What's Happening

A descriptive analysis of the principal workforce in Florida schools

Jessica Sidler Folsom
La'Tara Osborne-Lampkin
Carolyn Herrington
Florida State University

Key findings

Florida's school leaders were proportionally more racially/ethnic diverse than the teaching workforce but proportionally less diverse than the student population. Nearly all leaders hold both administrative and instructional credentials. Most leaders stay in the same district, but move to another school at least once. More than 95 percent of school leaders followed one of 23 common career paths for assistant principals or one of 16 common career paths for principals. Nearly all leaders were rated as at least "effective" in Florida's new principal evaluation system.

ies NATIONAL CENTER FOR EDUCATION EVALUATION AND REGIONAL ASSISTANCE
Institute of Education Sciences
U.S. Department of Education

REL SOUTHEAST
Regional Educational Laboratory
At Florida State University

U.S. Department of Education
Arne Duncan, *Secretary*

Institute of Education Sciences
Sue Betka, *Acting Director*

National Center for Education Evaluation and Regional Assistance
Ruth Curran Neild, *Commissioner*
Joy Lesnick, *Associate Commissioner*
Amy Johnson, *Action Editor*
Sandra Garcia, *Project Officer*

REL 2015–068

Summary

The Florida Department of Education is revisiting state and district policies regulating how school leaders are trained, certified, and evaluated. To support these efforts, the department and the Regional Educational Laboratory (REL) Southeast collaborated on a study of Florida's principal workforce. This study, which has cross-sectional and longitudinal components, describes the demographic make-up, state certification coverages, career paths between 2001/02 and 2011/12, and evaluation ratings of Florida's 2011/12 school leaders (assistant principals and principals).

This study will inform Florida's policymakers about the characteristics of a recent cohort of school leaders. While the data used in the analysis are routinely collected and accessible to Florida's policymakers and state and local education agencies, this study provides additional analysis and illuminates potential areas for improvement. For example, knowing whether school leaders are demographically similar to the teachers or student population could help in targeting recruitment of school leaders from certain backgrounds. Knowing more about school leaders' career paths could help policymakers better understand where recruitment efforts were focused previously and where more recruitment efforts may be needed. For example, the majority of recruitment has presumably occurred within the teacher population; however, there may be other education professionals, such as guidance counselors; other support staff or curriculum directors; and other district staff, who could also be recruited. Since many components of Florida's longitudinal data system were developed more than two decades ago, this study covers a longer period than previously reported in the literature.

Both the findings and the analytic methods should be of interest in other states as well. REL Southeast has created a companion applied research methods document that describes how administrative databases with personnel data can be used to address similar questions with other populations (Folsom, Osborne-Lampkin, & Herrington, 2014).

This study consists of two components: a cross-sectional component that analyzed the demographic characteristics of the 7,252 school leaders (4,273 assistant principals and 2,979 principals) in 2011/12, and a retrospective cohort analysis that tracked the certification coverages and career paths of the 2011/12 school leaders between 2001/02 and 2011/12. Analyses of frequencies, cross-tabulations, and measures of central tendency and distribution were examined to provide insight into the demographic characteristics, training, professional experiences, career paths, and performance of Florida's 2011/12 school leaders.

There were seven main findings from this study:
- While the majority of Florida's students were from racial/ethnic minority groups, the majority of teachers and school leaders were White. There were proportionally more racial/ethnic minority assistant principals than principals and proportionally more racial/ethnic minority school leaders than racial/ethnic minority teachers.
- There were proportionally more female school leaders than male school leaders and proportionally more male school leaders than male teachers. While 78 percent of teachers were female, 63 percent of assistant principals and 64 percent of principals were female.
- Principals were about five years older than assistant principals. Female school leaders were about one year older than male school leaders.

- Florida's school leaders held an average of 2.5 active "coverages" (subject, institutional level, and administrative qualifications) on their Florida Educator Certificates. More than 98 percent of school leaders held an active administrative coverage, and more than 98 percent held an active subject area coverage. The majority of school leaders held coverages with instructional levels commensurate with the school type in which they were working (for example, elementary school leaders held elementary-level coverages) or held broad coverages that applied to all instructional levels.

- School leaders typically stayed in the same district over the course of the 11 years between 2001/02 and 2011/12, but fewer than 20 percent of school leaders stayed in the same school. Fewer than half of school leaders stayed in the same school type (for example, an elementary school leader may have previously been a middle school teacher) over the course of the 11 years.

- School leaders followed a variety of career paths. For assistant principals, 82 distinct paths were identified; for principals, 76 distinct paths were identified. Of the 82 assistant principal paths, 23 were identified as common paths (meaning that more than 10 school leaders took the same path). Of the 76 principal paths, 16 were identified as common paths. The common paths accounted for about 95 percent of all paths taken.

- Under Florida's new 2011/12 principal evaluation system, which gives districts substantial discretion in measuring effectiveness, 26 percent of Florida's assistant principals were rated highly effective and 70 percent were rated effective, and 29 percent of principals were rated highly effective and 68 percent were rated effective.

Contents

Why this study?

Research is increasingly documenting the role of high-quality leadership in positive school outcomes, including student achievement (Branch, Hanushek, & Rivkin, 2012; Grissom & Loeb, 2009; Horng, Kalogrides, & Loeb, 2009; Nettles & Herrington, 2007; Rice, 2010). A 2004 study suggested that leadership may be second only to classroom instruction among all school-related factors that contribute to what students learn in school (Leithwood, Louis, Anderson, & Wahlstrom, 2004). Further, other studies of leadership suggest that school leaders may account for up to a quarter of total school-level effects (Hallinger & Heck, 1996, 1998; Leithwood & Jantzi, 2000).

Informing school leadership reform strategies in Florida

Given the critical role played by school leaders, the Florida Department of Education is interested in reform strategies that focus on improving how school leaders (assistant principals and principals[1]) are trained, certified, and evaluated. To support these efforts, the department and Regional Educational Laboratory (REL) Southeast collaborated on this study of Florida's principal workforce. The department requested that REL Southeast examine the diversity of the principal workforce in comparison to the teacher and student populations. The department also requested analyses of the certification, professional experiences, and record of performance of Florida's school leaders. Accordingly, this study describes the demographic makeup, state certifications, career paths between 2001/02 and 2011/12, and evaluation ratings of Florida's school leaders in the 2011/12 school year.

Knowing whether school leaders are demographically similar to the teacher and student population and knowing more about school leaders' career paths could help policymakers better understand where more recruitment efforts may be needed

This study informs Florida's policymakers about the characteristics of a recent cohort of school leaders. While the data used in the analysis are routinely collected and accessible to Florida policymakers and state and local education agencies, this study provides additional analysis and illuminates potential areas for improvement. For example, knowing whether school leaders are demographically similar to the teacher and student population could help in targeting recruitment of school leaders from certain backgrounds. Knowing more about school leaders' career paths could help policymakers better understand where recruitment efforts were focused previously and where more recruitment efforts may be needed. Similarly, the majority of recruitment has presumably occurred within the teacher population. However, other education professionals such as guidance counselors; other support staff or curriculum directors; and other district staff, could also be recruited.

Adding to the school leadership literature base

Given the recent initiatives of federal, state, and local education agencies to attract, improve, and retain school leaders, this study should be of interest outside Florida as well. There are few published studies on the characteristics of the school leader workforce (Clifford et al., 2012; Black, Bathon, & Poindexter, 2007; Fuller & Young, 2007). There are no studies that broadly describe the certifications of school leaders other than studies that investigate specific principal preparation programs or practices. In addition, no large-scale study has tracked the career paths of school leaders over an extended period. Thus, rather than information on actual certifications and work experience of school leaders, the only information available has related to state (or district) policies and requirements for obtaining certification. Consequently, it has been generally assumed, without specific evidence, that school leaders have a variety of administrative and teaching certifications covering

a broad range of instructional levels. It has also been assumed, again without specific evidence, that the traditional path to the principalship is from the classroom, to assistant principal, to principal.

Since many components of Florida's longitudinal data system were developed more than two decades ago, the system is particularly well suited to explore the characteristics of school leaders. Findings from this study provide a better understanding of the principal workforce, particularly providing insight into which candidates become school leaders (for example, teachers, district administrators) and how school leaders move into leadership positions (for example, from the classroom to assistant principal to principal).

Policymakers and state and local education agencies in other states can use the data and analytic methods from this study to develop and explore similar questions to better understand their state's workforce in order to enhance the pipeline and quality of their school leaders. REL Southeast has created a companion applied research methods document that more fully describes how administrative databases with personnel data can be used to address similar questions with other populations (Folsom et al., 2014). For example, states or districts may be interested in replicating the study on school types (such as charter schools and schools in need of improvement) or school subtypes (such as leaders of specific districts).

Findings from this study provide a better understanding of the principal workforce, particularly providing insights into which candidates become school leaders and how school leaders move into leadership positions

What the study examined

This study consists of a cross-sectional descriptive analysis and a retrospective cohort analysis conducted to document the demographic make-up, state certification, administrative and teaching coverages (see box 1), career paths, and evaluation ratings of the 2011/12 school leaders in Florida public schools (see box 2 for a summary of data and methods).[2]

To provide the Florida Department of Education with state-specific information on its school leaders, the following questions were addressed:
- What is the demographic composition of Florida's 2011/12 school leaders?
- How many and what types of Florida Educator Certificate "coverages" are held by Florida's 2011/12 school leaders?
- What career paths did Florida's 2011/12 school leaders take between 2001/02 and 2011/12?
- How were Florida's 2011/12 school leaders rated under Florida's new principal evaluation system?

Box 1. Key terms

All key terms are defined in appendix A. This box defines the most commonly used key terms.

Career path. The path between 2001/02 and 2011/12 that school leaders have taken to their 2011/12 position. Each step in the path is a different job category. This report divides career paths into two types: *common paths,* which are career paths taken between 2001/02 and 2011/12 by at least ten 2011/12 school leaders, and *unique paths,* which are career paths taken between 2001/02 and 2011/12 by fewer than ten 2011/12 school leaders.

Effectiveness rating. The extent to which a school leader meets district evaluation criteria. The Florida Department of Education requires that all educators and school leaders be evaluated each year and allows each district to determine how they are evaluated and the criteria for the level of effectiveness. See box 4 for more details on Florida's principal evaluation system.

Florida Educator Certificate. The qualifying certificate obtained by educators through the Florida Department of Education. It includes qualifications—called *coverages*—for certain administrative levels, instructional levels, and subject matters. Educators hold a single certificate with multiple coverages. For example, an educator might have coverages for middle school English or high school math, along with one of five administrative categories (school leadership, school principal, administration/supervision, local director of vocational education, and administration of adult education). Coverages are active for five years and can be renewed through continuing education credits or university coursework (see http://www.fldoe.org/edcert/subjlist.asp for more details). There are five instructional levels: all levels, elementary, secondary, prekindergarten, and district designation (a designation made by the district rather than the state). A certificate can also have an endorsement, which indicates that an individual has a particular expertise in an instructional level or methodology.

Job category. This study's broad categories related to the Florida Department of Education's many job classifications. See appendix A for descriptions and examples of each job category.

Job classification. Specific job code assigned by the Florida Department of Education. For this study, several job classifications were divided into distinct job categories. See appendix A for descriptions and examples of each job category.

School leader. All assistant principals and principals, including those with the interim/intern designation. The Florida Department of Education–assigned job classifications for the school leaders in this study are shown in figure 1 of the main text.

School type. Instructional level of the school designated by the Florida Department of Education. School types include elementary school, middle school, high school, combination elementary and secondary schools, adult schools, and other schools that do not fall into one of these types.

Box 2. Data and methods

Data. Data were drawn from the Florida Department of Education staff and certification databases over 11 school years (2001/02 through 2011/12). Data included variables specific to school leaders' demographics, certification, job history, and personnel evaluations. Up to 11 years of data were available for school leaders. To be included in the staff database, an individual had to be employed during that year. An average of 9.3 years (standard deviation of 2.0 years) of data were available for assistant principals and 9.9 years (standard deviation of 2.1 years) of data for principals; for the majority of assistant principals (65 percent) and principals (79 percent), at least 10 years of data were available for analyses. No procedures were used for handling missing data. Unreported or unavailable data are noted throughout the report.

Sample. This study included 4,273 assistant principals and 2,979 principals for a total of 7,252 school leaders in Florida's public schools in the 2011/12 school year. It included school leaders from 66 of Florida's 67 county school districts, plus 2 university laboratory schools, and 1 virtual school district. (For unknown reasons, data were not reported for one county district, two university laboratory schools, and four administrative districts of special programs [an example is the Florida School for the Deaf and Blind].) School leaders were employed in 2,739 schools across Florida.

Methods. This study consists of two components: a cross-sectional component that analyzed the demographic characteristics of the 2011/12 school leaders, and a retrospective cohort analysis that tracked the certification coverages and career paths of school leaders in 2011/12 over 11 school years (2001/02 to 2011/12). Descriptive analyses of frequencies, measures of central tendency and distribution, and cross-tabulations were conducted to examine the characteristics and career paths of school leaders in Florida. Appendix B includes additional statistical significance tests.

More than 98 percent of school leaders held an active administrative coverage, and more than 98 percent held an active subject area coverage

What the study found

In this document, the term "school leaders" is inclusive of assistant principals and principals. However, there are several specific job classifications within the Florida Department of Education for assistant principals and principals (figure 1). Most assistant principals were assigned to secondary schools (which include middle and high schools), and most principals were assigned to elementary schools.

While the majority of Florida's students were from racial/ethnic minority groups, the majority of teachers and school leaders were White. There were proportionally more racial/ethnic minority assistant principals than principals and proportionally more racial/ethnic minority school leaders than teachers.. There were proportionally more female school leaders than male school leaders and proportionally more male school leaders than male teachers.

Florida's school leaders held an average of 2.5 active coverages (see box 1) on their Florida Educator Certificates. Typically, this included at least one administrative and one instructional coverage. More than 98 percent of school leaders held an active administrative coverage, and more than 98 percent held an active subject area coverage. The majority of school leaders held coverages with instructional levels commensurate with the school type in which they were working (for example, elementary school leaders held elementary-level coverages) or held broad coverages that applied to all instructional levels.

Figure 1. Most assistant principals were assigned to secondary schools, while most principals were assigned to elementary schools in 2011/12
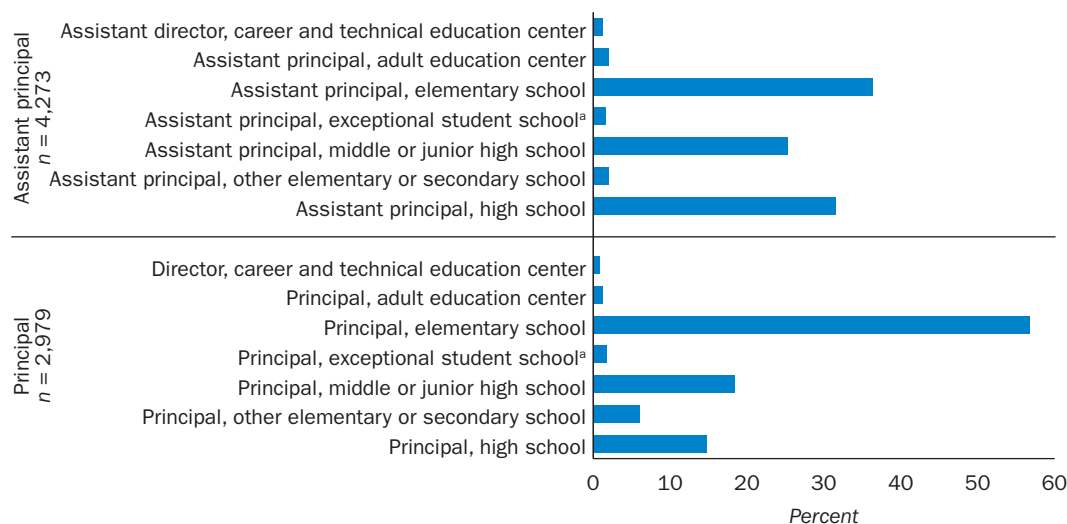
a. Schools that serve only students in exceptional student education, Florida's term for students with special learning needs. Other states may refer to these schools as special education center schools.

Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

School leaders followed a variety of career paths to their leadership positions. Of the 82 assistant principal paths, 23 were identified as common paths (meaning that more than 10 individuals took the same path). Of the 76 principal paths, 16 were identified as common paths. The common paths accounted for about 95 percent of all paths taken.

Under Florida's new 2011/12 principal evaluation system, in which districts have considerable discretion in measuring effectiveness, 26 percent of Florida's assistant principals were rated as highly effective, and 70 percent were rated as effective. Among Florida's principals, 29 percent were rated as highly effective, and 68 percent were rated as effective.

Florida's school leaders were demographically more diverse than the state's teachers but less diverse than its students

Gender and age of school leaders. Florida's school leaders were mainly female; 63 percent of assistant principals were women, and 64 percent of principals were women. There was not a significant difference in the gender ratio between assistant principals and principals (see appendix B for statistical tests of significance). However, compared with Florida's teachers, the gender ratio for school leaders is significantly different; there was an underrepresentation of female principals compared with female teachers.[3] Among teachers, 78 percent were women, whereas among school leaders, 64 percent were women. Within the student population, 49 percent of students were female; this was also significantly different from the gender distribution among school leaders (figure 2). Assistant principals were significantly younger (average age of 45) than principals (average age of 50; figure 3).

Race/ethnicity of school leaders. Overall, 37 percent of Florida's school leaders in 2011/12 were racial/ethnic minorities. The largest racial/ethnic group was White, followed by

Figure 2. Female school leaders were under-represented compared with female teachers and over-represented compared with students in 2011/12
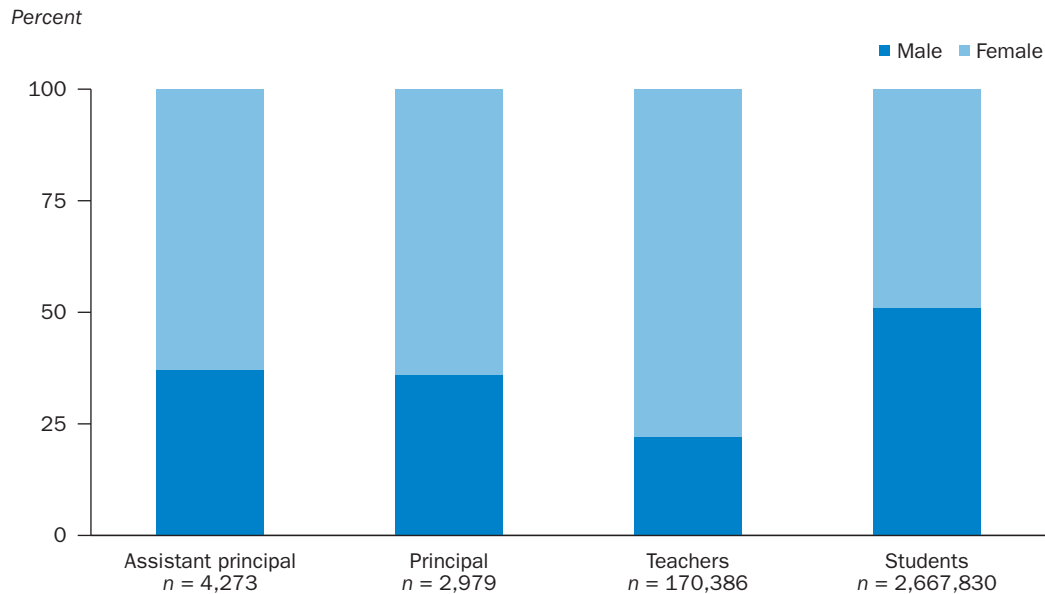
Percent

Source: Authors' analysis based on school leader data obtained by special request from the Florida Department of Education and teacher and student data from the Florida Department of Education (2012a, 2012b).

Figure 3. Florida's principals tended to be older than assistant principals in 2011/12
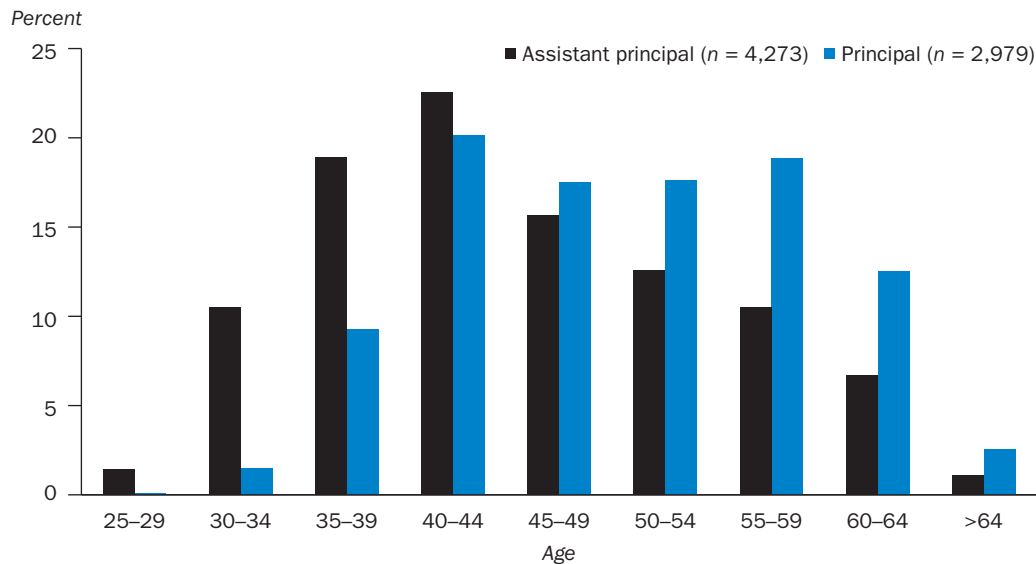
Percent

Age

Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

Black, Hispanic, and then other racial/ethnic minority groups (figure 4). However, there were proportionally more principals than assistant principals who were White.

The racial/ethnic distribution of Florida's 2011/12 school leaders was significantly different from the distribution of Florida's teachers that year; a smaller proportion of teachers than school leaders were racial/ethnic minorities (see figure 4).

Figure 4. There were proportionally more racial/ethnic minority school leaders than minority teachers but proportionally fewer minority school leaders than minority students in 2011/12

Percent

Source: Authors' analysis based on school leader data obtained by special request from the Florida Department of Education and teacher and student data from the Florida Department of Education (2012a, 2012b).

The racial/ethnic distribution of Florida's 2011/12 school leaders was also significantly different from the distribution of Florida's students. Some 60 percent of Florida's students were racial/ethnic minorities, compared with 37 percent of school leaders. Hispanic school leaders were particularly under-represented compared with the proportion of students who were Hispanic.

Nearly all school leaders held at least one administrative and one instructional coverage on their Florida Educator Certificate

In Florida educators hold a single Florida Educator Certificate. An educator's certificate can hold multiple "coverages," which refer to the administrative level, academic subjects, and academic levels for which the educator is qualified, and "endorsements," which are indicators of particular expertise in an instructional level or methodology. On average, principals held more coverages than assistant principals did. School leaders typically held two types of coverages: an administrative coverage (school leadership, school principal, administration/supervision, local director of vocational education, or administration of adult education) and a teaching coverage (such as elementary education, or math for middle grades). Proportionally more assistant principals held the school leadership coverage, while proportionally more principals held the school principal coverage. Coverages are discussed broadly here for assistant principals and principals across school types; see table 1 for results broken out by the school type that the school leader was in during the 2011/12 year.

On average, assistant principals earned 9.3 (standard deviation of 4.5) different Florida educator coverages and held an average of 2.5 (standard deviation of 1.6) different active coverages across their tenure in the Florida school system (coverages are active for five years and can be renewed through continuing education credits or university coursework).

Florida's 2011/12 principals held significantly more coverages than assistant principals did across their tenure in the Florida school system and had significantly more active coverages than assistant principals. Principals held an average of 11.9 (standard deviation of 4.8) coverages across their tenure and an average of 2.7 (standard deviation of 1.7) active coverages.

Nearly all assistant principals held at least one active administrative coverage (99 percent) and at least one active instructional subject area coverage (98 percent; table 1). More than a third of the assistant principals (36 percent) held at least one additional active "endorsement" (for example, a reading endorsement; see box 1). Similar to assistant principals, the vast majority (more than 99 percent) of principals held at least one active administrative coverage and at least one active instructional subject area coverage (98 percent). More

Table 1. Almost all 2011/12 school leaders have both administrative and subject coverages

Coverage	Elementary school		Middle school		High school		Combination school		Adult education	
	Assistant principal	Principal	Assistant principal	Principal	Assistant principal	Principal	Assistant principal	Principal	Assistant principal	Principal
Number	1,463	1,674	989	496	1,404	541	284	203	92	37
Average number of coverages ever held in Florida public schools										
Mean	9.4	11.8	9.2	12.2	9.1	11.6	9.0	11.6	12.1	13.8
Standard deviation	4.3	4.5	4.3	5.0	4.6	5.4	4.5	5.1	5.3	6.8
Average number of active coverages										
Mean	2.7	2.7	2.5	2.8	2.4	2.6	2.5	2.5	2.8	2.9
Standard deviation	1.6	1.7	1.6	1.7	1.6	1.7	1.6	1.8	1.7	2.2
Type of active coverages (percent)										
At least one administrative coverage	98.8	99.3	98.0	99.0	98.3	95.7	95.8	92.5	95.7	97.4
At least one subject coverage	98.1	98.5	97.5	96.4	96.8	92.2	95.1	92.9	96.8	89.5
At least one endorsement	47.3	40.2	31.9	35.1	28.0	28.8	38.5	27.4	36.2	26.3
At least one vocational coverage	0.5	0.4	0.4	1.2	1.2	2.0	0.0	0.9	3.2	13.2
Specific administrative coverage (percent)										
School leadership	88.1	50.8	85.6	48.3	83.0	46.1	85.1	46.2	68.1	42.1
School principal	25.7	82.5	29.3	84.4	28.5	75.2	21.5	65.6	23.4	57.9
Administration/supervision	1.6	2.9	2.1	3.8	3.0	1.8	0.7	4.7	9.6	10.5
Local director of vocational education	0.0	0.1	0.1	0.0	1.2	2.5	0.0	0.9	5.3	21.1
Administration of adult education	0.3	0.2	0.1	0.0	0.6	0.5	0.3	0.9	11.7	18.4
Instructional level of subject coverage (percent)										
All levels	31.8	28.9	32.6	25.9	30.9	25.7	37.5	42.0	28.7	31.6
Prekindergarten	6.2	12.2	0.7	2.8	0.7	1.3	1.7	1.4	2.1	0.0
Elementary school	78.8	76.4	29.9	30.3	19.6	21.9	45.8	43.4	25.5	15.8
Secondary school	19.5	20.1	66.6	70.7	71.8	72.9	43.4	42.5	69.1	68.4

Note: Florida Educator Certificate data were not reported for 1 percent of school leaders. Percentages are representative only of school leaders with data available. School leaders could hold multiple kinds of coverages; therefore, the categories are not mutually exclusive. The instructional level categorized as "all levels" is a unique instructional level designation. "All levels" does not necessarily indicate that an individual has coverages for each of the instructional levels. "All levels" indicates that the coverage applies to all levels. For example, the music coverage is considered an all-levels instructional-level coverage.
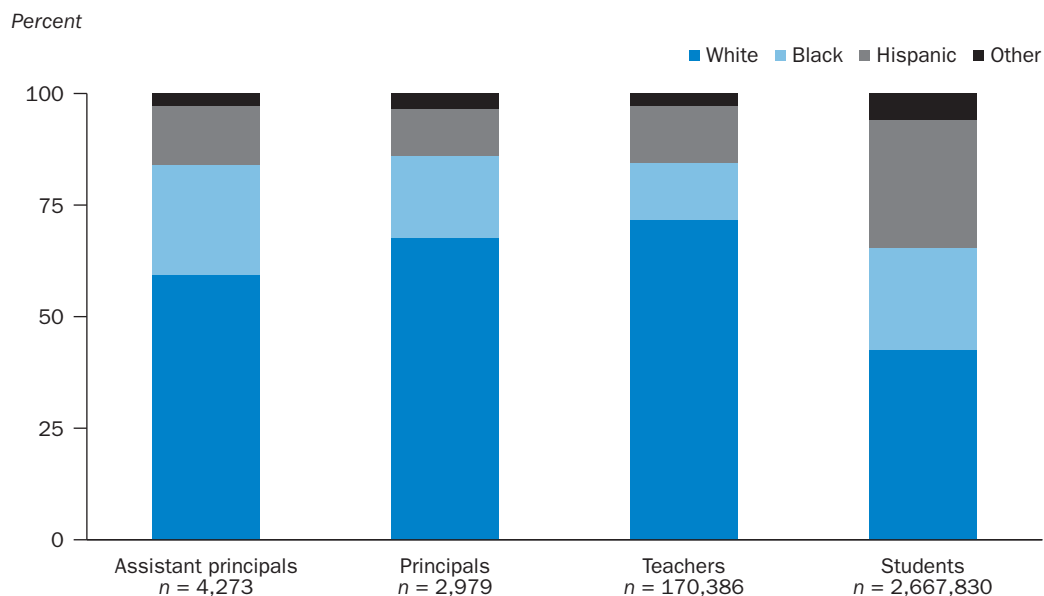
Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

than a third of principals held at least one additional active endorsement (36 percent). Nearly 2 percent of school leaders held at least one active vocational coverage.

While almost all school leaders had at least one administrative coverage, the types of coverages differed between assistant principals and principals. While 88 percent of assistant principals held a school leadership coverage, 82 percent of principals held a school principal coverage. However, 26 percent of assistant principals held the school principal coverage, and 50 percent of principals held the school leadership coverage.

For two of the five administrative coverages, the district determines the instructional level. For the local director of vocational education and the administration of adult education coverages, the instructional level is vocational. The instructional level of the administration/supervision coverage is "all levels." Of the teaching coverages, the highest percentage of assistant principals held secondary instructional-level coverages, whereas the highest percentage of principals held elementary instructional-level coverages.

Among the administrative and teaching coverages with an assigned instructional level, there were significant differences between assistant principals and principals in instructional level distribution.[4] The majority of school leaders held a coverage with an instructional level specific to the school type in which they were working (for example, 79 percent of elementary school assistant principals held an elementary-level coverage). However, a number of school leaders held a coverage with an instructional level not specific to the school type in which they were working. For example, 26 percent of assistant principals of adult education schools held an elementary-level coverage. School leaders in combination schools had relatively equal proportions of elementary- versus secondary-level coverages. Anywhere from 26 percent to 42 percent of school leaders held an instructional-level coverage that applied to all levels.[5]

Almost all of Florida's school leaders stayed in the same district over the previous 11 years, but almost all moved to a different school at least once

This section presents findings on the career paths of 2011/12 school leaders in Florida between 2001/02 and 2011/12. There was a significant difference in the number of changes among districts, schools, school types, and job types experienced by school leaders between 2001/02 and 2011/12. Note that these analyses are only relevant to the career paths through districts, schools, school types, and jobs within public schools (including charter schools) in Florida between 2001/02 and 2011/12.[6]

Districts. On average, assistant principals worked in 1.1 (standard deviation of 0.4) districts between 2001/02 and 2011/12. During that time the majority (88 percent) of 2011/12 assistant principals had been employed in only one school district, and 10 percent had been in two school districts. The remaining assistant principals had been in three to five districts. On average, principals had been in 1.1 (standard deviation of 0.3) districts between 2001/02 and 2011/12. Like the assistant principals, the overwhelming majority (93 percent) of the 2011/12 principals had been in only one district, and 6 percent had been in two districts. The remaining 1 percent had been in three to five districts.

Schools. Only 13 percent of assistant principals and 16 percent of principals stayed in the same school between 2001/02 and 2011/12. On average, school leaders moved to

different schools at least twice. Assistant principals had been in 2.8 (standard deviation of 1.2) schools, and principals had been in 2.7 (standard deviation of 1.2) schools. Some 63 percent of assistant principals had been in two to three schools, 22 percent had been in four to five schools, and 3 percent had been in six or more schools. Similarly, 59 percent of principals had been in two to three schools, 24 percent in four to five schools, and 1 percent had been in six or more schools.

School leaders had a variety of job experiences across a variety of school types and job categories

School types. Less than half of assistant principals (49 percent) stayed in the same school type (such as elementary or high school) between 2001/02 and 2011/12, and slightly more than half of principals (54 percent) stayed in the same school type. Rather, school leaders had experience in, and moved between, a variety of school types (table 2 and figure 5). On

Table 2. Elementary school leaders had the least amount of experience in other school types, while combination school leaders had the most between 2001/02 and 2011/12

Experience	Assistant principal					Principal				
	Elementary	Middle	High	Combination	Adult	Elementary	Middle	High	Combination	Adult
Number	1,467	996	420	296	94	1,670	496	556	220	37
Years of experience by type of school										
Elementary school										
Mean	7.9	0.8	0.4	1.7	0.4	8.8	0.9	0.6	1.6	0.2
Standard deviation	2.9	1.8	1.2	2.6	1.3	2.9	2.1	1.6	2.5	1.0
Middle school										
Mean	0.6	6.7	1.3	1.3	0.6	0.5	7.1	1.5	0.9	0.4
Standard deviation	1.6	3.2	2.2	2.4	1.4	1.3	3.4	2.3	2.0	1.3
High school										
Mean	0.4	1.5	7.3	1.2	2.4	0.3	1.7	7.1	0.9	1.3
Standard deviation	1.3	2.4	3.2	2.3	2.9	1.2	2.7	3.3	2.0	2.1
Combination elementary and secondary school										
Mean	0.2	0.2	0.2	4.4	0.3	0.2	0.1	0.2	5.7	0.3
Standard deviation	1.0	1.0	0.8	3.1	1.2	0.9	0.6	0.9	3.3	0.9
Adult education schools										
Mean	0.0	0.0	0.1	0.1	5.7	0.0	0.0	0.0	0.0	7.0
Standard deviation	0.1	0.1	0.6	0.5	3.5	0.2	0.0	0.1	0.3	3.3
Other										
Mean	0.3	0.2	0.2	0.3	0.1	0.2	0.2	0.3	0.3	0.3
Standard deviation	1.0	0.7	0.9	1.0	0.6	0.9	0.9	1.0	1.1	0.9
Percent with any experience by type of school										
Elementary school	100.0	21.6	11.6	40.5	10.6	100.0	22.2	14.2	36.4	5.4
Middle school	18.1	100.0	34.1	31.4	20.2	14.9	100.0	40.6	24.1	13.5
High school	11.5	35.9	100.0	29.4	53.2	9.8	39.9	100.0	20.9	35.1
Combination school	8.2	7.6	6.8	100.0	9.6	8.1	4.2	7.0	100.0	13.5
Adult education schools	0.3	0.5	1.5	1.4	100.0	0.4	0.0	0.5	0.5	100.0
Other	13.4	6.8	9.2	11.8	6.4	9.8	9.1	12.8	14.1	16.2

Note. Mean represents the average years of experience between 2001/02 and 2011/12. There was a substantial amount of missing data across all districts, school types, and school leader types in 2003/04 for an unknown reason at the Florida Department of Education's Education Data Warehouse. Thus, 2003/04 data are not presented here.

Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

Figure 5. Middle school leaders in 2011/12 had more experience in high schools than in elementary schools
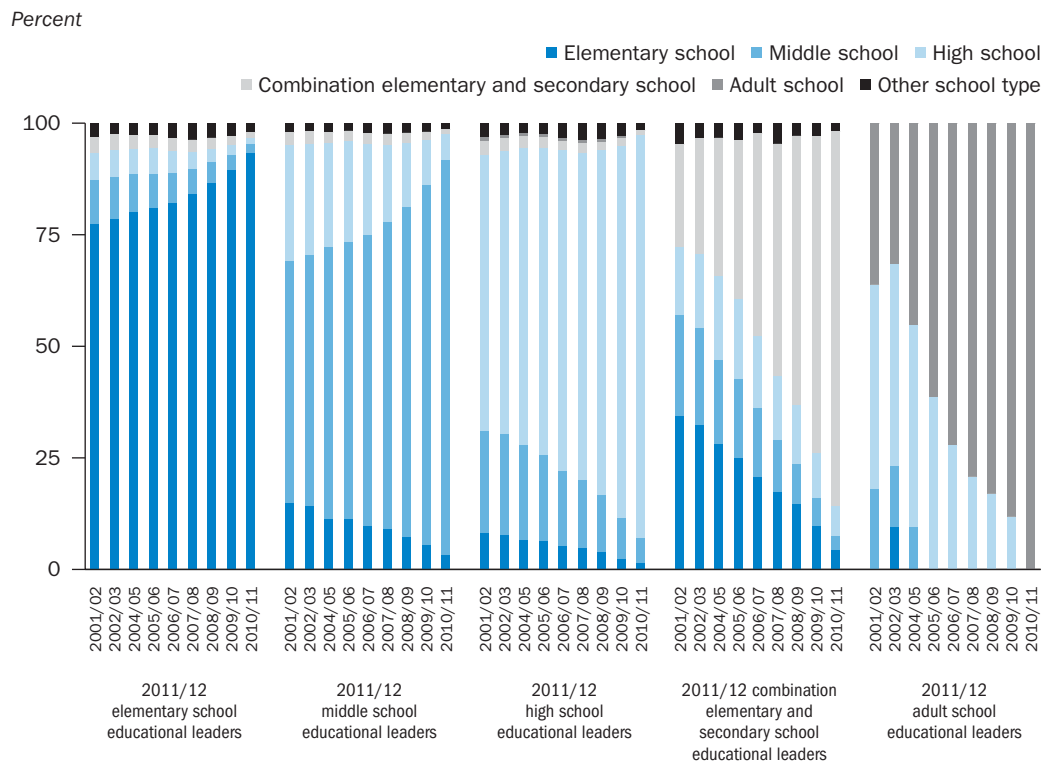
Percent

Note: Percentages are for school leaders from data in the Florida Department of Education for a particular year rather than for all school leaders in 2011/12. Each year the sample size changes as new school leaders enter the Florida public school system and are added to the sample. For example, if an individual was not present in 2008/09 but was present in 2009/10, data for that individual are included for 2009/10 but not for 2008/09. Movement into Florida public schools from outside the system is presented in figure C1 in appendix C by school type and in figure C2 by school leader type for each year. There was a substantial amount of missing data across all districts, school types, and school leader types in 2003/04 for an unknown reason at the Florida Department of Education's Education Data Warehouse. Thus, 2003/04 data are not presented here.

Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

average, assistant principals had worked in 1.7 (standard deviation of 0.7) types of schools, and principals had worked in 1.6 (standard deviation of 0.7) types of schools. Almost half of assistant principals (50 percent) and principals (46 percent) had been in two to three different types of schools. The remaining 2 percent of assistant principals and 1 percent of principals had been in more than four school types. For example, between 2001/02 and 2011/12, most elementary school leaders had spent previous years in elementary schools; however, a portion had also been in middle schools, high schools, combination schools, or other school types. Specifically, elementary school assistant principals had an average of 7.9 years of experience (including 2011/12; standard deviation = 2.9) in elementary schools, 0.8 (standard deviation of 1.8) year in middle schools, 0.4 (standard deviation of 1.2) year in high schools, 1.7 (standard deviation of 2.6) years in combination schools, and 0.4 (standard deviation of 1.3) year in adult education schools. Between 2001/02 and 2011/12, there were relatively few middle school leaders with previous experience in elementary schools; most had been in middle schools in previous years, though some had been in high schools, combination schools, or other school types. Proportionally more of the 2011/12 combination elementary and secondary school leaders matriculated into the Florida system between 2001/02 and 2010/11 than any other school type (see figure C1 in appendix C).

Table 3. Between 2001/02 and 2011/12, nearly three-quarters of assistant principals had experience in classroom instruction, and almost 70 percent of principals had experience as an assistant principal

	Assistant principal			Principal		
	Percent with any experience in this position	Years of experience among those with any experience		Percent with any experience in this position	Years of experience among those with any experience	
Type of experience		Mean	Standard deviation		Mean	Standard deviation
Experience in Florida public schools between 2001/02 and 2011/12						
Classroom instruction	72.1	3.9	2.0	30.4	2.5	1.3
Other instruction	16.6	2.3	1.5	6.7	2.4	1.5
Support services	6.8	3.0	2.0	3.0	2.1	1.3
General administration	4.9	2.2	1.3	2.0	1.7	1.0
Assistant principal	100.0	5.2	3.2	69.6	3.9	2.0
Principal	3.3	3.3	2.3	100.0	5.6	3.4
Superintendent's/district office	10.2	2.3	1.7	10.5	2.3	1.8
Self-reported experience outside of Florida public schools, including all years of work history[a]						
Military service	4.1	7.0	6.3	4.0	9.0	8.2
Teaching in Florida nonpublic schools	5.3	3.8	3.4	6.2	4.1	3.6
Teaching in out-of-state nonpublic schools	3.7	3.9	3.3	4.1	3.7	3.0
Teaching in out-of-state public schools	13.9	5.5	5.0	18.1	5.3	4.4

a. These data were self-reported by the school leader to the district and cannot be verified for accuracy. They cover a school leader's entire work history.

Note: The sample included 4,273 assistant principals and 2,979 principals. Note that the sample size increased each year. There was a substantial amount of missing data across all districts, school types, and school leader types in 2003/04 for an unknown reason at the Florida Department of Education's Education Data Warehouse. Thus, 2003/04 data are not reflected here.

Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

Job categories of previous experiences. Between 2001/02 and 2011/12, school leaders held a variety of positions across multiple job categories (classroom instruction, other instruction, support, general administration, assistant principal, principal, and superintendent's/district office; table 3 and figure 6). Some 83 percent of assistant principals had experience in at least one other job category (for example, classroom instruction) prior to their position as an assistant principal in 2011/12. On average, assistant principals had experience in 2.3 (standard deviation of 0.8) job categories between 2001/02 and 2011/12. Some 78 percent of principals had experience in at least one other job category (for example assistant principal) prior to their position as a principal in 2011/12. On average, principals had experience in 2.4 (standard deviation of 1.0) job categories between 2001/02 and 2011/12. While uncommon, some school leaders (less than 1 percent) had dual appointments. For example, an assistant principal may have concurrently served as the math coach and assistant principal at the same school. In another example, an assistant principal may have concurrently served as the assistant principal in two schools in the same district.

Less than a quarter of 2011/12 school leaders (17 percent of assistant principals and 22 percent of principals) were employed in only one job category in Florida schools between 2001/02 and 2011/12. This means that these school leaders were categorized in only one position between 2001/02 and 2011/12 (though it could be that 2011/12 was the only year of data available) and that "movement" in their career path occurred before 2001/02 or outside of Florida public schools.[7] Proportionally more principals matriculated from outside of Florida public schools than assistant principals did (see figure C2 in appendix C).

Figure 6. By 2006/07, the majority of school leaders were serving in their 2011/12 job category
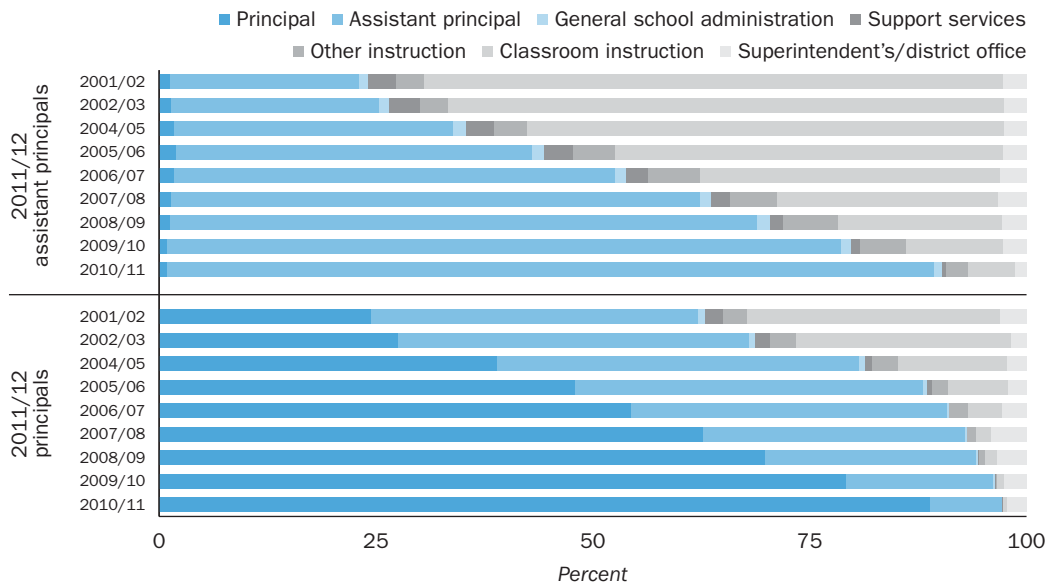
Note: Only data available in the Florida Department of Education's database are reported. Percentages reflect school leaders with data available in the Florida database for that particular year. Each year the sample size increases as new school leaders enter the Florida public school system. The bars represent data only for school leaders present in each year rather than the total of all 2011/12 school leaders. Movement into Florida public school positions from outside Florida public schools is displayed in figure C2 in appendix C. There was a substantial amount of missing data across all districts, school types, and school leader types in 2003/04 for an unknown reason at the Florida Department of Education's Education Data Warehouse, thus 2003/04 data are not presented here.

Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

By 2006/07 more than half of 2011/12 assistant principals were serving as assistant principals, and more than half of 2011/12 principals were serving as principals (figure 6). Before that, as would be expected as part of the natural progression to school leadership, the most common (72 percent) prior job category for assistant principals was classroom instruction (72 percent), and the most common prior job category for principals was assistant principal (70 percent; table 3).

Experience outside of Florida public schools. When reporting on the entire work history before 2011/12, some school leaders reported experience in education settings outside of Florida public schools, such as in Florida's nonpublic schools and in out-of-state nonpublic and public schools. For example, 5 percent of assistant principals reported teaching an average of 3.8 years (standard deviation of 3.4), and 6 percent of principals reported teaching an average of 4.1 years (standard deviation of 3.6) in Florida's nonpublic schools (see table 3). Principals self-reporting work experiences outside of Florida's public schools worked an average of 3.7 years (standard deviation of 3.0) teaching in out-of-state nonpublic schools and 5.3 years (standard deviation of 4.4) teaching in out-of-state public schools. For the 4 percent of assistant principals and 4 percent of principals reporting military service, assistant principals had a mean of 7.0 years of military service (standard deviation of 6.3), and principals had a mean of 9.0 years of military service (standard deviation of 8.2). Data on work outside of Florida public schools are self-reported by the school leader and reflect the school leader's entire work history before 2011/12 and extend beyond the 11 years included in the rest of the analyses presented in this report.

Over 95 percent of paths to school leadership were accounted for by 23 common assistant principal and 16 common principal paths

Despite the seemingly straightforward progression in the path to school leadership, 82 distinct paths were identified for assistant principals and 76 distinct paths for principals.[8] Paths are referred to as "common" if at least 10 school leaders took them. Of the 82 different assistant principal paths, 23 were common paths (meaning a career path taken between 2001/02 and 2011/12 by at least 10 school leaders); of the 76 different principal paths, 16 were commonly taken (tables 4 and 5; figure 7).

Table 4. Assistant principals took 23 common career paths between 2001/02 and 2011/12

Path	Number	Percent who moved between 2001/02 and 2011/12	Percent of total
No change	741	—	17.3
Common path	3,385	95.8	79.2
Unique path	147	4.2	3.4
Common path progression			
Classroom instruction → Assistant principal	1,929	54.6	45.1
Classroom instruction → Other instruction → Assistant principal	392	11.1	9.2
Classroom instruction → Superintendent's/district office → Assistant principal	174	4.9	4.1
Classroom instruction → General administration → Assistant principal	109	3.1	2.6
Support services → Assistant principal	105	3.0	2.5
Classroom instruction → Support services → Assistant principal	96	2.7	2.2
Superintendent's/district office → Assistant principal	81	2.3	1.9
Principal → Assistant principal	79	2.2	1.8
Other instruction → Classroom instruction → Assistant principal	70	2.0	1.6
Other instruction → Assistant principal	64	1.8	1.5
Superintendent's/district office → Classroom instruction → Assistant principal	51	1.4	1.2
Classroom instruction → Other instruction → Superintendent's/district office → Assistant principal	38	1.1	0.9
Classroom instruction → Superintendent's/district office → Other instruction → Assistant principal	32	0.9	0.7
General administration → Assistant principal	30	0.8	0.7
Classroom instruction → Principal → Assistant principal	22	0.6	0.5
Support services → Classroom instruction → Assistant principal	20	0.6	0.5
Classroom instruction → Other instruction → General administration → Assistant principal	16	0.5	0.4
Principal → Superintendent's/district office → Assistant principal	14	0.4	0.3
Other instruction → General administration → Assistant principal	14	0.4	0.3
General administration → Classroom instruction → Assistant principal	13	0.4	0.3
Superintendent's/district office → Classroom instruction → Other instruction → Assistant principal	13	0.4	0.3
Other instruction → Classroom instruction → Superintendent's/district office → Assistant principal	12	0.3	0.3
Superintendent's/district office → Other instruction → Assistant principal	11	0.3	0.3

Note: The sample included 4,273 assistant principals. There was a substantial amount of missing data across all districts, school types, and school leader types in 2003/04 for an unknown reason at the Florida Department of Education's Education Data Warehouse. Thus, 2003/04 data are not reflected here.

Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

Table 5. Principals took 16 common career paths between 2001/02 and 2011/12

| Path	Number	Percent of individuals who moved between 2001/02 and 2011/12	Percent of total
No change	643	—	21.6
Common path	2,220	94.9	74.2
Unique path	116	5.1	4.2
Common path progression			
Assistant principal → Principal	1021	43.7	34.3
Classroom instruction → Assistant principal → Principal	615	26.3	20.6
Superintendent's/district office → Principal	108	4.6	3.6
Assistant principal → Superintendent's/district office → Principal	67	2.9	2.2
Classroom instruction → Principal	64	2.7	2.1
Other instruction → Assistant principal → Principal	55	2.4	1.8
Classroom instruction → Other instruction → Assistant principal → Principal	52	2.2	1.7
Superintendent's/district office → Assistant principal → Principal	43	1.8	1.4
Support services → Assistant principal → Principal	42	1.8	1.4
Classroom instruction → Superintendent's/district office → Assistant principal → Principal	36	1.5	1.2
Classroom instruction → General administration → Assistant principal → Principal	24	1.0	0.8
Other instruction → Principal	21	0.9	0.7
Classroom instruction → Other instruction → Principal	20	0.9	0.7
General administration → Assistant principal → Principal	19	0.8	0.6
Classroom instruction → Assistant principal → Superintendent's/district office → Principal	17	0.7	0.6
Classroom instruction → Support services → Assistant principal → Principal	16	0.7	0.5

Note: The sample included 2,979 principals. There was a substantial amount of missing data across all districts, school types, and school leader types in 2003/04 for an unknown reason at the Florida Department of Education's Education Data Warehouse. Thus, 2003/04 data are not reflected here.

Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

The common paths account for 96 percent of all assistant principals and 95 percent of all principals who moved from a different job category at least once between 2001/02 and 2011/12. The remaining 4 percent of assistant principals and 5 percent of principals took unique paths to their leadership position. In general, the identified paths reflect what may seem to be the natural progression in school leadership. However, there were some less expected common paths (for example, going from classroom instruction to principal to assistant principal, or from classroom instruction directly to principal). While the less expected common paths may seem anomalous, they could be the result of following school leaders over 11 years. For example, the "true" path from classroom to principal may have been from classroom instruction to assistant principal to classroom instruction to principal. If the first two steps—classroom instruction to assistant principal—occurred prior to 2001/02, they would not be reflected in this study, leading to the seemingly anomalous finding of a common path from classroom instruction directly to principal. But if 20 years of data were available, a more complete picture of the path would be available.

The most common path for assistant principals, taken by 55 percent of assistant principals who moved, was from classroom instruction to assistant principal. The second most common path, taken by 11 percent of assistant principals who moved, was from classroom

Figure 7. Career paths of assistant principals between 2001/02 and 2011/12
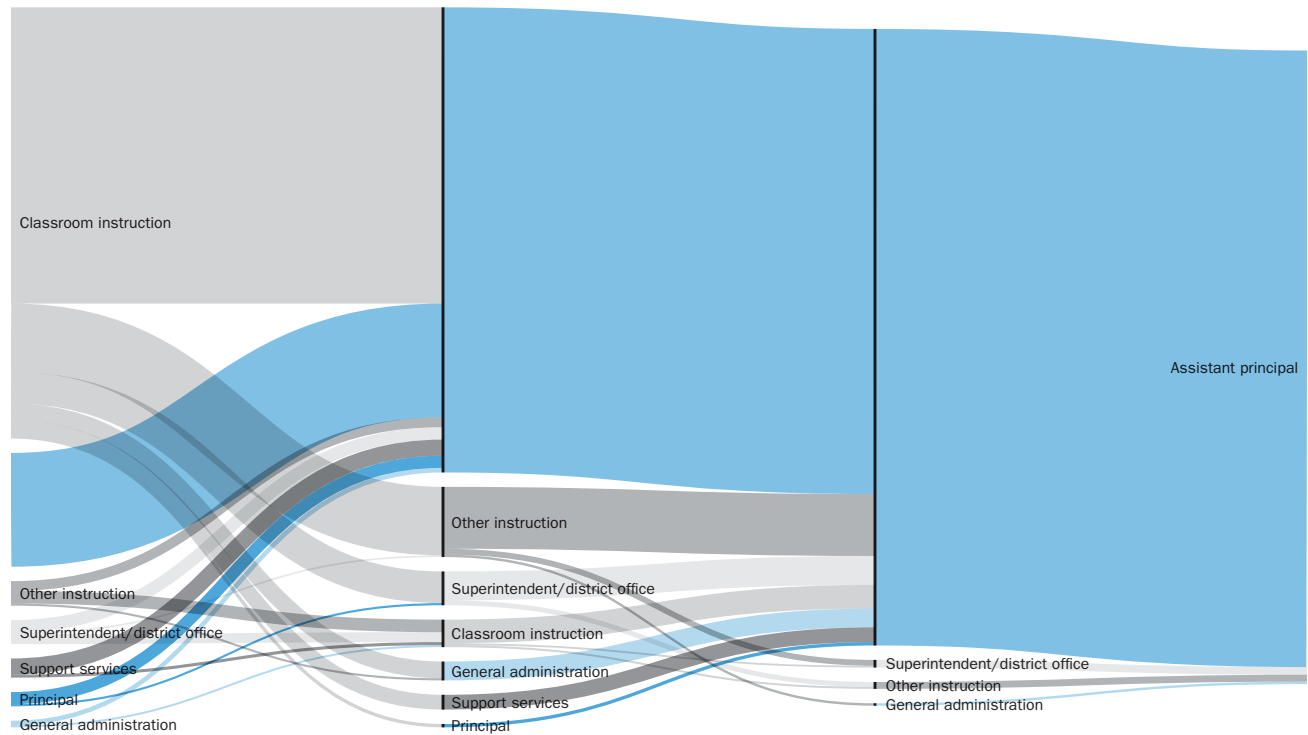
Note: This figure visually represents the career paths from table 4. Colors correspond to the job category and match the color scheme in figure 6. Each vertical line represents a switch to a new job category in the career path. The height of the vertical line represents the proportion of individuals in that job category at that particular switch. The height of each band represents the proportion of individuals taking that pathway. There was a substantial amount of missing data across all districts, school types, and school leader types in 2003/04 for an unknown reason at the Florida Department of Education's Education Data Warehouse. Thus, 2003/04 data are not reflected here.

Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

instruction, to other instruction, to assistant principal. Of the 23 common assistant principal paths, 15 paths included at least one "stop" in classroom instruction, 9 included other instruction, 9 included the superintendent's/district office, 5 included general administration, and 3 included support services (table 4; figure 7).

The most common path for principals, taken by 44 percent of principals who moved, was from assistant principal to principal. The second most common path, taken by 26 percent of principals who moved, was from classroom instruction, to assistant principal, to principal. Of the 16 common principal paths, 12 included a "stop" as assistant principal, 7 included classroom instruction, 5 included the superintendent's/district office, 4 included other instruction, 2 included support, and 2 included general administration (table 5; figure 8). While only 7 paths taken by principals included time in classroom instruction, it is likely that principals spent time in classroom instruction more than 11 years ago, a time not captured in this analysis.

Nearly all of Florida's school leaders were rated as at least "effective" in Florida's new principal evaluation system

Florida's Student Success Act of 2011 requires that each district have an approved principal evaluation program. The Florida Board of Education adopted new leadership standards in November 2011 and has been revising principal evaluation systems to link the evaluation to student achievement data. While each district has substantial discretion in its evaluation system (box 3), half a principal's evaluation is based on the results of value-added

Figure 8. Career paths of principals between 2001/02 and 2011/12
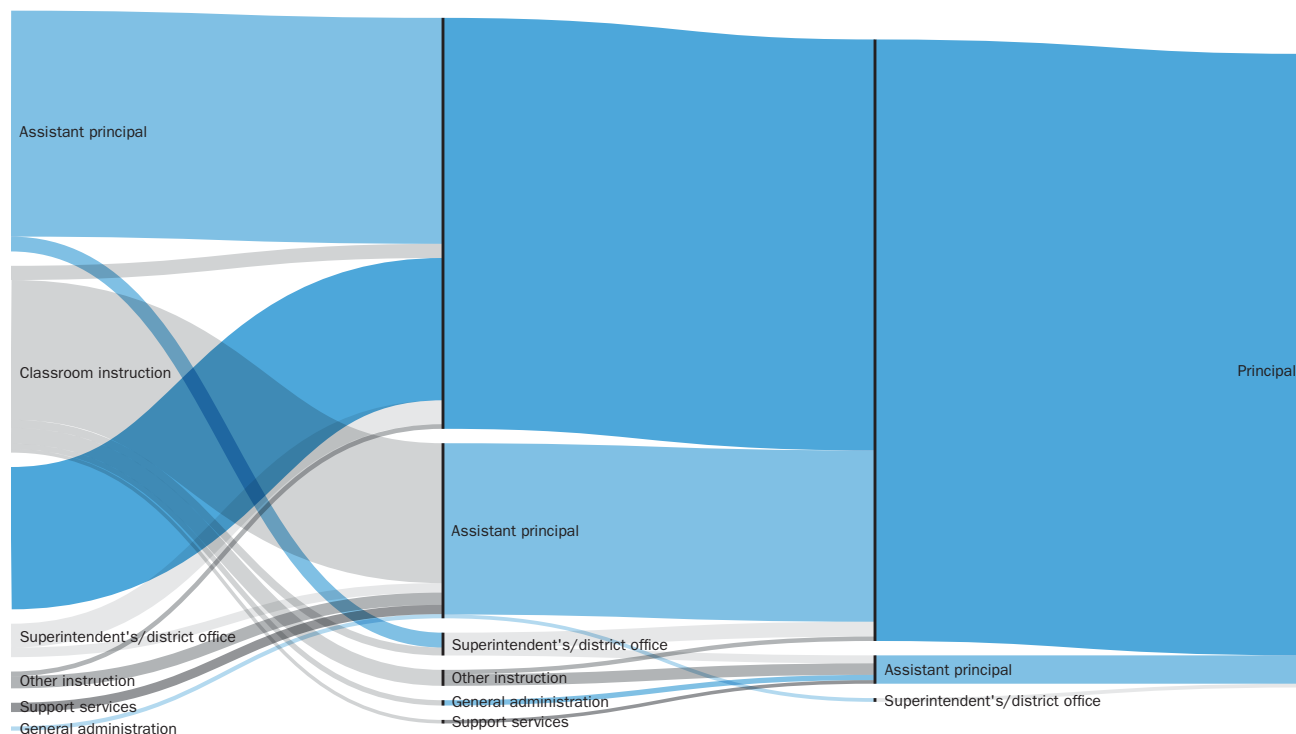
Note: This figure visually represents the career paths from table 5. Colors correspond to the job category and match the color scheme in figure 6. Each vertical line represents a switch to a new job category in the career path. The height of the vertical line represents the proportion of individuals in that job category at that particular switch. The height of each band represents the proportion of individuals taking that pathway. There was a substantial amount of missing data across all districts, school types, and school leader types in 2003/04 for an unknown reason at the Florida Department of Education's Education Data Warehouse. Thus, 2003/04 data are not reflected here.

Source: Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

Box 3. Florida's principal evaluation system

According to the Student Success Act of 2011, 40–50 percent of Florida's principal evaluation systems must be based on the performance of students, with instructional leadership and professional job responsibilities making up the remaining 50–60 percent. While up to half the evaluation is based on student performance, each district sets the cutpoints used to measure student growth. Each district determines the acceptable levels for proficiency (from the value-added assessment of student gains in learning). Districts are provided discretion to identify performance indicators linked to leadership standards, as well as additional professional and job responsibilities. The remainder of the evaluation is based on the district's performance measures of leadership standards related to the effectiveness of classroom teachers in the school, the school leader's use of evaluation criteria and procedures, recruitment and retention of effective and highly effective classroom teachers, improvement in the percentage of instructional personnel evaluated at the highly effective or effective level, and other leadership practices identified by the district. Districts are also given the option to include parent and instructional personnel input into the evaluation.

assessments of student gains in learning. Importantly, each district sets the cutpoints that determine the ratings of highly effective, effective, needs improvement/developing, and unsatisfactory. Thus, "effectiveness" is considered as the extent to which a school leader meets district evaluation criteria.

After the first round of ratings under Florida's new 2011/12 principal evaluation system, nearly all of Florida's school leaders were rated at the level of effective or above (on a scale of highly effective, effective, needs improvement, or unsatisfactory), as determined by district evaluation criteria. Since proficiency levels and rating schemes are district based, effectiveness is considered as the extent to which a school leader meets district evaluation criteria.

In the 2011/12 school year, of the school leaders evaluated (80 percent of assistant principals and 73 percent of principals in the sample[9]), 96 percent of assistant principals and 97 percent of principals were rated either highly effective or effective on their administrative performance evaluation. Specifically, 26 percent of assistant principals were rated highly effective, and more than 70 percent were rated effective. Principals received even higher ratings: 29 percent received an overall rating of highly effective, and 68 percent received a rating of effective. Only 3 percent of school leaders were rated needs improvement, and less than 1 percent were rated unsatisfactory.

Implications of the study findings

While this study was specific to Florida, the implications may be of interest to educators and policymakers in other states as they examine their own school leader workforce. From a policy perspective, the study's findings can guide reform and policy decisions related to recruiting, training, certifying, and evaluating principals. Specifically, findings on career paths can be used to identify the types of experiences school leaders have leading to their positions. Findings on effectiveness can help inform policymakers and district and state agency leaders about the overall performance of its school leaders on performance indicators implemented in districts across the state.

To diversify the school leadership workforce, Florida may want to consider targeted recruitment of minorities

Contrary to reports from other states (Clifford et al., 2012), this study finds that White women made up the largest share of Florida's 2011/12 school leaders. These findings also show that racial/ethnic minorities made up more than a third of Florida's school leaders in 2011/12. However, although Florida's 2011/12 school leaders were proportionally more racially/ethnically diverse than Florida's teachers, school leaders were proportionally less racially/ethnically diverse than Florida's students. Given these findings, Florida policymakers may consider implementing targeted recruitment of racial/ethnic minorities and men to have a more diverse workforce.

Further research on the relationship between paths to leadership and school leader effectiveness may be warranted

Much like reports from other states (Black et al., 2007; Fuller et al., 2007), Florida's school leaders had a wide range of administrative and teaching coverages for a broad range of instructional levels. Florida's school leaders also had a variety of education

experience—previous districts, schools, school types, and career paths—which has created relatively flexible paths to becoming a school leader. What is yet to be determined is whether a relationship exists among coverages, experiences, paths, and school leader effectiveness.

Lack of consistency and variability in school leader evaluations poses a challenge for future research

Beyond describing the 2011/12 workforce of school leaders, this study was also conducted to determine the degree of data variability and explore whether future correlational studies could be conducted. Because of the considerable district discretion in evaluating school leaders, educator effectiveness is not operationalized consistently across districts. Thus, it was not possible to analyze the relationship among coverages, experiences, paths, and school leader effectiveness across districts. Such correlational analyses would need to be conducted within each district. Moreover, unlike the variability in coverages and career paths, there was little variation in school leader evaluations, making it particularly difficult to conduct correlational analyses.

Limitations of the study

The design of this study and the types of analyses conducted were based on the specific requests of the Florida Department of Education. As such, the analysis was limited to analyzing experience within Florida public schools between the 2001/02 and 2011/12 school years. At the department's request, this study did not examine trends in the workforce using longitudinal data but instead provided a single cross-sectional analysis of 2011/12 school leaders and a retrospective cohort analysis of those leaders. Therefore, the historical data for 2001/02 to 2011/12 apply only to those who were school leaders in 2011/12. Anyone who was a school leader before 2011/12 but was not a school leader in 2011/12 was not included in these analyses.

Moreover, despite careful review and multiple efforts to clean datasets and rerun analyses, instances of missing data remained. To work around missing data, each analysis used the full data available and reported the sample size analyzed. While the results are accurate based on the data available, results might differ if there were no missing data. For example, all work experience outside of Florida public schools was self-reported by school leaders. A school leader could choose not to report time spent in the military or teaching in Florida nonpublic schools. Thus, it is unknown whether the individual had no experience in those categories or simply chose not to report the data.

Challenges with data quality are not unique to Florida (see Clifford et al., 2012). Despite compliance with federal and state guidelines, and efforts to ensure the security and continuity of data, consistent reporting across districts is often difficult to obtain, particularly when districts have substantial discretion, such as in evaluating effectiveness. Information on education and professional development was limited. A more nuanced and complete picture of school leadership training would require additional information about effectiveness, educational experience, and professional development in Florida and other states.

This study is purely descriptive. It describes characteristics of school leaders in Florida that are of interest to the Florida Department of Education. Beyond describing the 2011/12 workforce of school leaders, this study was also conducted to determine the degree of data

variability and explore whether future correlational studies could be conducted. Although correlational studies provide only suggestive information about how variables might be related (versus the causal information obtained from experimental investigations), future correlational studies could answer questions about the relationship between school leadership characteristics and effectiveness. For example, a correlational study might help determine whether particular career experiences identified through career paths are associated with higher levels of school leadership effectiveness.

Appendix A. Definition of key terms

Career paths for school leaders

Common path. A career path taken between 2001/02 and 2011/12 by at least ten 2011/12 school leaders.

Unique path. A path followed between 2001/02 and 2011/12 by fewer than ten 2011/12 school leaders.

Florida Educator Certificate

Florida Educator Certificate. The qualifying certificate obtained by educators through the Florida Department of Education. It includes qualifications for certain administrative levels, instructional levels, and subject matters called "coverages."

- *Coverage.* A term used by the Florida Department of Education to describe the specific administrative levels, instructional levels, and subjects covered by a Florida Educator Certificate. See http://www.fldoe.org/edcert/subjlist.asp for more details.
- *Instructional levels.* Each coverage of the Florida Educator Certificate has an associated instructional level. Current instructional levels include *all levels*, typically K–12; *elementary*, typically K–6; *secondary*, typically 6–12 and may include 5–9; *prekindergarten*, typically birth to age 4; and *district designation*, a designation made by the district rather than the state.[10]
- *Administrative coverages.* The five administrative coverages are school leadership, school principal, administration/supervision, local director of vocational education, and administration of adult education.
- *Subject coverages.* The subjects the educator is qualified to teach, such as English, math, and science, which are usually linked to an instructional level.
- *Endorsement.* Indicates that an individual has a particular expertise in an instructional level or methodology.

School leaders and job categories

Job classification. The specific job code assigned by the Florida Department of Education (see http://www.fldoe.org/core/fileparse.php/8862/urlt/0094214-sfappende.pdf). For this study, several job classifications have been divided into the distinct job categories described below.

School leader. All assistant principals and principals, including those with the interim/intern designation. This study used "job categories" that summarize some of the 336 Florida Department of Education assigned "job classifications" for the school leaders.

Job category. This study's broad categories related to the Florida Department of Education's job classifications. The specific job categories, with examples of Florida job classifications, are:

- *Assistant principal.* This job classification is limited to those identified as assistant principals or assistant directors of vocational/technical centers. According to the definition provided by the department of education, assistant principals are staff members assisting the administrative head of the school.

- *Classroom instruction.* Job classifications that involve student- or classroom-level instruction. Examples include but are not limited to intermediate resource teacher, teacher of language arts, teacher of music, or teacher of varying exceptionalities.
- *General administration.* Job classifications for school-level administration other than assistant principal or principal classifications. Examples include but are not limited to administrative assistant, school clerical staff, registrar, or school secretary.
- *Interim/intern assistant principal.* School districts use these classifications interchangeably. Typically, however, "intern" refers to an individual in a training program who is not yet fully eligible to serve in that position whereas "interim" refers to one temporarily serving in the position. For analytic purposes, interim/intern assistant principals are combined with assistant principals.
- *Interim/intern principal.* School districts use these codes interchangeably. Typically, however, interim/intern principals must have already served as an assistant principal. For analytic purposes, interim/intern principals are combined with principals.
- *Principal.* This job classification is limited to those identified as principals as defined by administrative rule 6A-4.0083 or directors of vocational/technical centers (box A1). According to the definitions provided by the department, principals are staff members assigned as the administrative head of a school and delegated responsibility for the coordination and direction of the activities of the school.
- *Other instruction.* Involves higher instruction or instruction of other professionals. Examples include but are not limited to computer systems user, educator of instructional technology, math coach, reading coach, or school librarian/media specialist.
- *Superintendent's/district office.* A job category specifically reserved for school leaders serving in the special use school number 9001 designated as the superintendent's office. In this instance the school number identifies the job classification rather than the code for the job classification. Examples include but are not limited to district dropout prevention specialist, learning resource specialist, director of instruction/curriculum, and program specialist.
- *Support services.* Includes job classifications that provide special support services to students, teachers, or administrators but do not necessarily involve direct instruction. Examples include but are not limited to administrator on special assignment for guidance services, coordinator of pupil personnel services, counselor, diagnostic specialist, dropout prevention specialist, or parent education specialist.

Work experience type. The following codes were used for possible work experience types that districts collected from school leaders and reported to the Florida Department of Education.
- Administration in education.
- Military service.
- Service to the district in current job code assignment.
- Teaching in current district.
- Teaching in Florida nonpublic schools.
- Teaching in Florida public schools.
- Teaching out of state nonpublic schools.
- Teaching out of state public schools.

Box A1. Qualifications for Florida principals

To be eligible to receive certification as a school principal in Florida, administrative rule 6A-4.0083 states that "an individual shall satisfy each of the following requirements:

(1) Hold a valid professional certificate covering school leadership, administration, or administration and supervision.

(2) Document successful performance of the duties of the school principalship. These duties shall be performed in a Department of Education approved district school principal certification program pursuant to Rule 6A-5.081, F.A.C., designed and implemented consistent with the principal leadership standards approved by the State Board of Education. In addition, these duties shall:
(a)   Be performed as a full-time employee in a Florida public school in a leadership position through which the candidate can fully demonstrate the competencies associated with the Florida Principal Leadership Standards.
(b)   Be a formally planned professional development program designed and implemented to prepare the individual to effectively perform as a school principal.
(c)   Be comprehensive of all the duties of the school principalship.
(d)   Be performed under the direct supervision of a currently practicing school principal or district manager who has been approved by the district school board to serve as the supervising principal or manager for this program.

(3) Demonstrate successful performance of the competencies of the school principalship standards which shall be documented by the Florida district school superintendent based on a performance appraisal system approved by the district school board and the Department pursuant to Rule 6A-5.081, F.A.C.

(4) An individual who holds a valid Florida Educator's Certificate covering administration or administration and supervision issued prior to July 1, 1986 and served as a school principal prior to July 1, 1986 for not less than one (1) school year may apply for certification as a school principal under the provisions of Rule 6A-4.0085, F.A.C.

Source: Florida Administrative Code Rule 6A-4.0083.

School types

School type. Instructional level of the school designated by the Florida Department of Education (see http://www.fldoe.org/core/fileparse.php/7588/urlt/0069233-schtypegrade.doc). The specific school types are:
- *Elementary schools.* Schools providing instruction at one or more grade levels from prekindergarten through grade 5. May include schools serving grade 6 if also serving one or more grades from prekindergarten through 5 (for example, a K–6 school).
- *Middle schools.* Schools providing instruction in middle school configurations (grades 6–8) and junior high school configurations (grades 7–9). Can also include schools serving a single grade in the 6–8 range (for example, a grade 6 center).
- *High schools.* Schools providing instruction at one or more grade levels from 9 to 12. Includes regular high schools and grade 9 centers.

- *Combination elementary and secondary schools.* Schools providing instruction in grade groupings that include more than one of the categories described above (for example, prekindergarten to grade 8, K–12).
- *Adult schools.* Schools providing instruction to adult learners.
- *Other.* Schools that do not fall into one of the above categories. Typically, these schools are part of special-use school numbers such as the superintendent's or district office.

Statistical terms

Statistical terms include the following:

Cross-tabulation. A table used to summarize categorical data.

Retrospective cohort analysis. Type of study that looks back in time at events specific to a group ("cohort") of individuals. This study is a retrospective cohort analysis of 2011/12 school leaders.

Appendix B. Statistical tests

This appendix includes the results of additional statistical significance tests for demographic characteristics of school leaders and for Florida Educator Certificate coverages.

Demographic characteristics

There was not a significant difference in the gender ratio between assistant principals and principals ($X^2 = .731$, $df = 1$, $p = .392$).

Compared with the gender distribution of Florida's teachers, the gender distribution among school leaders is significantly different ($X^2 = 919.141$, $df = 1$, $p < .001$).

Within the student population, 49 percent of students were female; this was also significantly different from the gender distribution among school leaders ($X^2 = 87.651$, $df = 1$, $p < .001$).

An analysis of variance revealed a significant age difference between assistant principals and principals ($F = 456.642$, $df = 1$, $p < .001$) and a significant age difference between males and females ($F = 18.033$, $df = 1$, $p < .001$). The relative racial/ethnic distribution was significantly different ($X^2 = 62.623$, $df = 3$, $p < .001$) between assistant principals and principals.

The racial/ethnic distribution of Florida's 2011/12 school leaders was significantly different from the racial/ethnic distribution of Florida's teachers ($X^2 = 563.668$, $df = 3$, $p < .001$).

The racial/ethnic distribution of Florida's 2011/12 school leaders was also significantly different from the racial/ethnic distribution of Florida's prekindergarten to grade 12 students ($X^2 = 1492.267$, $df = 3$, $p < .001$).

Florida Educator Certificate coverages

Florida's 2011/12 principals held significantly more coverages than assistant principals did across their tenure in the Florida school system ($F = 550.140$, $df = 1$, $p < .001$), and had significantly more active coverages than assistant principals had ($F = 14.958$, $df = 1$, $p < .001$).

Almost all school leaders had at least one administrative coverage. The types of coverages were significantly different between assistant principals and principals ($X^2 = 1093.985$, $df = 6$, $p < .001$).

Among the administrative and teaching coverages with an assigned instructional level,[11] there were significant differences between assistant principals and principals in instructional-level distribution ($X^2 = 173.52$, $df = 3$, $p < .001$).

According to a series of analyses of covariances, there was a significant difference in amount of changes (that is, district, school, school type, and job type) experienced by assistant principals and principals between 2001/02 and 2011/12 after controlling for the number of years of data available. The number of years of data available for each school leader was used as a control covariate because the opportunity to experience a change depends on being present in the dataset, thus the amount of changes may be correlated

with the number of years of data present. There were significant differences in the number of districts ($F = 21.395$, $df = 1$, $p < .001$), number of schools ($F = 11.423$, $df = 1$, $p = .001$), number of school types ($F = 21.362$, $df = 1$, $p < .001$), and number of job types ($F = 42.762$, $df = 1$, $p < .001$). The number of years of data was significant at the $p < .001$ level in all analyses of covariances.

This appendix shows data on the movement of school leaders from outside the Florida public school system into the Florida system (figure C1). Data show that proportionally more of the 2011/12 combination elementary and secondary school leaders matriculated into the Florida system between 2001/02 and 2010/11 than any other school type (figure C1). Proportionally more of the 2011/12 assistant principals than principals matriculated into the Florida system between 2001/02 and 2010/11 (figure C2).

Figure C1. Combination elementary and secondary schools have the largest proportion of school leaders from outside Florida public schools
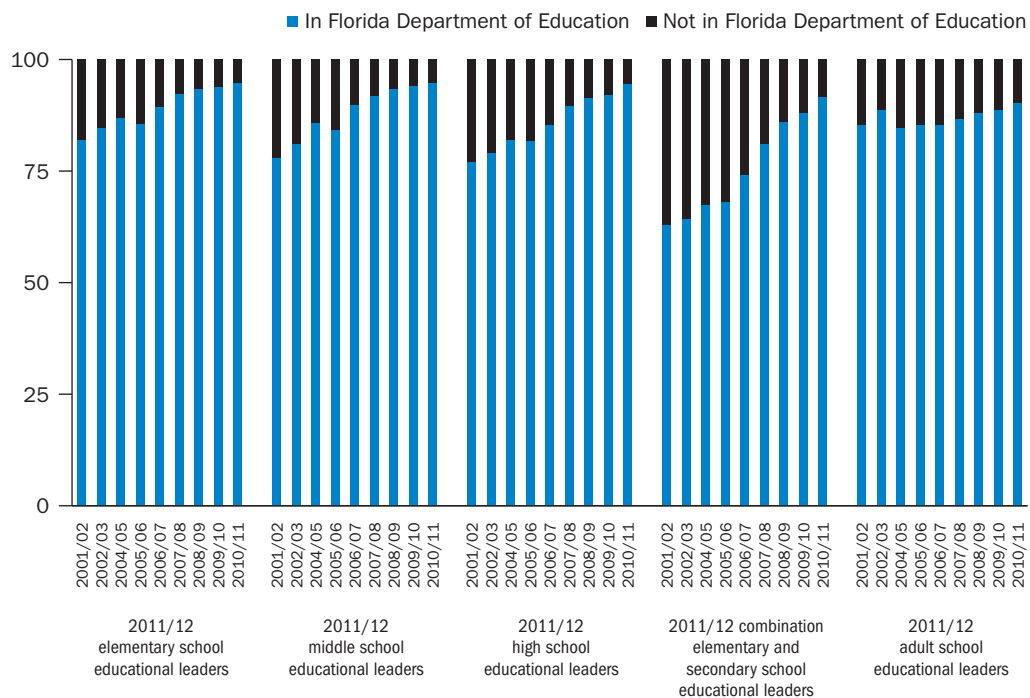
Note: Across all years, if job information was not reported (that is, the data are missing) for an individual, it was interpreted as the individual not working within the Florida school system. There was a substantial amount of missing data across all districts, school types, and school leader types in the 2003/04 school year for an unknown reason at the Florida Department of Education's Education Data Warehouse, thus 2003/04 data are not presented here.

Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

Figure C2. Proportionally more of the 2010/11 assistant principals than principals were outside Florida public schools at some time between 2001/02 and 2010/11
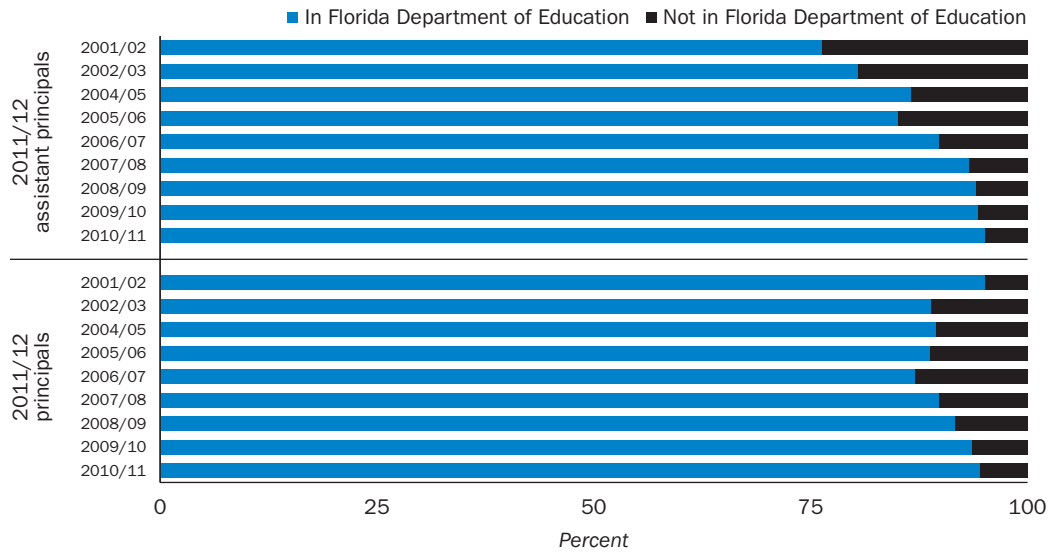
Note: Across all years, if job information was not reported (that is, the data are missing) for an individual, it was interpreted as the individual not working within the Florida school system). There was a substantial amount of missing data across all districts, school types, and school leader types in the 2003/04 for an unknown reason at the Florida Department of Education's Education Data Warehouse, thus 2003/04 data are not presented here.

Source: Authors' analysis based on data obtained by special request from the Florida Department of Education.

Notes

1. In this study the term "school leaders" includes assistant principals and principals; however, in the Florida Department of Education database there are several specific job classifications for assistant principals and principals.

2. Charter schools are considered public schools, and thus charter school employees are included in the analyses.

3. Florida Department of Education (2012a, 2012b) contains demographic data on students and teachers.

4. All administrative and teaching certifications, except for school leadership and school principal, are assigned an instructional level. The school leadership and school principal certifications do not have a Florida Department of Education–assigned instructional level. Rather, each district designates the applicable certification level, which is not reported in the certification database. Therefore, if a school leader had only a school leadership or school principal certificate, he or she would not be considered in the instructional-level descriptions, potentially underestimating the percentage of school leaders in each instructional level.

5. The instructional level categorized as "all levels" is a unique designation and does not necessarily indicate that an individual has coverages for each of the instructional levels. Rather it indicates that the coverage applies to all levels. For example, a coverage in music is an all-levels instructional-level coverage.

6. There was a substantial amount of missing data across all districts, school types, and school leader types in 2003/04 for an unknown reason at the Florida Department of Education's Education Data Warehouse. Thus, 2003/04 data are not reflected in the analyses.

7. This study follows the Florida Department of Education's practice of using "nonpublic schools" instead of "private schools."

8. This analysis includes all 2011/12 school leaders and follows their paths from their first entry into the Florida Department of Education database between the 2001/02 and 2011/12 school years; it does not include time spent outside the Florida public school system or the time before 2001/02. This progression does not account for time spent in each position. Further, the career paths analysis evaluates only broad job categories.

9. In cases where school leaders were not evaluated or school leaders were employed by a charter school that was not participating in Florida's Race to the Top initiative, a code was entered in the database to indicate that data were unavailable.

10. Some previous certifications and endorsements have instructional levels with different grade ranges. As part of the data-cleaning process, the study team matched old instructional levels to current Florida Department of Education instructional levels. For example, an older certification was primary education and had an instructional level of K–3, which now falls under the elementary instructional level.

11. All administrative and teaching certifications, except for school leadership and school principal, are assigned an instructional level. The school leadership and school principal certifications do not have a department-assigned instructional level. Rather, each district designates the applicable certification level, which is not reported in the Florida certification database. Therefore, if a school leader had only a school leadership or school principal certificate, he or she would not be considered in the instructional level descriptions, potentially underestimating the percentage of school leaders in each instructional level.

References

Black, W. R., Bathon, J., & Poindexter, B. (2007). *Looking in the mirror to improve practice: A study of administrative licensure and master's degree programs in the state of Indiana.* Indianapolis, IN: Indiana Department of Education.

Branch, G. F., Hanushek, E. A., & Rivkin, S. G. (2012). *Estimating the effect of leaders on public sector productivity: The case of school principals* (NBER No. 17803). Cambridge, MA: National Bureau of Economic Research. http://eric.ed.gov/?id=ED529199

Clifford, M., Condon, C., Greenberg, A., Williams, R., Gerdeman, R. D., Fetters, J., & Baker, B. (2012). *A descriptive analysis of the principal workforce in Wisconsin* (Issues & Answers Report, REL 2012–135). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest. http://eric.ed.gov/?id=ED530569

Florida Administrative Code Rule 6A-4.0083. School principal—administrative class. Retrieved April 1, 2013, from https://www.flrules.org/gateway/readFile.asp?sid=0&type=1&tid=6430535&file=6A-4.0083.doc.

Florida Department of Education. (2012a). *Membership in Florida public schools.* Retrieved April 1, 2013, from http://www.fldoe.org/eias/eiaspubs/archives.asp.

Florida Department of Education. (2012b). *Teacher demographics in Florida's public schools.* Retrieved April 1, 2013, from http://www.fldoe.org/eias/eiaspubs/archives.asp.

Folsom, J. S., Osborne-Lampkin, L., & Herrington, C. D. (2014). *Using administrative data for research: A companion guide to* A descriptive analysis of the principal workforce in Florida schools (REL 2015–049). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southeast. http://eric.ed.gov/?id=ED551066

Fuller, E. J., Young, M. D., & Orr, M.T. (2007, April). *Career pathways of principals in Texas.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL. Retrieved April 1, 2013, from http://www.mpea.org/instmaterials/casestudies/PDF/AERA%202007_Principal%20Career%20Paths%20-%20for%20web%20site.pdf.

Grissom, J. A., and Loeb, S. (2009). *Triangulating principal effectiveness: How perspectives of parents, teachers, and assistant principals identify the central importance of managerial skills* (CALDER Working Paper 35). Washington, DC: The Urban Institute. http://eric.ed.gov/?id=EJ939096

Hallinger, P., & Heck, R. H. (1996). Reassessing the principal's role in school effectiveness: A review of empirical research, 1980–1995. *Educational Administration Quarterly, 32*(1), 5–44.

Hallinger, P., & Heck, R. H. (1998). Exploring the principal's contribution to school effectiveness: 1980–1995. *School Effectiveness and School Improvement, 9*(2), 157–191.

Leithwood, K., & Jantzi, D. (2000). Principal and teacher leadership effects: A replication. *School Leadership & Management, 20*(4), 415–434. http://eric.ed.gov/?id=EJ621275

Leithwood, K., Louis, K. S., Anderson, S., & Wahlstrom, K. (2004). *How leadership influences student learning.* New York: The Wallace Foundation. http://eric.ed.gov/?id=ED485932

Louis, K., Leithwood, K., Wahlstrom, K., & Anderson, S. (2010). *Investigating the links to improved student learning: Final report of research findings.* Minneapolis, MN: University of Minnesota. Retrieved January 1, 2013, from http://www.wallacefoundation .org/knowledge-center/school-leadership/key-research/Documents/Investigating-the -Links-to-Improved-Student-Learning.pdf.

Murphy, J. (2008). The place of leadership in turnaround schools: Insights from organizational recovery in the public and private sectors. *Journal of Educational Administration, 46*(1), 74–98. http://eric.ed.gov/?id=EJ800473

Nettles, S. M., & Herrington, C. (2007). Revisiting the importance of the direct effects of school leadership on student achievement: The implications for school improvement policy. *Peabody Journal of Education, 82*(4), 724–736. http://eric.ed.gov/?id=EJ780703

Rice, J. K. (2010). *Principal effectiveness and leadership in an era of accountability: What research says* (Brief 8). Washington, DC: The Urban Institute. http://eric.ed.gov/?id=ED509682

The Regional Educational Laboratory Program produces 7 types of reports

Making Connections
Studies of correlational relationships

Making an Impact
Studies of cause and effect

What's Happening
Descriptions of policies, programs, implementation status, or data trends

What's Known
Summaries of previous research

Stated Briefly
Summaries of research findings for specific audiences

Applied Research Methods
Research methods for educational settings

Tools
Help for planning, gathering, analyzing, or reporting data or research