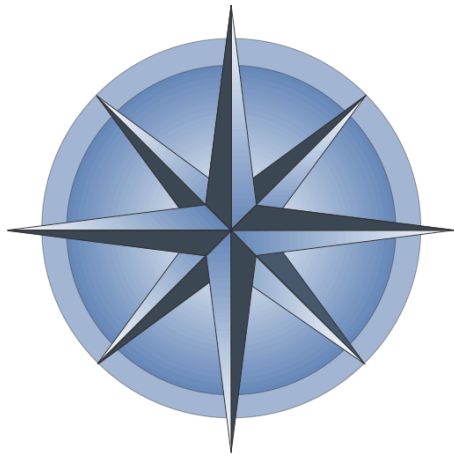


**School Leadership Study
Developing Successful Principals**



**Preparing and Supporting Principals for
Effective Leadership: Early Findings from
Stanford's School Leadership Study**

by
Michelle LaPointe, Debra Meyerson & Linda Darling-Hammond
Stanford University

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About the School Leadership Study

Principals play a vital role in setting the direction for successful schools, but existing knowledge on the best ways to prepare and develop highly qualified principals is sparse. What are the essential elements of good leadership? How are successful leadership development programs designed? What program structures provide the best learning environments? What governing and financial policies are needed to sustain good programming? “School Leadership Study: Preparing Successful Principals” is a major research effort designed to answer these questions.

Commissioned by The Wallace Foundation and undertaken by Stanford University in conjunction with The Finance Project, the study is examining eight highly-developed pre- and inservice program models to address key issues in developing strong leaders. Once effective processes have been identified they can be replicated, ensuring that more and more schools become vibrant learning communities under the direction of outstanding leaders.

SELI
Stanford University
School of Education
520 Galvez Mall
Stanford, CA 94305-3084

Phone: 650.724.7384
Fax: 650.736.0968
EMAIL: principalstudy@stanford
www.seli.stanford.edu

INTRODUCTION

Public demands for more effective schools have placed growing attention on the crucial role of school leaders — a professional group largely overlooked by the various educational reform movements of the past two decades. Evidence suggests that, second only to the influences of classroom instruction, school leadership strongly affects student learning (Leithwood, Seashore-Louis, Anderson, and Wahlstrom, 2004). Principals' abilities are central to the task of building schools that promote powerful teaching and learning for all students.

While principals are becoming instructional leaders, they are still expected to function as the school's business manager, liaison to the district office, spokesperson to the community, legal expert, and disciplinarian. The demands of the job have changed so that traditional methods of preparing administrators simply don't prime aspiring principals for their current realities (Elmore, 1999, NCATE, 2000; Dilworth and Thomas, 2001; Peterson, 2002). Given these demands, principals need additional support to develop into their ever-expanding role. Although there is some research that examines strategies used to help principals with their increasingly diverse roles, little is known about how to combine curriculum and methods to craft a program that develops or sustains successful school leaders. For example, while it is clear that clinical fieldwork is important for developing a principal's abilities (Kolb and Boyatzis, 1999; Daresh, 2001; Baugh, 2003), it is not clear what internship structure and duration are most effective in cultivating the capacity to lead. Little is known about how professional development programs impact the practice of principals. To increase the knowledge about professional development programs, in 2003 the Wallace Foundation commissioned a study of innovative professional development programs that develop or sustain school principals. Stanford's School Leadership

Study (SLS) is documenting highly developed pre- and in-service professional development programs for principals. This paper highlights some of the existing research on principal preparation and professional development and explores preliminary findings from the SLS.

EXISTING RESEARCH

To build a foundation for the study, we reviewed existing research discussing the preparation and professional development of principals. The *Review of Research** (2005) offers four key findings:

Essential Elements of Good Leadership. Growing consensus on the attributes of effective school principals shows that successful school leaders influence student achievement through two important pathways — the support and development of effective teachers and the implementation of effective organizational processes. This consensus is increasingly reflected in preparation and licensing requirements, which generally subscribe to a set of common expectations for the knowledge, skills, and dispositions of school leaders. Even with the growing body of evidence, additional research is necessary to determine the impact and relative importance of leadership in such key areas as curriculum, assessment, and adaptation to local contexts.

Effective Program Design. Research on principal preparation and development programs suggests that certain program features are essential in the development of effective school leaders. There is also little discrepancy between guidelines for pre- and in-service programs. Evidence indicates that effective programs are research-based, have curricular coherence, provide experience in authentic contexts, use cohort groupings and mentors, and are

The *Review of Research* is available on-line, at <http://seli.stanford.edu/research/sls.htm>

structured to enable collaborative activity between the program and area schools. Despite existing consensus, empirical evidence for the impact of these features is currently minimal.

Multiple Pathways to High Quality Leadership Development. As the focus on principal preparation and development has intensified, innovations in both leadership development programs and program structures have proliferated. Programmatic approaches to leadership development vary, with some reformers emphasizing leadership and management skills over academic proficiency while others support the cultivation of teachers who understand instruction deeply and demonstrate leadership potential. Structurally, most preparation programs fall under one of four categories while a diversity of in-service programs exist. Differentiating these programs requires in-depth research into the implementation and coherence of program features.

Policy Reform and Finances. Effective policy reform is aligned with knowledge of program components and the systems that support their implementation and sustainability. Additional research is needed to examine how various programs are implemented, governed, and financed.

Our review of the literature made it clear that little is known about how exemplary programs develop and support school leaders — how do they enact high quality internships, create a cohesive and integrated curriculum, and develop the leadership practices important in the changing role of principals? It also became clear that the field is quickly shifting — both in its conception of the role of the principal and what sorts of institutions are preparing and supporting them in that role. The School Leadership Study addresses several of these gaps in the current literature.

DESCRIPTION OF THE STUDY

The School Leadership Study was designed to contribute important data on how high quality pre- and in-service programs are structured, how they implement the effective strategies noted in the research literature, and the impact of program graduates in the schools they lead. The study examines whether program components triangulate with graduate practice. It also analyzes whether graduates experiences are consistent with program claims, if principal practice reflects what they learned in the program, and if what they learned is reflected in the curriculum, instruction, and organization of schools.

Research questions. The School Leadership Study is guided by the following research questions:

- (1) Qualities of Effective Programs.** What are the range of qualities and design principles displayed in exemplary programs? What are the components of effective training programs and ongoing professional development for principals? How are they designed and implemented?
- (2) Context of Exemplary Programs.** What role do state, district, and institutional policies play in the development of principal development programs? What does it cost to provide an exemplary professional development program?
- (3) Impact of Exemplary Programs.** Are aspiring principals developing the knowledge and skills taught by these programs? Do graduates of exemplary programs report leadership practice that's more instructionally focused, relative to other leaders?

Using the framework of these questions, the study focuses on eight distinct, but exemplary programs, in five different states. In addition, in collaboration with The Finance Project, findings from the SLS will illuminate how state policy and financing profiles enable or constrain the development of high quality leadership development programs.

Sample. Based on expert interviews, a review of the research, and initial research on a much larger sample of programs, we selected eight programs with reputation in the field for being effective. To facilitate deep study of context, the research team selected a sample of both pre- and in-service programs with several cohorts of graduates who work in a concentration of districts. With one exception, these programs represent a continuum of principal preparation and on-going professional development programs — generally through district-university partnerships. These exemplary programs were also selected to represent a variety of approaches with respect to their design, policy context, and the nature of the collaboration with their district.

Our sample includes the following programs:

Pre-service	In-service
University of San Diego	San Diego Public Schools
Bank Street College (NY)	New York City Public Schools - Region I
University of Connecticut	Hartford School District (CT)
Jefferson County (KY)	Jefferson County (KY)
Delta State University (MS)	

The program sample was augmented with an additional three states (Georgia, North Carolina, and Delaware) to allow for a broader perspective on how state policy and financing structures influence program financing, design, and orientation.

The eight professional development programs documented in the SLS represent innovative curriculum and instructional methods, and reflect a variety of structures, collaborations, and institutional arrangements. In addition to representing both pre-service and in-service, programs also fall into one of four general types: university-based programs, district

initiated programs, programs run by third parties* (including states), and programs run through partnerships between stakeholders (Davis, Darling-Hammond, LaPointe, and Meyerson, 2005).

University-based programs. Universities have traditionally offered courses for prospective administrators that are tied to state credentialing requirements and framed around discrete subjects (e.g., school law, budget management, and personnel management) rather than interdisciplinary themes. Our nationwide examination of pre- and in-service programs found a number of innovative university-based programs that have incorporated many of the effective program components described in the research. Although we discovered other high quality university programs in our initial review, we narrowed our sample of university-based programs to the University of Connecticut and Delta State University in Mississippi.

District Efforts to Develop Effective Principals. The second type of program includes those developed and operated by school districts. In the wake of liberalized policy developments and certification requirements in some states, the emergence of district owned and operated programs has become an increasingly attractive way of feeding the administrative pipeline with qualified candidates who are well-versed in the needs, structures, and cultures of the sponsoring district. These programs are highly contextualized, allowing the district to prepare school leaders for specific challenges faced in their schools. Our study highlights efforts in Jefferson County, KY, and Hartford, CT.

Partnerships that Develop School Leaders. Traditional principal preparation programs often to seek support from other organizations and local school districts to make their work more relevant. The need for stronger clinical training for aspiring administrators has encouraged a

* Third-party, independent professional development programs (e.g. New Leaders for New Schools, Big Picture Company) were excluded from our sample because they did not meet our inclusion criteria: a substantial number of graduates in a particular district or region, and graduates who have been school principals for five or more years. Two state-run academies will be examined as part of the sub-study on the state context, and are discussed later in this paper.

growing number of universities to collaborate with districts and schools as equal partners in the design, implementation, and assessment of pre-service principal preparation programs. Likewise, many district-based professional development efforts have failed to benefit from the intellectual resources available in their local universities. Increasingly, districts and universities are sharing resources to provide comprehensive education and field experiences to perspective principals and school leaders. The SLS will share lessons from partnerships between the University of San Diego and the San Diego Unified School District, and Bank Street College and Region 1 (formerly District 10) in New York City.

Comparison sample. Our comparison sample was drawn from the membership of the National Association of Elementary School Principals (NAESP) and the National Association of Secondary School Principals (NASSP). We drew a national sample, but over-sampled in the eight states being examined in the SLS. This allows us to compare overall program responses to a national comparison group, and to also compare each program sample to principals from within their state. Finally, it facilitates analysis of the possible impact of state policy on a sample of principal within each of our eight states.

Methodology. The SLS combines multiple methods of data collection to build case studies describing each program and to draw general inferences across the cases. Data sources include:

- surveys of program graduates contrasted with a national sample of comparison principals*
- surveys of teachers working for principals who are program graduates;
- interviews with program participants and graduates, program faculty and staff, and district staff who hire or supervise principals;

* We mailed out 721 principal survey to program completers (graduates of pre-service programs and principals in districts with in-service initiatives), and 1,229 to comparison principals drawn from the membership of NAESP and NASSP. Our overall response rate was 54.21%. Response rates among the eight programs ranged from 50% from Hartford Public School principals to 71% from Delta State University graduates.

- observations of program activities and the schools led by a sample of principals who are program graduates; and
- analysis of program documents.

The SLS completed data collection in early 2006, and the research team has conducted its first of a series of iterative rounds of data analyses.

Analysis. Qualitative and quantitative data were systematically analyzed to develop a case study for each program. The data also will be analyzed across cases to draw inferences about principles and practices common across the differentiated cases as well as to develop a typology of differences illustrated by the distinct exemplars, and finally analyzed by state to explore the relationship between state policy and the nature of the exemplary leadership development program in those states.

Data analysis followed an iterative process that included moving back and forth between quantitative to qualitative data, comparing coding schemes across cases, and refining the final coding scheme for each case to reflect both common themes and unique characteristics of each case. Quantitative analysis to date has focused on developing descriptive statistics from the survey results.

Each site visit team has produced a preliminary case study of the program they visited, merging in relevant survey data to provide demographic information about program graduates and a glimpse of graduates' perceptions of leadership and their leadership abilities. Case studies include budget information to determine the cost of the program (both to the institution implementing the program and to individual participants). Case studies also incorporate profiles of a small number of graduates and their schools. When data are available, school profiles fold in survey responses from teachers at those schools. In addition, survey data were analyzed across all programs, comparing their responses with the national comparison group.

INITIAL FINDINGS

The following is a summary of initial findings from the SLS. (Data tables are included in the appendix.)

Characteristics of Respondents. High quality, innovative programs have the reputation of recruiting aspiring principals from under-represented populations, to bring new people into the principalship, and to develop the leadership qualities of experienced teachers. Our survey of program graduates reinforced this reputation. In contrast to comparison principals, program principals are more likely to be women (72% v. 48%), more likely to be from a racial or ethnic minority (44% v. 8%), and are slightly younger than comparison principals (47 v. 50 years old). High quality programs serve candidates who better reflect the teaching profession and the diversity in the student population. (See Appendix A, Table 1.)

School Characteristics. In contrast to comparison principals, program graduates are more likely to lead schools with greater needs. A much larger proportion of program principals reported working in an urban school than comparison principals (72% versus 18%). In addition, program principals reported a larger average number of students in school, percent of minority students (66% minority v. 27%), and percent of students eligible for free or reduced-price lunch (69% eligible for lunch v. 42%). (See Appendix A, Table 2.)

Experience in Education. Principals in the program and comparison groups had similar amounts of teaching experiences (13.39 years v. 14.74) but the types of experiences varied. Program principals were less likely to have taught secondary school (28% v. 40%) and were more likely to have been a special education teacher (19% v. 10%). Program principals were also less likely to have been a physical education teacher (.01% v. 18%) or an athletic director or

coach (14% v. 39%). In contrast, they were much more likely to have been a literacy or math coach (23% v 8%). (See Appendix A, Table 3.) Thus, programs in our sample in their selection were more likely to emphasize backgrounds that would lead to strong instructional leadership.

Although principals in both groups had similar amounts of teaching experience, the program principals had less overall leadership experience than comparison principals and were less likely to hold permanent certification. Program respondents have been principals for nearly five years, in contrast with nearly 10 years for the comparison group. While nearly two-thirds of program principals held permanent certification as a principal (v. 84% of the comparison principals), one-third held probationary or initial certification (v. 10%). Some of these differences can be explained by the fact that we targeted program principals who had completed their credentialing program in the past 5 years. Some states issue an initial or probationary administrator license, which is converted to a permanent license upon passing a state test or completing a set of in-job requirements or after serving as a principal for a certain amount of time. Given that we surveyed program principals who have graduated within the past five years, the fact that program graduates have been principals for an average of 4.83 years is remarkable. When broken out by program type, principals in our program districts have been principals longer (5.8 years) than graduates of the exemplary pre-service programs (3.41 years). Principals in three of our districts (San Diego, Hartford, and Jefferson County, NY) have been principals for tenures similar to the comparison group principals. (See Appendix A, Table 4.)

Description of the Pre-Service Experience. Graduates of exemplary pre-service programs reported higher quality credentialing experiences. They were more likely to be recruited into their credentialing program and less likely to pay for the program on their own. When compared to the comparison group, a higher percentage of graduates were referred to or

recruited by their program (62.1% v. 40.6%). Graduates were more likely to get assistance in paying for the cost of their credentialing program. Among program respondents 52.8% paid only some of costs of program (v. 24.9%). Nearly two-thirds of the comparison group paid for all their costs themselves, in contrast to 38.3% of graduates of exemplary pre-service programs. (See Appendix A, Table 5.)

Quality of credentialing program. Overall, graduates describe the quality and attributes of their program and internship more positively than comparison principals. (See Appendix A, Table 6.) They reported that their programs implemented strategies and structures recommended in the research literature, including: a comprehensive and coherent program of study; program content that stressed instructional leadership and leadership for school improvement, faculty who were practitioners and knowledgeable in their field of expertise; learning in a cohort structure; the integration of theory and practice; and extensive opportunities to reflect on their experiences and development as a leader. (Those components were rated a 4 or better, on a scale of 1-5. These ratings were generally about 1 point higher than the ratings given by the comparison group, and the differences in the ratings were statistically significant.)

Internships. In contrast to the comparison principals, graduates were more likely to report that, as part of their credentialing program, they participated in an internship (85.3% v 78.5%). These internships appear to be of higher quality. (See Appendix A, Table 8.) Program respondents were more likely to complete a full-time internship (54.9% v. 31.7%), to intern outside of the school where they taught (57.5% v. 14.7%), and to have a mentor who was readily available (96.2% v 88.8%).

Perceptions of the Principalship. Program principals have a more positive perception of the principalship. They were more likely to agree that the principalship provides them with

opportunities for professional growth (4.85 v. 4.69) and enables them to develop relationships with others inside and outside the school (4.79 v. 4.63). Program respondents feel that being a principal enables them to influence school change (4.86 v. 4.72). They also were less likely to report that being a principal decreased opportunities to work with children (3.19 v. 3.50). (See Appendix A, Table 9.)

Leadership Practice. Program principals were more likely than comparison principals to report a variety of instructional leadership practices daily or more than once a week, including: facilitating student learning; building professional learning community among faculty and other staff; fostering teacher professional development; providing instructional feedback to teachers; working with teachers to improve teaching practices and to resolve challenges facing the school; and using data to monitor school progress, identify problems and propose solutions. In fact, the activities that program principals were less likely to engage in on a regular basis were related to managing the school facilities, maintaining building security, enforcing school rules, attending district meetings, working with outside agencies, and working with parents and the community. Program principals appear strongly focused on leading teachers and improving instruction in the classroom. (Respondents were asked to rate how often in the last month they engaged in the following activities, using the following scale: 1- Never; 2- Once or twice a month; 3-Once or twice a week; 4- Daily.) (See Appendix A, Table 10.)

On-going Professional Development. Program principals attended more professional development than comparison principals, and found the professional development more helpful. Program principals were nearly twice as likely to visit other schools, to participate in a network of principals, to be mentored by another principal, and to observe and critique the practice of other principals. They are also somewhat more likely to participate in professional development

with teachers from their schools. (See Appendix A, Table 11.) Principals from the district-sponsored in-service professional development programs completed more professional development and were motivated to do so by district requirements. Slightly more program principals agree that their district supports their professional development. (See Appendix A, Table 12.)

State Policy. States play an increasingly active role in promoting effective educational leadership. States actions can include aligning budget and state processes with leadership priorities, developing a pool of potential school leaders, and promoting more rigorous licensing and credentialing. Many states have launched new efforts to reform principal preparation and professional development programs in ways that are both more productive for schools and more sustainable for those who aspire to lead. These efforts include reforming standards for licensure requirements and performance assessments, influencing the content and focus of principal preparation programs.

In addition to setting policy and financing programs to develop school leaders, some states are developing direct approaches to training. Several states have created leadership academies to support the ongoing development of principals and, in some cases, superintendents and other leaders as well. These academies often provide a range of programs for leaders, or leadership teams, at different stages of their careers and facing different challenges. Their strategies include workshops and institutes that occur throughout the academic year and can be organized as part of a long-range professional development plan, as well as principal networks and, in some cases, coaching or internship models. Academies often partner with local universities and districts to meet particular needs. The SLS will highlight Georgia's Leadership Institute for School Improvement (GLISI) and North Carolina's Principal Executive Program.

Through a series of interviews with key state informants, The Finance Project is beginning to profile the state policy and financing context in each of the eight states included in our study. Their preliminary analysis has developed a rough framework to categorize the policy levers used in these states. State activities include regulation and accountability and infrastructure building and planning. Examples of regulation and accountability include New York and Connecticut. In 2004, New York revamped standards for preparation programs. In effect, all principal certification programs were de-certified, and had to re-apply to the state to become authorized providers of principal certification. Connecticut recently initiated a new credentialing exam, principal evaluation process, and professional development guidelines. Kentucky and Delaware offer examples of infrastructure building and planning. The Commonwealth of Kentucky studied supply and demand for principals, and held a conference on improving recruitment and preparation. Delaware organized a task force to make recommendations to the governor, and funded research on distributed leadership.

CONCLUSION

Principals play a vital role in setting the direction for successful schools, but existing knowledge on the best ways to prepare and develop highly qualified candidates is sparse. What are the essential elements of good leadership? How are successful leadership development programs designed? What program structures provide the best learning environments? What governing and financial policies are needed to sustain good programming? Stanford's School Leadership Study seeks to answer these questions. Once effective processes have been identified they can be replicated, ensuring that more and more schools become vibrant learning communities under the direction of outstanding leaders.

Initial findings from the case studies suggest that there are some consistent cross-program characteristics at the core of these exemplary programs. Programs had a strong leader, championing their development. Recruitment and admission practices were rigorous, admitting strong candidates into the programs. Programs were aligned with national, state, district, and professional standards. Programs formed collaborative relationships, working with institutions in their region to provide a comprehensive and integrated experience for program participants. Coursework was linked to robust internships. Cohorts were not simply a way to group candidates, but used as a pedagogical tool to teach teamwork and model distributed leadership. Signature pedagogies (e.g. “Walk Throughs”) appear increasingly common across programs. In addition, programs maintained an intense focus on instructional leadership.

There are several differences that distinguish these programs from each other. While programs use comparable rhetoric about instructional leadership there are differences in how it is enacted through their program focus and the experiences they provide for participants. There are some philosophical differences, too, that shape the focus of the program. At some programs, the targeted learner is the individual principal while in other cases they focus on the entire system. This influences whether the programs provides a treatment for individual aspiring principals or is a lever in district reform.

Further analysis will explore issues raised by the preliminary findings. For example, it is becoming clear that state fiscal support and policy context shapes programs in a number of ways. State funding is not the only or even the primary support for leadership development. Foundations have also provided substantial support to the programs in our study. In both cases, what is the implication for program sustainability when outside, “soft” money expires? Finally, the programs’ relentless focus on instructional leaders represents a paradigm shift in the

conception of the role of the principal, but has that become a reality in schools and districts? Are principals being prepared – and supported – to be both instructional leaders and building managers? More importantly, the role of the assistant principal is still focused on management and discipline issues. Since this is the entry level position in the field of educational leadership, are candidates being prepared for their initial job upon certification?

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APPENDIX A: DATA TABLES

Table 1: Characteristics of Respondents

	All Program Respondents	National Comparison
Male	28.0% n=112	53.8% n=335
Female	72.0% n=288	46.2% n=288
White	66.8% n=256	91.3% n=556
Black	22.7% n=87	5.3% n=33
Asian	2.3% n=9	0.8% n=5
Latino	5.5% n=21	1.0% n=6
Other Race	2.6% n=10	1.6% n=10
Average age	46.89 n=370 SD=8.73	50.00 n=612 SD=7.97

Table 2. Characteristics of Respondents' Schools

	All Program Respondents	National Comparison
Average percentage of students eligible for free/reduced-price lunch	69.81% n=294	39.57% n=524
Average percentage of students classified as racial/ethnic minorities	66.60% n=293	29.08% n=542
Average school enrollment	714.53 n=301 SD=590.78	674.48 n=569 SD=543.90

Table 3. Respondents' Teaching Background

	Pre-Service Graduates	District Principals	National Comparison
Average number of years elementary/ secondary teaching experience	12.79 n=212 SD=6.92	14.33 n=227 SD=7.76	14.14 n=619 SD=8.17
Percentage of respondents, by subject area /grade level taught:			
• Elementary School	67.3% n=144	67.8% n=156	55.0% n=345
• Middle School	48.1% n103	40.0% n=92	47.4% n=297
• Secondary School	31.8% n=68	30.9% n=71	43.2% n=271
• Special Education	20.1% n=43	23.9% n=55	10.5% n=66
• Math or Science	27.8% n=53	17.0% n=39	30.0% n=188
• English/Language Arts	25.2% n=54	18.3% n=42	20.0% n=125
• Social Science	18.2% n=39	12.2% n=28	24.6% n=154
• Foreign Language	2.3% n=5	4.8% n=11	3.8% n=24
• Vocational Technology	2.3% n=5	2.2% n=5	4.3% n=27
• Physical Education/Health	4.7% n=10	9.1% n=21	18.7% n=117
• Other	12.6% n=27	13.5% n=31	17.1% n=107
• None	-	-	.03% n=2

Table 4. Respondents' Leadership Background

	Pre-Service Graduates	District Principals	National Comparison
Average number of years in any certified educational leadership position	7.14 n=209 SD=7.37	12.54 n=228 SD=8.53	15.65 n=621 SD=9.42
Average number of years served as a principal	3.41 n=147 SD=3.06	5.95 n=229 SD=4.67	9.55 n=595 SD=7.16
Percentage of respondents, with experience as:			
• Department Head	27.1% n=56	34.5% n=77	36.1% n=188
• Curriculum Specialist	25.6% n=53	30.5% n=68	19.6% n=117
• Assistant principal or program director	46.9% n=97	68.2% n=152	65.7% n=393
• Guidance counselor	3.4% n=7	6.7% n=15	5.7% n=34
• Athletic coach or director	17.9% n=37	14.3% n=32	40.5% n=242
• Sponsor for student clubs, debate teams	39.1% n=81	36.3% n=81	52.7% n=315
• Literacy or math coach	29.5% n=61	20.2% n=45	8.0% n=48
• Person in charge of/responsible for school-wide functions	55.6% n=115	52.5% n=117	58.5% n=350
• Grade level or subject area team leader/chair person	57.0% n=118	53.8% n=120	44.6% n=267
• Member of a shared-decision making /school based leadership team/committee	68.1% n=141	65.9% n=147	69.6% n=416

Table 5. Program Recruitment and Support

	Pre-Service Graduates	District Principals	National Comparison
Percentage of respondents recruited into their credentialing program	62.1% n=214	37.2% n=234	32.5% n=607
Financial support for candidates			
Percentage of respondents who paid for all of their credentialing program	38.5% n=84	79.3% n=184	72.7% n=459
Percentage of respondents who paid for some of their credentialing program	52.8% n=115	13.4% n=31	20.8% n=131
Percentage of respondents who paid for none of their credentialing program	8.7% n=19	7.3% n=17	6.5% n=41

Table 6. Description of Credentialing Program

	Pre-Service Graduates	District Principals	National Comparison
My credentialing program included:			
Field-based projects in which you applied ideas in the field	4.17 n=222 SD =1.041	3.47 n=232 SD =1.183	3.37 n=620 SD =1.085
Linkages between coursework and your internship or other field based experience	4.23 n=222 SD =1.038	3.44 n=235 SD =1.247	3.37 n=620 SD =1.126
Use of problem-based learning approaches	4.24 n=222 SD =.947	3.51 n=235 SD =1.117	3.41 n=626207 SD =.959
Action research or inquiry projects	3.98 n=222 SD =1.023	3.24 n=235 SD =1.186	3.29 n=616 SD =1.076
Journal writing of your experiences	4.11 n=222 SD =1.144	3.09 n=235 SD =1.341	2.95 n=618 SD =1.278
Analysis and discussion of case studies	4.37 n=222 SD =.797	3.82 n=235 SD =1.107	3.73 n=620 SD =.960
Lectures	3.76 n=222 SD =.898	4.03 n=235 SD =.962	3.97 n=620 SD =.887
Participation in small group work	4.43 n=222 SD =.729	4.01 n=234 SD =.962	3.78 n=619 SD =.916
A portfolio demonstrating my learning and accomplishments	4.30 n=220 SD =1.108	3.22 n=234 SD =1.541	2.72 n=619 SD =1.473
My credentialing program content:			
Emphasized instructional leadership	4.55 n=221 SD =.794	3.79 n=233 SD =1.079	4.07 n=629 SD =.850
Emphasized leadership for school improvement	4.46 n=221 SD =.822	3.69 n=233 SD =1.011	3.65 n=630 SD =.959
Emphasized managing school operations efficiently	3.80 n=220 SD =.968	3.86 n=231 SD =.847	3.78 n=628 SD =.860
Emphasized working with the school community and stakeholders	4.10 n=219 SD =.925	3.64 n=230 SD =.971	3.59 n=628 SD =1.051
Was comprehensive and provided a coherent learning experience	4.39 n=220 SD =.814	3.83 n=231 SD =1.081	3.84 n=628 SD =.897
Integrated theory and practice	4.41 n=220 SD =.821	3.67 n=232 SD =1.007	3.73 n=628 SD =.890

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Table 6. (continued)

The program encouraged reflection in the following ways:			
• The program provided many opportunities for self-assessment as a leader	4.14 n=219 SD =1.058	3.40 n=227 SD =1.290	3.19 n=629 SD=1.112
• I was often asked to reflect on practice and analyze how to improve it	4.37 n=221 SD =.924	3.47 n=232 SD =1.267	3.37 n=624 SD =1.113
• The program provided regular assessments of my skill development and leadership competencies	4.05 n=219 SD =.991	3.20 n=229 SD =1.245	3.15 n=625 SD =1.073
Program faculty:			
• included practicing school or district administrators	3.94 n=218 SD =1.239	3.50 n=232 SD =1.406	2.88 n=628 SD =1.686
• were very knowledgeable about their subject matter	4.54 n=221 SD =.685	4.19 n=230 SD =.823	4.16 n=626 SD =.798
• provided many opportunities to evaluate the program	3.91 n=220 SD =1.018	3.35 n=230 SD =1.182	3.35 n=629 SD =1.113
I was in a student cohort	4.49 n=221 SD =1.163	3.04 n=230 SD =1.776	2.40 n=624 SD =1.686

Table 7. Impact of Credentialing Program

	Pre-Service Graduates	District Principals	National Comparison
My credentialing program helped me:			
Understand how different students learn and how to teach them successfully	3.75 n=216 SD =1.031	3.28 n=228 SD =1.151	3.19 n=618 SD =1.079
Create a coherent educational program across the school	3.97 n=216 SD =.941	3.41 n=228 SD =1.073	3.29 n=617 SD =.976
Evaluate curriculum materials for their usefulness in supporting learning	3.62 n=215 SD =1.118	3.26 n=228 SD =1.156	3.17 n=618 SD =1.002
Design professional development that builds teachers' knowledge and skills	4.00 n=215 SD =1.035	3.27 n=227 SD =1.257	3.14 n=618 SD =1.091
Evaluate teachers and provide instructional feedback to support their improvement	4.17 n=216 SD =.943	3.74 n=227 SD =1.079	3.53 n=618 SD =1.085
Handle discipline and support services	3.72 n=215 SD =1.135	3.41 n=227 SD =1.163	3.40 n=605 SD =1.076
Develop broad agreement among staff about the school's mission	3.94 n=215 SD =1.029	3.44 n=228 SD =1.132	3.30 n=609 SD =1.115
Create a collaborative learning organization	4.13 n=214 SD =.966	3.49 n=225 SD =1.140	3.35 n=611 SD =1.119
Find and allocate resources to pursue important school goals	3.53 n=213 SD =1.158	3.32 n=225 SD =1.140	3.09 n=611 SD =1.013
Analyze budgets and reallocate resources to achieve critical objectives	3.44 n=212 SD =1.083	3.26 n=228 SD =1.185	3.12 n=611 SD =1.110
Create and maintain an orderly, purposeful learning environment	4.07 n=214 SD =.962	3.66 n=228 SD =1.1057	3.65 n=611 SD =.922
Manage facilities and their maintenance	3.44 n=214 SD =1.152	3.44 n=228 SD =1.092	3.33 n=610 SD =1.034
Mobilize the school staff to foster social justice in serving all students	3.64 n=214 SD =1.152	3.24 n=228 SD =1.206	3.00 n=609 SD =1.121
Work with parents to support students' learning	3.61 n=215 SD =1.076	3.24 n=228 SD =1.147	3.18 n=611 SD =.984
Use data to monitor school progress, identify problems and propose solutions	4.09 n=214 SD =1.013	3.39 n=226 SD =1.223	3.05 n=609 SD =1.144
Engage staff in a decision making process about school curriculum and policies	4.01 n=216 SD =.979	3.43 n=227 SD =1.190	3.35 n=607 SD =.1.127

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Table 7, Continued

Lead a well-informed, planned change process for a school	4.01 n=215 SD =.962	3.41 n=227 SD =1.189	3.21 n=611 SD =1.118
Engage in comprehensive planning for school improvement	3.98 n=216 SD =1.012	3.44 n=227 SD =1.219	3.22 n=608 SD =1.115
Redesign school organizations to enhance productive teaching and learning	3.79 n=212 SD =1.023	3.20 n=225 SD =1.226	3.06 n=608 SD =1.061
Use effective written and communication skills, particularly in public forums	4.23 n=214 SD =.852	3.78 n=227 SD =1.012	3.64 n=611 SD =1.002
Collaborate with others outside the school for assistance and partnership	3.81 n=215 SD =1.030	3.34 n=226 SD =1.128	3.21 n=611 SD =1.015
Engage in self-improvement and continuous learning	4.44 n=215 SD =.832	3.83 n=228 SD =1.101	3.66 n=611 SD =.971
Develop a clear set of ethical principles to guide decision making	4.34 n=215 SD =.886	3.80 n=228 SD =1.030	3.76 n=608 SD =1.069
The program gave me a strong orientation to the principalship as a career	4.36 n=220 SD =.902	3.61 n=232 SD =1.119	3.72 n=630 SD =.973

Table 8. Internship Experience

	Pre-Service Graduates	District Principals	National Comparison
Percent of respondents who completed an internship as part of their credentialing program	85.0 n=187	57.1 n=132	63.5 n=395
Among those who completed an internship, percent whose internship was full-time	55.3% n=109	37.7% n=60	26.8% n=120
Among those who completed an internship, percent whose internship was <i>not</i> in the same school where s/he was teaching	65.0% n=130	22.3% n=56	22.2% n=98
Among those who completed an internship, percent who had a mentor	84.3 n=197	64.6 n=158	70.1 n=441
Among those who had a mentor, percent whose worked with him/her regularly.	96.4% n=189	90.0% n=117	85.2% n=345
To complete my internship: (mean response, scale: 1- Not at All; 3- Somewhat; 5- To a Great Extent)			
I worked in one or more schools serving students with a variety of socioeconomic backgrounds	3.93 n=195 SD =1.327	3.74 n=161 SD =1.421	3.36 n=442 SD =1.570
I was closely supervised and assisted by knowledgeable school leaders.	4.43 n=196 SD =.895	3.90 n=162 SD =1.152	3.54 n=444 SD =1.163
I had responsibilities for leading, facilitating, and making decisions typical of an educational leader	4.23 n=196 SD =1.003	3.96 n=162 SD =1.166	3.76 n=442 SD =1.171
My internship achievements were regularly evaluated by program faculty	4.28 n=195 SD =1.029	3.61 n=161 SD =1.174	3.20 n=441 SD =1.211
Through my internship, I was able to develop an educational leader's perspective on school improvement	4.46 n=196 SD =.810	3.95 n=162 SD =1.055	3.67 n=441 SD =1.126
My internship experience was an excellent learning experience for becoming a principal	4.48 n=195 SD =.810	3.84 n=161 SD =1.212	3.81 n=439 SD =1.114

Table 9. Perceptions of the Principalship

	Pre-Service Graduates	District Principals	National Comparison
Being a principal ...			
Allows me to make a difference in the lives of students and staff	4.90 n=212 SD =.318	4.90 n=228 SD =.383	4.87 n=632 SD =.368
Provides me opportunities for professional growth	4.85 n=210 SD =.386	4.82 n=225 SD =.503	4.68 n=631 SD =.524
Enables me to develop relationships with others inside and outside the school	4.78 n=210 SD =.500	4.78 n=226 SD =.536	4.62 n=629 SD =.596
Enables me to influence school change	4.87 n=210 SD =.404	4.85 n=226 SD =.447	4.73 n=632 SD =.521
Requires me to work very long work hours	4.69 n=211 SD =.646	4.79 n=226 SD =.552	4.73 n=631 SD =.590
Has too many responsibilities	3.92 n=211 SD =1.066	4.24 n=225 SD =1.000	4.08 n=630 SD =.973
Decreases my opportunity to work directly with children	3.10 n=211 SD =1.286	3.42 n=226 SD =1.295	3.45 n=629 SD =1.127
Creates a lot of stress	3.99 n=210 SD =1.007	4.30 n=226 SD =.908	4.12 n=631 SD =.952

Table 10. Leadership Practice

	N	SD	All Program Principals	National Comparison
Principals report how often in the past month they engaged in the following activities, including means and significance tests: (scale: 1- Never;2- Once or twice a month; 3-Once or twice a week; 4- Daily)				
Facilitate student learning (e.g. eliminate barriers to student learning; establish high expectations for students)	P: 279 C: 541	.641 .724	3.59	3.29**
Guide the development and evaluation of curriculum and instruction	281 541	.732 .747	3.32	2.86
Build professional learning community among faculty and other staff	281 539	.677 .866	3.45	3.01**
Maintain the physical security of students, faculty and other staff	283 534	.560 .710	3.79	3.68***
Manage the school facilities, resources, procedures (e.g. maintenance, budget, schedule)	280 538	.607 .593	3.66	3.68
Attend district level meetings and carry out district-level responsibilities	280 536	.681 .638	2.61	2.75**
Foster teacher professional development for instructional knowledge and skills	281 541	.728 .668	3.08	2.66
Evaluate and provide instructional feedback to teachers	282 539	.649 .685	3.34	2.94**
Use data to monitor school progress, identify problems and propose solutions	282 536	.763 .730	2.97	2.73
Work with outside agencies and individuals for school assistance and partnership	281 537	.721 .683	2.52	2.33*
Work with parents on students' problems or learning needs	280 540	.718 .716	3.32	3.35
Meet with parents and the community about other school matters	280 541	.736 .766	2.78	2.76
Work with teaching staff to solve school or department problems	281 536	.707 .725	3.31	3.22
Work with teachers to change teaching methods where students are not succeeding	280 541	.710 .706	3.08	2.67*
Develop and enforce school rules with students and staff	279 541	.701 .655	3.63	3.61
Work with faculty to develop goals for their practice & professional learning	281 541	.709 .683	2.75	2.51

T- Tests of group means. *p<.05; **p<.01; ***p<.001

Table 11. On-going Professional Development

Pre-Service Grads who are now Principals	District Principals	National Comparison Principals		Pre-Service Grads who are now Principals	District Principals	National Comparison Principals
In the past year, how often did you participate in the following professional development? (scale: 1- Not at All; 2- Once or twice; 3- Three times or more)				How helpful was the professional development? (scale: 1= not at all helpful . . . 5=extremely helpful)		
1.44 n=111 SD =.740		1.48 n=515 SD =.718	University course(s) related to your role as principal	3.95 n=33 SD =.892	3.92 n=38 SD =1.024	3.79 n=177 SD =.965
2.22 n=111 SD =.712	2.42 n=213 SD =.664	1.84 n=511 SD =.684	Visits to other schools designed to improve your own work as principal	4.04 n=92 SD =.954	4.15 n=190 SD =.893	3.75 n=341 SD =.854
2.05 n=110 SD =.841	2.05 n=211 SD =.814	2.04 n=509 SD =.777	Individual or collaborative research on a topic of interest to you professionally	4.15 n=74 SD =.857	4.24 n=147 SD =.798	3.99 n=363 SD =.861
2.01 n=110 SD =.956	1.98 n=217 SD =.577	1.33 n=513 SD =.678	Mentoring or coaching by an experienced principal, as part of a formal arrangement that is supported by the school or district	4.45 n=60 SD =.877	4.30 n=118 SD =.946	4.13 n=108 SD =.969
2.08 n=108 SD =.852	2.69 n=210 SD =.783	1.70 n=503 SD =.786	Peer observation / coaching in which you have an opportunity to visit with other principal(s) for sharing practice	4.28 n=74 SD =.897	4.23 n=164 SD =.815	3.99 n=844 SD =1.007
2.54 n=111 SD =.760	2.69 n=215 SD =.642	2.38 n=509 SD =.777	Participating in a principal network (e.g. a group of principals organized by your district, an outside agency, or on-line)	4.39 n=93 SD =.792	4.44 n=193 SD =.859	4.15 n=409 SD =.920
1.68 n=110 SD =.784	1.86 n=213 SD =.830	1.58 n=507 SD =.700	Workshops, conferences, or training in which you were a presenter	3.90 n=53 SD =.856	3.85 n=123 SD =1.024	3.84 n=232 SD =.840
2.65 n=108 SD =.534	2.68 n=231 SD =.551	2.52 n=514 SD =.588	Other workshops or conferences in which you were not a presenter	3.94 n=104 SD =.841	4.00 n=201 SD =.835	3.91 n=482 SD =.798
2.80 n=109 SD =.405	2.81 n=211 SD =.396	2.84 n=500 SD =.368	Reading professional books or articles.	4.28 n=107 SD =.760	4.26 n=209 SD =.853	4.04 n=500 SD =.819
3.63 n=66 SD=.633	3.75 n=134 SD=.527	3.27 n=211 SD=.767	Professional development with teachers from my school	n/a	n/a	n/a

Table 12. Principals' motivation for professional development

	State re-certification requirements	District policy	Personal interest in topic covered	Advancement on district payscale	Promotion to another position	Other
	27.6%	56.9%	80.2	1.7	2.6	18.1
District Principals	19.9% n=44	58.8% n=130	77.4 n=171	.09 n=2	1.4 n=3	16.3 n=36
National Comparison	25.1% n=131	30.7% n=160	86.1 n=449	3.1 n=16	2.7 n=14	16.7 n=87

My district supports my professional development (mean response, on the scale 1- Strongly Disagree ... 4- Strongly Agree)

Pre-Service Grads (who are now Principals)	District Principals			National Comparison		
3.34 n= 67 SD=.723	3.37 n=138 SD=.883			3.29 n=438 SD=.824		
n=32	n=66	n=93	n=2	n=3	n=21	