California State University Carnegie Project on the Education Doctorate
Convening – June 11-12, 2009
Background Resources

National CPED Resources:
These materials address the six central CPED topics.

Capstone
http://cpedinitiative.org/convenings/october2008/capstone

Inquiry
http://cpedinitiative.org/convenings/october2008/inquiry_issues

Core Courses
http://cpedinitiative.org/convenings/october2008/participant_panel

National CPED Summary Notes of First Convening
Big Ideas and General Impressions
http://cpedinitiative.org/node/21

Day-by-day Summary
http://cpedinitiative.org/node/22

The articles that follow also address the six primary CPED topics (Capstone, Inquiry, Laboratories of Practice, Core Courses, Signature Pedagogy, Assessment)

(1) Perry, J. A., & Imig, D. (2008). A stewardship of practice in education. *Change, November-December, 2008.*

    Reports out on the first year of the CPED initiative.

(2) Olson, K. & Clark, C. M. (2009). A signature pedagogy in doctoral education: The Leader-Scholar community. *Educational Researcher 38(3),* 216-221.

    Provides a working example of a signature pedagogy in professional practice doctoral preparation at one CPED institution.

(3) Shulman, L. S., Golde, C. M., Bueschel, A. C., & Garabedian, K. J.(2006). Reclaiming education's doctorate: A critique and a proposal. *Educational Researcher 35(3), 25-32.*

    Building on lessons learned from the Carnegie Initiative on the Doctorate and in the Carnegie Foundation's studies of the preparation for the professions, the authors

argue that reclaiming and rethinking the research doctorate (Ph.D.) and distinguishing the practice doctorate (Ed.D. or P.P.D.) in education is possible.

(4) Shulman, L.S. (2007). Counting and recounting: Assessment and the quest for accountability. *Change, January-February, 2007.*

Shulman takes a critical look at the accountability of assessment in education.

A Stewardship of Practice in Education

by Jill A. Perry and David Imig

Among the many conclusions of the Carnegie Initiative on the Doctorate (CID) was one with important consequences for the field of education, namely that graduate schools of education needed to resolve the confusion over the degree titles Ph.D. and Ed.D. According to the National Research Council, some 142 graduate schools of education award both degrees, with little differentiation between the preparation of future faculty and researchers and that of "leading practitioners." Having two degrees with dual purposes has long perpetuated misconceptions about the quality of education doctorates and led to accusation that both are "second-rate degrees" (Shulman et al., 2006).

With this conclusion, CID acknowledged the need to find the proper balance between preparing professional practitioners and future researchers in education. While the CID project focused on ways to improve the Ph.D. in education, it also evidenced the need for more thinking about the ways that graduate schools of education could prepare leaders for the world of practice—currently, the Ed.D. is simply not adequately preparing "leading practitioners" for the challenges that confront America's schools and colleges.

The participants in CID were neither the first nor the only ones to recognize this problem. With a national education system under fire, many criticisms about the role and purpose of the Ed.D. have surfaced. Among them is the assertion that current Ed.D. degrees often fail to provide leaders in K-12 and higher education with practical knowledge and the capacity for expert leadership. The conclusion is that the profession needs more rigorous and relevant professional training. Indeed, some scholars have called for abandoning the Ed.D. and casting the preparation for school and college leadership in an M.B.A.-type mold (Levin, 2005). But others have argued that it is time to "reclaim" the professional degree (the Ed.D.) and make it into the degree of choice for practitioners (Shulman et al., 2006).

So what is the best course of action? How do we produce the highly qualified professionals required for tomorrow's educational leadership? Where do graduate schools of education begin?

In January 2007, the Carnegie Project on the Education Doctorate (CPED), modeled after the CID project, was launched. Following nearly two years of planning, the Carnegie Foundation for the Advancement of Teaching announced its intent to have two dozen schools and colleges of education engage in a national, inter-institutional dialogue aimed at improving the preparation of advanced educational practitioners. The project focuses on developing stewards of practice in doctoral education—professional practitioners who are committed to the highest standards and prepared to take on the challenges of teaching in and leading schools, serving as administrators and clinical faculty in colleges and universities, and leading organizations that serve education. To do this, the project seeks to define what a steward of practice should know, value, and be able to do, as well as design the course of study and experiences that can develop this type of practitioner. As a companion effort, the project will simultaneously strengthen the Ph.D., with its goal of preparing stewards of the discipline.

CPED is a three-year initiative (2007-2010) that is divided into three phases: concept and design, experiment, and dissemination. Teams representing a broad cross-section of the faculty at each of the participating education schools convene twice a year to deliberate about the form and function of the professional-practice doctorate. They then bring results of these deliberations back to their home institutions, where they have each piloted new professional-practice programs in one of three areas: school leadership, organizational leadership, or teacher education.

The basic question being asked is this: What are the knowledge, skills, and dispositions that professionals working in education should demonstrably have? Mapping backward from the answers to that question, teams are determining what types of assessments, teaching, experiences, and scholarship will meet the needs of future practitioners. For the remainder of the project, the CPED initiative aims to produce several institutional examples that others can look to as models of exemplary practice.

Conversations and progress are centered around four design concepts—creating capstones for assessment, identifying a signature pedagogy, constructing laboratories of practice, and developing a scholarship of teaching and learning—that have grown out of the expansive work of Lee Shulman, former president of the Carnegie Foundation, who has long challenged education schools to improve every facet of their programs. Each of the participating institutions takes these ideas and engages colleagues in a far-ranging debate about ways to incorporate them into the redesign of their graduate education programs.

What Have We Learned Thus Far?

One and half years into the project, institution teams have participated in three CPED meetings involving rich discussion, creative thinking, and deep reflection among peers, guided by the prior work of the Carnegie Foundation. Institutional teams have then brought the fruits of those deliberations back to their home institutions and continued the discussion there. Each site has experimented with various signature pedagogies and/or laboratories of practice, in the process facing the challenges of developing professional-practice programs.

Capstones

During the first year, CPED teams examined the culminating project of the professional-practice degree, asking whether practitioners should be expected to pursue the same dissertation requirements as future researchers. This has been the toughest design component for most institutions. On the one hand, a common sentiment has been, "We don't know what good criteria for a capstone are." On the other, many faculty who were trained in traditional ways are determined to break the mold of the traditional six-chapter dissertation and replace it with something that meets the demands of leading 21st-century schools, colleges, and other organizations. What are the merits of a group project or one rooted in an ongoing practical problem faced by a school or college or other learning institution? Should the emphasis be on "original knowledge" (and the generation of a dataset), or should skills be developed to interpret and analyze data that might be generated by a school system or district or other source?

As a result of these conversations, new forms of the capstone project are emerging. For example, the program at the University of Southern California has introduced thematic dissertations, wherein students conduct individual investigations of field-based problems as part of a group organized around a set of related problems. The University of Houston has put together a candidacy paper task force, which is considering capstone models such as a needs analysis for educational institutions, the development of institutional-change plans, and a critical analysis of a district program. Both the University of Missouri–Columbia and the University of Florida are considering the role that solving "real-world" problems might play in a capstone piece. As a result of the focus on problems of practice, some institutions have suggested that the dissertation committee should include professional as well as academic members.

While CPED teams recognize the need for continued discussion about capstone projects, they have already demonstrated a strong commitment to rethinking how degree candidates should demonstrate that they are ready to assume educational leadership positions. Upcoming meetings will continue discussions of how we might build upon current ideas and generate new thoughts about the capstone.

Signature pedagogies

If the end product of a professional-practice program is an exceptionally well-prepared steward of practice, then what kind of teaching helps foster the essential skills and qualities for that role? CPED members view signature pedagogies as the route to cultivating the habits of a true professional and, as a result, have made the most progress in this area.

Signature pedagogies reflect "what counts as knowledge in a field and how things become known" (Shulman, 2006, p. 2). CPED teams have been challenged to consider these epistemological issues as they think about what their signature pedagogies could be. The Pennsylvania State University team, for instance, has started with the understanding that the "identification of signature pedagogies involves considering the variety of pedagogies that are evident in instructional, research, and field settings."

Other CPED teams are working toward cultivating the habits of critical reading and the curiosity that leads to investigation. At Duquesne University, the inquiry process takes the form of talking papers—annual student papers that outline their thoughts on key readings and eventually form the basis of the culminating project. California State University, Fresno, is developing a list of crucial readings that serve as a frame for the qualifying exams. The University of Connecticut educational leadership program focuses the first two semesters on creating consumers of research and on teaching about the role of both quantitative and qualitative research in the inquiry process, case-study write-up strategies, and question formulation.

Because professionals typically work with colleagues to solve real-life problems, developing practical skills through collaboration is a prominent signature pedagogy. The University of Nebraska–Lincoln's teaching, learning and teacher-education program uses the introductory seminar to "initiate and cultivate program continuity and community," which begins by developing "a common language" between students and faculty. At the University of Kentucky, the executive doctorate program faculty and students come together in a mixed-methods, research-based program to collaborate on scholarship. The University of Missouri–Columbia's transformative collaboration uses action research in projects involving both faculty and students as researchers. Building on what Schwab (1970) called the arts of the practical—practitioner debate, deliberation, and choice—the University of Nebraska–Lincoln team has created a set of cross-disciplinary courses that will "cultivate a culture of collaboration among scholars and practitioners [as a means to] promote reflective practice." Challenge-cycles at the University of Maryland involve a cohort in thinking and making decision about practice-based problems.

An attention to diversity, culture, and social justice in leadership and teaching has also been introduced as an element within signature pedagogies. Washington State University's statewide program is working across the institution's branch campuses to create culturally relevant pedagogies that meet the needs of both its doctoral students and those whom they will serve. University of Oklahoma faculty are addressing types of learning in the state's three demographics—rural, urban, and suburban—to prepare practitioners to understand the educational needs in each.

These are rich beginnings for building a reflective process that prepares students for leadership and offers them the opportunity to learn from experience. In the coming year, as CPED teams experiment with these different approaches, they will move closer to understanding the best ways to develop learning in the field of education.

Laboratories of practice

Laboratories of practice are structured experiences of, as the University of Connecticut team put it, "messy, real-world practice," which are designed to teach ways of doing. Such laboratories provide an important opportunity for students to view work in situ and to work alongside practicing professionals. Models come from other professional fields: one example is medical rounds, where students examine patients while supervised by a physician.

But this has been a difficult concept for CPED teams to grasp, and they have had to think hard about what type of structured experience meets the needs of practitioners. The teams are now analyzing their current fieldwork components and discussing how they could be redesigned. Targeting districts (Houston); face-to-face meetings with state and district leaders (Kentucky); residencies and purposeful apprenticeships in the profession (Pennsylvania State); and rotations through rural, urban, and suburban settings (Oklahoma) are some of the strategies that are being piloted.

The University of Missouri–Columbia recognizes that most Ed.D. candidates work full-time in professional settings and has made the students' workplaces their laboratories. The student experience is evaluated by the "extent to which students are able to set problems of their own organization into action research." Rutgers University follows the apprentice model of connecting students to practitioners in a learn-by-doing model. Northern Illinois University is developing a series of "extended, embedded, and integrated internship experiences" that provide students with "hands-on" experiences throughout the program. The University of Kentucky executive doctorate program has cohorts meet monthly with district and state-level professionals to gather field-based problems and learn from practitioners. CPED teams are vigorously experimenting with these and other models of laboratories for professional-practice doctorates. As they experiment, we anticipate the development of more examples that will contribute to the ongoing discussions.

The scholarship of teaching and learning

Work on the scholarship of teaching originated in Ernest Boyer's seminal piece, Scholarship Reconsidered (1990) and has continued through the efforts of the Carnegie Foundation Academy for Scholarship of Teaching and Learning (CASTL). CASTL goes beyond Boyer in drawing "the line between excellent teaching and the scholarship of teaching," the latter of which requires faculty to both "frame and systematically investigate questions related to student learning" (Hutchings and Shulman, 1999).

The scholarship of teaching and learning (SoTL) gives students a way to reflect on and critically think about their own teaching (whether as a teacher or as an administrator, they are going to teach). Still, they have grappled with this design concept and are deliberating and experimenting with various forms of SoTL to enhance their programs and nurture good practice. Examples include team teaching that brings together faculty and practitioners at Virginia Commonwealth and Virginia Tech. University of

Missouri–Columbia faculty are investigating their own teaching practice; California State University, Fresno, is looking at a theory-of-action model to frame such an inquiry into its own faculty's teaching. At Rutgers, faculty members are defining a variety of pedagogies for teaching. The University of Connecticut adult-learning-centered educational leadership focuses on the attributes of the non-traditional student who is learning in challenging environments. The University of Florida is relying on the work of Boyer to map a connection between the curriculum and student learning outcomes.

CPED teams have decided that through investigating teaching as it leads to student learning and by engaging in faculty self-reflective exercises, steps can be taken towards creating a scholarship of teaching and learning for the preparation of stewards of practice.

Bringing it home
The processes by which CPED institutions have brought the CPED initiative to their home institutions have proven beneficial to understanding how the field of education might successfully reclaim the practice doctorate.

Several institutions have designed their pilot projects around their institutions' themes, theories of learning, or identities and missions, all of which can provide a framework for programmatic change. Responding to state demands and struggling with ways of providing successful educational leaders and educators, the Universities of Kentucky and Louisville are partnering to design a professional doctorate that will address the state's "P-20 policy problem." Duquesne University stresses its university-appropriate mission—a scholarship for schools—in redesigning its program, and the program at the University of Southern California is built around the theme of the educational leader as change agent. Missions and themes not only provide the framework for change—they can also motivate faculty to discuss the "hows" of redesigning Ed.D. programs.

Information-gathering has played a leading role in fostering change at several institutions. Through a set of surveys, Rutgers University is engaged in a "fact-finding process with stakeholders" to gain a better understanding of what skills and knowledge a steward of practice needs to possess. Survey populations range from faculty to current students and alumni to current and potential employers. Committees that present a variety of perspectives because they include education faculty, faculty from other disciplines, and professionals at the state and district levels have been formed at many CPED institutions. Virginia Commonwealth University has developed such work groups to investigate all aspects of their first-practice doctorate (from admissions and capstone experiences to reflective practice). The University of Missouri–Columbia has created a student-faculty committee to assess its current programs. The University of Oklahoma has made a concerted effort to include committee members who represent the cultural diversity of the state.

Campus teams continue to seek new ways to generate interest and involvement. Finding effective ways to engage home-institution faculty in the change process is a common problem for all the CPED institutions. Colleagues who are not part of the initiative and who are pursuing their own teaching and research agendas are being asked to take on program-wide responsibilities, which require time. They are being asked to critically examine practices that some believe represent the highest quality doctoral training, particularly the traditional one-to-one apprenticeship and dissertation. They may also see inter-institutional assessment development or comparisons of outcomes as threatening rather than as a way to make programs more transparent.

Still, CPED teams are forging ways to nurture home-institution faculty involvement, since most believe that general faculty buy-in is necessary for creating institutional change. Pennsylvania State University, for example, is conducting a self-study with faculty leadership that will benchmark the program's progress. Washington is organizing design retreats for faculty. The University of Missouri–Columbia is conducting faculty retreats to teach action research, a major component of their program design. The University of Houston has monthly faculty meetings to discuss program directions.

Bottom-up efforts reflect the CPED commitment to reclaim the education doctorate through collaborative discussion and action. Faculty and students from across the nation have created a community that shares common ideas, offers friendly criticism, and tries to define the future of their profession. Despite the effort involved, this can be exhilarating, since participants find themselves in a situation where they can start with a clean slate and be creative, and students welcome the opportunity to contribute their voice.

Next Steps
The CPED initiative is in its second year. During this experimental phase, teams are testing and documenting the successes and challenges of their pilot projects. In October, they came together for a successful convening to share their progress and to seek friendly criticism from peers. During the year, they remain engaged through the CPED interactive website http://cpedinitiative.org), which includes home-institution faculty.

During the project's final year, CPED institutions will disseminate their restructured pilot projects and continue to deliberate and document their successes and challenges until they have developed programs that meet both their institution's and constituents' needs, as well as those of education leadership in the United States.

CPED teams have shown a willingness to reconceptualize the education doctorate but also recognize that this journey is by no means mapped out. Rather, they understand that success depends on each institution and the collaborative efforts among them. They recognize that the issues that face the education doctorate require immediate attention, and they are leading the way. In the next year, we anticipate having several proofing sites to serve as examples of how we might better prepare future stewards of practice.

About the Carnegie Initiative on the Doctorate

The 1990s saw several blue-ribbon commissions and sponsored research reports that offered recommendations to make doctoral education more effective. In their wake it seemed timely to move from talk to action, and so the Carnegie Foundation for the Advancement of Teaching partnered with the Atlantic Philanthropies to undertake a five-year project, called the Carnegie Initiative on the Doctorate. The initiative, which ran from 2001 through 2005, was designed to be both an action project and a research project. Its objective was to support selected academic departments' efforts to improve the effectiveness of their doctoral programs. The project invited participating departments to create local solutions suited to what they themselves identified as their needs and problems. The project involved 84 Ph.D.-granting departments in six fields—chemistry, education, English, history, mathematics and neuroscience.

Over the five years of the program, the participating departments made a commitment to examine their own purposes and effectiveness, to implement changes in response to their findings, and to monitor the impact of those changes. Many used their participation to continue plans and activities that were already begun but would benefit from the structure, prestige, and interaction provided by a national initiative. Carnegie's role, in turn, included visiting the departments, interviewing campus team members, and bringing project participants together (sometimes by discipline, sometimes by theme) to report on their progress, to learn from one another, and to help the project make sense of their experiences in ways that others could build on. In addition, both faculty and students participated in project-wide surveys, the results of which served as grist for rich discussion and debate about the preparation of scholars in the broadest sense, whether they work in industry, government or academe. The final book from that project, *The*

Formation of Scholars: Rethinking Doctoral Education for the Twenty-First Century, was published by Jossey-Bass in December 2007 (www.josseybass.com).

CPED Institutions

Arizona State University
California State University System
Duquesne University (PA)
Lynn University (FL)
Northern Illinois University
Pennsylvania State University
Rutgers University (NJ)
University of Central Florida
University of Connecticut
University of Florida
University of Houston (TX)
University of Kansas
University of Kentucky-Lexington
University of Louisville (KY)
University of Maryland
University of Missouri-Columbia
University of Nebraska-Lincoln
University of Oklahoma
University of San Francisco
University of Southern California
University of Vermont
Virginia Commonwealth University
Virginia Tech University
Washington State University

Resources

Golde, C., Walker, G. and Assoc. (Eds.) (2006). *Envisioning the Future of Doctoral Education: Preparing Stewards of the Discipline*. Stanford: Jossey-Bass.

Shulman, L., Golde, C., Conklin Bueschel, A., and Garabedian, K. (2006). *Reclaiming Education's Doctorates: A Critique and a Proposal. Educational Researcher*.

Walker, G., Golde, C., Jones, L., Conklin Bueschel, A., and Hutchings, P. (2008). *The Formation of Scholars: Rethinking Doctoral Education for the Twenty-First* Century. Stanford: Jossey-Bass.

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A Signature Pedagogy in Doctoral Education: The Leader–Scholar Community

Kate Olson and Christopher M. Clark

Since 2005 there has been an explosion of interest and debate about alternative futures for the doctorate in education. The authors take the debate from the abstract to the concrete by describing a signature pedagogy in doctoral education that combines theory, applied scholarship, and the wisdom of practice in new ways. They describe *leader–scholar communities*, whose goal is to assist and support students to conduct applied research in local educational contexts. They argue that leader–scholar communities are particularly useful for helping doctoral students persist to graduation, become socialized into a new identity as leader–scholars, and bridge the gap between what is learned at the university and what is practiced in schools.

Keywords: community of practice; doctoral education; educational doctorate; educational leaders; signature pedagogy

The years since 2005 have seen an explosion of debate about the doctorate in education, much of which appeared in these pages. Shulman, Golde, Bueschel, and Garabedian (2006) proposed that educators reclaim the professional doctorate, partly in response to a critique of doctoral programs in education published by Levine (2005). The public conversation continued with a philosophical critique-and-response exchange between Evans (2007) and Shulman (2007). Golde (2007), offering examples from neuroscience and from English, advocated that we adopt "signature pedagogies" from other fields to meet the needs of education doctoral students. Here, we hope to advance the conversation by describing a signature pedagogy, unique to education, that has been in operation for 2 years in an innovative professional doctoral program in the College of Teacher Education and Leadership at Arizona State University.

Shulman (2005) uses the term "signature pedagogy" to describe "the characteristic forms of teaching and learning . . . that organize the fundamental ways in which future practitioners are educated for their new professions" (p. 52). Examples include "the case dialogue method of teaching in law schools and bedside teaching on daily clinical rounds in medical education" (Golde, 2007, p. 345), as well as the journal club in neuroscience and "the

list" in English (Golde, 2007). Signature pedagogies are credited with socializing doctoral students into the discourse community of the profession, providing practice in articulating summary and critique of research literature, helping faculty and students keep up with the latest literature and with active controversies in their fields, making connections across disciplinary boundaries, and helping doctoral students discover and claim a topic and direction for their dissertation projects (Golde, 2007).

We agree with Golde (2007) that there can be great value in developing a signature pedagogy for use in doctoral study in education. We also side with Ball and Forzani (2007), who argue that the field of education must invent its own distinctive ways of studying educational practice, educating students, and preparing them for distinctive forms of professional practice. Here we describe the *leader–scholar community* (LSC) as one candidate for a signature pedagogy that is especially apt for professional doctoral programs in education.

We are faculty members at the Arizona State University College of Teacher Education and Leadership, in the doctoral program where LSCs were first invented, implemented, and refined. We present the idea of the LSC as a conceptual proposal for organizing learning and advising in applied doctoral programs in education. The interview data presented are not offered as grounds for making claims about the effectiveness of using LSCs. Rather, the quotations are offered to illustrate the kinds of testimony offered by doctoral students and faculty who were engaged in teaching and learning both in the graduate program and, specifically, in one LSC.

Leader–Scholar Communities

A persisting problem of practice in professional doctoral programs in education is how to organize pedagogy so that it is both meaningful and practical for teachers, administrators, and other leaders who are working in the field while they are completing their doctoral degree requirements. Professional programs for the doctoral degree in education (usually labeled the Doctorate of Education, or Ed.D.) are generally designed around pedagogical and curricular goals similar to those of Ph.D. programs, making them poorly suited to providing leaders in education with the tools and knowledge to effect change in local school settings (Murphy & Vriesenga, 2005; Osguthorpe & Wong, 1993; Shulman et al., 2006). This incongruity between the curriculum and instruction offered in traditional doctoral programs and lived

experience in schools decreases the usefulness of the pedagogy to help students graduate and to make positive and sustainable changes in the practice of education (Golde & Walker, 2006).

The Ed.D. in Leadership and Innovation in the Arizona State University College of Teacher Education and Leadership is not designed to prepare academic researchers to staff college of education faculties. Rather, the goal of the Ed.D. program is to build capacity among leaders in education to introduce small-scale innovations into their practices through action research, to study the consequences, and to make evidence-supported arguments for improvements in local education contexts. Cultivating "inquiry-driven leadership" is the program's essential goal.

To meet this goal, the doctoral program faculty decided to employ a different pedagogical approach to teaching, learning, and advising by creating a signature pedagogy that we named the LSC. At the end of the first year of this 3-year program, each doctoral cohort group of 20 to 24 students is divided into smaller groups of 5 to 7 students and assigned one faculty member as their collective doctoral advisor. Soon thereafter, a second faculty member is assigned to colead and coadvise the 5 to 7 students. This group, then, is designated an LSC, with all members agreeing to work together for 2 years, culminating in action research dissertation defenses and degree completion by all student members. In addition to the two faculty members leading each LSC, each doctoral student nominates an outside member for his or her dissertation committee—an accomplished professional who holds a doctoral degree and is in professional practice outside the college and usually from the world of practice outside the university.

What makes LSCs productive for educational leaders' learning and development is the organization of collaboration and practice by both faculty and students around student-driven, contextualized inquiry projects, also known as action research (Lewin, 1944/2005; Stringer, 2007). This signature pedagogy is atypical because the faculty mentors are not the subject-matter experts of each student's doctoral research project, as in the traditional Ph.D. academic discipline–centered model (Golde & Walker, 2006). Both faculty and students are experts and stakeholders in the learning process because the knowledge necessary to meet overall action research goals in the students' workplaces is distributed among all members of the doctoral community: The faculty members are experts at applied research, writing, and scholarly literature, and the students are experts and responsible leaders in the particular practices and contexts in which they conduct research and effect change. It is this multivoiced aspect of expertise that encourages professors and graduate students to collaborate and learn from each other (Tsui & Law, 2007).

In the Ed.D. in Leadership and Innovation, members of LSCs explicitly take on the goal of providing mutual support to all members, intellectually, practically, and socially. Each member assents to cultivating an ethos of support of all other members—helping and being open to receive help, with the goal of all members completing the doctoral program successfully.

Theoretical Roots of Leader–Scholar Communities

There are practical and theoretical reasons that the designers of the Ed.D. in Leadership and Innovation decided to create and implement the LSC as its signature pedagogy. The faculty members leading LSCs aspire to blur the traditional boundaries between the university and school systems so that what the students learn is directly meaningful in the context of their practices, yet richly informed by scholarship and theory. LSCs are intended to mitigate the theory–practice divide by grounding doctoral work in the theoretical construct of communities of practice (Wenger, 1998; Wenger & Lave, 2001; Wenger, McDermott, & Snyder, 2002) to facilitate faculty and student learning and development. As well, the doctoral program's embrace of the epistemology of action research (Lewin, 1944/2005; Stringer, 2007) shortens the distance between theory and practice so that the students' doctoral research projects are likely to make immediate, positive differences in local educational contexts.

The construct of community of practice is grounded in sociocultural theories of learning and development that contend that all human development is founded upon social interaction in cultural practices that are mediated by the use of cultural artifacts, tools, and signs (Cole, 1996; Engeström, 1987, 1999; Vygotsky, 1978). As Wenger (1998) contends, people construct and develop their identities and transform their thinking through their active participation and engagement with others in cultural–historical practices that are situated in social communities. Thus members of a community of practice interact, share, and participate in the creation and re-creation of the practice and, through that engagement, develop, reify, and transform their identities.

Rogoff's (1995, 2003) notion of guided participation and Wenger's (1998) concept of legitimate peripheral participation are most relevant here. Both constructs help us understand how teachers and students co-construct their involvement in situated, cultural activities and how this participation leads to development of the practice and the participants. Through apprenticeship and collaboration in communities of practice, participants' roles in the practice change and develop as they move from novice to expert in their understanding of the tools, concepts, and processes that co-construct and cultivate the practice (Rogoff, 1995; Vygotsky, 1978; Wenger et al., 2002). As the faculty and students interact and collaborate in LSCs, community-of-practice theory predicts that they will be socialized into understandings and dispositions that support teaching and learning about how to conduct applied research and study their practices in local schools, organizations, and communities.

Few studies have examined the benefits of working in communities of practice at the doctoral level. Leshem (2007) and Wisker, Robinson, and Shacham (2007) examined innovative doctoral programs that utilized the construct of communities of practice to support graduate students and their supervisors in their development and understanding of graduate research. The mentorship, interaction, and purposeful practice portrayed in both studies demonstrate that the community-of-practice construct can be helpful in providing students opportunities to reflect on and make sense of research at the doctoral level.

Tsui and Law (2007) demonstrated how university and school relationships cross traditional boundaries of learning when expertise is distributed among professors, graduate students, and mentor teachers. Although this work did not address doctoral programs or communities of practice per se, Tsui and Law showed that when expertise is distributed among professors, teachers, and preservice students to solve problems and contradictions in lessons together, expansive learning occurs for all participants. This

study shows how faculty and students who work collaboratively in education can create new knowledge that is an artful blend of the best of what each community member has to offer.

We found no research literature that specifically addresses the organization of the mentor–advisee model in Ed.D. programs and its effectiveness in supporting doctoral students in their learning and development. But we infer from the aforementioned studies that communities of practice can promote grounded knowledge development in graduate school when scholars and practitioners in education work together to solve problems.

How Leader–Scholar Communities Work in Practice

In the Doctoral Program in Leadership and Innovation, LSCs typically meet face to face once per month for 90 minutes. During these meetings, members build and sustain community, communicate about the developing focus of doctoral student research topics, discuss readings in the scholarly literature that may be helpful in support of students' applied research projects, provide feedback on student writing, advertise opportunities to attend professional conferences, and help one another stay current in meeting program milestones (e.g., nominating an external member for each student's doctoral committee, drafting the dissertation proposal, and preparing for the proposal defense). Faculty members who lead LSCs also meet with doctoral students individually when requested, and LSCs may meet more often than once per month when a high-stakes milestone such as dissertation proposal defense looms large.

Faculty members who are coleaders of LSCs also become members of a community of practice of their own. The LSC Leaders Group meets monthly with the director of the doctoral program and has become the de facto advisory committee for the doctoral program. Faculty members in the LSC Leaders Group communicate with one another and with the director about successes and challenges for their students, ideas for program and policy fine tuning, and successful activities tried in one LSC group that may be useful for others. This faculty community of practice is committed to becoming more effective as faculty advisors in the Doctoral Program in Leadership and Innovation.

Preliminary Study of Leader–Scholar Communities

Although this research is preliminary, we have collected data to begin our conversation about the LSC as a good candidate for a signature pedagogy in the education doctorate. Our ongoing research goal is to describe and understand how or whether participation in LSCs transforms both faculty members' and students' identities as leader–scholars, enabling them to begin to bridge the gap between theories learned in graduate school and practice conducted in educational settings. In this article, we report faculty members' and students' accounts of how their participation in the program has helped develop their habits of leadership and scholarship and transformed their thinking and behavior as educators.

First, we administered a two-item, open-ended survey in April 2008 to all 17 instructors in the doctoral program and to the first cohort of 20 doctoral students. This survey was based on Wenger's (1998) notion of identity transformation and reification through participation and interaction in a community of practice. The survey asked the faculty members to reflect on their experiences in the program and to indicate how they were different as a result of their participation.

In May 2008, the first author conducted a semistructured, formal interview of a faculty advisor and a focus group interview with the 6 graduate students of one LSC. The goal was to explore their beliefs about the graduate program, its organization and practice, and about how their participation in the program had evolved and how their identities as teachers, students, and scholars may have changed.

For analytic purposes, we typed and transcribed the survey and interview data. We coded and categorized the data using grounded theory (Huberman & Miles, 2002; Strauss & Corbin, 1990). Each statement was coded according to the faculty members' and the students' beliefs about the doctoral program, the LSCs, and their experiences and ideas about how the program helped develop their identities as teachers, doctoral students, researchers, and/or leader–scholars. These codes were then clustered with similar responses to determine prevalence in the data. Once the patterns were established, representative quotations of interview and survey data were used to illustrate the presence of particular beliefs about LSCs and the doctoral program.

Doctoral Student and Faculty Testimony About LSCs

By the end of May 2008, four LSCs had been operating as the signature pedagogy for 1 year. In our preliminary analysis, we learned that our faculty and students attributed a number of benefits to their participation in LSCs, which we highlight below.

Faculty

Faculty reported that participating in an LSC afforded multiple opportunities to grow professionally and personally. The act of supervising action research studies in local settings in a community of practice influenced the development of the LSC faculty advisors. This professional growth was attributed to the faculty advisors having to troubleshoot their own historical notions of graduate work and research in education in order to provide their graduate students the necessary guidance to conduct action research in their local contexts, as the following interview quotation illustrates:

> There are times when I am on cognitive overload, and I have to keep reminding myself that if this were a traditional Ph.D. [program], I would be the subject expert and I would guide in that way. Now I'm not the subject area expert; I am the action research expert and colleague that happens to be asking the questions they need, but because I'm so grounded in the schools, I'm OK with that except for the cognitive load, the expertise load, and I just have to pull back from that and say, "That's OK, we are solving a local problem. We are not finding the cure for cancer." I just have to ask the questions, "How is this working in your classroom? What evidence do you have that it is working? Does your principal support this? Who else are you pulling in?" The discomfort that I feel with my subject area expertise being tested is probably part of the program and I have to accept that and keep moving with the program because that is what it is supposed to be about—the localized problem. But it doesn't make it any easier.

The faculty advisors had to redefine their understanding of being a faculty mentor for doctoral students. They reported that their expertise and knowledge in a particular subject-matter area of research

were not sufficient to meet the needs of their graduate students. Problem solving about the role and study of action research in the LSC afforded the faculty advisors opportunities to transform their identities as teachers, in the words of one faculty member interviewee, from "sage on the stage to guide on the side."

The faculty members indicated in both the surveys and the interviews that their constructive collaboration with students in LSCs had revived their belief in research and deepened their understanding of what it means to be an educator, as the following survey response illustrates:

> One of the most memorable and influential learning experiences was having and helping four students in a LSC group as they were working on their first action research projects. . . . Providing academic support and personal encouragement was a rewarding, yet time-consuming and demanding, task. The students' projects varied, as well as their skill levels in conceiving and beginning to execute their projects. . . . Observing the growth of these students was also a rewarding aspect of the process. Taken together, the growth of the students and the outcomes of the projects in schools made the whole endeavor a valuable experience that renewed me as well as benefited the students and their schools.

The faculty members all wrote about moments of ideals being reaffirmed, skills developed, and optimism and engagement reawakened. It was evident in both the survey and the interview data that doctoral faculty were deeply engaged in attempting something new and challenging, working in constructive partnership with highly motivated expert leaders (their students), and playing a crucial role in making a difference in schools.

Students

The doctoral students formally and informally testified in both the surveys and the focus group interview that the key to the doctoral program's success was the LSCs and the experience of learning in a community of practice. The LSC provides the safety, trust, and connection that students say they need to persist in and achieve their doctoral goals. Because this pedagogy is structurally incorporated into the fabric of the program, the students have a required membership in a community in which to develop relationships, provide empathy, share stories, scaffold their work, and provide feedback, much like a family. To them, this "family feeling" was the crucial aspect of their development in the program, as it encouraged their progress and countered their doubts, fears, and thoughts about dropping out, as the following quotation illustrates:

> We support each other and we look out for each other and we push each other in our community of practice. But we get it; we are speaking the same language. We're doing the same thing together. The leader–scholar communities are the key to the success of the program and I think that is why we remain so intact—no one has dropped out and I don't think we would allow each other to drop out. . . . I mean we are a family; we are a community of practice.

The students reported that the community-of-practice model provided them with a team that helped them feel that they were all working together to meet their personal and professional needs and goals. The interaction and collaboration in the LSC practice validates the students' work, makes them feel that it is significant,

and reminds them that practicing inquiry-driven leadership is difficult but not impossible, and is worth the effort.

Through these interactions in the LSCs, the students also develop their identities as applied researchers and gain a better understanding of the practicality and usefulness of their work in real, messy settings. Their work in the LSCs helps them to connect their understanding of what they know and learn in doctoral studies with the immediate influence it has on their practices:

> [I now have] the confidence to address the different things going on at my school and I look at everything differently; I look at it as research: How can I apply something [an innovation] to make it better? I look at whatever problems that are there in the school and know that I can change them. Being immersed in action research allowed me to grow significantly.

The students attested that this connection and participation in the LSC practice helped to transform their identities as leaders and scholars. More significant, they reported that the program afforded them opportunities to bridge the distance between what they learned at the university and what they practiced in their schools, making the work that they did relevant and meaningful:

> I can see instant changes in the groups [at school] I'm working with. I also see that I am in the same role [as a teacher] but I am able to expand my role even more. As a teacher I can influence others to improve their practice. And the relationship will be lasting between the university and the school system. . . . It builds the bridge so that the research that we do affects the schools.

Faculty and student testimony suggests that LSCs can be a positive, practical, and powerful source of influence and support, helping educational leaders develop the confidence and competence to transfer and adapt their new habits of mind and skills as leader–scholars for use in contexts quite different from graduate school (Shulman et al., 2006). The socialization, collaboration, and apprenticeship that occur in this signature pedagogy have the potential to provide them with the guidance needed to meet graduation requirements; to reify the students' thinking and identities as leaders, scholars, and practitioners (Wenger, 1998); and to empower them to use research to guide and study their own practices.

How This Practice Is Suited to the Professional Doctorate in Education

We believe that the LSC is a particularly promising way to help scholars in academia and leaders in the field build connections and collaborate in efficient ways to study contemporary issues in education. There are several reasons why the LSC is particularly useful for helping doctoral students persist to graduation and become socialized into a new identity as leader–scholars.

First, we believe that the LSC is a particularly useful way to provide doctoral students in education, who are full-time administrators and leaders in various educational contexts, with the support, guidance, and collaboration they need to persist in their goals of proposing and completing their dissertations to graduate with the degree. Because the LSC is an embedded structure that meets regularly and consistently throughout the program, doctoral students in an LSC have an immediate and consistent community of peers and faculty with whom they can work in

partnership while they are conducting their research and writing their dissertations. LSC members are not left alone to determine how to navigate and manage the world of dissertation research and writing after they have completed their doctoral courses. The LSC serves as a group of critical friends (Curry, 2008) that creates and cultivates a mutually supportive atmosphere that provides doctoral students with the social, emotional, and scholarly assistance needed to graduate.

Research suggests that the doctoral students who are most successful in completing their dissertation research studies and earning their degrees are those who have been successfully socialized into the research community through interaction and collaboration with faculty and peers (Gardner, 2008). The LSC affords students multiple opportunities to work with others as they learn how to write, use, and critique scholarship in thoughtful and systematic ways as they conduct inquiry projects in their workplaces. This purposeful collaboration on research and writing in a community of practice provides opportunities to socialize and reify the students' identities as leader–scholars in education (Wenger, 1998).

Rethinking the Professional Doctorate in Education

We do not have a single prescription for the design and implementation of a signature pedagogy in all professional doctoral programs in education. What we have learned is that the synergy between theory and practice can begin in a university graduate program that aspires to build connections between what is learned in the academy and what occurs in schools.

Our description of the LSC illustrates how one doctoral program socializes educational leaders to examine their practice thoughtfully and systematically together in a research community focused on making a difference in schools. We believe that the resolution of the Evans–Shulman debate (Evans, 2007; Shulman, 2007) will not be found in a single ideal program design or doctoral curriculum, but in crafting a consensus about the goal of doctoral pedagogy: the alignment and integration of theory and practice that allows doctoral students to perform as leaders and work as scholars in a safe, supportive research community as they examine and attempt to promote progress on immediate, important issues in local educational contexts.

It is beyond the scope of this article to claim that LSCs constitute a uniquely superior signature pedagogy for Ed.D. programs in educational leadership. However, we have learned that integrating theory into the lived practice of doctoral study through LSCs has exercised students and faculty in the practical use of theoretical constructs and the theoretical framing and critique of contemporary practice. Doctoral students and faculty members give great credit to the benefits of interacting in purposeful communities of practice. So far, we have learned that integrating theory with practice and providing support through collaboration in LSCs constitute a promising model for a signature pedagogy in doctoral education.

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Reclaiming Education's Doctorates: A Critique and a Proposal

by Lee S. Shulman, Chris M. Golde, Andrea Conklin Bueschel, and Kristen J. Garabedian

The problems of the education doctorates are chronic and crippling. The purposes of preparing scholars and practitioners are confused; as a result, neither is done well. We must move forward on two fronts simultaneously: rethinking and reclaiming the research doctorate (the Ph.D.), with its strong links to practice, and developing a robust and distinct practice doctorate (the P.P.D.) with a distinctive scholarly base. Unlike most current education Ph.D.s and Ed.D.s, the two degrees would serve distinct purposes, and like their medical analogs—the biomedical Ph.D. and the M.D.—would have different curricula and assessments. Building on lessons learned in the Carnegie Initiative on the Doctorate and in the Carnegie Foundation's studies of preparation for the professions, we argue that this reform is necessary and possible.

When Karen Gallagher became dean at the University of Southern California (USC) Rossier School of Education in 2000, she assumed leadership of a school whose graduate programs looked like most others: More than two hundred students were enrolled in four distinct Ed.D. programs, more than a hundred in two Ph.D. programs. Distinctions between the programs were unclear, student progress was often slow, and the quality of student work was highly variable.

A recent academic program review had been negative, and the school was suffering from budget problems. Moreover, the university president had recently announced that doctoral programs needed to show evidence of high quality or risk closure.

This threat forced the faculty to answer questions of purpose that challenged existing structures, including implicit biases that treated the Ed.D. as a "low-end Ph.D." After much deliberation, the faculty overhauled their Ed.D. and Ph.D. programs. The decision-making and implementation processes, though sometimes rocky, resulted in two programs with clearly different goals, requirements, and student populations. Several programs, including a highly rated counseling psychology Ph.D., were dropped. Now, Ed.D. students are in a 3-year, part-time program with a practice emphasis. Admitted students are expected to have significant experience; talented candidates who do not appear to be a good fit for the program's emphases are not admitted. The Ph.D. program limits entering cohorts to a handful of students in a full-time, research-intensive program.

The implementation process had its setbacks. Although the entire faculty voted to let the Ph.D. Steering Committee set the program requirements, faculty did not support the committee's proposal to double the research requirement—to the equivalent of two solo-authored articles in 3 years—for faculty who would chair dissertations in the new Ph.D. program. Dean Gallagher responded to these objections by keeping the requirement as it had been. However, by student choice, only highly research-active faculty who can fund students on grants are advising Ph.D. students, thereby meeting the goal of the proposed research requirement.

Concurrent changes in organization and governance aided implementation. In 2001,

the dean decreed elimination of the school's three departments, creating a faculty of the school as a whole, and reducing turf battles. Now, faculty members voluntarily affiliate with four concentrations.

Because the school and its doctoral programs were restructured simultaneously, the Ed.D. and the Ph.D. are developing as equally valuable, but distinct, degrees. It took tremendous faculty time and energy to make these curricular changes, and the new curriculum continues to ask a lot of faculty, who keep revising with programs under way. But the change seems worth the effort: Applications to both programs have increased dramatically, and faculty members now have a commitment to shared intellectual enterprise. USC underwent tremendous change to address significant problems.[1]

* * * * *

The problems of the education doctorate are not acute. To call them such would suggest that they are new and of potentially short duration. In fact, the problems are chronic and crippling. Unless we face these issues squarely and with purposeful action, schools of education risk becoming increasingly impotent in carrying out their primary missions—the advancement of knowledge and the preparation of quality practitioners.

Some problems are endemic to all doctoral programs. For the last century— starting with William James' wonderful skewering of the "Ph.D. octopus" (1903)— many have questioned whether the experience of earning the degree prepares recipients for the professional and scholarly roles they will pursue.

Some problems are the special province of education. We struggle with the widespread perception that education doctorates

lack rigor and substance, and are often seen as second-rate degrees. Unlike other fields, ours uses the doctorate both to prepare scholars and to prepare the highest level of leading practitioners (McClintock, 2005). Often, through confusion of purpose, we end by doing neither very well.

Each year in the United States, about 6,500 doctorates are awarded in education—more than in engineering (5,700) or the physical sciences (6,000), and fewer only than in the life sciences (8,800) (Hoffer, Welch, Williams, Hess, Webber, Lisek, et al., 2005). Education students differ from those in the arts and sciences or engineering in that most education students have had careers before pursuing the doctorate. This sequencing of doctoral work and work in the profession is the inverse of other fields, with doctoral work coming at a mid-career stage for education students rather than at the beginning. On average, doctoral students in schools of education are older; the median age when they receive their doctorate is over 43. While arts and sciences students typically wait 2 years after receiving the bachelor's before starting the Ph.D., education students have an average "gap" of almost a decade.[2] In contrast to other doctoral students, the majority of education doctoral students attend school part-time while continuing to work.

To meet student needs, many education doctoral programs teach the majority of classes in intensive evening or weekend formats. This leads to little socialization into communities of inquiry or practice. Although we can make only gross estimates,[3] a relatively small proportion—a quarter to a third—enters the professoriate upon receipt of the doctorate. This is much lower than in most fields in the arts and sciences[4] and indicates a mismatch between preparation and actual career paths, an issue that also challenges the arts and sciences (Golde & Dore, 2001). Although most schools of education value diversity and depth of experience in their students, serving such a wide range of students presents significant challenges. Each discipline has its own issues to contend with, but education schools must solve some serious problems to achieve excellence.

We noticed many contrasts between education doctoral programs and those in the arts and sciences through our work in the Carnegie Initiative on the Doctorate (CID),

a 5-year project launched in 2001 that challenged graduate departments to think critically about their purposes and how to redesign their Ph.D. programs. We chose to include only six disciplines—chemistry, education, English, history, mathematics, and neuroscience—to sample broadly across the academy. We explored the particular challenges and contexts of each field and aimed to achieve discipline-wide impact and to foster cross-disciplinary insights and learning. We selected about a dozen participating departments in each of the six disciplines. In education, we worked with 15 schools and departments (see complete list at *www.carnegiefoundation.org/cid*). The process of reflection, implementation of program changes, and assessment that these departments and programs engaged in is leading to stronger doctoral programs and changed habits of mind in participating faculty and students. Like USC, a number of participating institutions are clarifying their research training missions (examples are discussed later in this article). By observing their deliberations, we can better understood the issues and challenges involved in training practitioners and researchers; we have also crystallized our thinking about the need for an alternative to how most schools of education prepare educational leaders for the world of practice.

For years, the field of education has struggled to strike a balance between the *practice* of education and *research* in education, in crafting doctoral programs to meet the needs of a diverse student population. Partly as a reflection of this research–practice tension, education (like medicine and the biomedical sciences) has accommodated two terminal degrees—the Ph.D. and the Ed.D. Teachers College, Columbia University, granted the first Ph.D. in education in 1893. In 1920, Harvard University awarded the first Ed.D. In 1931, the field produced its first study on the wisdom of granting the Ed.D. as opposed to the Ph.D. (Freeman, 1931).

Ninety-two universities had granted one or both education doctorates by the late 1950s (Moore, 1960); that number increased to 167 by 1983 (Anderson, 1983) and now exceeds 250 (Levine, 2005). After decades of steady growth, the Ed.D.'s popularity began declining in the 1960s. Today, Ph.D.s probably outnumber Ed.D.s (Brown, 1990). The literature is rife with studies comparing the Ph.D. and the Ed.D.

and arguing for the elimination of one, or for an increased distinction between the two (Anderson, 1983; Brown, 1966, 1990; Brown & Slater, 1960; Clifford & Guthrie, 1988; Deering, 1998; Dill & Morrison, 1985; Levine, 2005; Osguthorpe & Wong, 1993).

In theory, these two degrees are expected to occupy overlapping yet distinct categories. The Ed.D., intended as preparation for managerial and administrative leadership in education, focuses on preparing practitioners—from principals to curriculum specialists, to teacher–educators, to evaluators—who can use existing knowledge to solve educational problems. A Ph.D. in education, on the other hand, is assumed to be a traditional academic degree that prepares researchers, university faculty, and scholars in education, often from the perspective of a particular discipline. Research questions, techniques, and thesis requirements for the Ph.D. are expected to be more theoretical than for the Ed.D. and are similar to those in other academic disciplines (Anderson, 1983; Dill & Morrison, 1985).

In reality, the distinctions between the programs are minimal, and the required experiences (curriculum) and performances (dissertation) strikingly similar (Anderson, 1983; Dill & Morrison, 1985; Murphy & Vriesenga, 2005). Instead of having two separate entities that effectively accomplish distinct functions, we have confounding and compromise, a blurring of boundaries, resulting in the danger that we achieve rigorous preparation neither for practice nor for research.

One of the greatest challenges for education Ph.D. programs is ensuring that students develop into effective researchers. This was the issue most often raised by departments applying to participate in the CID (Golde & Bueschel, 2004), not surprisingly, given the well-documented national debates about what counts as quality educational research (see Eisenhart & Towne, 2003; Olson, 2004; Shavelson & Towne, 2002). To people outside the field of education, however, this is astonishing. The Ph.D. is a research degree; research is generally the one thing that Ph.D. programs are confident that they do well (Golde & Dore, 2001).

For the Ph.D. in most arts and sciences fields, a small cohort of students is admitted every fall for full-time study. The first

1 to 3 years emphasize course taking, but most students are also immersed in an apprenticeship to scholarly life: conducting research and teaching undergraduate classes. Students quickly transition from consuming to producing research, whether they are incorporated into a faculty member's ongoing research program (typical in the lab- or field-based physical, biological, and social sciences) or are producing smaller pieces of scholarship under the tutelage of faculty in courses (usual in the humanities and other social sciences). Once they advance to candidacy, students spend most of their time on their own research and scholarship under the regular mentoring supervision of faculty. Typical strategies for doctoral education in the CID's six disciplines are described in a collection of essays commissioned for the project (*Envisioning the Future of Doctoral Education*, Golde & Walker, 2006). Education alone struggles with whether and how to keep research at the center of the Ph.D. Explanations range from students' lack of interest in research (or even, dare we say, mistrust) to the limited number of funded research projects that can support full-time study at schools of education.

Even more apparent is the Ed.D.'s failure to do *its* job. Although most students in Ed.D. programs do not aim to be researchers, their doctoral programs often treat them as such by offering experiences more similar to Ph.D. programs than to the high-level preparation for practice or leadership found in other learned professions. Too often, the Ed.D. is defined by subtraction, with fewer requirements than the Ph.D. and much less emphasis on full-time study and residency. Nevertheless, the capstone requirement is some form of dissertation, although practitioners are unlikely ever to be asked to produce research like it again. Instead of being valued for accomplishing the discrete ends it was originally designed for, the Ed.D. is widely regarded as a "Ph.D.-Lite."

Not surprisingly, education programs in the CID struggled with questions of purpose and mission in training their doctoral students. Although participating departments were not prepared to scrap their programs and start *de novo*—in any of the six fields—all tried to ensure that their programs reflected the goals of the students, department, university, and discipline.

The Carnegie Initiative on the Doctorate

The CID's open-ended, locally determined change strategy provided a window into doctoral education in education, especially in contrast with the other five arts and sciences disciplines included in the project. Departments received no money for participation; rather, the Foundation offered a process for engaging deeply in questions of purpose, and encouragement to experiment with our offerings and to document the outcomes. We provided framing ideas; annual convenings at the Foundation; a network of colleagues; and feedback, support, and encouragement. All of these were in service of departments engaging in critical reflection and deliberation leading to action. We structured great flexibility into the project and left it to individual departments to decide how they should proceed locally, which aspects of their doctoral program to focus on, which particular practices to implement, and what kinds of evidence to collect.

We asked participating departments to identify a leadership team that included faculty and doctoral students. The leadership teams were expected to deliberate seriously, suggest and implement appropriate program changes, and assess their efforts. We wanted departments to feel accountable to the project from a spirit of shared inquiry, not out of a fear of losing money. Participating departments shared the vision of developing students into "stewards of their disciplines." We proposed that the purpose of doctoral education is, taken broadly, to educate and prepare those to whom we can entrust the vigor, quality, and integrity of the field. We believe these people are scholars first, in the fullest sense of the word—future leaders who will creatively generate new knowledge, critically conserve valuable and useful ideas, and responsibly transform those understandings through writing, teaching, and application. We call such people "stewards of the discipline." (See Golde, 2006, for an extended discussion.)

We use the term "steward" deliberately, intending to convey a role that includes, but also transcends, accomplishments and skills. A steward is entrusted with the care of the discipline, and thinks about the discipline's continuing health and how to preserve the best of the past for those who will follow. Stewards direct a critical eye toward the future. They must consider how to pre-

pare and initiate the next generations of leaders. We believe that these ideas are particularly compatible with education's long-standing commitment to social justice, equity, and professional responsibility.

We also provided CID departments with discipline-specific ideas for fruitful practices and recommended reforms. The essayists for *Envisioning the Future of Doctoral Education* (Golde & Walker, 2006) addressed the question, "If you could start *de novo*, what would be the best way to structure doctoral education in your field to prepare stewards of the discipline?" The essays were intended to spark faculty and student thinking rather than to offer definitive prescriptions to the participating departments.

In "Stewards of a Field, Stewards of an Enterprise: The Ph.D. in Education," essayist Virginia Richardson (2006) discusses the importance and challenge of teaching students the practice of research. She lists seven outcomes of learning to conduct research and the associated knowledge, skills, and habits of mind that students need to develop. She asserts that this kind of preparation will require "goal-setting, analysis, assessment, and constant vigilance on the part of a Ph.D. faculty if we are to develop Ph.D. graduates who are able both to conduct important, high-quality, useful research on educational practice and issues and provide guidance in improving the education enterprise" (p. 267). Richardson's detailed prescription for a research-intensive Ph.D. provides a useful blueprint for those questioning what their programs should look like.

The education departments that participated in the CID are now on a path of reflection and change. USC took the most dramatic path, distinguishing explicitly between the Ph.D. and the Ed.D. On the Ph.D. side, several departments have engaged in clear movement toward enrolling students full time, creating full-immersion and unequivocally research-focused programs. The following three examples illustrate these efforts.

The School of Education at the University of Colorado at Boulder designed a new doctoral curriculum around its more tightly focused research-oriented Ph.D. program, intending each change to strengthen research training. Inaugurated in fall 2005, the new program features the following: The first year is devoted to core courses,

taken by the entire student cohort, which include two qualitative research methods courses, two quantitative methods courses, and two courses on the big ideas in the field of education research. Students also take a specialty seminar in each semester for their particular program area. In the second year, students move into specialized area courses and take one multicultural education course as a cohort. The third year emphasizes advanced courses and comprehensive exams; the fourth and fifth years focus on dissertation work. These changes were a response to strong indicators that the original program was not preparing all students well: Courses were taken in ad hoc sequences, few advanced courses (which depend on some shared knowledge) could be offered, and students graduated with uneven knowledge of shared issues and research norms and standards.

The School of Education at the University of North Carolina at Chapel Hill undertook a reorganization of the Ph.D. and Ed.D. degrees in 1996 similar to that at USC. The CID committee, formed in fall 2002, which focused solely on the PhD. program, realized that Ph.D. students needed new opportunities to create community, engage with intellectual work, produce scholarly work, and learn about inquiry and research in their Ph.D. training. In response, the committee created "inquiry groups" to bring together faculty and students interested in a particular topic and research problem. The expectation is that their work will lead to scholarly publication by participants. The groups started in 2004, after CID began. There has been some initial success; however, the structure and role of inquiry groups continue to evolve. Participating students (the inquiry groups are voluntary) are enthusiastic but worry that courses must take priority. Other students feel they do not have time to join an inquiry group. Faculty members receive no teaching credit for creating inquiry groups but nevertheless send a message about the necessity that all PhD. students have equal access to early and sustained participation in inquiry and scholarship.

As described earlier, USC made dramatic changes in its doctoral programs. The faculty convened in a two-and-a-half-day strategic planning meeting, in which they confirmed their focus on urban education and developed an outline for radically re-

vising the Ph.D. and Ed.D. programs. The Ph.D. program shrank, from 70 new students per year to a half-dozen in 2004. The students now receive 4 years of full funding, and the Ph.D. curriculum now explicitly aims to develop future faculty for major research universities. A "program professional core," which includes an introduction to the professoriate course, now supplements traditional courses. Students must develop teaching and research portfolios throughout their careers.

USC's new Ed.D. program, a 3-year cohort-based program, is clearly distinguished from the Ph.D. program in its emphasis on practice. Students participate in "thematic dissertation groups," working collaboratively with faculty and practitioners to study a contemporary problem in educational leadership. The group's work culminates in a set of complementary dissertations around thematically similar topics. Students write individual dissertations but rely on faculty group leaders and group members for support, literature and research design recommendations, and feedback on drafts. In the first year, all students take four thematic core courses. In addition to the core courses, Ed.D. students take five courses in their area of concentration. Originally, these courses were selected from existing offerings. Now they are being modified, and sometimes newly invented, to align with the core courses. Few expected faculty members to invest so much time in curricular revision, but the faculty felt that their investment in the core would be compromised if they did not subsequently tackle the specialty courses. (The University of Colorado reports a similar "ripple effect," where one change inevitably leads to more.)

Today, the USC education faculty members see their doctoral programs as works in progress and subjects of ongoing reflection. Each change leads to new questions. For example, is the dissertation the appropriate capstone for the Ed.D. program? Dean Gallagher believes success is possible only because the two programs were restructured simultaneously. "Change of this magnitude can almost kill you," she said, "but it causes you to think, 'How *can* we do things differently?' You are forced to think innovatively if you want to do something important" (personal communication, January 23, 2006). We are encouraged by how purposeful and reflective USC was in implement-

ing these changes. Such ongoing habits of thinking about a doctoral program are a central goal of the CID.

These three examples show how education schools can restructure the Ph.D. to infuse learning of the techniques, habits of mind, and abilities of good researchers throughout the Ph.D. program. In this conception, the Ph.D. in education would be like the Ph.D. in other fields—full time, a true research apprenticeship in a multigenerational research lab/field setting, with a dissertation-like capstone.

Visions of the Possible: A Professional Practice Doctorate for Education

Standing in the way of any effort to strengthen the doctorate preparing scholars of education (the Ph.D.) is the critical need to revive and restore the doctorate preparing practitioners at the highest levels. We propose a new doctorate for the professional practice of education, which we might call the Professional Practice Doctorate (P.P.D.), though the name should be the least of our concerns. Despite the many challenges involved in creating a new degree, we believe the greatest danger lies in doing nothing. A new degree can help restore respect for the excellent work of education practitioners and leaders.

Arthur Levine (2005) has argued that the current Ed.D. should be re-tooled into a new professional master's degree, parallel in many ways to the MBA. We believe that, properly understood and designed, the highest professional degree in education deserves to be a doctorate—but not one so readily confounded with the doctorate needed to prepare education scholars.

Do we need to begin afresh rather than simply repair the Ed.D.? Why propose a wholly new professional practice doctorate for education and not a totally reinvented Ph.D.? In our judgment, the extent to which the professional practice doctorate requires a new vision demands a "zero-base" approach to design, without any of the assumptions that characterize the status quo. Tinkering toward the ideal is much less likely to succeed than starting with a clean slate. As the new degree approaches the ideal, we will be able to restore the Ph.D. as a bona fide preparation for research, instead of an omnibus degree that signals all things to all educators.

The P.P.D. that we propose would be an extremely demanding, rigorous, respectable, high-level academic experience that prepares students for service as leading practitioners in the field of education, whether as educational leaders—principals, superintendents, policy coordinators, curriculum coordinators, and so forth—or as educators of teachers and other school personnel. We argue that preparation as a scholar in the traditional sense, culminating in a doctoral dissertation, is not the best way to prepare the superintendent of schools for a California community or a teacher–educator who will be preparing teachers of mathematics for that same community. We need a degree that is positively and intentionally designed to serve the needs of professional practice—as the Ed.D. was originally intended to do, but no longer does.

By analogy, there are two degrees in the medical sciences: the M.D. and the Ph.D. in a biomedical field.[5] The recipients possess different but overlapping bodies of knowledge, see their professional practice in different ways, and have been trained and assessed in radically different ways. Most important, they are engaged in very different fields of practice. The M.D. spends years in the supervised practice of medicine, surgery, psychiatry, and the like. The Ph.D. spends years learning the practices of biomedical research and theory development.

Similarly, the Ph.D. and P.P.D. would be different—one the research degree and the other the practice degree. Like the M.D., the P.P.D. as we envision it would be highly rigorous, easily identifiable postbaccalaureate degrees that are prestigious, *sans* dissertation, but with substantive professional assessments at the end. And, like the M.D., the P.P.D. would have identifiable signature pedagogies (Shulman, 2005). Many P.P.D. faculty would be highly skilled practitioners, perhaps also with the title of "clinical" faculty. (We note that USC has defined criteria for "practice-active" faculty members in their Ed.D. program.) Unlike the M.D., which is typically pursued before practitioners enter independent practice, the P.P.D. probably would be earned by teachers, educational leaders, and teacher–educators who are already engaged in forms of practice and would pursue this degree concurrently or in serial periods of study, practice, and study-embedded practice.

Assessments Motivate Program Design: How to Begin

One possible way to develop the P.P.D. is to design the final set of assessments first, then embark on the creative design of programs. This "wisdom of practice" strategy begins with studying and thinking about the most able exemplars of accomplished practice that can be identified. We can then ask what they do, and do well, that leads us to consider them exemplary, and what tasks or settings enable such accomplishments to be demonstrated. How would one know if practitioners have reached that level of accomplishment, short of shadowing them for a year? What kinds of exercises, simulations, investigations, writings, and approaches to the systematic observation and documentation of practice is needed to make a grounded judgment of practitioners' competence? This is similar to the process that some of us engaged in 20 years ago, in laying the groundwork for the National Board for Professional Teaching Standards (NBPTS; Shulman 2004a, 2004b). We asked, "What are the challenging situations that separate the sterling practitioners from those who are merely average? Can we develop a set of assessments that put people in situations like that? Can we then set standards for performance in those situations?" The point is to use practice as the template and ask what the standards are for the wisest practice.

The assessments and standards of the NBPTS have been so influential that a growing number of institutions have designed M.A. programs in education around them. It is possible to imagine a similar process whereby a highly public, well-justified, rigorous set of assessments for the highest levels of professional practice might also stimulate the development of new P.P.D. programs.

Approaches to assessment in fields such as medicine are much more varied than in Ph.D. programs. In medicine, one engages in assessments of knowledge, assessments of practical skills, and assessments in a variety of fields. One does not converge on a single monograph. We anticipate something similar in the case of the P.P.D.; we might call this an "assessment decathlon." In medicine, assessments are also deeply embedded within programs of residency training. Since education does not have the kinds of supervised residency characteristic

of medical education (nor is the teaching hospital a helpful analogy to possible professional development schools for educational practice), we expect that a P.P.D. candidate could use his or her own practice situations as the equivalent of some combination of a residency clinical setting and an experimental laboratory or field site.

Undoubtedly, some research-related skills that we identify with the Ph.D. would be required for a P.P.D., as well. We would expect, for example, an accomplished P.P.D. to be able to read, *very* critically and analytically, research reports claiming to offer evidence that people should teach in certain ways, organize schools in certain ways, or redo the economics of school districts and states in certain ways. We would expect a P.P.D. to have the skills and experience necessary to evaluate such reports or to know when he or she needs more specialized knowledge to be able to evaluate them. Just as reviewing and critically analyzing literature is a requirement for a Ph.D., we believe it must be a requirement for the P.P.D., to enable practitioners to make practice and policy decisions—not to add new knowledge per se to the field. We also believe that the P.P.D.-holder should be skilled in carrying out local research and evaluations to guide practice. Those who teach should develop skills and experience in carrying out the scholarship of teaching and learning in their own programs.

Our CID research revealed a troubling contrast between the doctoral study of education and that of other fields: The majority of education students pursue their degrees in a part-time, almost haphazard, manner. If we turn this fact on its head, however, we can make a virtue of necessity. We propose fashioning a program that treats the "practice" part of students' lives as the wellspring of inspiration that makes their doctoral study richer and more powerful. In the best of all possible worlds, P.P.D. candidates would be *required* to have a certain amount of prior and ongoing practice experience. The initial part of the program would merge practice and part-time doctoral study; at the end would be a year-long residency, during which students would prepare in a more self-conscious way for the assessments and integration. People would be asked to give up only one year of work for full-time study—a capstone year with a definitive end.

The Name Is Not the Thing

Let us not argue about the name of the degree. Our view is that if education had made the right turn 50 years ago, the Ed.D. would be precisely the degree that we are proposing. Indeed, if our critique is taken seriously and acted on, the resulting degree is more likely to be called an Ed.D. (new and improved!) than a P.P.D.. We hold no particular brief for the letters P.P.D.. We propose a new degree only to escape all the accumulated layers of expectation, tradition, and association with which the Ed.D. is currently burdened.

There is real danger in taking to extremes the distinction between a professional practice degree and a research degree. Both will include an abundance of cross-over experiences and training. All university-based doctoral degrees must be grounded in scholarship as both substance and process. P.P.D.s will learn how to conduct applied research and critically read research reports, and will have serious grounding in scholarship. Ph.D.s will have to understand policy and practice deeply if they are to be scholars *of* educational practice and not garden-variety social scientists. Nevertheless, the emphases of the two degrees will be quite different, as is the case with the M.D. and the biomedical Ph.D.

We are sensitive to the concern that we may be misclassifying teacher–educators by placing them in the practice group. Indeed, how non-Ph.D. scholars can flourish and gain tenure if they focus primarily on practice is a question faced by professional schools in every field from law to nursing. That said, most teacher–educators must be highly accomplished practitioners who can analyze, evaluate, and—most important—model and teach practice to future (and currently active) teachers. That set of qualities is very difficult to attain. Add to them the expectation that P.P.D.s in teacher education be capable of competent applied research on teacher education, and we have the elements of a seriously demanding, albeit reasonable, doctorate of practice. Meanwhile, a smaller number of doctoral candidates could pursue the Ph.D. in teacher education (the same is true of educational leadership, we suspect) and prepare for different roles that are engaged *primarily* with research and the preparation of future research scholars.

Issuing the Challenge

These challenges can be met only by courageous new designs, experimentation, and evaluation. We are painfully aware of how difficult it is to introduce a new degree into the sturdy pantheon of graduate education, even when the argument supporting the effort is strong. As a cautionary tale, we review the frustrating attempt to create the Doctor of Arts (D.A.) degree, first proposed in 1932 but not attempted until much later.

Beginning in the 1960s, with strong support from the Carnegie Corporation of New York under the leadership of Alden Dunham, some institutions developed D.A. programs. In 1967, Carnegie Mellon University adopted the first D.A. degree in the fields of English, fine arts, history, and mathematics. Here was a degree envisioned as a preparation for college teaching in each of the disciplines, rather than for a career in research. Then, as now, the vast majority of those who earned Ph.D.s devoted their careers to teaching rather than to conducting research.

With the support of several powerful advocacy groups, 31 institutions adopted the D.A. However, the degree never spread or found the success that its proponents imagined. By 1991, only 21 universities were still granting the D.A.; the number has dropped to 12 today, and at those schools the D.A. usually is granted in only one or two fields. Glazer (1993) attributes this to a combination of factors: competitive pressures emphasizing research over teaching for faculty and students; the collapse of the academic job market; and the proliferation of other specialized doctorates in music, business, fine arts, and many of the professions.

The P.P.D. idea may well share the D.A.'s fate. For those who believe that the status quo is perfectly satisfactory, that would be fine. But those who share a sense that there is a serious problem must attempt to learn from the failure of the D.A. (and the more recent success of the Psy.D. and other new degrees) to map our strategies for reform.

Next Steps

We believe that the Ph.D. and the Ed.D. in education are now so closely intertwined that the improvement of one will necessarily entail the improvement of both. Practical steps can be taken concurrently. Ultimately, this kind of change will occur from the bottom up, institution by institution, program by program. No institution can be expected to pull it off in isolation. Therefore, even as change occurs locally and experimentally, it must be supported by the progressive networking of individual sites prepared to form consortia that experiment with such efforts in collaboration. For the past 2 years, the Carnegie Foundation has been working with the Council of Academic Deans from Research Education Institutions (the association of education school deans). Many in this organization find our vision of the P.P.D. compelling.

One strategy is to create a design team, akin to the NBPTS's planning committee, and charge it with developing P.P.D. assessments. Students could participate in a high-profile but low-stakes assessment environment, an "assessment decathlon." This would be a viable model for gaining national acceptance of a set of assessments. Over time, we imagine that P.P.D. programs would emerge, more purposefully preparing students to document and demonstrate their competence in these areas. Meanwhile, a group of doctoral educators has begun to meet at the Carnegie Foundation to develop a plan for action.

However the leadership for P.P.D. development emerges, nurtured by the Carnegie Foundation and located in a coalition of leading schools of education, we believe this is the boldest and surest way to confront the serious problems that plague both of our doctorates in education. John Gardner, former president of the Carnegie Foundation for the Advancement of Teaching, once said that "what we have before us are some breathtaking opportunities disguised as insoluble problems" (Gardner, 1965). If we can bring the education doctorates for practice and scholarship in better alignment with their professional and disciplinary analogs, we will make a powerful contribution to American education.

NOTES

[1]An additional description of the USC case can be found later in this article and in other

publications of the Carnegie Foundation, as well as on the USC Rossier School of Education website (*http://www.usc.edu/dept/education/*).

[2]The estimate of the average time spent between receipt of the baccalaureate and start of the doctorate is derived from the Survey of Earned Doctorates reports. We subtracted the reported disciplinary average for registered time to degree from the total time between receipt of baccalaureate and receipt of doctorate. From "Summary Report 1999" (Sanderson, Dugoni, Hoffer, & Meyers, 2000) through "Summary Report 2003" (Hoffer, Dugoni, Sanderson, Sederstrom, Ghadialy, & Rocque, 2001; Hoffer, Dugoni, Sanderson, Sederstrom, Welch, Guzman-Barron, et al., 2002; Hoffer, Sederstrom, Selfa, Welch, Hess, Brown, et al., 2003; Hoffer, Selfa, Welch, Hess, Friedman, Reyes, et al., 2004), the data reported for education are consistent: Registered time to degree is 8–9 years, and time from baccalaureate to doctorate is about 19 years. There is a dramatic change in the most recent set of data, "Summary Report 2004" (Hoffer et al., 2005): Registered time to degree zooms to 12.6 years, and time since the baccalaureate drops to 17.2 years. We do not have a ready explanation for these changes and do not know if this is a data anomaly or a new trend.

[3]Of the disciplines that were part of the Carnegie Initiative on the Doctorate, education is the only one in which no disciplinary society has conducted a study of doctoral programs and doctorate recipients in the last decade. The American Association of Colleges for Teacher Education conducted an extensive survey in 1960, published in two volumes (Brown & Slater, 1960; Moore, 1960), with a 1964 follow-up study (Ludlow, 1964). To our knowledge, this is the last time a comprehensive effort was undertaken in the field. At that time, the majority of doctoral recipients reported seeking employment in colleges or universities. The estimate of the current situation is derived by dividing the estimated number of assistant professors in education from NSOPF-04 (U.S. Department of Education, National Center for Education Statistics, 2004)—13,500—by the number of education doctorates granted in the 6-year period between 1999 and 2004 from the Survey of Earned Doctorates—39,000. The result is 34.6%.

[4]Career outcome data are more easily found in some fields than in others, reflecting the priorities both of the disciplines themselves and of the federal government in data collection efforts. Selecting from the fields studied by the CID, the humanities have the highest rate of employment in postsecondary teaching positions: 73% of those within 5 years of receiving the doctorate (Ingram & Brown, 1997). This finding parallels more recent data of 75% in history (Bender, Katz, Palmer, & Committee on

Graduate Education of the American Historical Society, 2004) and 73% in English (Nerad & Cerny, 1999). In neuroscience, at least half take faculty positions, although data tracking is hampered by the fact that most students take several postdoctoral positions. The 2003 survey of neuroscience programs showed that 3% of graduates took faculty positions immediately upon receipt of the Ph.D., 38% of postdocs took faculty positions, and another 37% of the postdocs moved to another postdoc position (Stricker, 2003). In the life sciences, overall about 40% of those who are 10 years past receipt of the Ph.D. are in faculty positions (National Research Council, 1998, p. 35). Mathematics is more like the humanities: 60% of Ph.D.s take faculty positions (Kirkman, Maxwell, & Rose, 2005). Chemistry has historically strong ties to industry; ultimately, two thirds of Ph.D. chemists work in industry or government labs and about one third work in academia (Heylin, 2004).

[5]We recognize that historically the Psy.D. has been more analogous to the Ed.D. than the M.D., but the sprouting of freestanding Psy.D. programs has become worrisome.

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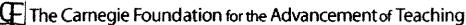
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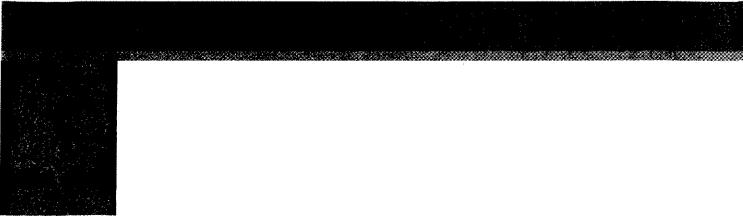
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The Carnegie Foundation for the Advancement of Teaching

Counting and Recounting: Assessment and the Quest for Accountability

Lee S. Shulman

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Accounting is essentially a form of narrative.
Dina Shulman

When my daughter Dina returned from her first class in managerial accounting early in her MBA program, I innocently asked how it had gone. I fully expected her to describe her boredom with the rigors of accounting, since pursuing an MBA was decidedly an afterthought for my iconoclastic daughter, who already held degrees in theatre and social work.

Imagine my surprise when Dina responded that accounting was unexpectedly interesting because, she now realized, it should be understood as a form of narrative, a kind of drama. Within the ethical and technical rules of the field, the task of the accountant is to figure out which of the stories of the company should be told through the medium of its "books." Accounting is basically about creating the plot, characters, and setting of the story. As the instructor explained to the class, "Your task is to render an account: to tell the facts of the case, the story of the condition of a company in an accurate and yet ultimately persuasive way."

I was reminded of this conversation as I read through the successive drafts of the Spellings Commission report, with its persistent refrain that higher education must become more accountable, more transparent, and more open to the scrutiny of its stakeholders. The key word is always "accountability," to which the canonical reaction among educators is a reaffirmation of the remarkable diversity of American colleges and universities and the dangers that accompany the specter of standardized testing and a "one-size-fits-all" approach to assessing the quality of a college education.

In the world of business, an account is a story told in quantitative form. It publicly documents all the income and investments that enter the company and all the products and liabilities that emerge from it, all its assets and debits, all its profits and losses. When the books balance, the account is closed: The story has been told.

Indeed, historian of science Mary Poovey argues in *A History of the Modern Fact* that a significant source for the modern conception of a scientific fact—that which is measurable, replicable, visible, quantitative, and credible—is the invention of double-entry bookkeeping in late-16th century England. Thus accounting was a source for modern scientific conceptions of evidence; then, in full-circle fashion, scientific doctrines became the basis for our contemporary conceptions of account-ability in education.

When I draw our attention, as Dina did mine, to the ghosts of narrative and story-telling that stand behind the counting, measuring, and computations that lie at the heart of modern assessment in the service of accountability, I do not aim to undermine the credibility of assessment. I am not referring to "mere storytelling" as if narrative is a lesser form of discourse. The connections between counting and recounting are built into the etymology of these words in many languages. Thus, in German, to count is zaehlen and to tell (a story) is erzaehlen. Even in Hebrew, a language with utterly different roots than English or German, the verb for counting is *l'spor*, while the word for telling is *l'saper*.

I believe the lesson is clear. How and what we choose to count and the manner in which we array and display our accounts is a form of narrative—legitimately, necessarily, and inevitably.

Tools for Counting and Recounting

When Benjamin Bloom led a group of university examiners in the development of the taxonomy of educational objectives in the late 1940s and early 1950s, their goal was to provide a structure within which assessors could determine which story they wished to tell about the learning of their institution's students. They had determined that most of the instruments then in use to assess students—and thus to render them, their teachers, and their colleges accountable—were exclusively stories of the acquisition and retention of knowledge, of

the students' success in recalling facts, events, principles, and concepts they had learned in class or read in their textbooks. Bloom and his colleagues argued that this was an impoverished story, one that missed the most important aspects of the account the examiners needed to give of students' learning.

By elaborating the cognitive outcomes of education into a taxonomy comprised of six categories—ranging from knowledge and comprehension through application, analysis, synthesis, and evaluation—Bloom and his colleagues developed a much richer array of plots and themes for the story of academic performance. A program that appeared to be achieving great success when knowledge alone was measured might look much less impressive if the "higher-order" processes were accounted for. Bloom and his associates also were committed to extending the story from the cognitive to the affective domains in order to include the development of emotions, motivations, passions, and identity.

The power of Bloom's approach to make visible important aspects of learning that would otherwise remain hidden (or to point out their absence) is nicely illustrated by a painful episode in my own history as a learner. When I was an undergraduate at the University of Chicago in the late 1950s, I attempted to cram for the end-of-year comprehensive examination in the history of western civilization—a nine-hour multiple-choice and essay test. I thought I had done quite well on the exam and was thus shocked to receive a "C" for the course. I asked to meet with a member of the Evaluation Office to learn why I had performed so poorly. We sat down and examined my performance, using Bloom's taxonomy as a template. I had "aced" the multiple-choice section, with its emphasis on recall; cramming can be a pretty good strategy for remembering facts and ideas, at least over the short term. But I had simply not studied well enough to integrate the ideas and to be able to synthesize new interpretations and arguments using the knowledge I had crammed into my head.

Had the accounting been limited to a factual knowledge of history, the Shulman narrative would have been one about a highly accomplished student of history. But the richer plot afforded by the design of this assessment told a more complex and less comforting story: Shulman knew the facts of history well but had not yet learned to use them in the service of new ideas or to solve novel problems.

Narratives are enriched not only by changes in plot and theme; introducing new characters as protagonists also has a profound effect. Thus, if the narrative were to examine the learning of discrete sub-groups of students, its complexity and nuance would increase. Is this an institution where students of one particular ethnic background score well across the categories while others do well only in knowledge acquisition but not in the higher-order achievements? Or is this a college where those majoring in the sciences flourish while those studying the humanities flounder? Each of these is a legitimate, "true," and reasonable account—on which the school's accountability will rest. Numbers may offer an illusion of irreducible accuracy and credibility, but they can only be interpreted in the context of the narrative selected and, indeed, the narrative not taken.

The story told by an assessment is thus ultimately a function of the dimensions of measurement that determine the possible directions the narrative might take. So accountability requires that we take responsibility for the story we commit ourselves to telling. We must make public the rationale for choosing that story as opposed to alternative narratives. This requires that we first deliberate with our colleagues and stakeholders about the goals we set, the missions of our schools, and the elaborated conceptions of our purposes.

Only then should we defend the adequacy of the forms of measurement and documentation we employ to warrant the narratives we offer. In the case of educational accountability, we are limited in our recountings by the instruments we use to count. As my colleague Lloyd Bond regularly reminds me, "Since we can't normally measure everything that counts, we can be sure that what will count is what we choose to measure." Taxonomies and indicators are critical aspects of how and with what coherence and credibility these stories can be told.

We can readily see the narrative possibilities for these accounts by examining some of the instruments and indicators that the Spellings Commission singled out. The Collegiate Learning Assessment (CLA) has received a great deal of attention recently and is described in some detail by Richard Shavelson in this issue of *Change*. What story does the CLA tell? The broad domains of its account are critical thinking, analytical reasoning, problem-solving, and writing. The heart of the narrative is the value added by a college education to the educational outcomes of students, rather than the absolute levels they achieve. It chronicles the development of their learning, thinking, judgment, and communication skills and does not aim or claim to assess domain-specific knowledge, skills, values, or appreciations. Thus, students' performance on the CLA does not correlate with their majors. It is currently used to tell a story about institutions, not individual students.

The National Survey of Student Engagement (NSSE) tells a very different kind of story. Although the items are designed to serve as proxies for outcomes, the instrument itself measures the kinds of experiences students have over the course of their academic careers. While the CLA looks for changes in the performance of students, the NSSE is more attuned to the opportunities the institutions offer and the advantage the students take of them. The NSSE describes institutions in terms of their level of academic challenge; the opportunities they provide for active and collaborative learning; the extent and quality of students' interactions with faculty; the availability and access to enriching extra-curricular experiences; and the extent to which the campus offers a supportive environment for learning and student development.

It's no accident that so many institutions (more than 970 for NSSE and 250 for the CLA) have opted to use one or both of these instruments. Each offers a very different narrative of educational opportunities and accomplishments. While they were not designed to fit together elegantly, they do offer different perspectives on this question: What account can be given of this institution's contribution to the education of its students? Notice, however, that neither instrument tells us anything about the discipline-specific aspects of learning. Do students learn to think like historians? Do they learn to reason quantitatively? Do they come to know the fundamental concepts of science and technology that are needed in the 21st century economy?

The Educational Testing Service's Measure of Academic Proficiency and Progress (MAPP), another instrument specifically identified by the Spellings Commission, attempts to tell a story that gets at some of these differences. Its chapter headings are "Reading," "Writing," "Critical Thinking," "Mathematics," "Humanities," "Social Sciences," "Natural Sciences," and—naturally—a total score. But before we leap to the conclusion that in the MAPP we now have a comprehensive, domain-specific map of student learning over time, we must note that the long form of the assessment takes all of two hours and includes 108 items, which is rather sparse for a substantive evaluation across so many areas. And ETS also offers an abbreviated form of the MAPP that contains only 36 items and can be administered in a total of 40 minutes!

My short tour of these tools and instruments (and of course there are many others that could be mentioned) is meant to point up both possibilities and limitations. We are better off with the CLA, the NSSE, and other new tools than without them. **But the bottom line is that the instruments now available for accountability purposes are necessarily short, superficial, and limited.** They are designed to interfere minimally with instruction and to be sufficiently general and unrelated enough to the details of any institution's curriculum that they can be broadly used. **In vivid contrast, the great promise of assessment is its deployment _in the service of_ instruction, its capacity to inform the judgment of faculty and students regarding how they can best advance the quality of learning.** So the challenge before us is to develop systems of assessment and accountability in which the internal uses of assessment for instruction—and the external uses of assessment for accountability and transparency—are carefully weighed. Ultimately, these are the books that need to be balanced—or, when necessary, to be strategically unbalanced.

So what are the lessons to be learned from our sense of accountability as narrative and argument? What tools and approaches can provide the most valid account of the condition of higher education and its constituent institutions? Is the most valid account necessarily the broadest and most comprehensive? Is the best strategy to develop highly specific, narrowly targeted instruments that offer deep insight into particular kinds of learning and development? Should we be looking at institutional performance or at the learning of individual students?

Seven Pillars of Assessment for Accountability

Most of the principles I want to offer here are familiar, even venerable. The fact that they remain pertinent suggests how persistent many of the challenges of assessment remain.

1. Become explicit about the story you need to tell and the rationale for choosing it. An account is one story among the many that could be told about the quality and character of an educational experience. No instrument can claim validity, no account can earn a warrant, without a clear explanation of why this story is being told instead of others. Indeed, it should be clear what the major alternative accounts could be and why they were rejected. Any one form of assessment, however rich, is a compromise, a choice among a set of legitimate possibilities.

2. Do not think that there is a "bottom line." An early step in the deployment of any instrument, new or old, should be a process of locating the instrument in a larger conceptual framework that explicitly stipulates what it does measure _and_ what it does not. Since there is no real bottom line, the first obligation of the person rendering an account is to take responsibility for locating its unavoidable insufficiencies.

Shavelson does this quite clearly for the CLA in this issue of _Change_, locating its domains of measurement within a figure that sketches out the broader domains that it does not assess. Bloom's classic taxonomies provide tools that can be employed in a similar manner.

Moreover, judgments of validity are never a property of measuring instruments per se. Validity can only be judged when we examine assessment results _in the context of a particular argument or narrative_. The cardinal principle of accountability is that counting is only meaningful and useful in the context of valid recounting. Indeed, we might make a distinction between measurement and assessment in this regard, with assessment referring to the manner in which one arrays, displays, and interprets particular measurements in the service of judgments, decisions, and actions.

3. Design multiple measures. As the stakes associated with a measurement rise, the restrictions on its form rise concomitantly—thus the need to move from judgment to measurement and from interpretation to objectivity. But as in any form of social inquiry, the price of precision is narrowness of scope. Therefore, a third principle that follows from the "no-bottom-line" observation is that nearly any use of assessment for serious practical and policy guidance should intentionally employ an array of instruments that will constitute a "union of insufficiencies." It is dangerous to permit highly consequential decisions of policy and practice to rest on the results of a single instrument, however carefully it has been field-tested and ostensibly validated.

In the Texas system of accountability for colleges and universities, for example, more than a dozen instruments are recommended for use, including the National Survey of Student Engagement, the Collegiate Learning Assessment, and multiple indices of access, graduation, and post-graduation success, often broken down by the racial and ethnic backgrounds of the students. Using this array of indicators enables others to render accounts that respond to their questions.

4. Work on combining multiple measures. A fourth principle is that a set of instruments, each with is own scores, indices, and observations, will deliver on its promise only if we take on the hard task of developing rules for deciding how to display, organize, and aggregate those indicators for making decisions. Inevitably, those decisions are functions of human judgment—which is, after all, an essential element in any such process, not something to be feared or avoided. On the other hand, there is a good argument to be made for "mechanical combination," in which general policies are debated and determined in such a way that algorithms for systematically

combining the available data can be computed objectively. The late Hillel Einhorn of the University of Chicago referred to this process as "expert measurement and mechanical combination."

5. Remember that high stakes corrupt. A fifth principle is that high stakes attached to assessments have a tendency to distort the educational and evaluation processes they were intended to support. This is not only because teachers and students are sorely tempted to cheat when the stakes are high. It is also because when test designers know that high stakes are involved, they have a tendency to use items less likely to be uncertain or subject to competing judgments and arguments. As the instruments are weeded of such items or sections, they gain reliability and objectivity but often at the sacrifice of validity and nuance.

The most significant feature of high-stakes assessment is this: The higher the stakes, the greater the likelihood that teachers will teach to the test. These assessments must be designed so that the tests are *worth* teaching to. This is not a trivial challenge. It cries out for a strategy of embeddedness.

6. Embed assessment into ongoing instruction. Assess early and assess often. In my early days in Chicago, we used to joke, "Vote early and vote often." High-stakes assessments are likely to be used very late in the course or program where they are employed in the service of accountability. But the later the assessment, the later the knowledge of results, and the less likely it is that the assessments will yield information that can guide instruction and learning. I call these "high-stakes/low-yield" forms of assessment. They may satisfy accountability mavens but have little educative value. Instead, we should develop low-stakes/high-yield forms of assessment, much like the "running records" used by K-12 reading teachers or the routine medical history, physical examinations, or lab tests that physicians and nurses administer.

Assessment should not only serve as an external evaluation and public conscience for higher-education institutions; at the very least, it also should do no harm to instruction, and at best, it should guide, support, and enrich it. When we embed assessment in instruction, it is much more likely that what is assessed will contribute to and be compatible with the core objectives of instruction. If colleges and universities can become active pedagogical laboratories, assessment that is useful for both instruction and accounting will be actively embedded and used continuously.

Embedded measures will necessarily be designed with a different "grain size" from those designed exclusively for external, high-stakes assessments. They will be more particular than general; more dedicated to measuring individual student progress than institutional success; repeatedly administered rather than being single end-of-course events; and highly transparent to students and teachers. They will have quick turn-around times rather than providing the highly secure, secretive, and delayed feedback of current high-stakes environments. This is assessment as a regular physical exam rather than as a public autopsy.

This aspect of assessment emphasizes the need for *bilateral* transparency. That is, the progress students are making needs to be as accessible to them as it is to teachers or policymakers. Such transparency can empower students to take greater control of their own destinies. It is, after all, ultimately the student who must own her or his understanding and progress. Systems of assessment that are opaque, secretive, and slow-responding cripple students' sense of responsibility.

7. Become an active and collaborative site for research on new forms of assessment, new technologies to support such work, and better strategies for integration of such approaches with instruction. If the use of single-instrument, high-stakes/low-yield assessment tools will, as many of us have argued over the years, undermine the most important goals and purposes of education, then those of us who design and deploy assessments have a professional and ethical responsibility to design them to contribute more positively to the quality of teaching and learning for all students. The need now is for new assessment research and development, a project that can succeed only if institutions collaborate, experiment, and open their windows so that national work can move our fields ahead.

We need a strategy to combine the local with the national and to meld low-stakes assessment with an accountability approach that will be minimally corrupting. This will require a change in the reward system of higher education to encourage faculty to engage in such experimental approaches to their teaching, rather than worrying that they will be punished if they permit such activity to interfere with more traditional forms of research and scholarship. In the public-policy arena, the culture of competition and ranking, of punitive reactions to honest accounting, of oversimplification via report cards and bottom lines must be resisted.

Taking Control of the Narrative

One of the reasons Dina was so taken with the metaphor of narrative in accounting was that the career she had pursued just before her MBA program was as a psychotherapist. During her graduate study in social work, she had been drawn to "narrative therapy" as an approach to counseling. In narrative therapy, the central idea is that each one of us is living the life of a character in a play or a novel. Some of us feel that we have a great deal of influence over the plot of the play, while others, alas, feel that they are characters in someone else's drama. The goal of the psychotherapy is to support one's clients in seeing the narratives they feel they are living but have no control over, and to develop strategies for becoming the authors of their own stories, able to act responsibly in the situation and exercise real agency over their lives.

I often feel that academics, in the face of the growing volume of calls for accountability, have developed a sense of higher education as victim, swept away by a powerful current over which we can exercise little influence. We think of accountability as a sinister plot invented by others, controlled by the enemy, and designed to take over our professional lives and make us unhappy. We must either paddle upstream, resisting all the way, or just go with the flow, adopting a stance of minimal compliance while hoping to find a little eddy in which we can float about undisturbed. But skilled white-water rafters and canoeists remind us that neither paddling against the

current nor going with the flow is a particularly fruitful tactic. The best way to get where *you* want to go when negotiating the rapids in a fast-moving stream is to *paddle faster than the current.*

In this spirit, our responsibility is to take control of the narrative. We educators must take advantage of the deep connections between counting and recounting to define the characters, the plots, the foreground, and the background of the new accountability systems. We must summon the creative energy and ambition to take advantage of the momentum (and resources) unleashed by the new policies and exploit them to initiate the long-overdue progress in assessment needed to improve the quality of learning in higher education.

We are obligated to recount the narratives of most interest to our key stakeholders, but we cannot be limited to those alone. We must display the evidence of teaching and learning (and their embarrassments) through the multiple legitimate narratives we create about our work and our students' fates. We must account for higher-order understanding and critical thinking, in addition to factual knowledge and simple skills. We must tell of the development of civic responsibility and moral courage, even when our stakeholders have not thought to ask for those books.

Moreover, we must make the process through which we render the accounts transparent to our stakeholders. The most important of these stakeholders are our students, who need to feel a sense of agency and responsibility in this relationship as well.

The current quest for accountability creates a precious opportunity for educators to tell the full range of stories about learning and teaching. Counting and recounting can only be pursued together. Counting without narrative is meaningless. Narrative without counting is suspicious. We now have an opportunity to employ the many indicators of learning that we can count for the most important stories we have to tell.

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Resources

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