WHERE DO OUR GRADUATES GO? A FIVE-YEAR EXPLORATION OF THE REGIONAL DISTRIBUTION OF PRINCIPAL PREPARATION PROGRAM GRADUATES[*]

Justin Bathon

William Black

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Abstract

Many university-based principal preparation programs prepare individuals for employment in local K-12 school districts. Programs recruit students and shape aspects of curriculum and ongoing professional development in light of local school districts and community characteristics. Utilizing Indiana state licensure and employment data sets for all individuals initially licensed as building-level administrators over a five-year period, and linking each individual to the U.S. Census Bureau locale codes and zip-code tabulation areas of their school of employment, we graphically present where principal preparation program graduates work and analyze different trends by program and job type (administrator and non-administrator). Most program graduates work in proximity to their preparation program, although two programs' graduates were more likely to work throughout the state. Graduates employed in rural settings were more likely to be employed as administrators with those in urban settings least likely. We provide an example of how data may systematically be made available to state policy makers, program faculty, and other stakeholders to develop a more coherent system of leadership preparation.

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2 Sumario en espanol

Muchos programas universitarios de liderazgo educativo preparan individuos para empleo en distritos escolares ubicados cerca del programa preparativo. Profesores buscan estudiantes y planean aspectos del desarrollo profesional pensando en las características de los distritos escolares y comunidades locales. Utilizando conjuntos de datos de licenciatura e empleo del estado de Indiana de todos los individuos que obtuvieron una licencia inicial de administración educativa a nivel de edificio durante un período de cinco años, ligamos a cada uno de estos individuos a códigos de lugar del Censo de EEUU y las áreas de tabulación de código postal de su escuela de empleo, presentamos gráficamente donde trabajan los administradores escolares, y analizamos tendencias diferentes por programa y tipo de trabajo (si llego a ser administrador o no). La mayoría de los graduados de los programas trabajan en proximidad a su programa de preparación, aunque encontramos que los graduados de dos programas tuvieron mejor posibilidad de trabajar a través del estado. En comparación con áreas urbanas, era más probable que los graduados empleados en áreas rurales fueran empleados comos administradores. Proporcionamos un ejemplo de cómo conjuntos de datos pueden ser analizado y presentado a políticos estatales, facultades de programas, y otras personas interesadas con el fin de desarrollar un sistema mas coherente de preparación de líderes educativos.

NOTE: Spanish translation provided by Co-author William Black, University of South Florida.

3 Introduction

Over the past decade, the preparation of school leaders has become an area of increased interest as policy makers, funders, and researchers have expressed interest in developing a coherent and robust system of leadership preparation that enhances leadership capacity in schools. This concern with the efficacy of leadership preparation, primarily at the level of the building administrator, surfaces from the growing consensus that effective school-level leadership is central to educational improvement and reform (Davis, Darling-Hammond, LaPointe, & Meyerson, 2005; Educational Research Service, 2000; Farkas, Johnson, & Foley, 2003; Hallinger & Heck, 1998; Leithwood, Seashore-Lewis, Anderson, & Wahlstrom, 2004; Rand, 2009; Waters, Marzano, & McNulty, 2003). In particular, concern for the development of school leaders capable of leading reform and increasing learning outcomes for all students is evidenced in state-level educational policy deliberations (McCarthy, 2005; Orr & Barber, 2009; Shelton, 2009) and foundation funded multi-state initiatives and studies (Fry, O'Neil, & Bottoms, 2006; Seashore Louis, Leithwood, Wahlstrom, & Anderson, 2010; Wallace Foundation, 2005). Additionally, members from the university-based professional organizations in the field, the University Council for Educational Administration (UCEA) and the National Council of Professors of Educational Administration (NCPEA) have produced much reflective commentary and supported self-evaluation as members of the organizations expand their interest in measuring and judging a variety of outcomes from the nearly 500 principal preparation programs in the country (Ballenger, Alford, McClure, & McClure, 2009; Cambron-McCabe, 2002; Creighton & Jones, 2001; Kochan & Locke, 2009; Murphy, 2002, 2006; Orr & Pounder, 2006; Orr & Barber, 2009; Pounder, Reitzug, & Young, 2002).

4 Purpose and Significance

Individual programs often track where their alumni find employment and many have utilized measures of alumni satisfaction. Nevertheless, there are few systematic studies of pre-service administrator career pathways and fewer still that illuminate employment patterns of all initially licensed administrators in one state

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[1] http://www.ncpeapublications.org

and link these individuals to their university-based preparation program (McFadden & Buckner, 2005; Orr & Barber, 2009; Seashore Louis, et al. 2010). The approach presented in this article adds a geographic dimension to career pathway research that links initially licensed administrators to their preparation programs (Baker, Orr, & Young, 2007; Young & Fuller, 2009). In the article, we seek to demonstrate how program production and career pathways can be profiled across distinct geographic locations, by cross tabulating individual-level licensure andK-12 employment data bases in one state (Indiana) and then linking all graduates from the 17 accredited university educational leadership programs over a time period (2001-2005) to the zip codes and U.S. Census locale codes of school of employment of all initially licensed building administrators in the state. As a result, we describe trends in employment patterns (administrator or non-administrator) for each of the preparation programs across proximity to preparation program location and type of community.

Knowledge of where principal preparation program graduates are employed and whether they are employed as administrators assists state-level initial principal preparation program accreditation and ongoing review (Adams & Copeland, 2005). It is in the interest of the state and university programs to be informed of regional employment patterns in order to provide an appropriate amount of minimally qualified educational leaders to school districts located in different regions and community types. Our own review of initial principal preparation program accreditation applications submitted to the Indiana Department of Professional Standards revealed that most institutions argued that their programs would serve a previously underserved locale. As well, K-12 school districts have great interest in accrediting institutions that are regionally distributed so that courses and programs are accessible to teachers (Gahunga, 2008; Hemmen, Edmondson, & Slate, 2009). The statewide analysis undertaken here informs educational leadership certification and program approval processes and can help answer questions about whether new programs are needed in a region. It can help sustain system-wide conversations about production of graduates for administrative roles (versus teacher leadership) in a particular area. The representation of regional and institution-specific employment patterns profiles candidate enrollment, district hiring practices, and post-program placement of graduates into leadership positions in ways that can shape deliberations on developing a state-level coherent system of leadership preparation (Gahunga, 2008; Rand, 2009; Young, 2010).

Knowing how graduates are regionally and occupationally distributed can also guide program-level recruitment, curricular and program design considerations, and efforts to provide ongoing professional development (Kochan & Locke, 2009; McCarthy, 2002). For program faculty, knowing specifically where graduates are located can help with targeting important efforts to engage school districts in partnership efforts to recruit new students, develop robust internships, provide meaningful and sustained research for K-12, and create ongoing professional development conversations (Rand, 2009; Wallace, 2006). As well, districts can access this information, which becomes one important piece of information in their strategies about the extent to which university graduate program collaboration efforts need to be targeted, particularly for ongoing licensure-plus types of support and the capacity-building administrators need during the course of their career (Adams & Copeland, 2005; Black & Murtadha, 2006, Fry, O'Neil, & Bottoms, 2006).

Researchers, programs, and state licensing and accreditation institutions can systematically examine the dynamics of where graduates are finding employment and begin to determine where there may be specific shortages of principal candidates (Roza, 2003). We argue that the ability to systematically collect and present data in ways that makes data easier to access and quickly interpret does inform multiple stakeholders about where university-based preparation program graduates go to work and can be used as a foundation for further studies on the efficacy of programs and program graduates (Pounder & Orr, 2006; Young, 2010).

5 Method

For this article, we engage the following questions drawing from data we had originally collected in the larger study (Black, Bathon & Poindexter, 2007): Where do program graduates go to work? To what extent are they employed close to where they received their training? What variation, if any, does living in a particular type of community (as defined by U.S. Census Locale Codes) have on initially licensed building administrators employment as administrators (rather than a teacher)?

5.1 Data Collection

The larger study of building-level educational leadership preparation programs across the state was supported by the state of Indiana, with backing from the Wallace foundation. The purpose of the study was to gather information on programs to construct a state of the state of building-level leadership preparation and two of the lead investigators of the study are the authors of this article (Black, Bathon & Poindexter, 2007). The 2007 study underwent review and was approved by the Indiana University-Purdue University Institutional Review Board. Data collection for the 2007 study took four forms. First, the researchers collected publically available data in the form of NCATE reports, state-mandated Unit Assessment Reports, as well as other publically available information listed on program websites. Secondly, we created an open-ended program narrative survey that was sent to all 17 state accredited programs that sought information and documentation on 13 program characteristics. All programs returned the narrative survey, most with supporting documentation. Information from these two sources is not used directly in this article although the knowledge gleaned does inform our discussion.

Most relevant to this article are the next two forms of data collected. We gathered identity protected individual-level data on all individuals receiving an initial building-level licensure between October 2001 and October 2005 from the Indiana Division of Professional Standards. In this dataset, each individual was linked to one of the 17 approved preparation program, which allowed us to view multiple trends by institution. Fourth, we accessed Indiana Department of Education's K-12 school data. This data link allowed us to link employment in a particular role to each of the 2028 individuals receiving an Indiana initial building administrator license during the five-year period of study.

5.2 Analysis

Subsequent to gathering the licensure and employment datasets, we cross-referenced the two datasets using a snapshot date of October 31, 2005 and were able to link individuals and various personal characteristics such as gender and race to position type (Principal, Assistant Principal, Counselor, Dean, or Teacher), place of employment (including high school, middle school, or elementary), and licensure-granting institution. For this article, we define placement and non-placement in administrative position as either employment as a principal or assistant principal (placement) or employment in any other position (non-placement). Because the data in both datasets represented population data, the analysis used for this report was primarily descriptive.

Figure 1:

Indiana 3-Digit ZCTAs (Zip Code Tabulation Areas)
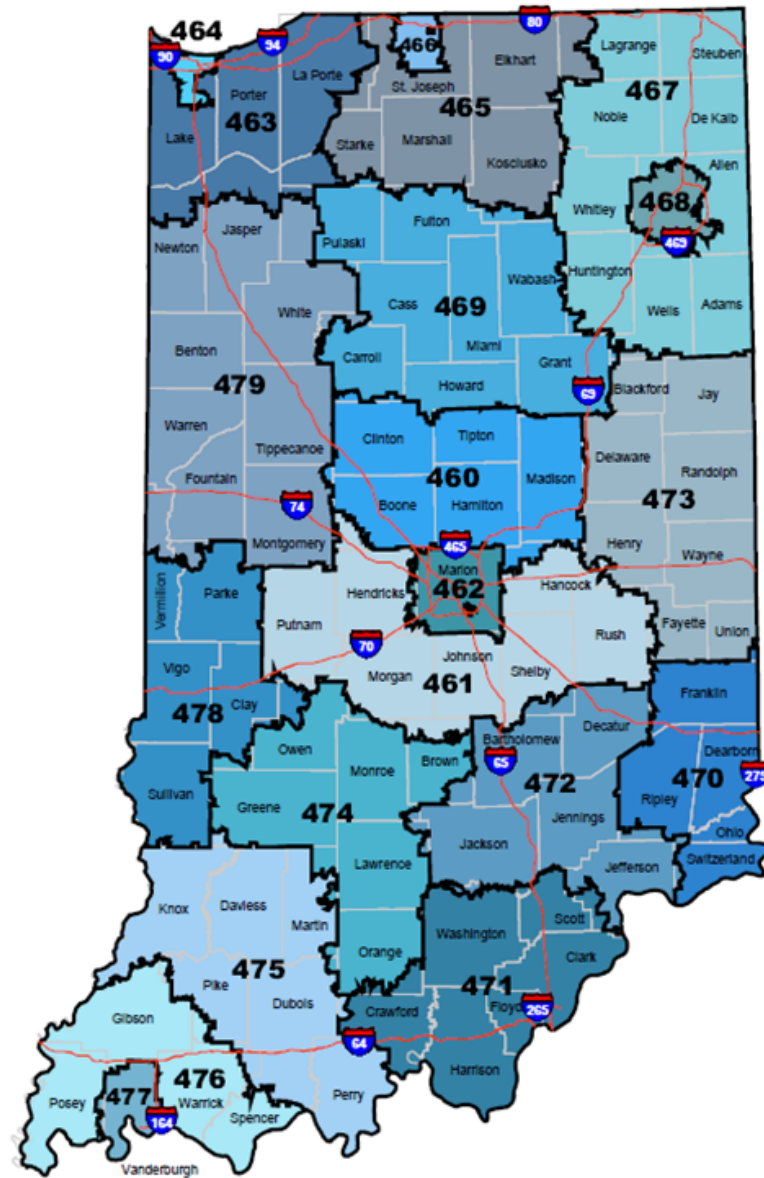
Map produced by the Indiana Business Research Center,
Kelley School of Business, Indiana University, June 2004

Figure 1

By cross-referencing these two datasets we were able to access and extract information that allowed us to profile the regional distribution of graduates of all 17 accredited preparation programs over the five-year period (2001-2005). We utilized the six-digit zip code of the place of employment of the new building-level graduates as of October 31, 2005. The numbers in a zip code are consciously assigned to identify different regions of each particular state.

For instance, the first three digits of a zip code represent a 'zip code tabulation area' (ZCTA). These ZCTAs are used by the U.S. Census Bureau to disaggregate data by different regions within a state. The ZCTA distribution in Indiana can be seen to the right. Data in the state dataset was thus disaggregated according to the first three digits of the location in which the individual with the new initial licensure was employed. We first present findings by U.S. Census Bureau Locale Codes, which describe different types of communities and are listed below. We then present findings on the regional distribution of graduates by ZCTAs. By correlating these locale codes and ZCTAs with preparation institutions it was possible to determine the number of graduates each institution was providing within different types of communities and regions, as well as to possible to apply employment type (placed as administrator or not placed) and the different level (elementary, junior or high school) in which the employment occurred. The locale codes reveal the types of communities in which graduates from different programs find employment and differential hiring patterns within the locales, while the zip code data tells us more about physical distance of employment in relationship to the university preparation program.

Table 1:

U.S. Census Bureau Locale Codes

1 Large City:
A central city of a CMSA or MSA, with the city having a population greater than or equal to 250,000.

2 Midsize City:
A central city of a CMSA or MSA, with the city having a population less than 250,000.

3 Urban Fringe of a Large City:
Any territory within a CMSA or MSA of a Large City and defined as urban by the Census Bureau.

4 Urban Fringe of a Midsize City:
Any territory within a CMSA or MSA of a Midsize City and defined as urban by the Census Bureau.

5 Large Town:
An incorporated place or Census designated place with a population greater than or equal to 25,000 and located outside a CMSA or MSA.

6 Small Town:
An incorporated place or Census designated place with a population less than 25,000 and greater than or equal to 2,500 and located outside a CMSA or MSA.

7 Rural, Outside MSA:
Any territory designated as rural by the Census Bureau that is outside a CMSA or MSA of a Large or Midsize City.

8 Rural, Inside MSA:
Any territory designated as rural by the Census Bureau that is within a CMSA or MSA of a Large or Midsize City.

5.3 Limitations

We were unable to follow those graduates who moved out of state or who were not employed in K-12 public education in Indiana. Therefore, a small percentage of program completers (estimated at 10%) were unaccounted for in the employment data. One program, Notre Dame University, was not included in this article, as the vast majority of the program graduates work in Catholic schools in other states or other countries. We also found that 57 individuals initially licensed as building administrators (3.7% of sample), were not represented in any location.

We do not attempt to evaluate the effectiveness of preparation nor characteristics or quality of program graduates in this article. We merely assume minimal qualification as represented by a license (Adams &

Copeland, 2005). While we report on placement rates of administrators, which we define only as principal or assistant principals, we are well aware that leadership can and should be conceptualized as distributed and organizational and is enacted through multiple roles in schools (Seashore Louis, et al., 2010). We do not analyze or describe labor market factors such as state or regional level demand for administrators or district hiring practices, but rather describe institutional production and general employment patterns that are reflected at a specific date. The study utilizes descriptive analysis and does not rely on other forms of analysis to draw conclusions as to correlation or cause and effect.

6 Results

Results are first presented by geographic locale code, creating three clusters of communities by locale codes: Large City and Urban Fringe of Large City; Mid-Size City and Urban Fringe of Mid-Size City; and Large Town, Small Town, and Rural Outside and Inside MSA. Subsequently, findings are presented on the regional distribution of graduates by 3 digit Zip Code Tabulation Areas (ZCTAs).

6.1 Distribution of initially accredited building administrators by locale codes

We disaggregated placement of program completers geographically based on U.S. Census Bureau Locale Codes. This gave us information on the different types of communities the newly licensed building-level administrative preparation program graduates were entering. When rates of employment and further placement as administrators (Principals or Assistant Principals) of program completers from all programs are examined, we found variations across the locale codes.

Table 2:
Principalship placement across locale codes, 2001-2005

Locale Code	Number	Percentage of Total
Large City	205	13.1%
Urban Large City	291	18.7%
Mid-Size City	249	16.0%
Urban Mid-Size City	136	8.7%
Rural Inside MSA	270	17.3%
Large Town	10	0.6%
Small Town	156	10.0%
Rural Outside MSA	185	11.9%
Unspecified	57	3.7%

The general distribution of all October 2001 to October 2005 graduates of the principal preparation programs can be seen in the table below. Nearly a third (35%) of all principal preparation candidates were employed in any capacity within the locales of large city or in the urban fringe of a large city. A smaller percentage (23%) was employed in mid-size city or the urban fringe of a mid-size city. Indiana has a large amount of initially certified administrators working in towns and rural areas as a remaining 40% of graduates were working in large towns, small towns, or rural outside or inside the MSA. Interestingly, the rural inside MSA had the largest percentage (17.3 %) of these particular categories. Another way of profiling where graduates go after they finish preparation programs is to examine the number of individuals placed by community classification in a bar graph. The community classification distribution, below, shows that cities and the suburbs are the predominant locales for employment.

Figure 2:
Indiana Building-Level Initial Licensure Placement Per NCES
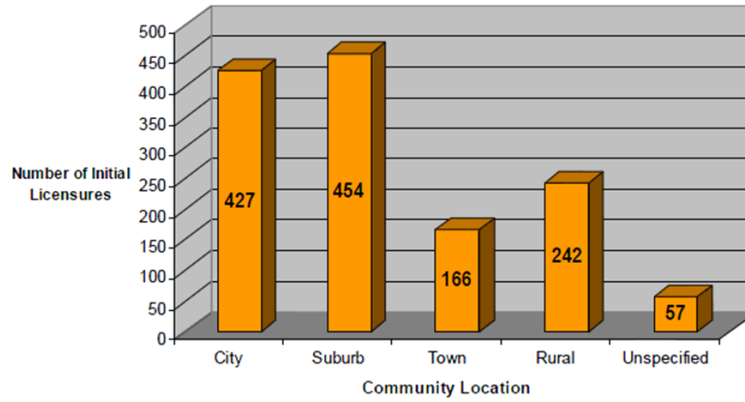Community Classification

Figure 2

Examining the data in the figure above, we found variation across the locales in the placement rates of graduates as administrators (placed-as principal or assistant principal) or as employed in non-administrative positions (teachers, counselors, deans). Completers who reside in the following types of communities have the following distribution of placement as employed administrators: Rural outside MSA-68%, Rural Inside MSA- 63%, Small Towns- 59%, Urban Fringe Midsize Cities and Midsize Cities-59%, Urban Fringe Large Cities -53%, and Large Cities-46%. Initially licensed administrators are employed as administrators at the highest rate in rural areas, with lower Principal and Assistant Principal placement rates becoming evident in towns and lower still in more urban areas. The rural outside MSA rate of 68% is vastly higher than the overall placement rate of 53% that we found for the state as a whole, while the large cities placement rate of 46% is lower.
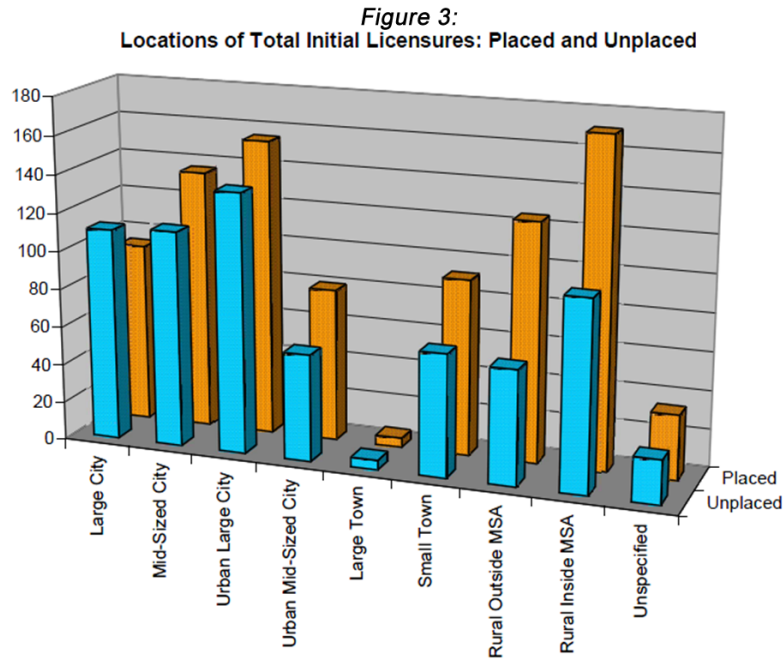
Figure 3:
Locations of Total Initial Licensures: Placed and Unplaced

Figure 3

6.2 Large city and fringe of urban large city

We further examined placement across each of these locale codes, beginning with the categories of large city and their urban fringes. We found that several programs had concentrations of graduates in Indianapolis, the large city in the state, while most programs had graduates in fringes of large cities, including Indianapolis and cities located in neighboring states-Louisville, Kentucky or Chicago, Illinois.

In terms of large cities, Butler University had the highest number of graduated employees, followed by IUPUI and its core campus partner, IU-Bloomington 60 miles away. These are programs physically located close to Indianapolis with curriculum, purpose, and alumni networks oriented to the Indianapolis area. The large city represents the most significant area of placement for those particular programs. Interestingly, two programs that can be characterized as statewide because of online delivery (Ball State) or ease of access and convenient delivery of program by current administrators (Indiana Wesleyan) also had a presence here, even though they were physically located at distances of approximately 60 miles with four other universities located closer. The placement rates for administrators were the lowest of all locales (46%) with highest rate of placement in elementary school (47% of all placed administrators-assistant principal or principal) of any of the categories. Conversely, placement rates in high schools for these newly licensed administrators (18%) were the lowest of any category. This might disproportionately affect program placement rates for programs producing for those areas, such as Butler and IU-Core Campus programs. Also noteworthy is the 75% to 25 % assistant principal versus principal placement ratio in urban areas, which varies from the state average of 55% to 45%.

Figure 4:
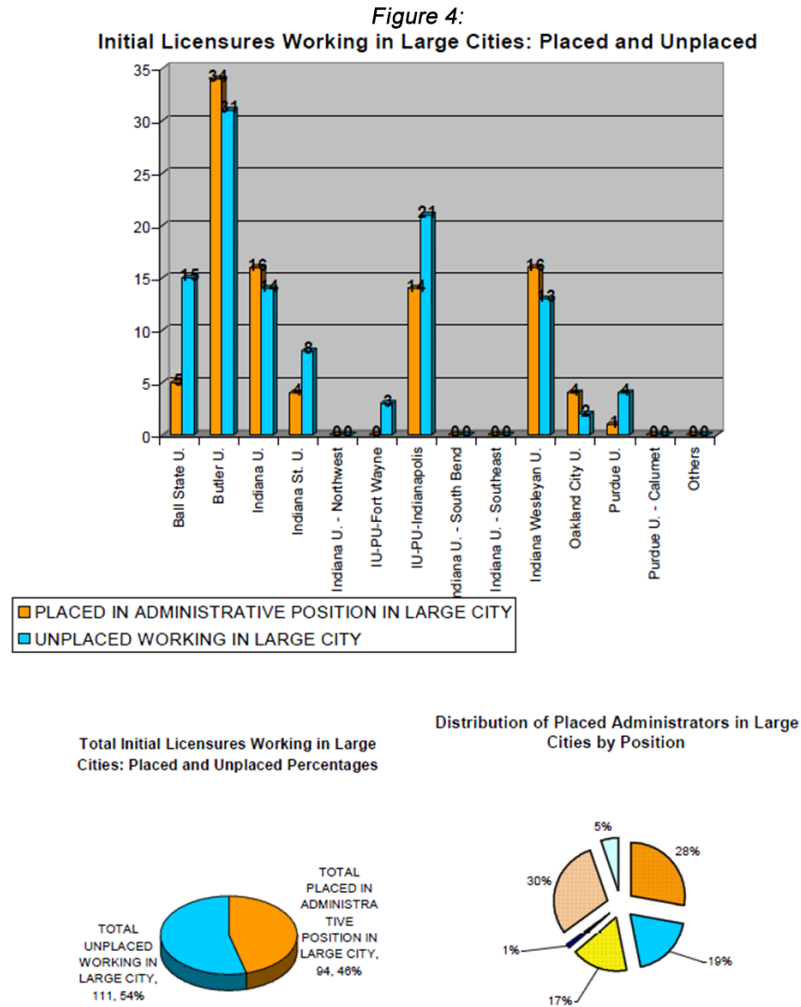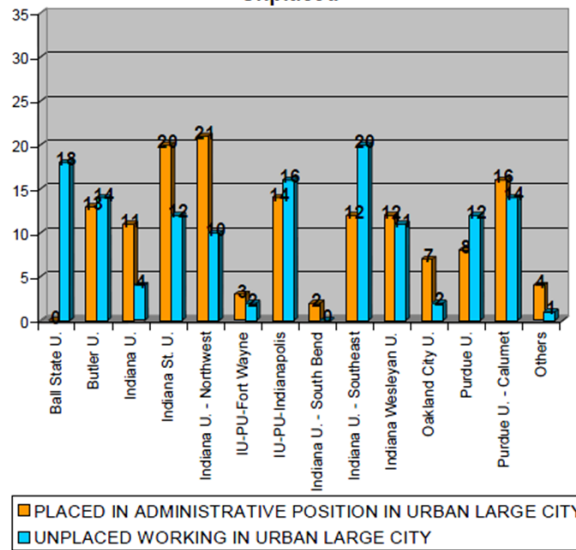Initial Licensures Working in Large Cities: Placed and Unplaced

Figure 4

In terms of urban fringes of large cities, we found distribution of programs to be more varied. Relatively larger numbers of graduates employed in the urban fringe districts received training through smaller regional programs physically located in fringes (IU-Northwest, Purdue-Calumet, and IU-Southeast) around Louisville and Chicago. Again, Ball State and Indiana Wesleyan, located in the middle of the state and outside of Indianapolis, remained significant suppliers of certified administrators. However, Ball State had 18 unplaced administrators, while Indiana Wesleyan's placement rate was aligned with the state average (53%). We are not clear as to why there is such a discrepancy. The overall placement rate in the urban fringes paralleled the state average. Striking is the relatively high percentage of placed administrators who are assistant principals at the secondary level (53% of all placed administrators). Similar to large cities, the assistant principal to principal placement ratio (65%) is higher than in other locales. Urban fringe placement information is profiled in the following figure.

Figure 5:
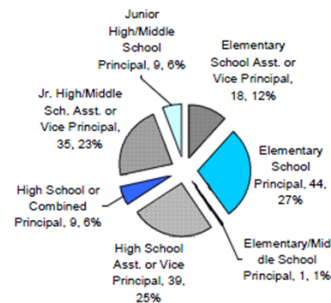Initial Licensures Working in Urban Large Cities: Placed and Unplaced

Figure 5

6.3 Mid-Size cities and urban fringe of mid-size cities

Whereas the IU core campus and Butler have high profiles in Indianapolis, and three regional state university system located in northwest and southeast Indiana play significant roles in supplying urban fringe districts, Ball State and other IU regional campuses have significant amounts of program graduates working in Mid-Size cities. IUPU Fort Wayne appears to supply its local mid-size city (Fort Wayne), as does IU-South Bend, whose graduates seem to overwhelmingly be represented in mid-size cities in the northern tier of the state. Ball State, with its online delivery and location in a mid-size city, is a significant player. In sharp contrast to their very low placement rates in large cities, nearly 80% (27 of 34) of their initially licensed principal preparation program graduates working in mid-sized cities are in administrative positions, much higher than the state average. In general, program graduates in mid-size cities have overall placement rates as principals or assistant principals that are close to the state average (55% to 53%), although these individuals were

slightly less likely to be placed in the principalship compared to the state average (41% to 45%). The figure below profiles initially certified administrators who found employment in mid-size cities.
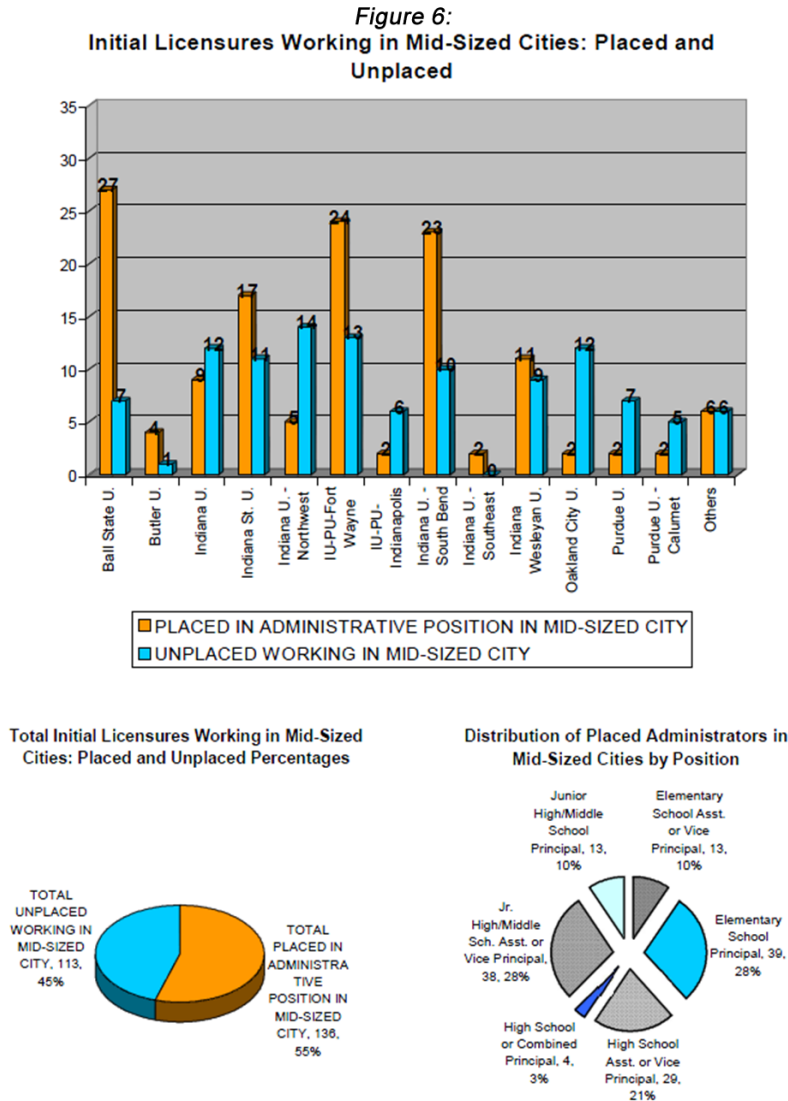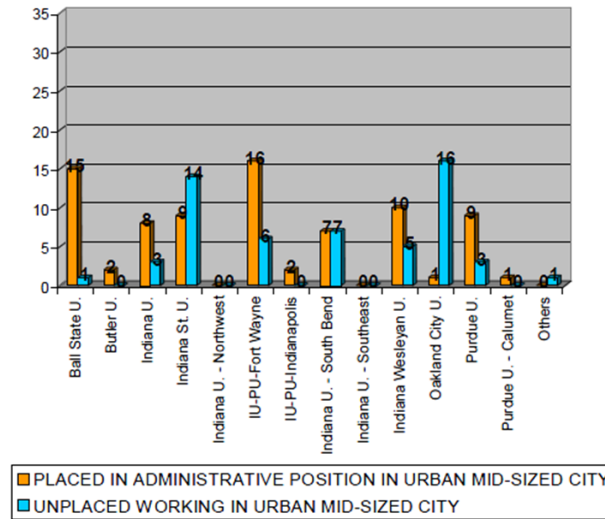

Figure 6:
Initial Licensures Working in Mid-Sized Cities: Placed and Unplaced

Figure 6

Turning attention to the urban fringe of mid-size cities, it is noticeable that several institutions have relatively high placement rates in those areas. Nearly all of Ball State's graduates (15 out of 16) were working as administrators, while IUPU-Ft Wayne had 16 out of 22 graduates working as administrators. Indiana University at Bloomington had 8 out of 12 graduates in administrative positions, while Purdue had 9 out of 12. In contrast, Oakland City University only had 1 out of 17 graduates working in administrative positions. Coming to understand the supply and demand side dynamics of such variances in placement would be worthy of further study.
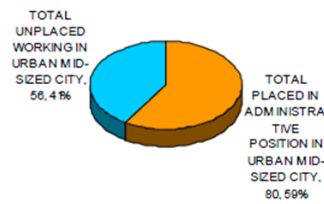
The administrative placement rates in school districts located in the geographic fringes of mid-size towns

continue to be higher than in large cities and their urban fringes, as in these locales, 59% of all graduates find employment as either principals or assistant principals. Additionally, 64% of placed administrators are in secondary level positions, which compares favorably to the state average of 55%. Other information is displayed in the figure below.
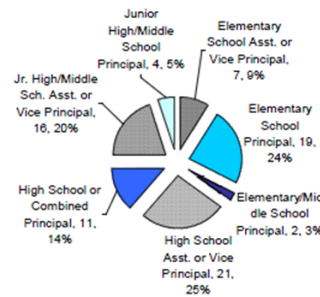

Figure 7

**6.4 Large town, small town, and rural communities**

Small town and rural placement rates are generally higher for all institutions and Ball State leads all institutions in the production of certified graduates for small towns and rural areas, with Indiana State a close second. IUPU-Ft. Wayne and Indiana Wesleyan also produced a significant amount of their licensed administrators for communities listed in these categories. These programs are located close to small towns

and rural areas. As well, Ball State was a leader in distance education and Indiana Wesleyan employed locally-based adjunct instructors to provide coursework in local schools. Production for the rural inside MSA (exurbs) is a bit more evenly distributed across programs.

The administrative placement rates for small towns (60%), rural areas (68%), and rural inside MSA (63%) were higher that the state average of 53% and much higher than the urban average of 46%. Also of note was the greater percentage of secondary school level administrators that were hired. In small towns, 54% of all administrator placements were for middle or high schools. Similarly for rural inside MSA the figure is 53%, while it climbs to 64% in rural areas. Correlated with these figures was the relatively high rate of placement of graduates in the role of high school assistant principal in small towns (30%), rural inside MSA (22%), and rural areas (21%). Of note, we found that males filled over three quarters of high school assistant principal placements in our sample.

These findings are represented in the next series of figures, which profile placement rates in small towns, rural outside MSA, and rural inside MSA.

Figure 8:
Initial Licensures Working in Small Towns: Placed and Unplaced
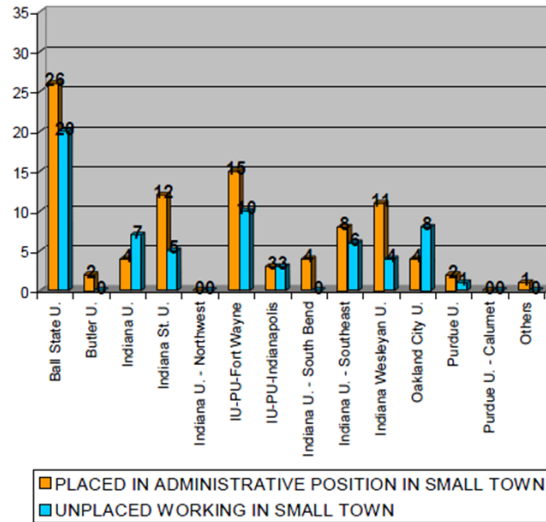
Total Initial Licensures Working in Small Towns: Placed and Unplaced Percentages
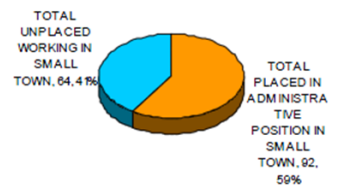
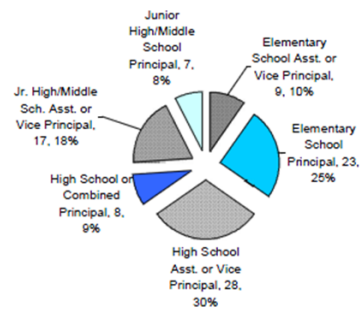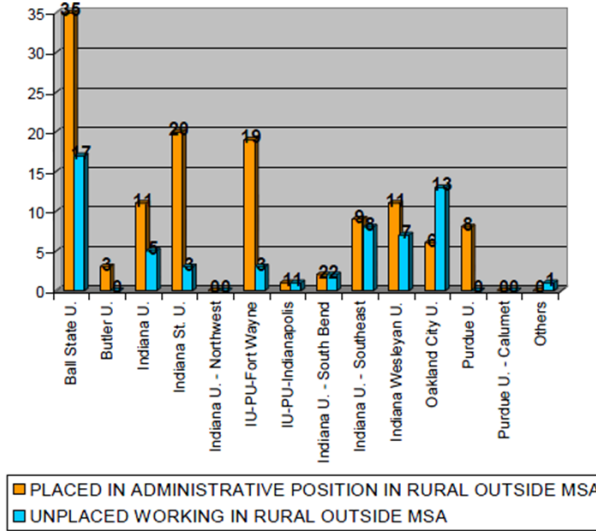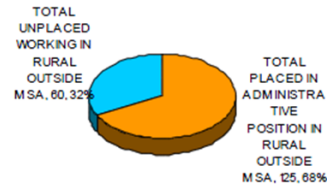**Distribution of Placed Administrators in Small Towns by Position**

Figure 8

Figure 9:
Initial Licensures Working in Rural Outside MSA: Placed and Unplaced
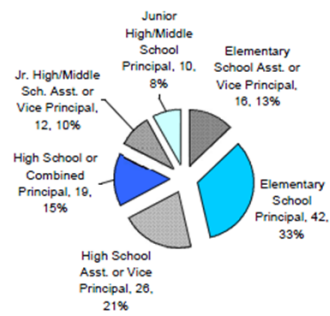
Figure 9

Figure 10:
Initial Licensures Working In Rural Inside MSA: Placed and
Unplaced
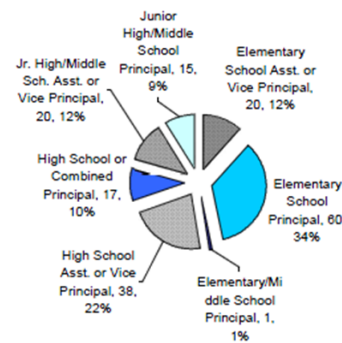
Figure 10

6.5 Zip code analysis of placement of graduates

We were also able to link program graduates to 3-digit zip codes to further profile geographic distribution of graduates. Consistent with findings from the other statewide study that was completed in Utah (Pounder & Hafner, 2006), programs tended to supply communities located next to the main campus with graduates. For example, while 17% of all program completers were employed in Marion County (Indianapolis), these placements were dominated by Butler, with nearly all of its completers in Marion County zip codes, and the Indiana University core campus, where two thirds of its program completers found jobs. Interestingly, the

fastest growing program and largest producer in 2005, Indiana Wesleyan, is the program whose completers are fairly well distributed throughout the state and whose program is most compellingly described as a statewide program.

In the distribution maps that follow Table 3, the distribution percentages are represented for all programs producing more than 40 graduates within the inquiry period of 2001 to 2005 **are presented as a PDF.** Interestingly, the programs that are considered statewide producers tend to place only around 20 percent of graduates into particular ZCTAs, whereas programs that are more regionally based tend to produce graduates chiefly within one or two ZCTAs with percentages of placement nearing 70 percent. Also, the distribution shows that Indiana Wesleyan University is the only University where their highest percentage of distribution is in a ZCTA different than the ZCTA in which the University's main campus is located (represented by a blue star). Another interesting finding is that in the highly regionally based preparation programs (above 40 percent of graduates within a single ZCTA) the urban preparation institutions primarily place graduates in the ZCTA region adjacent and often encompassing the ZCTA of the mid-sized city in which the preparation program is located. This result can be seen in the distributions of Indiana University – Northwest, Purdue University – Calumet, Indiana University – South Bend and Indiana University/Purdue University – Fort Wayne.

Table 3:

Indiana New Principal Distribution Across Zip Code Tabulation Areas, 2001-2005

Indiana 3 Digit Zip Code Tabulation Area (ZCTA)	Total Population	School Age Population (5-19)	Total '01-'05 Building Level Administrators Working in ZCTA	Ball State U.	Butler U.	Indiana U.	Indiana St. U.	Indiana U. - Northwest	IU-PU-Fort Wayne	IU-PU-Indianapolis	Indiana U. - South Bend	Indiana U. - Southeast	Indiana Wesleyan U.	Oakland City U.	Purdue U.	Purdue U. - Calumet	Others
ZCTA 460	410766	91689	110	44	19	10	2	0	2	8	0	0	11	3	10	0	1
ZCTA 461	450865	100877	130	28	17	12	14	0	2	21	0	1	21	7	4	1	2
ZCTA 462	861898	181490	260	23	86	37	14	0	4	49	0	0	34	8	5	0	0
ZCTA 463	613149	134755	134	6	1	2	26	32	3	1	5	2	5	2	17	29	3
ZCTA 464	153703	36301	46	0	1	1	2	20	0	0	0	1	4	0	5	11	1
ZCTA 465	445730	106595	97	12	0	7	4	0	18	0	46	1	6	0	1	0	2
ZCTA 466	152469	32120	22	1	0	2	0	1	0	0	17	0	1	0	0	0	0
ZCTA 467	314033	74672	95	16	2	1	2	0	60	2	0	0	11	0	1	0	0
ZCTA 468	288829	64897	64	3	0	1	0	0	49	5	0	0	5	0	0	0	1
ZCTA 469	320261	69438	82	38	3	5	3	0	4	2	2	0	17	1	5	0	2
ZCTA 470	109041	25308	31	8	0	5	7	0	0	0	1	5	0	4	1	0	0
ZCTA 471	265865	56735	63	1	0	1	2	2	0	0	0	55	0	2	0	0	0
ZCTA 472	197632	42533	40	6	1	7	1	0	0	3	0	14	3	5	0	0	0
ZCTA 473	330418	69509	87	66	1	7	1	0	2	3	0	0	4	1	1	0	1
ZCTA 474	244587	52070	72	2	4	33	7	0	1	0	1	1	15	6	1	0	1
ZCTA 475	159208	35672	38	0	0	0	16	0	0	1	0	3	3	15	0	0	0
ZCTA 476	120366	26810	36	0	0	0	9	0	0	0	0	1	2	23	0	0	1
ZCTA 477	174974	35980	44	0	0	1	18	0	0	0	1	1	1	14	0	0	8
ZCTA 478	185164	39071	48	1	0	0	36	1	0	1	1	0	5	2	1	0	0
ZCTA 479	281527	63647	60	6	3	2	16	0	0	2	0	1	6	1	22	1	0

To maintain the original work of the authors, the IJELP Editors suggest readers view the PDF version of *the distribution percentages represented for all programs producing more than 40 graduates within the inquiry period of 2001 to 2005.*Click Here to Access[2]

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[2]See the file at <http://cnx.org/content/m36620/latest/Figure11_PDF.pdf>

7 Discussion

For this study (Black, Bathon & Poindexter, 2007), we asked where do program graduates go to work? To what extent are they employed close to where they received their training? And, what variation, if any, does living in a particular type of community (as defined by U.S. Census Locale Codes) have on initially licensed building administrators employment as administrators (rather than a teacher)? We found, consistent with national literature that indicates that the majority of educational leadership preparation programs prepare their graduates for work in districts in close proximity to the preparation programs (Pounder & Crow, 2005), that most programs placed graduates in school corporations that are in close proximity to their institution. We found patterns of employment that generally support the assumption that principal preparation programs serve regional markets-that is they prepare administrators and teacher leaders for school districts within 50 miles of the university campus. At least in Indiana, educational leadership preparation programs can still be characterized as regional in their distribution of graduates. Although more evenly distributed generally, some preparation programs also narrowly distribute their graduates into different sizes of community based on population as understood by U.S. Census Bureau Locale Codes.

However, we found two programs did place graduates statewide and this was associated with online course delivery, rural alumni networks, and the ability to deliver curriculum at school and office sites throughout the state. The program design for Indiana Wesleyan, in which regionally located adjunct faculty and faculty were willing to travel to students to instruct them in combination with sustained statewide recruitment efforts, probably contributed to the statewide presence. Additionally, the online modes of delivery, as well as previously existing statewide alumni networks probably contribute to making Ball State the next most likely program to be considered statewide, closely followed by Indiana State. The onset of statewide delivery reshapes the preparation landscape and has negatively impacted the relative (but not necessarily total) market share of regionally situated programs, which continue, by and large, to produce for schools located within close physical proximity of campus.

Our findings suggest that the effects of potential differences in the educational labor market need to be considered in any evaluation of program efficacy that considers employment in administrative positions as a criterion of success. Placement data across zip codes and locales might suggest that concepts of metropolitan markets for higher education might be more useful than urban or suburban, as graduates of more urban oriented programs such as IU-Northwest and IU-Core campus seem to find employment largely across large cities and both the urban fringe and rural fringe. Interestingly, there are more Ball State and Indiana State program completers in smaller towns than completers from other programs, which may help explain why their graduates are more geographically distributed than graduates of other programs. The high rural placement rate may suggest that the "tapping" process by which teachers are tapped to become administrators operates strongly in rural areas. Additionally, rural locations may be less attractive to program completers, so those who are willing to take jobs in rural areas may have higher placement rates. Conversely, the pressures associated with raising accountability performance in large cities may lead individuals to not assume what are perceived to be an overwhelming set of responsibilities, particularly earlier in their career (Roza, 2003; Seashore Louis, et al., 2010; Young & Fuller, 2009). Those who wish to be employed in a large city and urban administrators may be in a more competitive labor environment as many completers reside in cities and/or may not have as much access to the tapping process for the principalship (Preiss, et al., 2007). These findings merit further investigation by the programs themselves.

The high profile of exurbs, that is, rural inside MSA and urban fringes, is striking, as is the continuing influence of rural context for higher placement rates. As a whole, districts located in larger cities and urban areas do employ more program completers, although completers are hired at a lower rate. This data merits further disaggregating, as school and community context vary within cities. For example, in a survey of principals and superintendents in Indiana (returns were 98% White), urban was listed as the least attractive locale for work (Balch, 2003b).

Educational leadership preparation programs should recognize the distribution of graduates of their programs both by distinct regions within the state and by community size to carefully craft both the mission and elements of the preparation program. This tracking of data will aid not only in differentiating preparation

programs missions to better compete in an increasingly crowded marketplace, but will also help to meet the localized needs of their building-level administrator candidates as well as the schools and students within the region the university serves. Both licensure andK-12 employment information can be used to inform conversations about recruitment, selection, and program curriculum and delivery.

The datasets used for this study, combined with the datasets used for the previous Indiana study, provide a lot of useful information to preparation programs. This point should not be underestimated. There is valuable information sitting in existing state datasets that is largely untapped. State policymakers can help various stakeholders develop strong schools by providing timely and useful data that responds to local needs as well as help to establish career pathways for teachers who want to take on additional responsibility (Shelton, 2010). Career pathway profiles of the last five years of graduates from each educational leadership preparation program should be possible and can function on the same highly graphical, clickable software platform that is easy to use by practitioners, policymakers and academics alike. In this way, much information is accessible about each preparation program that provides a more comprehensive portrait of the important work universities are doing, as well as demonstrates the ongoing relevancy and potency of university-based preparation. This information can both inform the preparation program in their program development, and can also be a source of information for future leadership candidates as well as future graduate employers.

This study informed preparation programs about the number of their graduates employed as administrators, the location of their graduates within the state relative to the institution, and the type of community where program graduates are working. Other information can and should be gleaned from state datasets about principal preparation program graduate roles and demographics, including employment by position relative to race, gender, experience, and locale. As well, school-based data on teacher, discipline, graduation, demographic and accountability scores of the schools can be linked to graduates. Presently, these data are independently maintained in state datasets using unique identifiers proliferated by state employees in each state. Thus, although there are large quantities of data available, there is no standardization in the selection or classification of the data that would allow for aggregation across states. Educational leadership preparation has to think about how it can help states better collect, classify, and distribute this data. But, even without state standardization, technology can allow for greater promotion of this data in the near term. In addition to traditional outlets, educational leadership as a whole has to think about how to better get this data into the hands of more people using technology. Technology tools already exist to do this, and this is a place where professional organizations such as NCPEA and UCEA can take a leading role in organizing and providing data for the field. As a profession, it becomes incumbent on researchers to address this data systematically rather than in small and uncoordinated bites in order to scale up and layer our analysis (Young, 2010).

8 References

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