

Winter 2-2025

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Recommended Citation

Hub, K., & Hunter, G. (2025). Public School Superintendent Turnover in Appalachian Kentucky. *The Rural Educator*, 46(1), 22-35. <https://doi.org/10.55533/2643-9662.1488>

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Public School Superintendent Turnover in Appalachian Kentucky

Kevin Hub and Gill Hunter

This study makes use of a data set detailing instances of public school superintendent turnover in the commonwealth of Kentucky between 2014 and 2023. A quantitative research design was used to analyze descriptive statistics and salary changes based on a set of demographic and descriptive variables in the sample of 205 superintendent turnovers occurring during the identified decade. The research demonstrates that superintendent turnover in Appalachian and non-Appalachian school districts is proportionally consistent. Within the Appalachian region of Kentucky, the analysis reveals that salaries for superintendents hired during the study period were lower than the salaries paid to their predecessors, at a rate comparable to the commonwealth as a whole. That trend did not hold when a male replaced a female as superintendent as, on average, the new hire saw a salary increase over the incumbent. The analysis reveals a disparity between females and males selected to fill superintendent vacancies, with 71 males and 18 females hired into the role during the decade reviewed, most often with males replacing males. The findings demonstrate that applicants for superintendent positions serving as assistant superintendents or in other central office positions are selected for the superintendency nearly 60% of the time. The findings demonstrate that sitting superintendents and, to a lesser extent, internal hires, were likely to receive a starting salary higher than the incumbent compared to external hires other than sitting superintendents and/or those from other school or district leadership positions or those hired from outside agencies. Suggestions for future research, including assembling and analyzing comparable data sets in other states, are provided. Given the implications of the findings in this study, additional research with the assembled data set also holds promise.

Superintendents of public school districts across the US encounter many of the same problems and pressures whether their district is large or small, urban, suburban, or rural. These problems and pressures range from student achievement and teacher shortages, to local and national politics, to financial constraints and aging infrastructure. External pressures are felt internally, as superintendents question their own preparation, the support they receive entering and while in the role, the burnout and stress that comes with the job, and the high rate of turnover among their peers (Grissom & Andersen, 2012; Kamrath & Brunner, 2014). Superintendent stress and turnover are directly related, reinforcing incumbents' and aspirants' feelings of instability and allowing the foreboding of impermanence to threaten development and adoption of a bold vision (Tekniepe, 2015). Superintendents' commitment to the schools, students, teachers, staff, and communities of their districts is rarely questioned (Myers, 2011). Superintendent turnover risks negatively impacting school districts, with a loss of momentum, shifting priorities, and uncertainty about the future (Kamrath, 2022).

Background and Rationale

Superintendent Relationships With School Boards

While the groups most impacted by superintendent turnover are teachers, administrators, students, parents, and superintendents themselves, research consistently identifies the school board as the group with the greatest influence on a superintendent's success, failure, longevity, and turnover (Kamrath, 2022; Tekniepe, 2015; Wargo et al., 2022). Public school district superintendents constantly feel pressures related to finances, accountability, and politics. Superintendents are most successful when they have the support of the school board (Tekniepe, 2015). It is in the best interest of the superintendent to work well with the board, as that is the body that hires for the role and evaluates the incumbent (Tekniepe, 2015). The board's support for and investment in the superintendent contribute to superintendent satisfaction, longevity in the role, and stability and success of the district's schools (Kamrath, 2022). The school board's investment is demonstrated through members' understanding of their roles; commitment to a supportive relationship with the superintendent; willingness to let district and school officials handle responsibilities under their purview; and balancing political ideologies with

wholesale support for the community and the district's students and employees, including the superintendent (Kamrath, 2022; Wargo et al., 2022). Board members' failure to maintain distance contributes to pressure superintendents feel while in their role, to which they surrender in leaving the role, and of which they are wary before seeking the role. Such board member failure takes two forms: micromanagement and political interference (Kamrath, 2022; Tekniepe, 2015). Some board members fail in these ways more than others. Some superintendents withstand more than others. Some districts are more heavily impacted than others.

Superintendents and Rural Communities

Every superintendency turns over as incumbents retire or exit to pursue other roles, whether willingly or by virtue of external or internal pressures. The pressures are common no matter the district's size, location, history, or health. Districts experience and respond to turnover in predictable ways, pausing to some extent while a search for a next district leader occurs, then acclimating to a new vision. Turnover brings opportunity, but it also can present problems to solve, especially in rural school districts (Kamrath, 2022). Kamrath and other researchers see direct overlap between frequent superintendent turnover and rurality (Lamkin, 2006; Rey, 2014; Tekniepe, 2015; Zuckerman et al., 2023).

It is not accurate to say that the default relationship between superintendent and rural community is fraught, no more accurate than it is to say that the default relationship between superintendent and school board is fraught. It can be true but does not have to be. Research shows that a satisfactory relationship between a superintendent and a rural community, and the corresponding stability and success of the school district, comes down to an effective match and some deliberate expectation setting on the superintendent's part (Copeland, 2013; Kamrath, 2022). The expectation-setting responsibility is the superintendent's because rural communities carry expectations for superintendents similar to those for other public officials (Copeland, 2013; Kamrath, 2022; Tekniepe, 2015). Superintendents, with an explicit need to build community trust, decide how and when to engage (Kamrath, 2022; Tekniepe, 2015). Superintendents generally do not decide with whom to engage in a rural community, carrying an obligation to the school board, to the district's employees, students, and

parents, and to the "community at large" in order to influence "student academic achievement" (Copeland, 2013, p. 10). Nearly everyone in the community has some connection to the school district's success and opinions on its priorities in the classroom, on the athletic fields, and among its graduates (Wargo et al., 2022). A superintendent's vision setting and preferred leadership style must be balanced with the community's history and culture, just two of the pressures about which the superintendent can do little but of which must remain aware while considering and filling the role (Kamrath, 2022). This expectation could be one reason why rural school districts benefit from "grow your own" leadership development programs that create opportunities for promoting from within to increase the likelihood that the next generation of leadership buys into the district vision and community lifestyle (Kamrath, 2022).

Because rural school districts are unique and because rural areas have been marginalized, it is worthwhile to explore why such communities might make the superintendency matter so much and why turnover in the role, which outpaces the average, is such a concern. The "rural" label has specific use, defined against "urban" and "suburban" (Gutierrez & Terrones, 2023). A large portion—42%—of U.S. school districts are rural, serving 7.7 million students, which is 15% of students enrolled in public schools (Gutierrez & Terrones, 2023). Hartman et al. (2022) are careful to distinguish between the "educational challenges related to rurality" and "rurality itself as an educational challenge" (p. 59). The same research acknowledges the "shortcomings of rural places: a lack of economic development, a lack of human capital..., parochialism, and the overall unattractiveness of rural communities as places to live and work" (Hartman et al., 2022, p. 59). Rural areas disproportionately experience poverty and lack multiple educational inputs and outcomes related to wealth (Gutierrez & Terrones, 2023; Lavalley, 2018; McConnell et al., 2021). Deficits common to rural districts include access to course offerings, especially advanced and technology-rich curriculum; certified and classified staff shortages; gaps in teacher preparation, continuing education, and professional development; and transportation inefficiencies (Cowen et al., 2012; Gutierrez & Terrones, 2023).

The rural school district superintendent shoulders these burdens, seeking allies in the community, within the district, and on the school board. The stressors endemic to rural areas add

pressure and threaten burnout. Kamrath (2022) includes “isolation,” “community pressure and politics,” and “school board politics and misconceptions” among the stressors unique to rural school district leadership (p. 19). District employees and board members joining students and parents as stakeholders in a district’s success is expected. Community members also see themselves as rural districts’ stakeholders. Members of the community are often products of the district’s schools and bring both a range of priorities and expectations, determined by the culture of place, and preconceived notions of education that are based first on their own educational experiences and also on their willingness to support public education with tax dollars (Tekniepe, 2015; Zuckerman et al., 2023).

The Rural Superintendent’s “Many Hats”

The successful and long-tenured superintendent, then, navigates relationships internal to the district and internal to the community to achieve goals around which everyone involved can rally in palatable ways. To the responsibilities expected of the position are added those relationships and their accompanying deferences (Davidson & Butcher, 2019). Relationship management is just one of the skills rural school district superintendents must possess and demonstrate. Add to that the flexibility that lean organizational structures and finances demand, requiring superintendents to fill varied roles in the classroom, on the district level, and in the community within a single day (Wargo et al., 2022). Copeland (2013) calls these roles the “many hats” of a rural superintendent, broadly describing them as “manager, planner, listener, communicator, and community life” (p. 11) and pointing to superintendents’ specific examples, such as “‘shoveling snow,’ ‘driving a bus,’ ‘subbing in the cafeteria,’ ‘emptying trash,’ and ‘sweeping the floors’” (p. 8). Assumed responsibilities juxtapose those inherent in the role, like executive management, vision setting, and change leadership (Kamrath, 2022). Given that abundant research indicates superintendent turnover is a cause for concern, especially in rural school districts, defining responsibilities and liberating superintendents to focus on their work would be one key to supporting effective leadership (Kamrath, 2022; Tekniepe, 2015; Zuckerman et al., 2023).

The Superintendency in Kentucky

The commonwealth of Kentucky has 171 school districts, including independent, municipality-based systems in a state of 120 counties and a population of just over 4.5 million (America Counts Staff, 2020). A majority of those districts are rural, based on the Office of Management and Budget (OMB) and the National Center for Education Statistics (NCES) definition, with just over one-third of the commonwealth’s students enrolled in a rural school (Cowen et al., 2012; Provasnik et al., 2007).

Kentucky consists of several distinct geographical regions. The most recognizable rural districts are in the Appalachian part of the state, though there are rural districts in the south central and the western parts of the state, as well as in the north central area between Louisville and northern Kentucky, the state’s two most populous urban environments. Kentucky also is notable for its homogeneity, with 82.4% of residents identifying as “White Alone” in the most recent census, compared to 61.6% nationally (America Counts Staff, 2020). The commonwealth’s rural counties account for a large portion of the 77 counties with more than 90% of residents identifying their race or ethnicity as “White Alone” (America Counts Staff, 2020).

In terms of superintendent turnover in Kentucky, a November 1, 2022, snapshot documents that 17 (10%) of Kentucky’s school districts had a superintendent with continuous service in the district and role for 10 or more years (Young, 2022). Demonstrating how rare such longevity is, the same snapshot shows that 114 (66.7%) Kentucky school districts had a superintendent with continuous service in the district and role for 5 or fewer years (Young, 2022). The average length of continuous district and role service at the time of the snapshot was 4.35 years, an increase from a parallel census the previous year that documented 4.05 years of service on average (Young, 2022).

A comparable snapshot, taken 5 years earlier, in August 2017, documents that 12 of Kentucky’s 171 (7.0%) school districts had a superintendent with continuous service in the district and role for 10 or more years (Young, 2017). The same snapshot shows that 105 (61.4%) school districts had a sitting superintendent with 5 years or fewer of continuous service in the role (Young, 2017). Another nine (5.3%) districts employed an interim or acting superintendent as the district conducted or prepared for a search (Young, 2017). At the time of the 2017

snapshot, not including those in interim roles, the average length of continuous district and role service was 3.99 years, a number the report's author expected to decline in the following year (Young, 2017). That average, lower than the 2022 snapshot average, could be accounted for by retirement or resignation decisions being delayed during the pandemic, thereby raising the average but not necessarily indicative of any easing of pressures or greater satisfaction in the role.

A decade of data, which precedes the 2017 snapshot of the Kentucky superintendency and extends beyond the 2022 snapshot, reveals that the high-profile leadership role does not keep pace even with the state's homogeneity, with at least 97% of superintendents identifying as "White Alone." For context, and suggestive of the need for broader examination, this percentage compares to the 91.38% of superintendents nationally who identify as White (Tienken, 2021). The gender breakdown is similarly disparate, with about 80% of superintendent roles

filled by males and just under 20% filled by females (Kentucky Association of School Administrators [KASA], 2022). Again, Kentucky falls below the national figure of 26.68% of superintendents identifying as female (Tienken, 2021).

Superintendents in the Rural Districts of Appalachian Kentucky

This research focuses on Kentucky's Appalachian counties, to compare superintendent turnover in public school districts in the Appalachian region of Kentucky to turnover in the rest of the state, including districts that are rural but not located in Appalachian Kentucky, and those that are urban and suburban. Fifty-four of Kentucky's 120 counties are in Appalachia (Appalachian Regional Commission, n.d.). Figure 1 depicts those counties. Figure 2 depicts Kentucky's school districts, including those located in the Appalachian region.

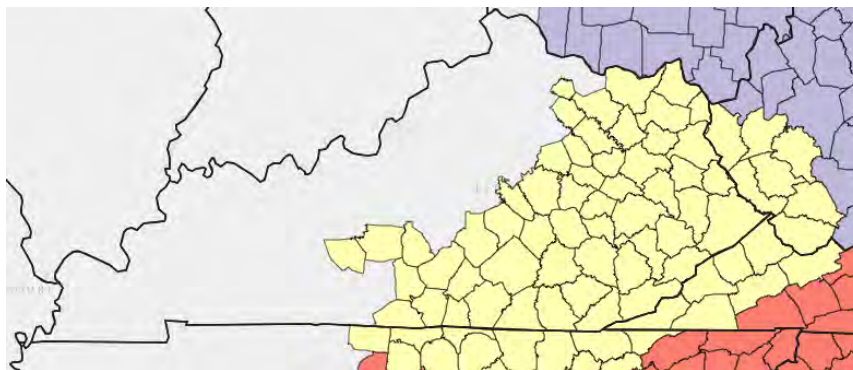


Figure 1: Appalachian Region of Kentucky (Appalachian Regional Commission, n.d.)

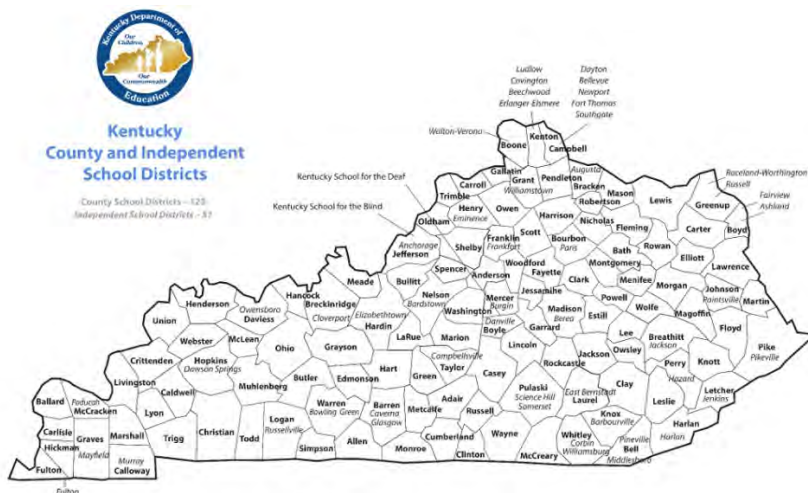


Figure 2: Kentucky School Districts (Kentucky Department of Education [KDE], n.d.)

Cowen et al. (2012) note the “sharp geographic divide between the Appalachian and non-Appalachian districts” in Kentucky, with “37 districts that form the border” (pp. 433, 434). All the counties in Appalachia are considered rural; descriptions from research on rural school districts and rural communities, including “poverty and geographic isolation,” apply (Cowen et al., 2012, p. 432). Residents of rural Appalachian communities have an especially strong connection to place, which can be seen as both a benefit and detriment culturally and economically to those communities’ schools and towns (Cowen et al., 2012).

Though research on the superintendency in Kentucky is limited, and less on the Appalachian region of Kentucky is available, broader research on the experiences and qualifications of superintendents in rural communities applies to Appalachian Kentucky specifically. One reason this application of the evidence can be made is because of the focus Cowen et al. (2012) gave to Appalachian Kentucky teachers. Even before the well-chronicled teacher shortages of the early 2020s, researching during the tail end of the Great Recession, when those in stable jobs sought to keep them, Cowen et al. (2012) acknowledged that teachers in Appalachia were disproportionately “likely to exit the profession” (p. 431). This finding was confirmed more than a decade later by Gutierrez and Terrones (2023), who saw teachers in Appalachian Kentucky exiting the profession after a single year of teaching, which compared unfavorably to teachers in other parts of the commonwealth who “become progressively less likely” to leave teaching (p. 3). While teachers in Appalachian Kentucky who remain are “unlikely to leave their initial districts,” showing the community-focused commitment to schools and districts found in other rural places, teachers statewide are “more likely to leave Appalachia than to transfer to it” (Cowen et al., 2012, pp. 437, 431). The evidence extrapolates to investment in school and district leaders, surrounding them (and teachers) with a supportive infrastructure and meaningful opportunities for professional growth and development, integrating them into the community in ways with which they are comfortable, and defining roles as precisely as is logical.

Research Questions

This study explores superintendent turnover in Appalachian Kentucky, within the context of the entire state, during a 10-year period: 2014 to 2023.

This analysis of demographic data and salary comparisons uses descriptive statistics for those in superintendent positions, including those moving into and out of such roles, based on gender and previous experience. For this study the following research questions were examined with respect to the Appalachian region of the commonwealth of Kentucky during the decade studied.

1. When a superintendent vacancy occurs in Appalachian Kentucky, how likely is it that a female rather than a male is selected as the next superintendent?
2. Is it more likely that an internal or external candidate is selected to fill a superintendent vacancy in Appalachian Kentucky?
3. From what previous position are superintendents in Appalachian Kentucky most often hired?
4. When a superintendent vacancy is filled in Appalachian Kentucky, how does the new superintendent’s salary compare to the incumbent’s?

Answering these questions provides useful information for current and aspiring superintendents, local boards of education, state legislatures and other education advocacy or authorizing bodies, and superintendent search consultants in Kentucky and perhaps especially in the Appalachian region, where documented concerns about teacher shortages, leadership development, and community support threaten the vitality of school districts. Though there is an impressive collection of research on rural education, there is little recent research on superintendent turnover, or on any aspect of the superintendency, in Kentucky or the Appalachian region. Informative research has been conducted on the superintendency in Ohio, Kentucky, Illinois, Indiana, North Carolina, Oklahoma, and Florida (Beese et al., 2022; Carroll, 2014; Chambers, 2010; Garletts, 2016; Hart et al., 2022; Marshall & Evans, 2019; Soules, 2015).

Methodology

The 171 public school districts in Kentucky served as the population for the assembled data set, which included all the state’s incumbent, outgoing, and incoming district superintendents during the decade studied. A quantitative research design was used to analyze descriptive statistics and salary changes in the sample of 205 superintendent turnovers that occurred during the identified decade.

Reporting is provided cumulatively for the decade rather than annually to capture a meaningful sample size and demonstrate trends across the state and its regions over time, while also noting single year distinctions.

For the purposes of the research, superintendent turnover is defined as an instance in which one full-time superintendent is replaced by another full-time superintendent, whether resulting from voluntary or involuntary separation, including retirement. In cases where an interim superintendent was employed, demographic and salary change comparisons were made based on the outgoing and incoming full-time superintendents only.

Data on public school districts in Kentucky were accessed through the KDE, some in public-facing databases and dashboards and some acquired through a congenial open records request process. Data also were collected from Kentucky's Education Professional Standards Board (EPSB), KASA, and KASA's former executive director. Data were assembled, organized, and analyzed using Microsoft Excel.

Definition of Variables

The following variables were included within the data collection and analysis process: gender of each outgoing superintendent and each incoming superintendent; the school district's region of the

state, whether in the Appalachian region of Kentucky or not in the Appalachian region, and to which of Kentucky's geographical education cooperatives the district is assigned; and previous position held immediately before assuming the superintendency, including whether that previous position was within the district (internal) or outside the district (external).

Race and ethnicity are not included among the demographic variables analyzed in this study of superintendent turnover because, while a small handful of cities and school districts in Kentucky can be considered diverse by prevailing metrics, none of them are in the Appalachian region of the state. The number of superintendents of color is correspondingly small—five superintendents of color across the state during the survey period, with only one in the Appalachian region (KASA, 2022). This difference argues for additional research, including qualitative studies of the experiences of superintendents of color in predominantly White districts and/or states, but represents a negligible *n* for the purposes of the data reported on here.

Findings: Demographic Data

In Kentucky from 2014 through 2023, there were 205 superintendent turnovers, 89 that occurred within school districts defined as Appalachian (43.41%). Table 1 identifies the Appalachian superintendent turnovers by year.

Table 1
Annual Appalachian Superintendent Turnover in Kentucky (2014–2023)

Academic year	Superintendent turnovers
2014–2015	12
2015–2016	9
2016–2017	12
2017–2018	11
2018–2019	14
2019–2020	8
2020–2021	7
2021–2022	10
2022–2023	6

Note. *N* = 89.

During the period of this study, 20 of Kentucky's districts kept the same superintendent, while the remaining 151 districts had at least one superintendent turnover (88.3%). During the same period, within the 73 Appalachian school districts in Kentucky, seven districts kept the same superintendent while the remaining 66 Appalachian

districts had at least one superintendent turnover (90.41%). Table 2 identifies the demographic variables considered in this study of superintendent turnover within Appalachian school districts in Kentucky and the terms for analysis. Discussion of the findings follows the table.

Table 2

Demographic Variables of Interest (2014–2023)

Demographic variables (%)	<i>n</i>	<i>M</i> (%)	<i>SD</i>	Min	Max
Male to male turnover	64	70.10	12.80	50.00	88.89
Female to male turnover	7	8.80	5.40	0.00	16.67
Male to female turnover	16	18.33	7.62	8.33	33.33
Female to female turnover	2	2.78	7.86	0.00	25.00
Internal	61	66.71	11.83	50.00	83.33
External	28	33.29	11.83	16.67	50.00
Assistant superintendent	21	21.09	17.03	0.00	44.44
Central office position	31	36.40	16.47	16.67	70.00
High school principal	9	10.65	6.28	0.00	16.67
Middle school principal	3	2.83	4.06	0.00	10.00
Elementary school principal	7	6.96	11.20	0.00	33.33
Outside agency	7	7.74	6.08	0.00	16.67
Superintendent	11	14.32	15.87	0.00	50.00

Note. *N* = 89.

Gender Comparisons

Of the 89 superintendent turnovers within the 73 Appalachian school districts in Kentucky, 64 were male to male turnovers, representing 71.91% of the total number of turnovers. The mean for annual male to male turnovers is 70.10%. For the 2015–2016 school year, there were eight male to male turnovers, representing the maximum annual percentage (88.89%). Conversely, for the 2019–2020 school year, there were four male to male superintendent turnovers, and for 2022–2023, there were three male to male superintendent turnovers, each representing the minimum annual percentage (50%).

There were seven female to male turnovers, representing 7.87% of the total number of turnovers. The mean for annual female to male turnovers is 8.8%. The maximum annual percentage (16.67%) occurred in the 2022–2023 school year, when there was one female to male superintendent turnover. Conversely, the minimum annual percentage (0.0%) occurred in 2015–2016 and 2018–2019, with zero female to male superintendent turnovers.

There were 16 male to female turnovers, representing 17.98% of the total number of turnovers. The mean for annual male to female turnovers is 18.33%. For the 2022–2023 school year, there were two male to female superintendent turnovers, representing the maximum annual percentage (33.33%). Conversely, in 2016–2017, there was one male to female superintendent turnover, representing the minimum annual percentage (8.33%).

There were two female to female turnovers, representing 2.25% of the total number of turnovers. The mean for annual female to female turnovers is 2.78%. The maximum annual percentage (25%) was in the 2019–2020 school year, when there were two female to female superintendent turnovers. The minimum annual percentage (0.0%) occurred during all other years between the 2014–2015 and the 2022–2023 school years, when there were zero female to female superintendent turnovers.

Based on the research data, for the 89 Appalachian superintendent vacancies during the decade between 2014 and 2023, female applicants were selected for the superintendent position 20% of the time (*n* = 18). When female superintendents left their position, they were replaced by female applicants 29% of the time (*n* = 7).

Previous Position Comparisons

For this study, the researchers used two sets of variables to compare superintendent turnover within the 73 Appalachian school districts in Kentucky based on the previous position held by the incoming superintendent. First, data were disaggregated by whether the incoming superintendent came from within the school district hiring the superintendent (internal) or from outside the district (external). Second, the data were disaggregated by the previous position held by the incoming superintendent. Based on the research sample, the categories for previous position were assistant superintendent, central office position other than assistant superintendent, high

school principal, middle school principal, elementary school principal, outside agency, and superintendent.

Of the 89 superintendent turnovers between 2014 and 2023, 61 of the incoming superintendents were internal candidates, representing 68.54% of the total, with an annual mean of 66.71%. The maximum annual percentage (83.33%) of internal candidates hired into the superintendency occurred in the 2016–2017 school year, when there were 10 superintendent turnovers resulting in internal hires. The 2019–2020 and 2022–2023 school years saw the minimum annual percentage (50%) occur, when there were four and three superintendent turnovers with internal hires, respectively.

During the period of study, 28 superintendent turnovers included the hiring of external candidates, representing 31.46% of the total, with an annual mean of 33.29%. The highest annual percentage (50%) occurred during the 2019–2020 and 2022–2023 school years, when there were four and three superintendent turnovers filled by external candidates, respectively. The lowest annual percentage (16.67%) was in 2016–2017, when there were two superintendent turnovers resulting in the hiring of external candidates.

Of the 89 superintendent turnovers between 2014 and 2023 occurring within the 73 Appalachian school districts in Kentucky, 21 incoming superintendents were assistant superintendents in their previous position. These 21 represent 23.6% of the total, with an annual mean of 21.09%. For the 2015–2016 school year, the four assistant superintendent selections represent the maximum annual percentage (44.44%). For the 2021–2022 and 2022–2023 school years, zero assistant superintendent selections represent the minimum annual percentage (0%).

Thirty-one incoming superintendents served in a central office position other than assistant superintendent in their previous position. These 31 represent 34.83% of the total, with an annual mean of 36.4%. For the 2021–2022 school year, there were seven superintendent appointments from central office leadership other than an assistant superintendent position, representing the maximum annual percentage (70%). For 2014–2015 and 2016–2017, there were two superintendents hired from central office positions other than assistant superintendent each year, representing the minimum annual percentage (16.67%).

Nine of the incoming superintendents during the period of study served as high school principals in their previous position. These nine represent 10.11%

of the total, with an annual mean of 10.65%. For the 2014–2015 school year there were two high school principal selections, for 2016–2017 there were two high school principal selections, and for 2022–2023 there was one high school principal selection, each representing the maximum annual percentage (16.67%). For the 2015–2016 and 2018–2019 school years, zero high school principals were hired as a district superintendent, which represents the minimum annual percentage (0%).

Three incoming superintendents served as middle school principals in their previous position. These three represent 3.37% of the total, with an annual mean of 2.83%. For the 2021–2022 school year, there was one middle school principal selection, representing the maximum annual percentage (10%). The minimum annual percentage (0.0%), when there were zero middle school principal selections, occurred in multiple school years: 2015–2016, 2016–2017, 2017–2018, 2019–2020, 2020–2021, and 2022–2023.

Seven superintendents were hired after serving as elementary school principals in their previous position. These seven represent 7.87% of the total, with an annual mean of 6.96%. For the 2014–2015 school year, there were four elementary school principal selections, representing the maximum annual percentage (33.33%). The minimum annual percentage (0.0%), when there were no elementary school principal selections, occurred in multiple school years: 2016–2017, 2018–2019, 2019–2020, 2020–2021, 2021–2022, and 2022–2023.

Seven of the superintendents hired during the review period were working for outside agencies in their previous position. These seven represent 7.87% of the total, with an annual mean of 7.74%. For the 2016–2017 school year, there were two outside agency selections, representing the maximum annual percentage (16.67%). In the 2014–2015, 2015–2016 and 2022–2023 school years, there were zero outside agency selections, representing the minimum annual percentage (0.0%).

Eleven of the incoming superintendents were serving as school district superintendents in their previous position. These 11 represent 12.36% of the total, with an annual mean of 14.32%. For the 2022–2023 school year, there were three superintendents hired from school district superintendent positions, representing the maximum annual percentage (50%). In 2014–2015, 2020–2021, and 2021–2022, there were zero school district superintendent selections, representing the minimum annual percentage (0.0%).

Table 3 identifies the previous positions held by superintendents hired in this study of superintendent turnover within Appalachian school districts in

Kentucky. Discussion of the findings follows the table.

Table 3

Superintendent Turnover Previous Position Variables (2014–2023)

Demographic variables (%)	<i>n</i>	<i>M</i> (%)	<i>SD</i>	Min	Max
Internal	61	66.71	11.83	50.00	83.33
External	28	33.29	11.83	16.67	50.00
Assistant superintendent	21	21.09	17.03	0.00	44.44
Central office position	31	36.40	16.47	16.67	70.00
High school principal	9	10.65	6.28	0.00	16.67
Middle school principal	3	2.83	4.06	0.00	10.00
Elementary school principal	7	6.96	11.20	0.00	33.33
Outside agency	7	7.74	6.08	0.00	16.67
Superintendent	11	14.32	15.87	0.00	50.00

Note. *N* = 89.

Based on data presented, for the 89 superintendent vacancies within the 73 Appalachian school districts in Kentucky during the decade between 2014 and 2023, internal applicants were more likely to be selected to fill superintendent vacancies (68.54%) than external candidates. When considering the previous position of superintendent applicants, those candidates serving in a central office position other than assistant superintendent in their previous position were most frequently hired into the superintendent role (34.83%). Combining the categories of assistant superintendent and central office position other than assistant superintendent accurately describes the previous position of more than half of the superintendent selections (58.43%). Applicants serving as high school principal (10.11%) were hired into the superintendency at a similar rate to those candidates already serving as superintendent (12.36%).

Findings: Salary Comparison Data

In the commonwealth of Kentucky from 2014 through 2023, there were 205 instances of superintendent turnovers, 89 that occurred within school districts defined as Appalachian (43.41%). During the period of this study, in Kentucky, 20

districts kept the same superintendent, while the remaining 151 districts had at least one superintendent turnover. During the same period within the 73 Appalachian school districts in Kentucky, however, only seven districts kept the same superintendent while the remaining 66 Appalachian districts had at least one superintendent turnover (90.41%).

Of the 205 superintendent turnovers between 2014–2023, 65 (31.71%) of the incoming superintendents received higher annual salaries than the outgoing superintendent, 133 (64.88%) received lower annual salaries than the outgoing superintendent, and seven (3.41%) received the same salary as the outgoing superintendent. For the 89 superintendent turnovers in Appalachian school districts in Kentucky, 27 (30.34%) of the incoming superintendents received higher annual salaries than the outgoing superintendent, 59 (66.29%) received lower annual salaries than the outgoing superintendent, and three (3.37%) received the same salary as the outgoing superintendent. Table 4 identifies the salary comparison variables considered in this study of superintendent turnover within Appalachian school districts in Kentucky and the terms for analysis. Discussion of the findings follows the table.

Table 4

Superintendent Turnover Previous Position Variables (2014–2023)

Demographic variables (%)	<i>n</i>	<i>M</i> (%)	<i>SD</i>	Min	Max
Internal	61	66.71	11.83	50.00	83.33
External	28	33.29	11.83	16.67	50.00
Assistant superintendent	21	21.09	17.03	0.00	44.44
Central office position	31	36.40	16.47	16.67	70.00
High school principal	9	10.65	6.28	0.00	16.67
Middle school principal	3	2.83	4.06	0.00	10.00
Elementary school principal	7	6.96	11.20	0.00	33.33
Outside agency	7	7.74	6.08	0.00	16.67
Superintendent	11	14.32	15.87	0.00	50.00

Note. *N* = 89.

Gender Salary Comparisons

Of the 89 superintendent turnovers within the 73 Appalachian school districts in Kentucky, 64 were male to male turnovers, representing 71.91% of the total number of turnovers. The mean salary difference for male to male turnovers was -3.1% (*SD* = 12.75%). The greatest salary increase was 41.67%; the greatest salary decrease was -29.3%.

There were seven female to male turnovers, representing 7.87% of the total number of turnovers. The mean salary difference for female to male turnovers was 2.74% (*SD* = 11.42%). The greatest salary increase was 19.74%; the greatest salary decrease was -19.04%.

There were 16 male to female turnovers, representing 17.98% of the total number of turnovers.

The mean salary difference for male to female turnovers was -6.06% (*SD* = 16.88%). The greatest salary increase was 46.66%; the greatest salary decrease was -25.7%.

There were two female to female turnovers, representing 2.25% of the total number of turnovers. The mean salary difference for female to female turnovers was -14.1% (*SD* = 7.85%). The greatest salary increase was -6.25%; the greatest salary decrease was -21.95%.

Table 5 compares the salary changes from incumbent superintendents to newly hired superintendents based on gender demographics during this study of superintendent turnover within Appalachian school districts in Kentucky. Discussion of the findings follows the table.

Table 5

Gender Salary Comparisons (2014–2023)

Salary comparisons (%)	<i>n</i>	<i>M</i>	<i>SD</i>	Min	Max
Male to male turnover	64	-3.10	12.75	-29.30	41.67
Female to male turnover	7	2.74	11.42	-19.04	19.74
Male to female turnover	16	-6.06	16.88	-25.70	46.66
Female to female turnover	2	-14.10	7.85	-21.95	-6.25

Note. *N* = 89.

Based on the research data, for the 89 superintendent vacancies within the 73 Appalachian school districts in Kentucky during the decade between 2014 and 2023, applicants selected for the superintendent position averaged a lower salary than their predecessor. The single exception is when males replaced females. This group had an average salary increase over their predecessor. When female superintendents were selected, their salaries were lower by a greater percentage than when male superintendents were selected, and when females

replaced females, none of them earned a higher salary than their predecessor.

Previous Position Salary Comparisons

As with gender comparisons, the researchers used two different sets of variables to make previous position comparisons: data disaggregated based on whether the incoming superintendent came from within the district (internal) or from outside the district (external) and data based on the previous

position held by the incoming superintendent. Categories for previous position were assistant superintendent, central office position, high school principal, middle school principal, elementary school principal, outside agency, and superintendent.

Of the 89 superintendent turnovers between 2014 and 2023, 61 of the incoming superintendents were internal candidates. The 61 internal candidates represent 68.54% of the total. The mean salary difference for internal candidate turnovers was 0.36% ($SD = 13.08\%$). The greatest salary increase was 46.66; the greatest salary decrease was -29.3%.

There were 28 superintendent turnovers with external candidates. The 28 external candidates represent 31.46% of the total. The mean salary difference for external candidate turnovers was -5.16% ($SD = 14.14\%$). The greatest salary increase was 41.67%; the greatest salary decrease was -19.41%.

Of the 89 superintendent turnovers between 2014–2023 within the 73 Appalachian school districts in Kentucky, 21 of the incoming superintendents were assistant superintendents in their previous position, representing 23.6% of the total. When assistant superintendents were hired, the mean salary difference was -6.68% ($SD = 9.62\%$). The greatest salary increase was 12.38%; the greatest salary decrease was -24.8%.

There were 31 incoming superintendents serving in the central office in their previous position. These 31 represent 34.83% of the total. When they were hired, the mean salary difference was -3.85% ($SD = 14.48\%$). The greatest salary increase was 46.66%; the greatest salary decrease was -25.7%.

Nine incoming superintendents served as high school principals in their previous position, 10.11% of the total. When high school principals were hired,

the mean salary difference was -4.57% ($SD = 10.75\%$). The greatest salary increase was 11.16%; the greatest salary decrease was -21.14%.

Three incoming superintendents served as middle school principals in their previous position. These three represent 3.37% of the total. When middle school principals were hired, the mean salary difference was -15.54% ($SD = 9.73\%$). The greatest salary increase was -8.33%; the greatest salary decrease was -29.3%.

Seven incoming superintendents served as elementary school principals in their previous position, representing 7.87% of the total. When elementary school principals were hired, the mean salary difference was -2.9% ($SD = 10.61\%$). The greatest salary increase was 19.74%; the greatest salary decrease was -13%.

Seven incoming superintendents worked for outside agencies in their previous position, representing 7.87% of the total. When they were hired, the mean salary difference was -0.29% ($SD = 18.44\%$). The greatest salary increase was 41.67%; the greatest salary decrease was -18.52%.

Eleven incoming superintendents served as school district superintendents in their previous position, representing 12.36% of the total. When school district superintendents were hired, the mean salary difference was 5.91% ($SD = 13.57\%$). The greatest salary increase was 28.7%; the greatest salary decrease was -19.41%.

Table 6 compares the salary changes from incumbent superintendents to newly hired superintendents based on position previously held during this study of superintendent turnover within Appalachian school districts in Kentucky. Discussion of the findings follows the table.

Table 6

Appalachian Superintendent Turnover in Kentucky: Previous Position Salary Comparisons (2014-2023)

Salary Comparisons (%)	<i>n</i>	<i>M</i>	<i>SD</i>	Min	Max
Internal	61	0.36	13.08	-29.30	46.66
External	28	-5.16	14.14	-19.41	41.67
Assistant superintendent	21	-6.68	9.62	-24.80	12.38
Central office position	31	-3.85	14.48	-25.70	46.66
High school principal	9	-4.57	10.75	-21.14	11.16
Middle school principal	3	-15.54	9.73	-29.30	-8.33
Elementary school principal	7	-2.90	10.61	-13.00	19.74
Outside agency	7	-0.29	18.44	-18.52	41.67
Superintendent	11	5.91	13.57	-19.41	28.70

Note. *N* = 89.

Based on data presented for the 89 superintendent vacancies within the 73 Appalachian school districts in Kentucky, during the decade between 2014 and 2023, when considering positions from which superintendents were hired only those applicants employed previously in the position of superintendent were more likely to receive a salary higher than their predecessor. When considering the other previous positions of superintendent applicants, candidates serving with outside agencies, as elementary school principals, and in central office positions other than assistant superintendent earned higher starting salaries relative to their predecessors compared with candidates serving in the positions of high school principal, assistant superintendent, and middle school principal.

Limitations of the Study

One limitation of this study is that the research focused solely on Appalachian superintendents in the commonwealth of Kentucky, which may not be representative of other states or present an educational structure generalizable to other states. Another limitation is the scope of the research, which examines data from 2014 through 2023. Though the time period suffices to provide a healthy set of superintendent turnovers, different or broader time parameters would yield different results. The fact that the time period included a worldwide pandemic also impacts the results, though in indeterminate ways, as COVID-19 caused school boards, superintendents, principals, and everyone else to adjust plans and timelines. Finally, limitations exist based on the lack of previous research on this topic in Kentucky, specifically, and nationally as well. This data set and analysis is an important contribution to the under-researched area of public school superintendency in the US.

Significance of the Study and Conclusions

As well-publicized pressures mount, the tenure of rural public school superintendents continues to be short in duration and turnover of the position remains high. This study benefits from a sample size robust enough to derive conclusions about the demographic profiles of, and salary comparisons between, superintendents filling roles and turning over in Appalachian Kentucky during the 10-year period reviewed. The research will usefully inform state and national school board associations, state legislatures, superintendent search consultants, and other

education advocacy or authorizing bodies. It can influence and support decision-making processes of local boards of education. And it will provide useful context for current superintendents and those who might aspire to the role.

Specifically, this study answers the research questions. Regarding question 1, the analysis reveals a disparity between females and males selected to fill superintendent vacancies. Of the 89 superintendent turnovers between 2014 and 2023 in Appalachian Kentucky, only 18 (20%) females were selected to be superintendent. When female superintendents left their position, they were replaced by female applicants 29% of the time ($n = 7$). This finding is important as it does not reflect the gender balance of the education profession generally. It also suggests space for qualitative study of the experiences and perspectives of females in superintendent roles.

Research questions 2 and 3 work in conjunction, seeking data that suggest the best path to a district superintendency, whether from within the district or externally, and from what position is a superintendent hired. The findings demonstrate that applicants for superintendent positions already serving within the district (internal applicants) were more likely (68.54%) to be selected than external applicants. When considering the previous position of superintendent applicants, assistant superintendents or other central office positions are selected for the superintendency nearly 60% of the time.

In response to research question 4, the findings demonstrate that when female superintendents were selected, their salaries were lower by a greater percentage than when male superintendents were selected, and when females replaced females, none of them earned a higher salary than their predecessor. Based on the research data, only those applicants employed previously in the position of superintendent were more likely to receive a salary higher than their predecessor.

Recommendations for Future Research

This study provides the foundation for numerous opportunities for future research. Parallel studies can be conducted in other states. Qualitative research in Appalachian Kentucky and other rural areas can interpret identified demographic distinctions and salaries in superintendent turnovers. Similar nuances can be explored through quantitative research, such as by using inferential statistics, in Appalachian Kentucky and other rural areas.

Superintendent preparation, district decision making, and projections for district leadership needs in a future with changing demographics can all be interpreted by continuing to explore reasons behind superintendent turnover and the effect of such changes in leadership. To develop one example, identifying nuances within answers to the research question, “Are internal candidates more likely to be selected to fill a superintendent vacancy?” is promising, as institutional and individual factors contributing to “growing your own” and promoting from within compared to hiring from outside the district merit exploration. Correspondingly, analyzing outside agencies and the type and quality of

superintendent preparation that they provide could contribute to diversifying the position demographically and ideologically. Variables such as district health, in terms of finances, student achievement, and culture; the stability of leadership development programs; local, state, and national political contexts; the conditions under which the departing superintendent leaves the position; and more influence decisions related to superintendent turnover and are ripe for exploration. This study’s research questions also could be applied to other rural areas and other periods of time in Appalachian Kentucky and elsewhere.

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Suggested Citation:

Hub, K., & Hunter, G. (2025). Public school superintendent turnover in Appalachian Kentucky. *The Rural Educator*, 46(1), 22–35.

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