
# Student Achievement: Lessons Learned From Kentucky's Relatively Highest- And Lowest-Performing Schools

Research Report No. 494

Office Of Education Accountability

# Kentucky Legislative Research Commission

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# Student Achievement:
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**Project Staff**

Deborah Nelson, PhD
Christopher Riley
Sabrina J. Smith
Allison M. Stevens

Deborah Nelson, PhD
Research Division Manager

Bryan Jones
Interim Deputy Director for the Office of Education Accountability



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# Foreword

In Kentucky, as in the rest of the nation, academic performance is highly associated with student demographic characteristics such as economic disadvantage, limited English proficiency, and disability status. Yet, academic performance of students from traditionally lower-performing groups is far better in some schools than in others.

This study identifies Kentucky schools that succeed regardless of demographic challenges, as well as those whose students perform far below demographically similar students across the state. Based on statewide data and site visits to 14 schools across the commonwealth, the study seeks to understand

- school practices that might contribute to higher academic achievement in some schools,
- specific barriers to school improvement in underperforming schools, and
- how existing policy structures aimed at school improvement might assist underperforming schools in addressing barriers.

Jay D. Hartz
Director

Legislative Research Commission
Frankfort, Kentucky
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# Summary

In Kentucky, as in the rest of the nation, academic performance is highly associated with student demographic characteristics. Most of the state's highest-performing schools, for example, are those serving students from relatively wealthy families, whereas most of the lowest-performing schools have very high percentages of economically disadvantaged students. Additional factors associated with achievement include limited English proficiency, student disability, race, and ethnicity. Yet, academic performance of students in demographically comparable schools varies widely.

This report analyzes differences between "higher-impact schools," in which student academic performance far exceeds the performance of demographically similar students across the state, and "lowest-impact" schools, in which academic performance appears low even after student demographic characteristics are taken into account. Understanding these differences may inform educators, the Kentucky Department of Education (KDE) and the General Assembly, in efforts to increase academic achievement of all students.

Using statewide data as well as site visits to 14 schools across the commonwealth, the study seeks to understand

- characteristics of highest-impact schools,
- barriers to student learning in lowest-impact schools, and
- potential for existing school improvement policies and resources to provide additional support to lowest-impact schools.[a]

Overall, the study finds that highest-impact schools are more likely than lowest-impact schools to have positive, orderly school environments and to be implementing research-based instructional practices that are promoted by KDE. The study highlights barriers to school improvement that are relatively less emphasized in school improvement planning currently required of schools and districts. These include

- leadership skills necessary to establish and maintain effective instructional and behavioral systems,
- staff turnover, and
- school climate and culture challenges that affect teachers as well as students.

Many of these barriers might be addressed, in part, through use of existing resources and school improvement practices. Others—such as staff shortages in particular schools or districts—may be difficult for local leaders to address on their own.

[a] OEA staff visited eight highest- and six lowest-impact schools. Site visits represented all school levels and geographic regions and included schools with a variety of demographic characteristics.

## Differences Between Highest- And Lowest-Impact Schools

### Culture, Climate, And Student Behavior

Teachers' responses to a biennial KDE survey of working conditions show great differences among highest-impact schools in teacher working conditions, especially those related to climate, culture, and student behavior. Data from teachers in lowest-impact schools indicated less favorable working conditions at 4.5 times the rate of teachers in highest-impact schools (60 percent versus 13 percent). Both teachers and students in lowest-impact schools were much less likely than those in highest-impact schools to report orderly learning environments; consistent, fair rules; positive relationships between students; and respectful relationships between students and teachers.

### Instructional Systems

Consistent with existing research on effective schools, almost all highest-impact site visit schools had well-developed instructional systems that clarified expectations for teachers and students based on collectively developed or refined curriculum documents and classroom assessments.[b] These systems featured ongoing team analysis of student assessment data and classroom work; systematic support for both teachers and students not meeting expectations; and commitment to high standards for classroom instruction and student work. KDE provides a wealth of materials and guidance for schools and districts in implementing these types of systems.

## Barriers To Effective Practice In Lowest-Impact Schools

Barriers to implementing best practices vary by school and district setting. In some site visit schools, school or district administrators appeared unaware of gaps in instructional or behavioral systems. In others, they lacked the knowledge, skill, or confidence to address these gaps. Some site visit teachers and administrators noted instances in which challenges were known, but some local leaders were unwilling to take the steps, such as addressing personnel challenges or investing the time and resources necessary to address the challenges.

**Staff Turnover.** Teacher and principal turnover undermine the conditions necessary to establish and maintain instructional and behavioral systems in many lowest-impact schools. Lowest-impact schools are 7 times as likely to have very high teacher turnover rates as highest-impact schools (35 percent versus 5 percent). Likewise, lowest-impact schools, on average, have much higher percentages of teachers with 5 or fewer years of experience than highest-impact schools. Percentages of these newer teachers in lowest-impact middle schools are especially high and are 1.4 times as great as in highest-impact middle schools (44 percent versus 31 percent). In addition, principal tenure is 1.5 times as long in highest- versus lowest-impact schools (an average of 6 and 4 years).

[b] As outlined in KRS 160.345, local superintendents, in consultation with local boards, have the authority to determine curriculum, textbooks, and instructional materials provided to schools. School administrators and teachers in highest-impact schools used these documents as a base but added many elements that clarified instructional expectations and established systems for teacher feedback and student remediation.

In some cases, teacher turnover reflects poor working conditions that might be addressed by school leaders. In other cases, staff turnover reflects challenges that may be difficult for school or district leaders to address alone. These challenges include regional housing shortages, lower teacher salaries, or geographic locations/demographic conditions not favored by teachers.

**Schools Identified For Comprehensive Support And Improvement.** Great challenges related to culture, climate, behavior and staff turnover are also evident in the state's lowest-performing schools—those identified by KDE for Comprehensive Support and Improvement (CSI) according to federal requirements.[c] Data from both students and teachers in these schools suggest that challenges associated with relationships among students and student behavior are greater in CSI schools than in lowest-impact schools overall.

## Importance Of Local Leaders

Site visit data illustrate the strong influence of local leaders on building and sustaining the instructional and behavioral management systems in highest-impact schools. Teachers credited local leaders—most often principals but also district administrators—with communicating high and compelling expectations for teachers and students, providing the supports needed to meet those expectations, and holding staff and students accountable when efforts fell short. Experienced teacher leaders also played critical roles in examining/improving classroom practices, holding each other accountable for high standards of instruction, and supporting less experienced teachers to understand and implement instructional and behavioral expectations of students. Finally, OEA visited four districts in which all schools were higher-impact. District administrators in these districts played active instructional leadership roles that included monitoring data, monitoring instructional practices, leading professional development, and supporting new or struggling teachers.

## Relevance Of Findings For School Improvement Practices

Findings of the report highlight challenges associated with climate, culture, and student behavior; staff turnover; and leadership knowledge, skills, or willingness to address known challenges. Data related to these indicators receive less attention in school improvement practices required of districts and schools than do data related to student achievement or particular instructional practices. Although instruction and student achievement must always be a central focus of school improvement efforts, it is possible that efforts at instructional improvement may be difficult to effect and sustain in those schools or districts with underlying challenges related to culture, staff, or leadership.

The report suggests ways that existing school improvement policies or programs might shed greater light on these underlying challenges.

[c] CSI schools analyzed for this report were identified based on actual scores that do not take into account student demographic characteristics.

## Comprehensive School And District Improvement Planning

Comprehensive School Improvement Plans (CSIPs) and Comprehensive District Improvement Plans (CDIPs) are the primary mechanisms by which KDE might support and monitor improvement efforts of individual districts and schools. These plans currently pay little or no attention to staff turnover or working conditions data and focus less on climate and culture challenges than on academic or instructional challenges.

District and school administrators interviewed for this report, while supportive of the planning process generally, noted ways that the process might be improved to assist with planning and to reduce unnecessary paperwork. They identified issues with the burdensome amount of specific requirements for the plan, with the timing of the plans as out of step with data and natural planning cycles, and with limited feedback or support from KDE.

KDE staff noted reduced staffing available for plan review relative to previous years and limitations in KDE's ability to influence district implementation due to the fact that schools are locally controlled.

Data collected for this report and in previous research warrant review of the CSIP and CDIP process and opportunities for input from a variety of stakeholders.[d] Based on additional input, KDE, the Kentucky Board of Education, and the General Assembly might consider changes to the CSIP and CDIP requirements and to KDE's role in monitoring these plans. These changes might include efforts to minimize paperwork, to align timing and structure of school plans with school and district planning needs, to place greater attention on staffing and leadership issues, and to identify schools and districts in greatest need of support or direction related to specific data points.

### Recommendation 3.1

**The Kentucky Department of Education should consider soliciting feedback from superintendents, principals, and school-based decision-making councils about requirements and processes for Comprehensive School Improvement Plans and Comprehensive District Improvement Plans. Feedback should include positive effects of the process, which elements might be required annually and which on a rotating basis, timing of submissions, software functionality, desired feedback, and desired sources of support.**

### Recommendation 3.2

**By August 1, 2025, the Kentucky Board of Education should submit to the Interim Joint Committee on Education recommendations for any statutory changes or additional legislation that would allow the Kentucky Department of Education to carry out meaningful review, feedback, and monitoring of Comprehensive School Improvement Plans or Comprehensive District Improvement Plans in select districts or schools.**

[d] Data collected for this report were limited to 14 schools and districts and are not necessarily representative of all schools and districts in the commonwealth.

**Recommendations might include additional authority, if any, of the department to require schools or districts to take specific actions.**

### Statutory Guidance

Although several statutes refer to annual plans, none specifically authorize CSIPs and CDIPs as they apply to the annual plans currently required of districts and schools. Based on feedback from KDE and education stakeholder groups, the General Assembly may wish to consider such legislation.

### Recommendation 3.3

**The General Assembly may wish to introduce legislation directing the Kentucky Department of Education to collect, review, and monitor school and district comprehensive plans. The legislation might address additional authority, if any, of the department to require districts or schools to take specific actions under certain conditions.**

### Working Conditions Survey

KDE's biennial working conditions survey provides data that can identify critical foundational gaps that are barriers to improvement in lowest-impact schools and to maximizing student outcomes in others. As noted in this report, local leaders may lack the awareness, skills, or will to address challenges identified in schools with unfavorable working conditions. Although KDE encourages schools and districts to use working conditions data, it does not currently provide guidance or support for addressing issues identified in data.

### Recommendation 3.4

**In connection with release of data from its working conditions survey, the Kentucky Department of Education should consider providing a list of resources and supports for schools seeking to understand and improve specific challenges identified by educators in survey data. Resources might include those available through the department and through the state's local educational cooperatives, best practice sites, professional organizations, or vendors.**

### Intervention And Assistance For Low-Performing Schools

Currently, requirements for intervention and support in the Kentucky's lowest-performing schools are provided entirely by the federal government through the Every Student Succeeds Act (ESSA) of 2015.[e] [1] ESSA requires state departments of education to allocate resources to schools identified for intervention and gives states discretion in how those resources are allocated.

[e] See *Assistance To Low-Achieving Schools And Districts*, a 2010 OEA report, for Kentucky-specific programs, such as the Highly Skilled Educators Program, that were provided in the past.

KRS 160.346 guides implementation of ESSA. Among other things, the statute requires KDE to approve a "turnaround vendor list" of vendors to assist the state's lowest-performing schools that have been identified for Comprehensive Support and Improvement. The vendors should have "documented success at providing turnaround diagnosis, training, and improved performance of organizations." Given the specific challenges documented in this report related to climate, culture, student behavior, and staff turnover in CSI schools, the Kentucky Board of Education should endeavor to ensure that the approved vendor list includes at least one vendor, in addition to KDE, with a successful track record for assisting schools with such challenges.

**Recommendation 3.5**

**In assembling the list of vendors required by KRS 160.346(1)(a), the Kentucky Board of Education should seek vendors with experience in assisting districts to support schools with sustained challenges related to staff turnover; school climate and culture; and student behavior.**

# Chapter 1

## Introduction And Background

**This study identifies Kentucky schools that perform far better academically than would be predicted based on student demographic characteristics (highest-impact schools) versus those that perform much worse than predicted (lowest-impact schools).**

This study identifies Kentucky schools that perform far better academically than would be predicted based on student demographic characteristics (highest-impact schools) versus those that perform relatively much worse than predicted (lowest-impact schools). Using statewide data and site visits to 14 schools across the commonwealth, the study seeks to understand

- school practices that might contribute to higher academic achievement,
- specific barriers to school improvement in lowest-impact schools, and
- what types of policies or supports might assist lowest-impact schools in achieving better outcomes.

**Highest-impact schools have strong local leaders, have embraced systems for instruction and behavior, and set and maintain high expectations of students and staff.**

Highest-impact schools are distinguished from lowest-impact schools by systems for instruction and behavior that are collectively embraced by teachers and administrators. These systems set and maintain high expectations of student and staff, are built and maintained by effective school or district leaders, and are supported by experienced teacher teams.

**Staff longevity and positive school climate, culture, and student behavior may form the cultural building blocks on which instructional reforms depend but are less emphasized in school and district improvement planning.**

Statewide data highlight strong contrasts between highest- and lowest-impact schools on indicators related to teacher working conditions, especially climate, culture, and student behavior. In addition, lowest-impact schools are much more likely than highest-impact schools to experience high staff turnover rates. These statewide measures related to school environments and staffing may form the cultural building blocks upon which instructional reforms depend but are less emphasized in school and district improvement planning.

**Characteristics of highest-impact schools in Kentucky are well established in educational research but can be difficult to attain. Lowest-impact schools face many barriers.**

Characteristics of highest-impact schools as identified in this study are well established in educational research, outlined in Kentucky Department of Education (KDE) guidance documents, and addressed in training opportunities for district and school staff, yet these characteristics can be challenging to attain, especially in some settings. Barriers in lowest-impact schools include staff turnover; absence of experienced leadership teams; and lack of awareness, capacity, or—sometimes—political will to carry out the actions necessary to build and maintain strong systems.

**This report suggests steps to leverage existing resource and policy structures to guide and support lowest-impact schools.**

This report suggests steps that might leverage existing resources and policy structures, especially the comprehensive planning required of districts and schools, for guidance and support in lowest-impact schools.

## Description Of This Study

### Study Request

In November 2023, the Education Assessment and Accountability Review Subcommittee requested that the Office of Education Accountability (OEA) study the characteristics of higher- and lower-impact schools in the commonwealth. The committee asked that the study use available data to describe differences between these higher-performing schools and others in the state.

### Organization Of The Report

**Chapter 1 describes data methods, lists major findings, and summarizes performance.**

The remainder of Chapter 1 describes data, methods, and major findings of the report, and it summarizes differences between actual school performance and performance as measured by school impact.

**Chapter 2 uses statewide data to describe differences between highest- and lowest-impact schools.**

Chapter 2 uses statewide data to describe broad differences among highest- and lowest-impact schools related to staffing, school finances, instructional time, teachers' working conditions, and culture and climate.

**Chapter 3 highlights differences in instructional systems and leadership of highest- and lowest-impact schools and makes recommendations.**

Chapter 3 uses site visit data to illustrate differences in instructional and behavioral systems and leadership in highest- and lowest-impact schools. It describes relevance of data in the report to existing school improvement structures and makes recommendations about how existing policy structures might be used to expand identification of and support for challenges in lowest-impact schools.

## Major Findings

### Climate, Culture, And Student Behavior

**Teachers and students in highest-impact schools reported more favorable climate, culture, and student behavior.**

Statewide, students and teachers in highest- versus lowest-impact schools were more much likely to report supportive, kind, and respectful relationships among students and between students and teachers; fair, consistent rules; and fewer classroom disruptions.

Data related to climate and culture and student behavior distinguish highest- from lowest-impact schools more than any other statewide data on school characteristics.

**Site visit data indicated strong and consistent schoolwide norms and behavior systems in highest-impact schools. Teachers in lowest-impact schools report feeling isolated and unsupported, especially with persistent student behavior challenges.**

Site visit data indicated strong schoolwide norms and behavior systems in highest-impact schools and little variation among classrooms and teachers. In lowest-impact schools, student behavior varied considerably among classrooms. Teachers struggling with student relationships or behavior reported feeling discouraged and sometimes isolated and unsupported. Teachers specifically noted the detrimental effects on entire classrooms when a small percentage of students are disengaged or disruptive.

### Instructional Systems

**Consistent with existing research on effective schools, highest-impact site visit schools had well-developed instructional systems.**

Consistent with existing research on effective schools, almost all highest-impact site visit schools had well-developed instructional systems that clarified expectations for teachers and students based on collectively developed curriculum documents and classroom assessments.[a]

These systems featured ongoing team analysis of student assessment data and classroom work; systematic support for both teachers and students not meeting expectations; and commitment to high standards for classroom instruction and student work.

**Lowest-impact schools inconsistently implemented instructional systems and had insufficient accountability and support for struggling teachers and students.**

Pieces of these instructional systems were present in lowest-impact schools but were inconsistently implemented. Instructional practices and quality varied greatly among individual classrooms. Accountability and support for struggling teachers and students was insufficient to meet their needs.

### Stable, Effective Leadership Teams

**Principals play critical roles in the success of highest-impact schools and provide both accountability and support.**

**Principals.** Principals in highest-impact site visit schools played critical roles in building instructional systems, creating positive environments in which students and teachers felt supported, and providing accountability when either students or teachers did not meet expectations. In some site visit schools, district administrators

[a] As outlined in KRS 160.345, local superintendents, in consultation with local boards, have the authority to determine curriculum, textbooks, and instructional materials provided to schools. School administrators and teachers in highest-impact schools used these documents as a base but added many additional elements that clarified instructional expectations and established systems for teacher feedback and student remediation.

also served key leadership functions related to systemwide accountability and support.

Building and maintaining productive environments for teaching and learning involved great investments of time and resources to support staff and students. It also required leaders to make difficult decisions about staff or students and have the political will to stand behind those decisions if unpopular with some parents, teachers, or community members.

**Experienced teacher teams were critical to maintaining instructional and behavioral systems in highest-impact site visit schools, but they were lacking in lowest-impact site visit schools.**

**Experienced Teacher Teams.** In highest-impact site visit schools, experienced teacher teams played critical roles in maintaining instructional and behavioral systems. Teacher leaders worked together to monitor student learning and behavior, to assist newer teachers in developing the skills necessary for meeting high standards of the school, and to maintain schools' high standards by modeling what is possible and maintaining group norms.

Lowest-impact site visit schools lacked these experienced teacher teams to establish content-specific instructional expectations or provide support for teachers who were unable or unwilling to meet instructional expectations.[b]

### Teacher And Principal Turnover

**Higher turnover of teachers and principals was a barrier to school improvement in lowest-impact schools.**

Turnover in teachers and principals posed a strong barrier to improvement in lowest-impact schools. Whereas site visit data suggest that it may take 7 years or more for principals and teachers to build strong instructional and behavioral systems, the average principal tenure in highest-impact schools was 6 years—1.5 times as high as the average of 4 years in lowest-impact schools. Conversely, teacher turnover was an average of 21 percent in lowest-impact schools, or 1.4 times as high as the average of 15 percent in highest-impact schools.

### Disproportionate Working Condition And Teacher Turnover Challenges In Schools Identified For Comprehensive Support And Improvement

**Schools identified for Comprehensive Support and Improvement (CSI) have high staff turnover and challenges with relationships and student behavior.**

The report notes especially great challenges related to managing student behavior and building positive relationships among staff and students in schools identified for Comprehensive Support and Improvement (CSI) under federal requirements. These schools also experience very high rates of teacher turnover and, at the middle and high school levels, principal turnover. Ideally, districts

[b] In one school, these teams existed in one grade level but not others.

with CSI schools would be able to select from a variety of vendors that have demonstrated success in working with district leaders to address these types of challenges. Turnaround efforts that focus on instructional improvements without addressing these underlying challenges may not be sustainable.

## Data And Methods Used In The Report

### Data

**This report uses student-level assessment, demographic, program, and survey data from the Kentucky Department of Education (KDE).**

To identify highest- and lowest-impact schools, the report uses student-level assessment, demographic, and program data from KDE for school years 2022 and 2023.[c]

It looks for differences among these schools based on school-level data including expenditures, staffing, turnover, attendance, instructional hours, school climate and safety surveys completed by students, and the Impact KY Working Conditions Survey administered every 2 years by KDE. The report refers to the Impact KY survey exclusively as the "working conditions survey."

**The Office of Education Accountability (OEA) conducted site visits to 14 schools representing all school levels and geographic regions.**

Site visit data from eight highest-impact schools and six lowest-impact schools, representing all school levels and geographic regions of the state, are used to provide context for state-level data and to look for differences in school practices among sampled schools. Appendix A provides additional data related to site visit selection and protocols.

### Methods For Identifying School Impact

**The report gives five categories of "impact" based on how far a school falls above or below statistical predictions based on student characteristics.**

The report gives each school an "impact" score based on how far it falls above or below what is statistically predicted based on student characteristics. The report groups schools into five categories ranging from lowest to highest impact. In lowest-impact schools, students perform far below similar students across the state; in highest-impact schools, students perform far above similar students.

**Appendix B describes the statistical model used to calculate impact scores.**

Using a statistical model described in Appendix B, the report takes into account student factors such as family poverty as measured by eligibility for the federal free or reduced-price lunch program; eligibility for special education; limited English proficiency (LEP); homelessness; whether a student moved during the academic year;

[c] This report refers to a school year by the year in which it ends. For example, the 2021-2022 school year is referred to as school year 2022.

race and ethnicity; whether the student is enrolled in a highest-poverty school; and the percentage of adults in a student's community with a bachelor's degree or higher.

**Because the analysis relies exclusively on standardized test scores, it does not capture many important elements of successful schools. The statistical method may advantage schools that identify students for special education at very high rates.**

**Limitations.** OEA's method for identifying highest- and lowest-impact schools relies on standardized test scores to gauge success. Many characteristics of schools that are desirable to policy makers, families, employers, and other education stakeholders are not measured through these tests. In addition, the model introduces some statistical limitations that may disadvantage schools with lower student poverty rates and lower rates of special education identification.[d] For example, data shown in Appendix C illustrate the relative advantage of the model for schools that identify students for special education at very high rates. The appendix shows that when school impact is calculated only for students without individualized education programs, some schools identified as highest-impact by the model are no longer in that category.

## School Performance, Actual And Impact

This section illustrates key differences between actual and impact scores by showing differences in the poverty levels of schools when performance is determined by each method. Students' eligibility for the federal free or reduced-price lunch program is used as a proxy for family poverty.[e] Appendix D presents differences in actual versus impact performance categories based on special education eligibility, limited English proficiency, race, and other demographic categories included in the model.

**If schools are judged by actual test scores alone, then almost no highest-poverty schools appear successful and most lowest-performing schools are higher-poverty schools.**

Figure 1.A illustrates the strong association of student poverty and actual student performance in Kentucky schools. The figure

[d] The statistical model may make it more difficult for lower-poverty schools to achieve higher ratings. In addition, the model may privilege schools that identify students for special education at rates that far exceed the state's, and it may disadvantage schools that identify students at much lower rates. Finally, as noted in OEA's 2023 *Effectiveness And Efficiency of Kentucky School Districts* report, the statistical model used by OEA in its district impact analysis does not explain most of the variance observed in outcomes among students. While the results from the model provide important information about student performance that is not available from actual, unadjusted scores, it is not intended to provide an alternative means of ranking districts and does not report impact scores for individual schools. All statistical models have their own limitations, which may affect some school districts more than others.

[e] Students are eligible for free lunch if their family income is within 130 percent of the federal poverty level; students are eligible for reduced-price lunch if their families are within 185 percent of the federal poverty level.

groups schools into five categories based on students' actual performance on state tests.[f] Within each category, the figure indicates the number of schools that fall in lowest to highest levels of poverty. Almost all schools in the highest level of actual performance are lower-poverty schools, whereas almost all schools in the lowest performance level are higher-poverty schools.[g]

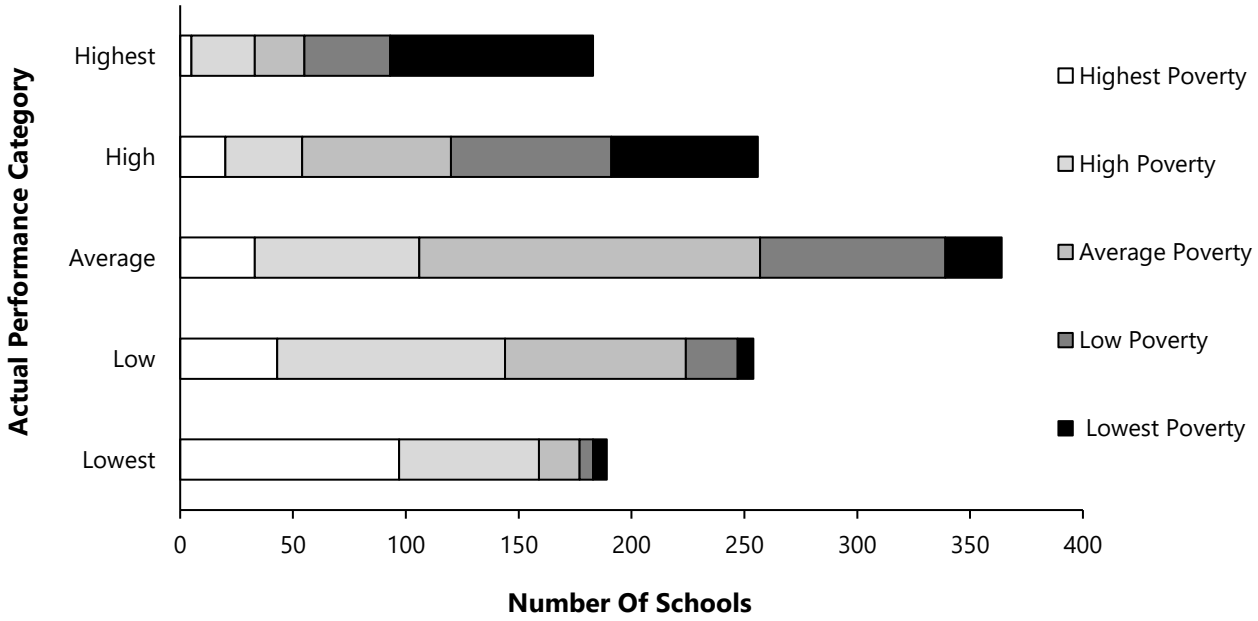
**When schools' demographic characteristics are taken into account, the relative performance increases in many higher-poverty schools and decreases in many lower-poverty schools.**

Figure 1.B groups schools by "impact" performance level, which is determined by how each school performs compared to statistically similar schools across the state. Compared with Figure 1.A (actual performance), Figure 1.B shows a much greater number of lower-poverty schools in the highest category of performance and a much lower number of higher-poverty schools in the lowest category of performance. Schools that do not stand out as highest performers by actual scores may offer important lessons on how to improve outcomes for the students who attend schools with high percentages of students who typically perform below state averages.

[f] These include scores for all students in reading and mathematics in grades 3-8 and 10; scores for science, social studies, and writing are included once each at the elementary, middle, and high school levels.

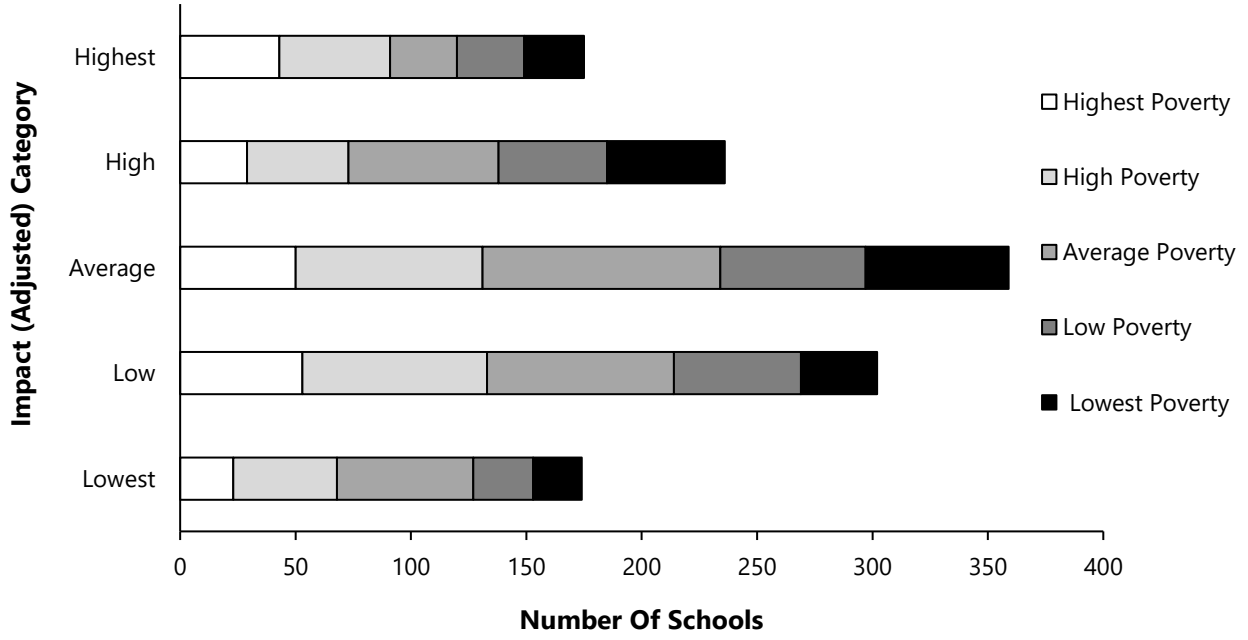
[g] In Kentucky, as in the rest of the nation, academic performance is highly associated with student demographic characteristics such as economic disadvantage, limited English proficiency, and disability status. Students in some schools perform better than demographically similar students across the state on student assessments and other measures of student success.

**Figure 1.A**
**Number Of Schools By Actual Performance Category And Poverty Level**
**2022 And 2023**




Source: Staff analysis of data from the Kentucky Department of Education.

**Figure 1.B**
**Number Of Schools By Adjusted (Impact) Performance Category And Poverty Level**
**2022 And 2023**




Source: Staff analysis of data from the Kentucky Department of Education.

**Using actual assessment results to identify high-performing schools may not reveal best practices for several reasons.**

Figure 1.A illustrates limitations in using actual assessment results to identify high-performing schools as the source of best practices that might be shared with all schools. High-performing schools are generally not representative of the types of school communities found across the state. Further, in the cases of both higher- and lower-performing schools, the degree to which student outcomes are associated with school practices versus characteristics of students who typically live in lower- or higher-poverty communities may not be clear. The performance of students in some of the state's higher-performing schools may look average when compared to that of similar schools across the state, whereas the average performance in some of the state's highest-poverty schools may look very high when compared to similar schools across the state.[h]

**When student demographics are taken into account, many CSI schools are no longer in the lowest performance category.**

**CSI Schools Actual Versus Impact.** Analysis of schools' actual versus impact categories show that many of the states' lowest-performing schools—those identified for Comprehensive Support and Improvement—appear relatively less low-performing when the performance of students in the school is compared to that of similar students in schools across the state. Appendix E shows that almost all schools identified as CSI were in the lowest performance category of actual scores. Smaller numbers of CSI elementary schools and almost no CSI middle and high schools are in the lowest-impact category. The percentage of CSI schools in the lowest-impact category was 58 percent at the elementary level, 42 percent at the middle school level, and only 17 percent at the high school level.

## Difference, Actual And Impact Performance

**Most highest-impact schools are also higher-performing by actual scores.**

As shown in Appendix E, school categories generally do not change dramatically when calculated by actual versus impact scores; most of the highest-impact schools are well above average in actual scores, whereas most of the lowest-impact schools were well below average in actual scores.

[h] OEA staff visited the school with the state's highest impact rating, a very high-poverty elementary school that was already in the highest performance category by actual scores. Several site visit schools looked only slightly below average on actual scores but were in the lowest-impact category when student demographic characteristics were taken into account.

## Summary Of Differences Between Highest- And Lowest-Impact Schools

**Table 1.A summarizes key differences between highest- and lowest-impact schools.**

Table 1.A summarizes key differences between highest- and lowest-impact schools as identified in this report and shows which elements are supported by statewide data versus site visit data alone.

Statewide data come from teachers' responses to KDE's working conditions survey and student responses to KDE's school climate and safety survey.

**Table 1.A**
**Characteristics Of Highest-Impact Schools**
**2022 And 2023**

| School Characteristics | Statewide Data | Site Visit Data |
|---|---|---|
| ***Common, Aligned, Instructional Systems Based On High Expectations*** | | |
| Curriculum scope and sequence | — | X |
| Assessment—classroom and unit | — | X |
| Collective analysis of student data and work | — | X |
| Instructional monitoring, support, and accountability | X | X |
| Student remediation | — | X |
| ***School Climate And Culture*** | | |
| Positive, supportive | X | X |
| Orderly behavior; accountability for student misconduct | X | X |
| ***Leadership With Accountability And Support*** | | |
| Principals | X | X |
| Experienced teacher leaders | — | X |
| District leaders | — | X |

Note: Statewide data based on Kentucky Department of Education working conditions survey responses of teachers and school climate and safety survey responses by students.
Source: Staff compilation of data sources and findings of the report.

**Conclusions of the report reflect best practices as supported by existing research and outlined in KDE guidance documents.**

All of this study's conclusions about practices in highest-impact schools are supported by existing research and outlined in guidance documents by the Kentucky Department of Education.

## Research On Effective Schools

### Effective Schools

**Research has shown characteristics of effective schools to include high expectations, instructionally focused leadership, data-driven instruction, a focus on human capital, and additional support for high-need populations.**

Practices highlighted in studies on effective schools include high expectations; stable, instructionally focused leadership; systems of aligned expectations for curriculum and assessment; data-driven instruction; intentional human capital strategies that raise capacity of teachers and leaders (including but not limited to professional development and frequent teacher feedback); community

investment and engagement; increased instructional time; cultures of collaboration; and targeted support for high-need populations.[2] One of these studies was conducted by the Prichard Committee for Academic Excellence in 2005, looking for differences between high- and low-performing high-poverty Kentucky schools.

## Leadership

**Effective leaders impact school organization, culture, teacher retention, and student outcomes. They also identify and support teacher leaders.**

Decades of research show that effective principal leadership can have strong effects on school organization, culture, teacher retention, and student outcomes. The most effective schools also include strong leadership teams of teachers and other school staff. Principals play important roles in identifying these leaders, helping them to develop, and supporting leadership teams.[3]

# Chapter 2

## Statewide Differences Between Highest- And Lowest-Impact Schools

**This chapter uses statewide data to analyze differences between highest- and lowest-impact schools. Differences are greatest in data related to student behavior, positive relationships, and staff turnover.**

This chapter uses statewide data to highlight differences between highest- and lowest-impact schools.[a] Highest- and lowest-impact schools are distinguished most by data related to student behavior, climate and culture, and staff turnover. The data presented in this chapter are consistent with site visit data described in Chapter 3 noting differences in school culture between highest- and lowest-impact schools and the degree to which schools are preferred working destinations for teachers.

**Although per-pupil spending does not differ between highest- and lowest-impact schools, the percentage of expenditures that are directly for classroom instruction is slightly greater in highest-impact schools.**

Financial data show no clear differences among highest- and lowest-impact schools on per-pupil spending, but do show modest differences between schools in the percentage of expenditures that are directly for classroom instruction versus school instructional or administrative support. These differences are likely explained largely by the fact teachers in highest-impact schools, on average, have more years of experience than teachers in lowest-impact schools and are therefore at higher pay scales.

### KDE Working Conditions Survey Data

#### Description Of Survey

**KDE administers a biennial working conditions survey to all certified educators. The survey is based on research showing that teacher effectiveness is influenced by working environments.**

Every 2 years, KDE administers a working conditions survey to all certified educators. Data for schools with at least 10 responses and a 50 percent response rate are available on the KDE website.[b] The working conditions survey is administered by Panorama, a private, for-profit company. According to Panorama, the survey is based on research showing that teachers' effectiveness can be either constrained or supported by their school working environments. Teachers in buildings with favorable conditions improve at faster rates and stay in the classroom longer than other teachers.[c] [4]

[a] For each topic, data for all five impact categories appear in appendices.
[b] The response rate was lower in 2024 (77.6 percent) than in 2022 (85 percent). In 2024, working conditions survey data for approximately 15 percent of schools were not reported because they did not meet the 50 percent threshold.
[c] According to Panorama, schools are organizations that influence the behavior of staff as well as students, and favorable working conditions cause teachers to improve at faster rates and stay in the classroom longer than schools with unfavorable conditions. The survey is intended to measure influential factors

## Relationship Between Teacher Working Conditions And School Impact On Academic Achievement

**OEA analyzed student achievement in schools with favorable working conditions and schools with less favorable working conditions.**

OEA analyzed the relationship between teacher responses on the working conditions survey and the impact of the schools where they work on student achievement.[d] Staff ranked schools by the percentage of teachers who responded favorably on the working conditions survey, classifying schools ranking substantially above the average as having more favorable working conditions and those substantially below the average as having less favorable working conditions.[e]

**Lowest-impact schools were more than 4 times as likely to have less favorable working conditions as highest-impact schools.**

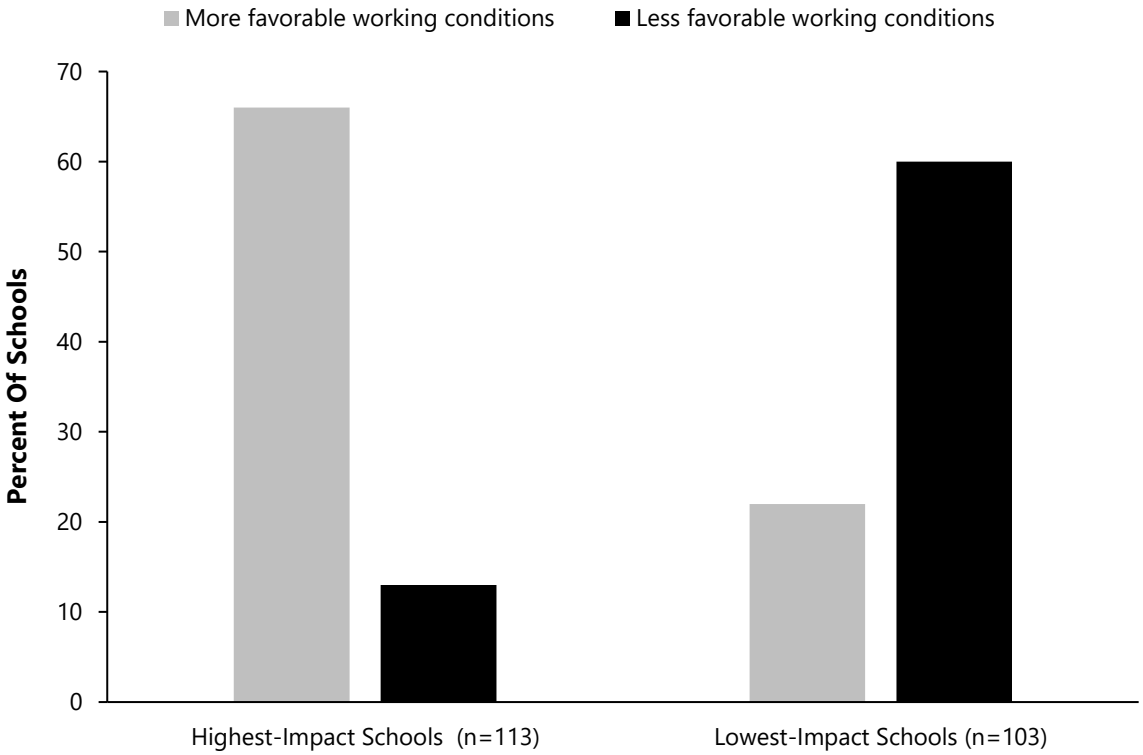
As shown in Figure 2.A, lowest-impact schools were more than 4 times as likely as highest-impact schools to have less favorable working conditions data (60 percent and 13 percent, respectively) and much less likely to have favorable working conditions data (22 percent and 66 percent, respectively).

such as the quality of collaboration and relationships among staff, the behavioral and academic expectations for students, and the responsiveness of administrators.

[d] OEA's analysis includes responses of teachers only. Teachers constituted 87 percent of all respondents. Others included other certified staff (such as school counselors and school psychologists), principals, and assistant principals.

[e] Schools were considered substantially above average if they were more than ⅓ of a standard deviation above the mean; they were considered substantially below average if they were more than ⅓ of a standard deviation below the mean.

**Figure 2.A**
**Working Conditions Favorability Ratings By School Impact Level**




Note: OEA defined schools with higher favorable working conditions to be those in which the percentage of favorable responses was in the highest or high category and schools with lower favorable working conditions to be those in the low or lowest category. Categories were computed by OEA using methods described in Appendix F. The number of schools included in this analysis was smaller than the total number of schools because only 797 out of 1,246 schools (64 percent of schools) met the threshold to report school-level responses in both 2022 and 2024. Of the 175 highest-impact schools, 113 schools (65 percent) met the threshold to be included in the analysis. Of the 174 lowest-impact schools, 103 schools (59 percent) met the threshold. School impact performance categories are based on data from school years 2022 and 2023. Teacher working conditions survey data are from school years 2022 and 2024.
Source: Staff analysis of data from the Kentucky Department of Education.

**Overall, teachers' favorability ratings were highest on staff/leadership relations questions and lowest on resource-related questions.**

Table 2.1 shows the percentages of teachers in highest- and lowest-impact schools who responded favorably to questions in different topic areas. Overall, favorability ratings were highest on questions related to staff/leadership relations (76 percent) and lowest on resource-related questions (50 percent). Appendix F shows differences in overall favorability by school level. On average, differences between levels were greatest at the elementary level and least at the high school level.

**Highest- and lowest-impact schools varied most on questions related to student behavior, school climate, and feedback/coaching.**

Differences between highest- and lowest-impact schools were greatest in topic areas related to managing student behavior, school climate, and feedback/coaching.

**Table 2.1**
**Working Conditions Favorability Ratings Of Teachers**
**In Highest- And Lowest-Impact Schools, By Topic Area**
**2022 And 2024 Survey Data**

| | Percent Favorable Responses | | | Percentage Point |
|---|---|---|---|---|
| Category | Average All Schools | Highest (n=144) | Lowest (n=154) | Difference, Highest And Lowest |
| Managing student behavior | 66% | 77% | 57% | 19 |
| School climate | 63 | 74 | 55 | 19 |
| Feedback and coaching | 57 | 68 | 51 | 17 |
| Emotional well-being | 53 | 63 | 47 | 16 |
| Resources | 50 | 58 | 43 | 15 |
| School leadership | 66 | 74 | 59 | 15 |
| Professional learning | 59 | 67 | 54 | 13 |
| Staff/leadership relationships | 76 | 81 | 73 | 9 |
| Educating all students | 67 | 71 | 65 | 7 |
| Overall favorability rating | 63 | 72 | 58 | 14 |

Note: Differences may not sum due to rounding. School impact performance categories are based on data from school years 2022 and 2023. Teacher working conditions data are from school years 2022 and 2024.
Source: Staff analysis of data from the Kentucky Department of Education.

Table 2.2 shows the top 10 questions in which responses of teachers in highest- and lowest-impact schools differed the most. These questions were all related to the behavior of students and to school resources. Appendix F shows differences between highest- and lowest-impact schools on all survey questions.

**Teachers in highest- versus lowest-impact schools were much more likely to respond favorably on questions related to positive relationships and orderly behavior.**

Related to the behavior of students, teachers in highest-impact schools were much more likely than those in lowest-impact schools to respond favorably on questions related to supportive interactions among students, classroom disruptions due to student misconduct, students' enthusiasm about being in school, students being helpful to each other, and respectful relationships between teachers and students. In addition, teachers in highest-impact schools were more likely to agree that school leaders were effective in developing school rules that facilitate learning.

**Resource-related favorability ratings were only 50 percent for all teachers, but were substantially lower among teachers in lowest-impact schools.**

Teachers' favorability ratings on resource-related topics were only 50 percent overall, but were substantially lower among teachers in lowest-impact schools. Data analyzed for this study shed little light on why teachers in highest- and lowest-impact schools differed so greatly on general questions related to resources.[f] As discussed later in this chapter, per-pupil expenditures differ little between highest- and lowest-impact schools.

[f] OEA site visit interviews indicated few differences between the variety of answers given by teachers in highest- and lowest-impact schools when asked whether teaching, working conditions, or any other areas were negatively affected by a lack of resources.

**Teachers differed most on resource questions related to instructional technology, students needing extra support, and whether school facilities needed repair.**

Question-level data in Appendix F shows that, on resource-specific questions, teachers in highest- versus lowest-impact schools differed most on questions related to instructional technology, resources for students needing extra support, and whether school facilities needed repair. These differences were smaller, however, than the general resource-related questions shown in Table 2.2 or the question about how often students need to wait for help.

**Highest-impact middle and high schools have more teachers and instructional classified staff than do lowest-impact middle and high schools.**

It may be that the general resource-related questions also reflect teachers' perceptions that staffing is sufficient to meet student needs. As shown later in this chapter, highest-impact middle and high schools have more teachers and instructional classified staff than do lowest-impact middle and high schools.

**Table 2.2**
**Top 10 Questions With Greatest Differences Among Teachers**
**In Highest- And Lowest-Impact Schools**
**2022 And 2024 Survey Data**

| | | Percent Favorable Responses | | Percentage Point |
|---|---|---|---|---|
| Category | Question | Highest Impact | Lowest Impact | Difference, Highest And Lowest |
| School climate | How supportive are students in their interactions with each other? | 75% | 49% | 26 |
| Managing student behavior | How often does student misconduct disrupt the learning environment at your school? | 50 | 26 | 24 |
| Resources | Overall, how much does your school struggle due to a lack of resources? | 73 | 49 | 24 |
| School climate | On most days, how enthusiastic are the students about being at school? | 70 | 46 | 23 |
| Resources | To what extent does the quality of the resources at your school need to improve? | 60 | 38 | 22 |
| School climate | How often do you see students helping each other without being prompted? | 81 | 59 | 21 |
| School climate* | How respectful are the relationships between teachers and students? | 83 | 62 | 21 |
| Resources | How many more resources do you need to adequately support your student's learning? | 70 | 51 | 19 |
| School leadership* | How effective are the school leaders at developing rules for students that facilitate their learning? | 74 | 55 | 19 |
| Resources | When students need help from an adult, how often do they have to wait to get help? | 72 | 53 | 19 |

Note: Differences may not sum due to rounding. Working conditions data are from school years 2022 and 2024. Impact categories are based on data from school years 2022 and 2023. Schools with more favorable ratings are those that are greater than ⅓ of a standard deviation beyond the mean; schools with less favorable ratings are more than ⅓ of a standard deviation below the mean.
*This question is also included in the "managing student behavior" question category.
Source: Staff analysis of data from the Kentucky Department of Education.

## Quality Of School Climate And Safety Survey

**An annual school climate and safety survey is given to all Kentucky students and is included in the state accountability system.**

Kentucky public school students in all tested grades participate in an annual school climate and safety survey. The results of the survey are included as a component in the state accountability system.[g]

**The difference between responses from highest- and lowest-impact schools ranged from 7 to 11 percentage points.**

On average, the difference between the percent of favorable responses in highest- versus lowest-impact schools was 8 percentage points at the elementary level, 11 percentage points at the middle school level, and 7 percentage points at the high school level. As with the teacher working conditions survey, differences were greater at the individual question level.

**Questions with the greatest difference between highest- and lowest-impact schools related to how students treat each other, whether student rules are fair, and whether the school is an encouraging place.**

Table 2.3 shows the questions with the greatest and least difference between highest- and lowest-impact schools at each school level. At all levels, questions with greatest differences between highest and lowest impact are related to how students treat each other, whether school rules are fair, and whether the school is an encouraging place.

**Table 2.3**
**Questions With Greatest And Least Difference In Percentage Of Favorable Responses Among Highest- And Lowest-Impact Elementary Schools, School Climate And Safety Surveys 2022 And 2023**

| Question | Highest Impact | Lowest Impact | Percentage Point Difference |
|---|---|---|---|
| ***Elementary*** | | | |
| Students being mean or hurtful to other students is **not** a problem for this school. | 51% | 31% | 19 |
| All students are treated the same if they break school rules. | 76 | 59 | 17 |
| Students being mean or hurtful to other students online (such as websites and apps) is **not** a problem for my school. | 63 | 47 | 15 |
| ***Middle*** | | | |
| Bullying is **not** a problem for this school. | 51 | 36 | 15 |
| My school is an encouraging place. | 83 | 69 | 13 |
| The school rules are fair. | 67 | 54 | 12 |
| ***High*** | | | |
| Bullying is **not** a problem for this school. | 56 | 44 | 13 |
| My school is an encouraging place. | 77 | 65 | 12 |
| Students from this school respect each other's differences (i.e., gender, culture, race, religion, ability). | 57 | 45 | 12 |

Note: Differences may not sum due to rounding.
Source: Staff calculations based on data from the Kentucky Department of Education.

[g] Results of the survey account for 4 percent of the total accountability score.

**Students generally responded favorably to questions about teachers and other adults. The differences between highest- and lowest-impact schools were smaller on these questions.**

In general, survey questions related to adult behavior received more favorable responses in all schools than those related to student behavior, and the differences by impact level on adult-related questions were relatively small. Even in lowest-impact schools, for example, the average percentage of students who agreed that teachers expect them to do their best was 93 percent at the elementary and middle school levels and 89 percent at the high school level.

## Teacher Turnover

**Highest-impact schools had lower teacher turnover, longer principal tenure, and slightly longer superintendent turnover.**

As shown in Table 2.4, teacher turnover is an average of 21 percent in lowest-impact schools and 15 percent in highest-impact schools, making turnover rates 1.4 times as great in lowest-impact schools. The table also shows that the average principal tenure is 1.5 times as great in highest- versus lowest-impact schools (6 years versus 4 years). Highest-impact schools, on average, are located in school districts where superintendents have slightly longer tenures than the districts where lowest-impact schools are located.

**Table 2.4**
**Teacher Turnover And Average Principal And Superintendent Tenure**
**Highest- And Lowest-Impact Schools**
**2022 And 2023**

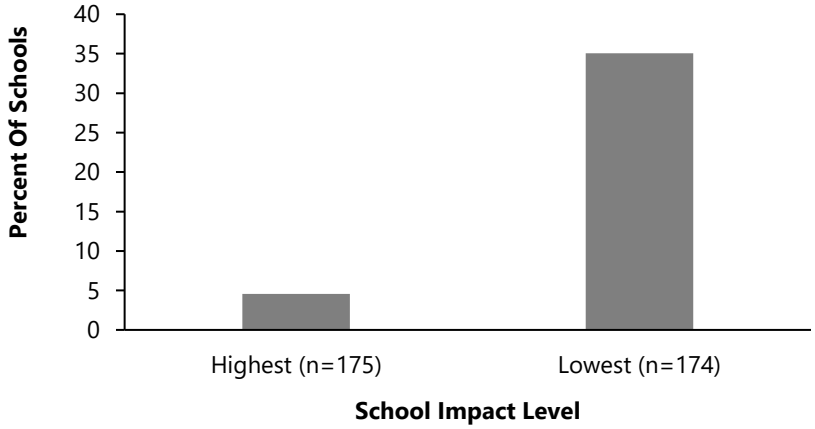
| | | Average | | |
|---|---|---|---|---|
| Impact Category | School Count | Teacher Turnover Percent | Principal Years At School | Superintendent Years At District |
| Highest | 175 | 15% | 6 | 6 |
| Lowest | 174 | 21 | 4 | 5 |
| All schools | 1,246 | 18 | 5 | 5 |

Note: Teacher turnover was computed as an average for school years 2022 and 2023. Principal and superintendent tenure was computed as of 2023.
Source: Staff analysis of data from the Kentucky Department of Education.

**Lowest-impact schools are 7 times as likely to have very high teacher turnover rates as highest-impact schools.**

As shown in figure 2.B, lowest-impact schools are 7 times as likely to have very high teacher turnover rates as highest-impact schools (35 percent versus 5 percent). OEA computed high teacher turnover rates by methods described in Appendix B that considered how far turnover rates were from the average at each school level. Very high turnover rates were 25 percent or above for elementary schools, 28 percent or above for middle schools, and 23 percent or above for high schools.

**Figure 2.B**
**Percentage Of Highest- And Lowest-Impact Schools With Very High Teacher Turnover Rates**
**2022 To 2023**



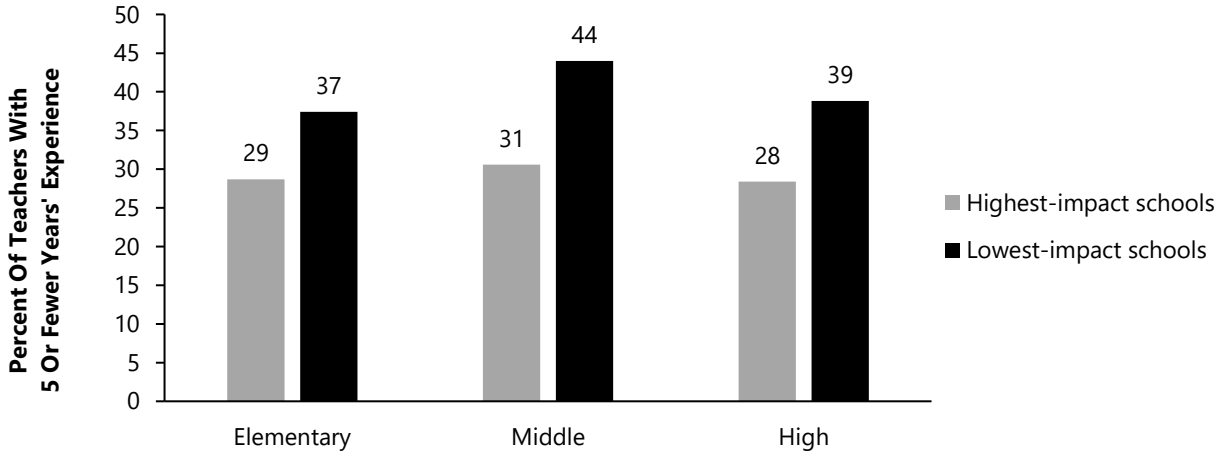

Note: Data were calculated from the subset of schools that met the response rate threshold for both 2022 and 2024. Highest turnover rates were calculated separately at each school level to be more than 1 standard deviation from the mean. Very high turnover rates were 25 percent or above for elementary schools, 28 percent or above for middle schools, and 23 percent or above for high schools.
Source: Staff calculations based on data from the Kentucky Department of Education.

## Teachers' Years Of Experience

**Lowest-impact schools have a greater percentage of teachers with 5 years of experience or less than do highest-impact schools.**

Figure 2.C shows that the percentage of teachers with 5 years of experience or less is greater in lowest- versus highest-impact schools, especially at the middle school level.

**Figure 2.C**
**Percentage Of Teachers With 5 Years' Experience Or Less, Highest- And Lowest-Impact Schools**
**2022 To 2023**




Source: Staff analysis of data from the Kentucky Department of Education.

**Newer teachers are increasingly likely to be entering through alternative teaching routes.**

Data available for this report do not allow for analysis of differences in types of teacher certification among highest- and lowest-impact schools. Schools with higher percentages of relatively new teachers are, however, more likely to have higher percentages of teachers entering through alternative routes, as the number of alternatively certified teachers has been increased substantially in recent years. Option 6—the most common form of alternative certification—allows a person with a bachelor's degree or graduate degree to teach while enrolled in a postbaccalaureate program to earn a full professional teaching certificate. The number of teachers entering through Option 6 nearly doubled between 2020 and 2023.[5]

### Teacher Exit Survey

**In over one-third of districts, no teachers completed the exit survey required by House Bill 2019 of the 2023 Regular Session.**

House Bill 319 of the 2023 Regular Session required districts to ensure that each employee who voluntarily leaves a district completes an exit survey. As of February 2024, only 226 teachers completed the survey. In over one-third of districts (68 of 171), no teachers completed the survey.

Appendix G provides an analysis of survey data collected through February 2024. Due to the low response rate on the survey, extreme caution should used in drawing conclusions from respondent data.

## Policy Requirements Related To Turnover And Working Conditions

**As discussed in Chapter 3, high staff turnover and unfavorable working conditions can undermine school performance yet are not included as indicators on school and district planning documents.**

Data presented in this chapter supports existing research indicating that staff turnover and unfavorable working conditions undermine school performance. Both represent critical priorities in schools and districts with high turnover rates or poor working conditions. These metrics are not included as required components of the annual comprehensive planning required of schools and districts discussed in Chapter 3. For reasons discussed in that chapter, working conditions survey data would not be appropriate as a required component of comprehensive planning. Conclusions of the report will, however, recommend a greater focus on teacher turnover in comprehensive planning and increased atttention to working conditions survey data in those schools and districts in which data indicates substantial challenges.

## School Resources

**Highest- and lowest-impact schools have slightly different spending patterns.**

Highest- and lowest-impact schools do not differ consistently on per-pupil expenditures but do have slightly different spending patterns. Highest- versus lowest- impact schools spend, on average, a slightly greater percentage on instruction and a slightly lower percentage on instructional support. In addition, student-to-staff ratios are lower in highest-impact middle and high schools, especially for classified instructional staff. Finally, school calendar data indicate a greater number of maximum instructional hours, on average, in highest- versus lowest-impact schools.

### Expenditures

Appendix H shows per-pupil expenditure data at each school level by impact category and the percentages of these expenses that were for various functions. The data do not indicate clear differences between highest- and lowest-impact schools in per-pupil spending overall. As shown in Table 2.5, however, the percentage of expenditures on instructional services versus instructional support and school administrative support is slightly greater in highest- versus lowest-impact schools.

**Table 2.5**
**Percentage Of Expenditures**
**On Instructional Services, Instructional Support Or School Administrative Support**
**2022 To 2023**

| Level | | Instructional Services | Instructional Support | School Admin Support |
|---|---|---|---|---|
| Elementary | Highest | 78% | 8% | 7% |
| | Lowest | 75 | 10 | 8 |
| Middle | Highest | 77 | 7 | 8 |
| | Lowest | 75 | 8 | 10 |
| High | Highest | 79 | 7 | 7 |
| | Lowest | 74 | 8 | 9 |

Note: Instructional Services = expenditures on instruction directly dealing with the interaction between teachers and students; Instructional Support = expenditures associated with assisting instructional staff such as counselors, coaches, and pupil attendance workers; School Admin Support = expenditures related to principals, assistant principals, and other assistants. In all three categories, staff salaries constitute the overwhelming majority of expenditures. OEA excluded food and transportation services from the calculation of the percentages shown.
Source: Staff analysis of data from the Kentucky Department of Education

**The greater percentage of expenditures on instructional services in highest-impact schools is likely explained in part by higher salaries of more experienced staff and, in middle and high schools, greater numbers of classified and certified staff per student.**

The slightly greater percentage of instructional services in higher-impact schools is likely explained, in part, by the relatively higher salaries of more experienced teachers in highest-impact schools at all school levels and by the greater ratios of pupils to teachers and to classified instructional staff at the middle and high school levels.

## Staffing Ratios

**Highest-impact middle and high schools have more classified staff and teachers per student than lowest-impact middle and high schools.**

Table 2.6 shows that ratios of students to teachers, and students to classified instruction staff, are lower in highest- versus lowest-impact middle and high schools. This means that for every student there are more teachers and classified instructional staff in highest- versus lowest-impact middle and high schools. As shown in Appendix I, these differences do not exist for elementary schools.

**Lowest-impact schools have more administrators per student than highest-impact schools.**

Table 2.6 also shows higher student-to-administrator ratios in highest- versus lowest-impact middle and high schools. This means that lowest-impact schools have relatively more administrators per student than highest-impact schools.

**Table 2.6**
**Student-To-Staff Ratios, Highest- And Lowest-Impact Schools**

| | | | Ratio | | |
|---|---|---|---|---|---|
| Level | Impact Category | School Count | Student To Teacher | Student To Classified Instructional Staff* | Student To Administrator |
| Middle school | Highest | 47 | 14.9 | 88 | 249 |
| | Lowest | 47 | 15.8 | 132 | 219 |
| High school | Highest | 29 | 15.2 | 132 | 307 |
| | Lowest | 30 | 17.6 | 175 | 264 |

Note: Calculations are based on full-time equivalent staff.
***** Most classified instructional staff are instructional aides.
Source: Staff analysis of data from the Kentucky Department of Education.

## Maximum Instructional Hours Comparison By School Level

OEA staff used the master calendar data for all districts to conduct an analysis on the maximum instructional hours for schools grouped by Impact category. Table 2.7 shows the difference in the average maximum instructional hours for schools in the highest- and lowest-impact categories for all three school levels.

**Table 2.7**
**Comparison Of Average Maximum Instructional Hours Between Highest- And Lowest-Impact Schools By School Level**

| | Elementary | | Middle | | High | |
|---|---|---|---|---|---|---|
| Impact Category | School Count | Maximum Instructional Hours | School Count | Maximum Instructional Hours | School Count | Maximum Instructional Hours |
| Highest | 99 | 1,145 | 47 | 1,133 | 29 | 1,145 |
| Lowest | 97 | 1,122 | 47 | 1,117 | 30 | 1,119 |
| All schools | 702 | 1,142 | 317 | 1,137 | 227 | 1,133 |

Source: Staff analysis of data from the Kentucky Department of Education.

**Lowest-impact schools had fewer maximum instructional hours on average, than highest-impact schools.**

At all three school levels, lowest-impact schools had the fewest maximum instructional hours, on average. Elementary schools in the lowest-impact category had 23 fewer maximum instructional hours on average relative to the elementary schools in the highest-impact category. At the middle school level, schools in the lowest-impact category had 16 fewer maximum instructional hours on average than the middle schools in the highest residual category.[h] High schools in the lowest-impact category had 26 fewer maximum instructional hours on average relative to the high schools in the highest-impact category.

## Lowest-Performing Schools By Actual Scores And Schools Identified For Comprehensive Support And Improvement

Appendix J shows that the differences between highest- and lowest-impact schools in teacher working conditions and staff turnover also exist for highest- and lowest-performing schools as measured by actual scores.

**Kentucky's CSI schools have greater challenges related to teacher working conditions and staff turnover than lowest-impact schools generally.**

Appendix K shows that the state's lowest-performing schools that have been identified for Comprehensive Support and Improvement have high rates of staff turnover and face even greater challenges associated with culture, climate, and student behavior than do lowest-impact schools, on average.

**Teacher turnover is a challenge in CSI schools nationally, forcing these schools to hire less experienced or effective teachers.**

Data collected from CSI schools across the nation also show challenges with teacher shortages and turnover. Leaders in these schools report that teachers feel it is less desirable to work in high-needs schools and, due to teacher turnover, schools are forced to hire less inexperienced or effective teachers. Among CSI schools' turnaround plans reviewed by the US Government Accountability Office, 41 percent cited access to effective educators as a key challenge.[6]

**Nationally, CSI schools are disproportionately found among high-poverty schools and schools in which the majority of students are Black or Hispanic.**

National data on CSI schools shows that they are found disproportionately among high-poverty schools, schools in which the majority of students are Hispanic, and schools in which the majority of students are Black.[7] Only four elementary schools in Kentucky have student populations in which the majority of students are Hispanic. The number of Kentucky schools in which the majority of students are Black is 41 at the elementary level, 9 at the middle school level, and 8 at the high school level.

[h] Schools from the highest- and lowest-impact categories had fewer maximum instructional hours than the average for all middle schools, however, so instructional hour trends at the middle school level are not clear.

**Student demographics in Kentucky's CSI schools show similar patterns.**

Data on Kentucky's CSI schools appear in Appendix K. Consistent with national data, Kentucky CSI schools are found disproportionately among the state's highest-poverty schools and even more disproportionally among the schools with highest percentages of Black students. In addition, compared with schools that have not been identified in any federal improvement category, the percentage of LEP students in CSI schools is over 3 times as great at the elementary level, and 21 times as great at the middle and high school levels.

**Appendix L shows the number of schools by Kentucky district that have demographic characteristics of schools more likely to be lower-performing.**

Appendix L shows the number and percentage of schools by district that are highest-poverty, that have highest percentages of LEP students, and in which the majority of students are Black.

# Chapter 3

## Site Visit Data And Conclusions

**This chapter describes differences in the instructional and behavioral systems of highest- and lowest-impact site visit schools and describes the critical importance of local leaders in establishing and maintaining these systems.**

This chapter describes differences in the instructional systems of highest- and lowest-impact site visit schools. Site visit data are also used to provide context for data reported in Chapter 2, distinguishing highest- and lowest-impact schools statewide on metrics of culture and climate, student behavior, and teacher turnover. Consistent with existing research, many of the differences among highest- and lowest-impact schools can be explained in large part by the ability of local leaders to establish effective instructional and behavioral systems and to address personal and organizational challenges necessary to ensure system success.

**The chapter also provides insights into barriers experienced by lowest-impact schools and relates this report's findings to state policies or programs designed to improve schools.**

As noted in Chapter 1, none of the practices of highest-impact schools that are reported in this chapter will be new to seasoned educators or policy makers. Further, all are represented in various forms of guidance and support provided by the Kentucky Department of Education for all schools in the commonwealth. The chapter may, however, provide insights into some of the barriers experienced by lowest-impact schools in putting these practices into place. The chapter ends by discussing relevance of the report's findings to state policies or programs designed to improve schools.

### Site Visit Data

**OEA conducted site visits to eight highest- and six lowest-impact schools. Staff interviewed school administrators, teachers, and district administrators. Staff also reviewed school planning documents, staffing, and working conditions data.**

Data in this chapter are based on OEA site visits to eight highest-impact and six lowest-impact schools, representing all school levels and geographic regions. Each site visit comprised interviews with school administrators, district administrators, and classroom observations of and interviews with at least four teachers in each school.[a] During site visits. OEA interviewed a total of over 30 school administrators, over 50 district administrators, and over 50 teachers. Staff also reviewed school and district improvement plans, school staffing data, and working conditions survey data. Appendix A contains interview protocols used in site visits.

[a] Teachers interviewed at each school included at least one veteran of 8 years of more, at least one teacher who had been at the school for 2 years or less, and at least one special education teacher. At the elementary level, teachers were 2nd- and 5th-grade teachers, and a teacher of science of social studies. At the middle school level, teachers included a 7th-grade language arts teacher, an 8th-grade math teacher, and a teacher of science of social studies. At the high school level, teachers' subjects included English II, geometry, and science or social studies.

**Limitations.** The broad differences between highest- and lowest-impact schools that are described in this chapter hide variation among teachers and grades in individual schools. OEA observed and interviewed many teachers in lowest-performing schools who exhibited characteristics similar to teachers in highest-performing schools. In addition, OEA staff used data from school years 2022 and 2023 to compute impact categories, whereas site visits occurred in the spring of school year 2024. The practices of lowest-impact schools that are reported in this chapter are based on staff reports of those that occurred during school years 2022 and 2023. In some schools, practices or school leadership had changed.

## Instructional Systems

**Components of instructional systems in highest-impact schools included teacher-developed or teacher-adjusted curriculum maps and classroom assessments; collective review of data and student work; systematic reteaching of unmastered skills; support for struggling students; and instructional monitoring, feedback, and support.**

Table 3.1 describes components of instructional systems in all highest-impact schools.[b] These systems included teacher-developed or teacher-adjusted curriculum maps; teacher-developed or teacher-adjusted classroom unit assessments; teacher/administrator team analysis of student work and data through professional learning communities (PLCs) or regular, informal review; systematic reteaching of skills by classroom teachers during specifically set-aside times of the day or school week; additional pull-out support as necessary; and instructional monitoring, feedback, support, and accountability.[c] As noted following the table, highest-impact schools varied considerably in the way they carried out each component of these systems. OEA documented no single, replicable practice present in highest- versus lowest impact schools.[d]

[b] One minor exception is that one small, highest-impact high school had all components described in Table 3.1 except collective review by experienced teacher teams. This school was too small to have subject-specific teacher teams and did not have regular professional learning communities. The principal reviewed all lesson plans and unit assessment data and regularly reviewed student work.

[c] When district instructional materials, textbooks, or other instructional requirements were in place, these systems were extensions of those materials or requirements.

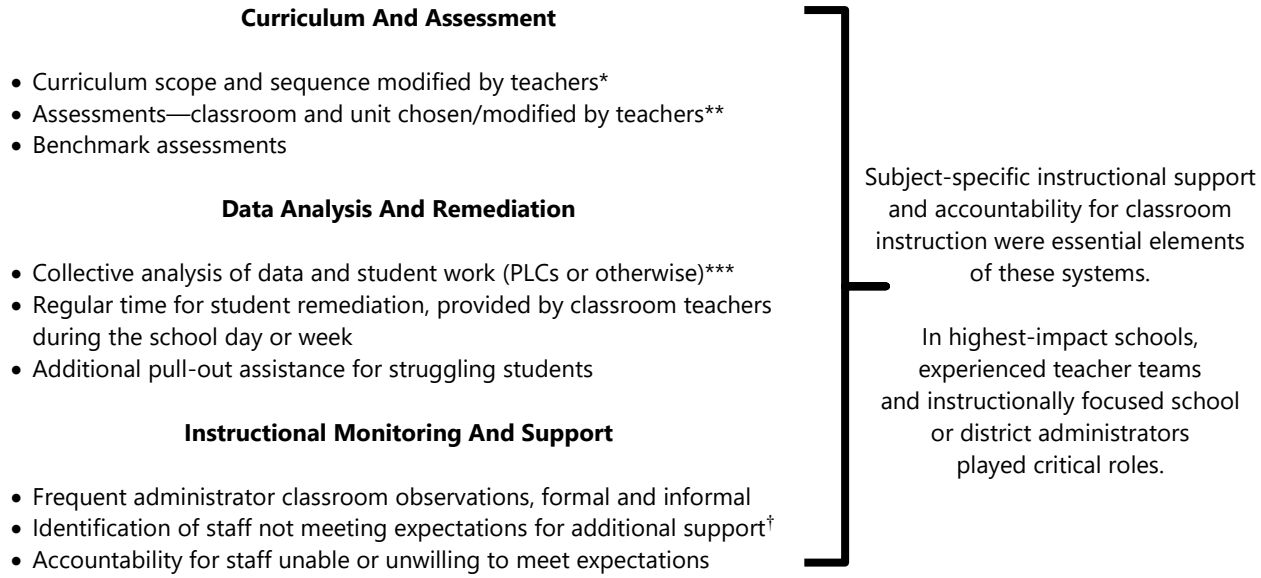
[d] Teachers' scope and sequence documents or classroom assessments are often expansions of curriculum materials or textbooks provided by the district. Although districts have the authority to determine curriculum, textbooks, and instructional materials, staff in many highest-impact schools took additional steps to clarify or extend district materials. In some cases, teachers worked directly with district teams to do this work.

**KDE provides extensive guidance to districts and schools to support active implementation of curriculum standards and assessment/remediation systems. Yet, lowest-impact schools lacked many elements. In some cases, basic structures of these systems were in place, but the school lacked the experienced instructional leaders necessary to implement them.**

Related to practices described in Table 3.1, KDE provides extensive guidance to districts and schools to support active implementation of curriculum standards and assessment/ remediation systems.[e] Yet, as described later in this chapter, lowest-impact schools lacked critical elements of these systems. In some cases, basic structures of these systems were in place, but the school lacked the subject-specific instructional support or accountability for classroom instruction necessary to implement the systems. In highest-impact schools, subject-specific instructional support was provided by experienced teacher teams or other school/district administrators. Accountability for classroom instruction was most often provided by principals, though district administrators and teacher leaders played roles in some schools.

[e] A sampling of these resources includes guidance documents related to high-quality instruction; effective leaders; teacher teams; data analysis; and multitiered systems of intervention and support. In addition, the department's implementation of Senate Bill 9 of the 2022 Regular Session, the Read to Succeed Act, models all aspects of these instructional systems. It recommends high-quality instructional materials and related assessments, provides subject-specific training for educators and administrators, encourages administrators to educate themselves about evidence-based reading practices, and establishes regional networks of teachers and administrators to support implementation.

**Figure 3.1**
**Components Of Instructional Systems In Highest-Impact Schools**
**2024 OEA Site Visits**




* These were extensions of any district-provided materials. In some schools, teachers used district-developed curriculum maps or those provided from purchased programs, but teachers met to clarify expectations at the building level.
** Classroom assessments may include bell ringers or exit slips or assignments. Both highest- and lowest-impact schools used standardized interim assessments such as MAP or IXL, but teachers in highest-impact schools collected or discussed additional formal or informal data.
*** PLCs are professional learning communities comprising teams that have regularly scheduled meetings to review components of instruction including curricula, assessments, data, and student work. PLCs may share strategies, innovate, problem-solve, and otherwise address instructional needs and challenges.
† In some schools, expectations were defined against specifically articulated models. All but two of the six highest-impact site visit schools had some specific instructional components that were expected to be included in lessons. In some, these involved ways of structuring lessons and introducing material; in others, they were more general, such as writing across the curriculum and listening to/explaining other students' thinking, or students' and teachers' ability to articulate and "unpack standards." In all schools, administrators and teacher teams attended to the rigor of classroom expectations and the degree to which assignments and student work reflected those expectations.
Source: Staff analysis of site visit data.

## Subject-Specific Instructional Support

In highest-impact schools, subject-specific instructional support was provided in the context of specific expectations for curriculum standards and student learning. Examples of subject-specific expectations include teams of reading or mathematics teachers discussing learning standards, what type of classroom instruction is necessary to assist students in mastering those standards, and what student classroom work that meets the expectations looks like. In contrast, when asked about instructional expectations, teachers in lowest-impact schools most often mentioned broad

expectations such as "bell-to-bell instruction" or student engagement.

In highest-impact schools, new teachers or struggling teachers were paired with experienced teacher leaders or district subject experts who provided ongoing, on-site support to assist teachers in understanding instructional expectations and the subject-specific instructional methods that would assist students in meeting those expectations. Some highest-impact schools employed instructional coaches who also played this role.[f]

Teachers in highest-impact schools most often cited other teachers as the source of instruction-specific support. For example, a special education teacher in one highest-impact school explained that she relied heavily on the experienced teachers for content knowledge and specific techniques. The teacher summed up her interview by explaining,

> It's the staff. You have to have the horses to pull the buggy, and you have it here. [The newer teachers] are not necessarily good at the beginning, but older teachers pull them along.

Principals play a critical role in identifying teacher leaders and mentors. As one principal in a highest-impact high school explained, "Within the departments, we have teachers with individual strengths, and we tap them to model their knowledge." One highest-impact middle school had teacher team leads for each grade. These teachers were paid a stipend to provide additional support to teachers and to ensure that teacher team concerns were known to administrators.

In addition, teachers in highest-impact schools often noted subject-specific support from principals, other school support staff, and district administrators. The principal in one highest-impact school assured a new teacher that, although students' reading levels had

[f] OEA found little difference in the proportion (about half) of highest- and lowest-impact schools that employed instructional coaches but did find a difference in the function of instructional coaches. Instructional coaches in highest-impact schools were used to support schoolwide instructional expectations, whereas instructional coaches in lowest-impact schools appeared to assist teachers in a voluntary basis and reported difficulties influencing the practices of teachers who were unwilling to change. It was not possible for OEA to look for systematic differences in the employment of instructional coaches across all highest- and lowest-impact schools, as OEA staff found that instructional coaches in site visit schools were often incorrectly coded as classroom teachers in professional staff data.

dropped during the COVID pandemic, the students would be able to understand and eventually independently read grade-level texts and suggested appropriate supports. In another highest-impact school, an Option 6 math teacher was assisted frequently by a district math coordinator who provided instructional materials and math-specific teaching strategies. A special education teacher in another highest-impact school explained that the principal conducted observations with the instructional rubric in hand, to ensure that the special education students were being instructed at grade level.

### Variation Among Highest-Impact Schools ln Specific Practices But Common Commitment To Operate Collectively

**Specific practices varied among highest-impact schools. Some had prescriptive schoolwide models of instruction, while others permitted variation in practice and focused on outcomes.**

The individual ways in which highest-impact schools carried out the components described in Table 3.1 varied greatly. Some schools had prescriptive schoolwide models of instruction and lesson planning, while others permitted variation among instructional practices, focusing instead on collective analysis of student work to determining whether students were meeting curriculum standards. Some met regularly to analyze work in PLCs of teachers and administrators, while others met informally with groups of teacher teams during planning periods.

**In highest-impact schools, the teachers, administrators, and students embraced common expectations and took collective responsibility for the school's academic success.**

Despite this variation, what all highest-impact schools had in common was the sense that teachers, administration, and students understood the common expectations and assumed collective accountability for the academic success of the school. As one teacher in a highest-impact school noted, "It's like night and day now from 17 years ago. It is now more like 'our kids' for all students than just the ones in your classroom. It used to be that a teacher may only care about the students in the grade they teach. Now, there are core check-ins based upon how well the teachers know the children, and the level of instruction has increased." This sense of collective purpose was often cited by teachers as a source of pride and an important component of their professional satisfaction as educators.

### Instructional Leadership In Higher-Impact Districts

**Districts with higher-impact schools played proactive roles in developing or maintaining instructional systems. District administrators ensured consistency across schools and provided a support system for new teachers and administrators.**

OEA visited four districts in which all schools were in higher-impact categories.[g] Specific practices and approaches varied among these districts, but all played proactive roles in developing or maintaining instructional systems. Common characteristics included longevity of district teams with decades of experience

[g] All of the schools were in either the highest or the high category.

in district schools; presence of subject/program experts actively involved in monitoring data and classroom instruction; and frequent, onsite subject- or program-specific support by district administrators for school administrators or teachers. These experienced teams ensured consistency across district schools and provided a support system for new administrators or teachers, ensuring that effective school practices survived turnover in teachers and administrators.

**Higher-impact districts provided systemwide direction for curriculum and instruction that went far beyond the purchase of textbooks or instructional materials.**

All of the higher-impact districts provided systemwide direction for curriculum instruction that went far beyond the purchase of textbooks or instructional material. As one superintendent explained, this made them a "school district rather than just a district of schools." All four districts also promoted specific instructional practices districtwide. These varied by district and included specific ways of structuring lessons; incorporating writing across the curriculum; early literacy instruction and assessment; behavioral expectations and interventions; and instructional grouping and methods of classes that contained special education students.

**Higher-impact districts embraced training opportunities through regional cooperatives.**

All four districts regularly sent teams of administrators and teachers for training in regional cooperatives. Of the four districts, one was a member of two cooperatives and two were members of three cooperatives.

### Incomplete Or Nonexistent Systems In Lowest-Impact Schools

**No lowest-impact schools had complete instructional systems in place. Until recently, some had no systems in place.**

In some lowest-impact schools instructional systems had been nonexistent. In others, they were partially implemented.[h] Teachers and administrators in some lowest-impact schools acknowledged complete lack of instructional systems in previous years. For example, one middle school administrator reported that, "When I got here … there was extreme autonomy [among teachers in different parts of the school] … We needed to put in organizational basic structures. It was bizarre to me. I didn't understand how it was legal. They didn't put anything into [Infinite Campus] or anything." An administrator in a CSI school that had just begun to implement systems noted that, prior to identification of the school as CSI, it received very little attention or oversight from the district. The principal reported that, despite the school's relatively low performance, the district had "assumed" there were systems in place and "it was not thrown in your face

[h] OEA visited several schools with new principals who were attempting to build systems. In these cases, interviewees were asked to describe systems in place during school years 2022 and 2023.

that you have to improve … It is assumed that if you are not in crisis, you don't need support." The principal in this highest-poverty school was provided a mentor, but the mentor did not visit the school or proactively check with the principal.

One experienced teacher who had recently transferred to a highest-impact school explained, "I came from a much smaller district. There is no set curriculum there. Teachers try to fit things in as best they could. They really don't use the [Kentucky Academic Standards] there. There's no reading curriculum in some of the lower grades. Here we have a reading and math curriculum. There's no guessing work. A brand-new teacher has everything they need."

### Barriers To Implementation In Lowest-Impact Schools

Variation in quality of classroom instruction was not consistently addressed in lowest-impact schools. Barriers included building leaders' lack of skill, will, or comfort in addressing teacher performance issues; lack of subject-specific instructional leaders (such as experienced, effective teachers or district administrators) capable of assisting less effective teachers to improve practice; or insufficient numbers of instructional leaders relative to the number of teachers needing support.[i]

**In lowest-impact schools, systems may be implemented on a surface level and have limited impact on classroom instruction.**

**Inconsistent Administrator Expectations Of Educators.** OEA asked a principal in one highest-impact school to explain why the districtwide instructional system was working so well in her school but did not appear to be having the same effect in another district school. The principal explained that, though systems can be implemented at a surface level, administrators may fail to implement all aspects of the system. She had formerly been a coach in the other school and noted that the principal did not monitor the systems, check that instructional expectations were implemented, or address shortcomings among staff. Thus, the system did not necessarily impact instruction within classrooms.

[i] Approximately equal proportions of highest- and lowest-impact site visit schools also had instructional coaches. Instructional coaches in highest-impact schools were active implementers of the school's instructional system, whereas instructional coaches in lowest-impact schools appeared less able to influence instruction of teachers who were uninterested in assistance. OEA also found that most instructional coaches were coded as classroom teachers in staffing data. Due to inconsistent coding practices, it is not possible to analyze differences among highest- and lowest-impact schools statewide in the presence of instructional coaches.

**In highest-impact schools, building leaders persisted in addressing teaching deficits and were uncompromising in insisting that expectations for instruction were met.**

Teachers and administrators in all highest-impact schools were able to provide multiple examples of building leaders' actions to address teaching that did not meet expectations and, in many cases, consequences for teachers unwilling or unable to meet expectations. In the case of newer teachers, contracts were not renewed. In the case of veteran teachers, administrators maintained performance pressure until behavior changed. In one building, a cadre of veteran teachers voluntarily left the building or retired as they disagreed with the performance expectations.

**Administrators in many lowest-impact schools appeared to lack the expertise or will to address ineffective teaching.**

In contrast, administrators in many lowest-impact schools appeared to lack the expertise or will to require specific instructional improvements of less effective teachers. Some administrators noted that they showed professional respect for teachers by deferring to them on subject matter instruction. Others noted difficulty influencing behavior of veteran teachers unwilling to change. For example, one explained, "Some of the teachers are very headstrong, so they can be difficult to coach. Once teachers are tenured, it is almost impossible to remove them. Some exhibit some issues with showing up to work, but they are not necessarily terrible teachers." In some cases, newer struggling teachers were advised, but not required, to seek assistance from experienced teachers.

**Lowest-impact schools often have inconsistent expectations of classroom teachers and inconsistent classroom practices.**

Teachers in several lowest-impact schools specifically cited administrators' inconsistent expectations of classroom teachers as a key challenge in the school. OEA observed inconsistency in classroom practices in lowest-impact schools. In some classrooms, teaching and classroom environments were similar to those observed in highest-impact schools, but in most lowest-impact schools, OEA observed at least one classroom in which at least one-third of students were inattentive, disengaged, or disruptive. In one case, OEA observed students misusing Chromebooks, chatting, or resting their heads on their desks, even in the presence of the principal who had accompanied staff in the observation. A teacher who had recently transferred into a highest-impact school from a lower-performing school said, "There were different expectations among classrooms in my old school. What was expected of me in my math group was different than the other group. My old principal had picks. He had different expectations for them. It was a toxic work environment, and I considered leaving teaching."

**Monitoring protocols reported by highest- and lowest-impact school administrators were similar.**

OEA noted few differences in the monitoring protocols reported by administrators in highest- versus lowest-impact schools. Principals in both school types reported frequent informal monitoring of

classrooms; regular walk-throughs that used observational tools to record classroom practices and were independent of formal teacher evaluations; and teacher evaluations as required by regulation.

## Lack Of Sufficient Subject-Specific Instructional Assistance

**Lowest-impact schools with high percentages of new or inexperienced teachers lacked sufficient numbers of experienced educators or other instructional leaders to provide subject-specific support to struggling teachers.**

OEA visited several lowest-impact schools with very high percentage of new teachers, many of whom had entered through alternative routes. In some, administrators were making great efforts to address instructional needs of these new teachers. Still, classroom observations and interviews indicated that these teachers required more instructional support than they were receiving, and were struggling even when implementing very structured district curricula. For example, OEA spoke with several teachers who explained that they adjusted the assessments provided through district programs because they believed the students were incapable of meeting the expectations. While newer teachers in highest-impact schools were shown by veteran teachers what students could do in math or reading with the proper support, teachers in lowest-impact schools lacked these leaders to show them what was possible.

**Districts and schools with high rates of administrator and teacher turnover have challenges building subject-specific instructional teams to operate effective instructional systems. In some cases, these challenges may be difficult to overcome through efforts of school or district administrators alone.**

Districts and schools with very high rates of administrator and teacher turnover face special challenges in building the subject-specific instructional teams necessary to operate effective instructional systems. In some cases, local districts experienced challenges related to teacher and administrator retention that were difficult to overcome through efforts of school or district administrators alone. For example, one district had experienced a natural disaster that led to an exodus of staff and a shortage of housing for newer teachers. In another rural district, teacher housing also presented a challenge. This district was within commuting distance of larger cities and was therefore able to recruit newer teachers. Administrators cited lack of locally available housing as one cause of the district's inability to retain teachers who eventually transferred to other schools with shorter commutes.[j]

**Local leaders may be unaware that their students are performing below their potential compared to schools with similar students, and unaware of practices used in other districts.**

**Lack Of Awareness That Change Is Needed.** In some cases, local leaders may be unaware that students are performing academically below their potential, compared to schools with similar students. OEA visited one district that appeared slightly below average by actual scores but was far below average when

[j] Administrators in two rural districts noted that real estate available for purchase was often large family farms.

students were compared to similar students across the state. Administrators in this district explained limitations in academic achievement, in part, by students' lack of interest in college education. At the same time, the district administrators in this rural county described a sense of isolation and lack of exposure to practices that might raise expectations of staff and students. As the superintendent explained, "We also don't know what other districts are doing … You become 'county good,' but you don't know how good it is."

**Some education leaders reported instances in which pushing for instructional changes might generate opposition from powerful local interests.**

**Lack Of Political Will To Address Challenges.** Site visit interviewees identified a number of situations in which leaders were aware of but did not address the need for instructional change because of reluctance to oppose powerful local interests. In some cases, ineffective principals were not removed due to personal connections with local leaders. In another, a superintendent felt pressured by the local board to appoint a principal who was popular in the community but lacked the skills necessary to be the instructional leader of a school.

**Whereas meaningful and sustained change takes many years, some administrators in lowest-impact schools felt great pressure to demonstrate immediate improvements.**

**Unrealistic Timelines.** Principals in lowest-impact schools are often under great pressure to demonstrate immediate improvement in school performance and other metrics, such as turnover. Yet, data collected for this report suggests that meaningful and sustained change takes many years. Highest-impact schools visited for this report had been undergoing improvement efforts, led by building leaders or district administrative teams for at least 7 years; most had experienced stable instructional leadership for over a decade.

One new principal noted that things might need to get worse before they got better. Although the school was already facing turnover challenges, additional turnover would be necessary to build an effective team. The principal noted, "I was told that I had to stop teacher turnover. Then I came here and I thought that there was no way. There are some people here who don't need to be teaching. They don't even like kids. In order to move this school forward, I *have to have turnover*. I am not going to get there in 1 year."

### Benefit Of Assistance Teams From KDE's Office Of Continuous Improvement And Support

**Intervention and support from KDE benefited two schools visited by OEA.**

OEA visited two schools in which instructional systems had recently been implemented as a result of assistance from an intervention and support team provided by KDE. In both cases, school and district administrators noted the wide-scale, positive

changes that had been implemented on the recommendation of and with the support of the intervention team. These included coherent instructional programs in reading and math, instructional monitoring practices, and student intervention systems. The administrators noted that, although no one would want to be labeled as failing, they were grateful for the support and wished the intervention teams could have assisted in the district for a longer period of time.

## Climate, Culture, And Student Behavior

**Highest-impact schools focused systematically on building positive relationships; establishing behavioral expectations, and addressing persistent behavior challenges.**

Site visit data indicated no systematic differences between specific programs or policies in highest- versus lowest-impact site visit schools. Rather schools were differentiated from each other in the degree to which they

- focused systematically on building positive relationships with students and families,
- consistently and repeatedly modeled and reinforced behavioral expectations, and
- addressed persistent behavior challenges and classroom disruptions.

While some of these actions were associated with specific programs, each school had its own approach that could not be attributed entirely to a specific, replicable program.

### Positive Behavioral Interventions And Supports

**The Positive Behavioral Interventions and Supports (PBIS) model was followed by both highest- and lowest-impact schools.**

The overwhelming majority of both highest- and lowest-impact schools reported following the Positive Behavioral Interventions and Supports (PBIS) model to promote positive school climate and student behavior. This system, for which KDE provides training and support, focuses on identifying and rewarding positive behaviors and preventing unwanted behaviors rather than responding to individual incidents. PBIS provides a system for establishing behavior expectations and ways of supporting students when behavior challenges occur.

**Benefits of PBIS were noted by most educators in highest- and lowest-impact schools, but some noted that the system does not sufficiently address behavior of students who do not respond to positive rewards.**

Most educators noted benefits of PBIS in establishing a structure and motivating many students to seek positive rewards for good behavior. Educators in both highest- and lowest-impact schools also noted limitations of the system in addressing persistent behavior challenges. Teachers noted that the system could result in additional positive attention and rewards for the most

challenging students and did not sufficiently address behavior of students who did not respond to positive rewards.

### Building Positive Relationships With Families And Students

**Highest-impact school educators and administrators noted that focusing on positive relationships with students and families contributed to academic success.**

When asked to identify characteristics that explained school success, educators and administrators in highest-impact schools consistently noted a schoolwide focus on positive relationships with students and families.[k] For example, the principal of one of the commonwealth's highest-poverty schools, which serves high percentages of English-learner students, noted that it is "very important to address the whole child, especially in an urban environment. Teachers—all of them—love the students, and students feel that. It's like a family. We develop bonds with the student and with each other. Because they feel comfortable, that allows them to learn, because their needs are being met."

Teachers and administrators in highest-impact schools generally reported spending high amounts of time and personal attention on building relationships with students with an understanding that, absent these relationships, student behavior—and ultimately student performance—would suffer.

**Highest-impact schools had common schoolwide activities to build bonds among teachers, students, and families.**

Schoolwide activities in highest-impact schools, designed to build bonds among teachers, students, and family, included

- emphasis on extracurricular activities that involve all students and heavy encouragement that teachers attend games and performances;
- efforts by the principal or other administrator to know and check in with every child and mobilize school resources when necessary to meet their needs (in several schools, administrator interviews were delayed due to a steady stream of students walking in and out of the office to check in with the principal); and
- efforts to reach specific parent populations through parent clubs and employment of instructional aides with connections to specific communities.

### Structure, Reinforcement, And Consistency

**Highest-impact schools consistently reinforced school expectations to students through the year.**

All highest-impact schools invested time in teaching and reteaching school expectations, throughout the school year. In one small high school, the principal conducted a required

[k] Educators and administrators in lowest-impact schools often noted commitment of individual teachers to helping students but, with the exception of one school, did not cite relationship building as an attribute of the entire school.

individual entry meeting with each student, laying out behavioral expectations. In another elementary school, OEA observed staff repeatedly referring to the school mascot and associated behavior code in the hallways and classrooms.[1]

**Both highest-impact site visit middle schools were committed to full implementation of the PBIS model.**

Both highest-impact site visit middle schools were committed to full implementation of the full PBIS model. Each held regular schoolwide meetings convening with students in person, highlighting positive behavior and providing reminders. Students were gathered for more structured meetings to reinforce rules after vacation breaks, long weekends, or any time principals felt that standards needed to be retaught. Some teachers in the school acknowledged occasional personal reluctance to follow all system components with fidelity due to the time and effort involved (for example, observing hallway duty and addressing even minor student violations of hallway protocols). These same teachers noted the necessity of consistent expectations, however, and the benefits to classroom environments and student learning.

**Most highest-impact school teachers reported that, once behavioral expectations are established, students contribute to enforcing them.**

Teachers in most highest-impact schools reported that, once the cultural foundation is laid, students actively participate in reminding other students about school codes of conduct. They noted that, when students transfer to the school they quickly acclimate to expectations, even if they had experienced behavior challenges in other schools.

### Consequences For Persistent Behavior Challenges

**High-impact school administrators took determined and proactive approaches to persistent student behavior challenges.**

Administrators in highest-impact schools acknowledged that, despite the schools' efforts to build relationships, establish expectations, and provide supports, behavior challenges can persist and must be addressed. Teachers felt supported by administrators in ensuring that administrative action, when necessary, would protect classrooms from disruption. Methods of addressing persistent behavior challenges varied, but administrators in highest-impact schools understood their responsibilities to address challenges even in face of obstacles such as inadequate resources or resistance from parents, district administrators, or local boards.

Examples of administrators' determined and proactive approaches include

[1] This very strong behavior code did not exist in any written documents that teachers or administrators could locate but appeared to have been passed down through generations of students and teachers who all seemed to know the rules.

- an elementary school principal who described the necessity of standing firm when parents became angered at school disciplinary actions;
- a middle school principal who pursued a grant to add an additional administrator, post-COVID, solely to handle the increase in student behavior challenges when students returned to the classroom;
- a high school principal who insisted, in the face of local board resistance, that the district's policy allowing expulsion for a certain drug-related offense be carried out; and
- a middle school principal who insisted that a special education student be suspended for a dangerous action, despite the district's informal policy against it.

### Issues Cited In Lowest-Impact Schools

**Lowest-impact schools lacked schoolwide, coherent approaches to building relationships and consistently setting/reinforcing expectations. Teachers reported that behavioral challenges were concentrated in a small percentage of consistently disruptive students.**

In contrast to the examples cited above, lowest-impact schools lacked the schoolwide, coherent approaches to building relationships and consistently setting/reinforcing expectations.

The behavioral challenges most often cited by teachers in lowest-impact schools were associated not with the student body as a whole, but with the disruptive influence of a small percentage of students who were consistently disengaged at best and disruptive at worst (teachers cited roughly 5 percent). Teachers often credited principals for their attempts to improve discipline but noted that the efforts were not effective with a small percentage of students who they felt were not accountable for their actions and who could undermine the learning environment for an entire class. The principal in one lowest-impact elementary school noted an increase in the number of students with severe mental health challenges and the fact that several students in the school could "clear a classroom."

**School staff perceive restrictions on the disciplinary actions that can be taken for special education students.**

**Special Education Students With Persistent Behavior Challenges.** When asked to comment on why students were not held accountable, administrators or teachers in four site visit schools noted perceived restrictions on disciplinary actions that can be taken with special education students and school or district administrators' desire to reduce the amount of time that special education students are removed from regular classroom settings. Some noted that this reluctance stemmed from federal requirements for students with disabilities.

**In one lowest-impact school, district administration was perceived to be a barrier to addressing student behavior.**

A special education teacher in a lowest-impact school specifically identified district administration as a barrier to addressing student

behavior in the district. The teacher had left a lowest-performing middle school in the district because she feared for her physical and psychological safety. The teacher reported frequent verbal threats and regular physical assaults which, if not resulting in an injury, met with relatively little consequences for the students involved. She described a revolving door of students sent to the principal's office, only to quickly return with a verbal reprimand. The teacher described desperate pleas to district administrators for assistance and reported that the assistance, when it came, was in the form of a visiting consultant who recommended that additional strategies be tried to promote positive behavior in the students who had been threatening or assaulting her. She reported that teachers in the middle school did not feel supported by district administration regarding student discipline and were afraid to share their honest feedback.

**Some school administrators were frustrated with district discipline policies that restricted suspensions.**

A school administrator in the same district reported difficulty addressing the most difficult behavior challenges due to the district's discipline policy and its rules related to suspensions. The administrator noted that the school needs to ask for permission to take certain disciplinary actions and that its "hands are tied in terms of suspensions. The families of students that witness or are victims of the behavior are concerned about what the school is doing." School staff do not feel that they can tell district leaders what they really think about discipline.

**KDE reported to OEA that district administrators may be unaware of allowable disciplinary options.**

KDE staff have explained to OEA that district and school administrators may be unaware of the options allowable under federal law to discipline special education students.[8] Addressing the possible communication gap between teachers, school administrators, and district administrators is beyond the scope of this study.

**Several principals reported shortcomings in principal mentorships or district leadership training.**

**Need For Principal Mentors Experienced In Challenging Environments.** Several principals noted shortcomings of principal mentorships or district leadership training that did not address what they felt were situation-specific challenges in their buildings. This was especially true among principals who felt ill equipped to deal with culture, climate, and behavior challenges. As one principal in a lowest-impact middle school explained, the meeting with his assigned mentor "is just one more meeting. I wish I would have someone who has walked a mile in my shoes. I don't need someone who has been out of the classroom. I need someone who is a current principal and middle-school specific. At the district leadership meetings, I look at my phone and see that we just caught three kids with vapes. What are you going to do?"

## Teacher Turnover

### Staff Recruitment And Retention

**Highest-impact school principals took active steps to recruit and retain teachers.**

Principals in highest-impact schools embraced their responsibilities to recruit and retain teachers, going beyond prescribed roles. As one principal explained, due to staff shortages, "You have to go the extra mile to show teachers that you care to get them to stay. Teachers are more like free agents in the NFL now." Recruiting stories from highest-impact schools included a principal who recruited a private school math teacher from her church, helping her clear a manageable path toward certification; a principal who volunteered to do mock interviews with local colleges to identify and recruit the best of the graduating class of teachers; and a principal who enlisted accomplished teachers to recruit family or friends to come to the school as Option 6 teachers. One principal in a highest-impact school said, "Work ethic is most important. We have a small farm where you can pick blueberries. I met someone earlier at the farm, and she was picking blueberries for others. You pick up on their work ethic when you see them in the community or are student teaching." The principal recruited the blueberry picker to be an instructional aide in the school.

**Teachers seek positions at well-functioning, high-performing schools and note many benefits of working at such schools.**

Well-functioning, high-performing schools are desired destinations for teachers. In every highest-impact school, OEA interviewed teachers who had sought positions at the school, some from as long as an hour's drive away, because they admired the principal's leadership and the support of students and teachers. As benefits of the school, teachers cited positive relationships among staff; strong instructional support and feedback; pride in academic accomplishments of students; and the willingness of principals to support teachers through difficult times, in and out of the classroom. In some schools, teachers reported being unwilling to leave the school for any reason other than retirement or family circumstances, even if they could earn higher pay in another district. In some schools, multiple teachers stated that they would follow the principal to a new school if necessary. For example, one explained, "The principal is someone that we would follow into the fire. We would fight bears for her. We love her. She's right there with us. She supports us in everything we do … All my life I've been looking for this place. This is the place I wouldn't have fallen through the cracks. I'm so glad I'm here … Here each kid, the principal knows what each student may do and how to keep them on the right track. She knows about their lives. It's like we are part of something here."

Conversely, some teachers in highest-impact schools explained that they left other schools because of leaders who were unsupportive. For example, one middle school teacher reported being so discouraged in his previous school that he had decided to leave the profession and work at a local business, even though teaching had been a lifelong dream. He struggled with classroom management yet received no support from the principal, who instead blamed him for challenges in the classroom. Through chance, the teacher was offered a job at highest-impact middle school where he received the instructional and behavioral support he needed and, within months, felt effective. The teacher reported that he was planning to teach in his new school until retirement.

**School leaders affect every aspect of school operations, including instruction, culture and climate, and staff recruitment and retention.**

As described in this chapter, school leaders affect every aspect of school operations including instruction, culture and climate, and staff recruitment and retention. As one superintendent interviewed for this study noted, other than an effective teacher in every classroom, effective principals hold the most power to influence educational outcomes. The superintendent opined that he and his colleagues would be out of jobs if every school were run by highly effective principals.

## Leadership Development And Support

**No systematic differences existed between the sources of leadership support mentioned by principals in highest- and lowest-impact schools.**

During interviews, OEA staff asked school and district administrators what types of supports had influenced their leadership the most. No systematic differences existed between the sources mentioned by principals in highest- and lowest-impact schools.

**Administrators cited personal mentors as the most important source of leadership support.**

More than 80 administrators were interviewed for the study, and all of them cited personal mentors as their most important source of learning and support. Most often these mentors were principals or district administrators with whom they had worked closely.

**Many also cited leadership training provided by KDE through the National Institute for School Leadership.**

Following personal mentors, the most frequently cited source of influence on leadership was National Institute for School Leadership (NISL) training, available through KDE's Office of Continuous Improvement and Support (OCIS). One highest-impact district reported sending all of its principals to NISL training.

OCIS has several education recovery staff trained as NISL facilitators and typically has two to three cohorts of training

running each school year. In addition, OCIS provides Cognitive Coaching Training and Systems training to school leaders. Using federal funds, OCIS purchases materials and provides this leadership training free of charge to districts.

Other sources of training noted by administrators included a local chamber of commerce and a local foundation (Elgin); principal mentors available from the regional coop or the Kentucky Association of School Administrators; and KDE's P3 Principal Partnership Project, which provides personalized support and networking opportunities for principals.

## Relevance Of Findings To State Policies And Programs

### Need For Additional Focus Or Support

**Lowest-impact schools experience a variety of barriers to productive teaching and learning environments.**

This chapter describes a variety of barriers to productive teaching and learning environments observed in six lowest-impact schools. Examples related to instruction include incomplete or nonexistent instructional systems; lack of subject-specific instructional support; and inconsistent accountability for classroom instruction. Although statewide data on implementation of instructional systems are not available, decades of existing research suggest that schools with very low academic achievement likely lack fully functioning instructional systems.

Related to teacher working conditions, challenges in site visit schools included frustrations with disengaged or disruptive students or feelings of isolation and ineffectiveness in the face of student academic challenges.

**Some school or district administrators may be unable or unwilling to address challenges.**

In some cases, school or district administrators are aware of the challenges but lack the knowledge, skill, or confidence to address them. In other cases, local leaders may be aware of challenges but unwilling to take the steps, such as addressing personnel challenges or investing necessary time and resources, necessary to address them.

**These challenges are especially great in schools identified for Comprehensive Support and Improvement.**

Chapter 2 demonstrates that challenges related to climate and culture, student behavior, and teacher turnover are widespread in lowest-impact schools. As shown in Appendix K, these challenges are especially great in schools identified for Comprehensive Support and Improvement.

The section that follows discusses relevance of the report's findings to three areas:

- Comprehensive school and district planning
- Support for use of teacher working conditions survey data
- KDE support for CSI schools

## Comprehensive School And District Improvement Planning

**Comprehensive School Improvement Plans (CSIPs) and Comprehensive District Improvement Plans (CDIPs) are the primary mechanisms by which KDE supports and monitors improvement efforts of schools and districts.**

Comprehensive School Improvement Plans (CSIPs) and Comprehensive District Improvement Plans (CDIPs) are the primary mechanisms by which KDE supports and monitors improvement efforts of districts and schools across the commonwealth. As noted earlier in this chapter, all of the characteristics of highest-impact schools that are identified in this report align with KDE-recommended practices.

**KDE provides many forms of support to schools and districts. It uses CSIPs and CDIPs to identify and support schools and districts in need.**

KDE provides a wealth of resources in the form of guidance documents, best-practice videos, and consultants available for technical assistance in a range of subject areas, behavioral supports, and leadership standards and guides. In addition, through its work with various schools and districts and its operation of the annual Continuous Improvement Summit, staff are aware of a variety of resources across the state through educational cooperatives, best practice PBIS sites and "hub" schools. CSIPs and CDIPs provide a means by which KDE might use data to identify greatest needs schools and districts, connect them with relevant resources, offer support on recommended practices, and monitor progress.

**Educators interviewed for this study cited shortcomings in current CSIP and CDIP requirements.**

For a variety of reasons described in this section, however, the school improvement process does not appear to be serving that function for many of the state's neediest schools. Barriers to effective use include the burden on KDE staff of reviewing plans in all schools, the lengthiness of plans due to the many required elements, and the lack of focus on critical building blocks of school success: teacher working conditions and teacher retention.

**CSIPs and CDIPs are not directly authorized in statute, but KRS 158.649 and 160.346 are related to annual planning.**

**Policy Requirements.** No statute directly authorizes CSIPs and CDIPs, but KRS 158.649 requires that schools develop annual plans to address achievement gaps, and KRS 160.346 refers to annual plans in requirements for schools identified for federally required intervention and assistance categories. In addition, some components of these plans are used to satisfy federal requirements including, but not limited to, Schoolwide Program Plans for schools operating Title I schoolwide programs.

**Per 703 KAR 5:225, CSIPs and CDIPs are annually required plans that must be developed with the input of parents, faculty, and staff, and submitted to KDE.**

CSIPs and CDIPs, as outlined in 703 KAR 5:225, are annually required plans that must be developed with the input of parents, faculty, and staff and submitted to KDE. Plans must be based on needs, as determined by data that include perception data of teaching and learning conditions. In addition, plans must include data analysis, priority needs and goals, objectives, strategies, and activities such as

- a set of assurances related to compliance with federal and state school improvement requirements,
- a process for annual review and revision by the school or district,
- a plan for equitable education of English learners,
- other statutory or regulatory requirements related to achievement gap targets and turnaround plans for schools identified for improvement by federal regulations, and
- measures of organizational effectiveness including governance and leadership.

703 KAR 5:225(2) states that the department shall "review and approve all submissions" and "monitor implementation of each CDIP or CSIP and shall provide guidance upon information," which may include progress reports, data reviews, on-site observation, or other information provided by the district or school.

**Required elements of improvement plans are submitted at several points through the year and encompass a variety of information.**

**Current Plan Requirements Exceed Regulatory Requirements.** KDE contracts with Cognia, a private vendor, to manage collection of required improvement plan elements. District and school staff submit electronic plans through Cognia software on due dates at several points during the year.[m] The software requires schools to complete elements that, together, go beyond what is specifically required in regulation. Inputs are required for achievement gap strategy and all of the indicators on the state accountability system: math and reading; science, social studies and writing; English learner progress; school climate and safety and, for high schools, postsecondary readiness and graduation rates. For each indicator, plans must include specific elements related to goals, strategy, activities, measures of success, monitoring, and resources. The software includes an open-ended "other" category in which districts and schools can insert additional data, goals, and improvement plans. Required plan elements alone may comprise over 50 inputs for high schools.

[m] As reported by KDE staff to OEA, downloading plans to form a complete document is a time-intensive process.

**Improvement plans do not require data on teacher attraction and retention, working conditions, or leadership challenges.**

**No Required Focus On Teacher Working Conditions, Recruitment, Retention.** As described above, the required elements do not include data on teacher attraction and retention, working conditions, or leadership challenges. Yet, as suggested by data in Chapter 2 and in site visits, these conditions may be critical building blocks of school success. When these elements are lacking, the instructionally oriented improvement activities that constitute the majority of CSIPs may not be successful. KDE notes that CSIPs and CDIPs have an open-ended section that allows schools and districts to include data on teachers' working conditions and retention, but "based on KDE's knowledge of and historical experience reviewing CDIPs and CSIPs, teacher turnover and working conditions are not typically addressed by schools or districts."[9]

**Challenges related to staff turnover or student misconduct receive relatively little attention in CSIPs and CDIPs.**

OEA's review of CSIPs in site visit schools and CDIPs of districts in which they are located indicated that challenges related to staff turnover or student misconduct receive little or no attention. For example, in one lowest-impact middle school, no teacher responded favorably to the question of how often student misconduct disrupts learning. Teacher interviews in the school indicated that student behavior challenges impacted teacher morale and absences and were causing substitutes to refuse to work in the building. Yet, related to behavior, the CSIP indicated only that the school would provide monthly lessons on social issues such as "making friends, bullying, study habits, being kind, character, etc." In another lowest-impact school, teacher turnover was very high, reaching 34 percent in the district the previous year. Yet, neither the CSIP or the CDIP mentioned turnover challenges.[n]

**KDE provides broad guidance on development of improvement plans and reviews plans of schools identified for Comprehensive Support and Improvement and some schools identified for Targeted Support and Improvement.**

**KDE Support, Review, And Feedback Regarding CSIPs And CDIPs.** KDE staff provide guidance, through trainings or other means, on the general components of good plans. Due to reductions in the staffing of the Office of Continuous Improvement and Support, KDE reviews only a small minority of plans each year. Reviews are conducted exclusively for schools identified in federal intervention categories described later in this chapter. These include plans of schools identified for Comprehensive Support and Improvement and a subset of schools identified for Targeted Support and Improvement, chosen with a risk assessment tool.

According to the KDE website, plans are reviewed using a rubric that rates the way the plans are constructed on factors such as

[n] The district's strategic plan stated that there would be a new teacher mentor program.

identifying specific areas of weakness, citing precise numbers, identifying a manageable number of priorities, identifying precise actions to be taken, and timelines.

**Most staff interviewed by OEA reported that CSIPs and CDIPs were cumbersome to implement and of limited impact to their school improvement efforts.**

**Plans Perceived As Cumbersome And Of Limited Impact, In Themselves.** During site visit interviews, OEA asked staff to comment on the importance of current policy structures, including CSIPs and CDIPs, in assisting their efforts to improve teaching and learning. Few questioned the benefit or necessity of improvement planning generally. The overwhelming majority of interviewees noted, however, that the plans did not currently play a critical role in their school improvement efforts. They noted specifically that the volume of requirements promotes a compliance orientation to plan completion and that submission deadlines do not align with districts' and schools' actual planning activities. Aspects of the plans that might be addressed to make the process more useful and less cumbersome for staff included making the software interface more user friendly; revisiting the number and prescriptiveness of required components; and addressing discrepancies between submission deadlines for plans and times of the year when schools and districts engage in their own improvement planning.

**KDE staff acknowledged a "weak correlation" between school improvement plans and practices. Research previously conducted in Kentucky also noted weak relationships between plans and improvement.**

KDE staff acknowledge a "weak correlation" between school improvement plans and school improvement practices. In some cases, lower-performing schools may have a great plan on paper but fail to implement it. In others, a skilled school leader may be making great improvements that are not documented in the school plan. Staff note that, because school districts are locally controlled, KDE staff have no authority to require schools or districts to take specific steps to implement plans.[10]

Research conducted in Kentucky has also noted weak relationships between plans and improvement. In 2005, a Prichard Committee study of successful higher-poverty schools in Kentucky noted no apparent relationship between the quality of school plans and school practices or outcomes.[11] OEA's analysis of CSIPs for a 2016 study, *Overview Of Achievement Gaps In Kentucky Schools*, noted that many were not complying with the requirements of the statute and that, because of the many components required by regulation for inclusion in each plan, the plans were often lengthy and could be regarded by teachers and principals primarily as compliance documents.[12]

**Requirements of 703 KAR 5:225 may be burdensome.**

In addition, the requirements of 703 KAR 5:225 that all schools submit annual plans and that KDE review and monitor all plans may set burdensome requirements for department staff that

preclude more meaningful attention to a subset of highest-need schools. According to KDE staff, all elements in CSIPs and CDIPs are statutorily required and the Kentucky Board of Education does not have authority to minimize required elements.[13]

### Recommended Review Of CSIP and CDIP Requirements

OEA staff believe that data collected for this report and in previous research warrant review of the CSIP and CDIP process and opportunities for input from a variety of stakeholders.[o] Based on additional input, KDE, the Kentucky Board of Education, and the General Assembly might consider changes to the CSIP and CDIP requirements and to KDE's role in monitoring these plans. These changes might include efforts to minimize paperwork, to align timing and structure of school plans with school and district planning needs, to place greater attention on staffing and leadership issues, and to identify schools and districts in greatest need of support or direction related to specific data points.

### Recommendation 3.1

**Recommendation 3.1**

**The Kentucky Department of Education should consider soliciting feedback from superintendents, principals, and school-based decision-making councils about requirements and processes for Comprehensive School Improvement Plans and Comprehensive District Improvement Plans. Feedback should include positive effects of the process, which elements might be required annually and which on a rotating basis, timing of submissions, software functionality, desired feedback, and desired sources of support.**

### Recommendation 3.2

**Recommendation 3.2**

**By August 1, 2025, the Kentucky Board of Education should submit to the Interim Joint Committee on Education recommendations for any statutory changes or additional legislation that would allow the Kentucky Department of Education to carry out meaningful review, feedback, and monitoring of Comprehensive School Improvement Plans or Comprehensive District Improvement Plans in select districts or schools. Recommendations might include additional authority, if any, of the department to require schools or districts to take specific actions.**

[o] Data collected for this report were limited to 14 schools and districts and are not necessarily representative of all schools and districts in the commonwealth.

## Lack Of Authorizing Statute

Although several statutes reference annual plans, statute does not specifically authorize CSIPs and CDIPs as they apply to the annual plans required of districts and schools.[p] Based on feedback from KDE and various education stakeholder groups, the General Assembly may wish to consider such legislation.

## Recommendation 3.3

**Recommendation 3.3**

**The General Assembly may wish to introduce legislation directing the Kentucky Department of Education to collect, review, and monitor school and district comprehensive plans. The legislation might address additional authority, if any, of the department to require districts or schools to take specific actions under certain conditions.**

## Working Conditions Survey

**The working conditions survey provides data on barriers to improving or maximizing student outcomes.**

As noted in Chapter 2 and illustrated in this chapter, the working conditions survey provides data that can identify critical foundational gaps that are barriers to improvement in lowest-impact schools and to maximizing student outcomes in others. According to KDE, the survey is intended to prompt educators to reflect on previous progress and steps that should be taken to create the working conditions that educators deserve.

The chapter describes some instances in which school administrators appeared unaware of the serious nature of these working conditions challenges and others in which they were aware but in need of guidance on how to address the challenges.

**Educators' response rates to the working conditions survey have declined recently.**

**Declining Response Rates.** The percentage of educators responding to the working conditions survey has declined in the last two cycles of administration. The response rate was 85 percent in 2022 but dropped to 78 percent in 2024. In 2024, data were not reported for 183 schools (15 percent) because they did not meet the minimum response thresholds to be reported.[q] OEA did not collect data sufficient to explain declining response rates. It is possible, however, that declining response rates indicate declining confidence by educators that working conditions data will be used to improve conditions.

[p] Some elements of these plans fulfill federal requirements.
[q] Schools must have a minimum of 10 educators responding and 50 percent of teachers in order to be reported.

**The working conditions survey vendor provides data analysis support to districts and schools but does not provide topic-specific guidance.**

**Limited Guidance And Support In Connection With Data Release.** Support to districts and schools following the release of working conditions survey data is provided by the vendor, Panorama, through webinars aimed at school and district administrators. These webinars advise administrators on use of data tools and general approaches to analyzing data. They do not provide topic specific guidance on issues that may emerge from the data, though vendor representatives provide contact information for follow-up questions.

**Various guidance and training relevant to topics covered in the working conditions survey is available through KDE.**

As stated earlier in this chapter, KDE provides a wealth of guidance on its website and through various trainings throughout the year that are relevant to topic areas covered in the working conditions survey. Technical assistance is available, upon request, from KDE consultants in academic, leadership, and behavior-related program areas. Further, KDE staff may be aware of resources of value to schools and districts in particular regions, such as training provided through local cooperatives or schools/districts with positive outcomes.

**Results of the working conditions survey are not currently used to encourage districts and schools to seek KDE guidance or to identify best practices schools or districts.**

**KDE Role In Follow-Up Support And Guidance.** It is possible that district and school leaders might take more active advantage of resources available through KDE and elsewhere in the state if they were specifically recommended in connection with data-identified challenges. KDE staff do not currently provide guidance or support to districts or schools that is specifically associated with release of working conditions survey data, and survey data are not currently used to identify potential best practice schools or districts that might serve as models for schools struggling on particular indicators.[14]

Schools may benefit from direction toward specific resources if data indicate a need for attention to in those areas. KDE might direct schools toward specific resources that may be helpful to schools or districts struggling to manage student behavior, to provide meaningful feedback or coaching, to address concerns about teacher well-being, or to address specific leadership challenges.

### Recommendation 3.4

**Recommendation 3.4**

**In connection with release of data from its working conditions survey, the Kentucky Department of Education should consider providing a list of resources and supports for schools seeking to understand and improve specific challenges identified by educators in survey data. Resources might**

**include those available through the department and through the state's local educational cooperatives, best practice sites, professional organizations, or vendors.**

**The working conditions survey would not be appropriate as a required component of administrator evaluations or comprehensive planning.**

**Working Conditions Survey Data Not Appropriate As Sole Indicators Of Working Conditions Or Leadership Quality.** OEA agrees with KDE staff that, even though these data may indicate critical needs in some schools, they are not valid as sole sources of data about working conditions or school leadership and should not be required components of administrator evaluations or comprehensive planning. Use of survey data for high-stakes decisions would likely lead to unintended consequences such as decreases in response rates or in the degree to which educators feel comfortable sharing their views.[r] [15]

## Intervention And Assistance For Low-Performing Schools

**Requirements and funding for intervention and support in Kentucky's lowest-performing schools are provided entirely by the federal government through the Every Student Succeeds Act (ESSA) of 2015.**

Currently, requirements for intervention and support in Kentucky's lowest-performing schools are provided entirely by the federal government through the Every Student Succeeds Act (ESSA) of 2015. In the past, state funds have also been allocated to assist low-performing schools.[s] [16] According to a 2022 analysis by the Education Commission of the States, at least 39 states include improvement categories beyond those required by ESSA.[t] [17]

[r] For a variety of reasons, working conditions are not valid or reliable as a sole indicator of particular leaders' actions related to positive or negative working conditions in a school or district. For example, previous OEA studies have documented some educators' reluctance to indicate unfavorable opinions, even when anonymity is assured. In some cases, unfavorable responses may reflect educators' discontent over which leaders at particular levels do not have total influence. For example, principals can be constrained by district requirements or practices and, in some cases, district practices may be constrained by local school boards. In the course of this and previous studies, OEA has heard examples of these constraints as relevant to student behavior, school resources, or teacher overload. In addition, in some schools, educators' less favorable responses may reflect discontent with leadership efforts that would not necessarily be viewed as negative in other schools. Finally, differences in response patterns among elementary, middle, and high school educators should be taken into account when interpreting data, as high school educators are generally less favorable in survey responses.

[s] See OEA's 2010 report, *Assistance To Low-Achieving Schools And Districts: Strengths, Limitations, And Continuing Challenges*, for Kentucky-specific programs, such as Highly Skilled Educators, that were provided in the past.

[t] State policies related to these additional categories vary considerably. These can include additional funding opportunities and state technical assistance; additional state auditing and possible recommendation for alternative governance; and choice options available for students in designated schools.

ESSA requires state departments of education to allocate resources to schools identified for intervention, as described below, and to provide guidance in the use of these resources to support evidence-based interventions. ESSA gives states flexibility in methods used to identify schools and distribute available resources but requires that districts be given flexibility to choose interventions most appropriate for their schools.

**KRS 160.346 guides implementation of ESSA in the commonwealth and identifies two main categories for assistance and support.**

KRS 160.346 guides implementation of ESSA in the commonwealth. The statute identifies two main categories for assistance and support:

- **Comprehensive Support and Improvement** includes schools in the lowest-performing 5 percent of all schools, by level; high schools with graduation rates less than 80 percent; and schools that fail to exit Targeted Support and Improvement.
- **Targeted Support and Improvement (TSI)** includes schools that have one or more student subgroups performing at or below any of the lowest-performing 5 percent of schools, by level, for 3 consecutive years.

**KRS 160.346 stipulates requirements regarding turnaround assistance vendors.**

**Turnaround Vendor List.** KRS 160.346 requires local boards of education to choose a vendor to provide turnaround assistance to schools identified for CSI and to negotiate the terms and duration of the vendors' services. The statute also requires the Kentucky Board of Education to approve a "turnaround vendor list" of vendors with "documented success at providing turnaround diagnosis, training, and improved performance of organizations."

**KDE reports that it will begin the process of selecting turnaround vendors in July 2025. KDE was the only vendor option chosen by districts in 2022.**

For school year 2023, KDE received two completed vendor applications and approved both. In addition, districts were permitted to select KDE as a turnaround vendor. None of the 49 schools identified for CSI in that year elected to work with the approved vendors, choosing instead to receive assistance from KDE's Office of Continuous Improvement and Support.[u] [18] According to KDE, it will begin the process of soliciting turnaround vendors in July 2025 for CSI schools to be identified in that year.[19]

**The Kentucky Board of Education should endeavor to include on the approved vendor list at least one vendor, in addition to KDE, with a successful track record assisting schools with characteristics similar to CSI schools.**

Given the specific challenges documented in this report related to climate, culture, student behavior, and staff turnover in CSI schools, the Kentucky Board of Education should endeavor to include on the approved vendor list, at least one vendor, in addition

[u] The two approved vendors were the Central Kentucky Educational Cooperative School Improvement and Turnaround Project and the University of Virginia Partnership for Leaders in Education.

to KDE, with a successful track record assisting schools with such challenges.[v] [20]

**Recommendation 3.5**

**Recommendation 3.5**

**In assembling the list of vendors required by KRS 160.346 (1)(a), the Kentucky Board of Education should seek vendors with experience in assisting districts to support schools with sustained challenges related to staff turnover; school climate and culture; and student behavior.**

**KDE distributes substantial amounts of federal funding to districts to support school improvement.**

**Distribution Of Funds.** Each year, KDE is awarded substantial funding for school improvement through Title I(A) funds. Of this amount, 95 percent must be distributed to districts to support school improvement activities chosen by the district.[w]

**KRS 160.346 requires the Kentucky Board of Education to promulgate administrative regulations on how the disbursement amounts shall be determined.**

KRS 160.346(9) states:

> The department shall annually disburse funds to a school district, for a maximum of three (3) years, to assist with funding the turnaround vendor costs incurred by the district under subsection (8) of this section. The Kentucky Board of Education shall promulgate administrative regulations on how the disbursement amounts shall be determined, which shall be based on the department's past practice for determining allocations for school improvement.

KDE staff cited language in 703 KAR 5:280 as meeting this statutory requirement.[21] The regulation states:

> A school, including a charter school, identified for comprehensive support and improvement shall be eligible to apply for funding under 20 U.S.C. 6303. Any funds awarded to a school pursuant to 20 U.S.C. 6303 shall be utilized to pay for turnaround activities, which may include assisting with funding [a local education agency's] utilization of a non-department

[v] It may not be easy to identify vendors with a successful track record related to improving student performance in CSI schools. A 2020 review of 67 studies analyzing effects of state intervention in low-performing schools found that turnaround effects in schools with a majority of Hispanic students were more successful than those in schools with a majority of white or a majority of Black students. Overall, the study found moderate positive effects in math but no effect on English/language arts scores.

[w] Title 1(A) funding designated for school year 2023 amounted to approximately $19 million.

> vendor from the approved turnaround vendor list published pursuant to KRS 160.346(1)(a) ...[x] [22]

**The associated regulation does not offer specific details on how disbursement amounts are determined.**

If it was the intent of the General Assembly that the associated regulation provide specific details on how the disbursement amounts shall be determined, legislators should be aware that the current regulation does not offer these details.

[x] In addition, KDE noted that 20 U.S.C. 6303 provides that KDE may use federal school improvement funds "**with the approval of the local educational agency**, [to] directly provide for these activities or arrange for their provision through other entities such as school support teams, educational service agencies, or nonprofit or for-profit external providers with expertise in using evidence-based strategies to improve student achievement, instruction, and schools [emphasis added] …"

# Appendix A

## Site Visit Data Collection

Site visit schools were chosen to represent every school level and region and to include a mix of school sizes, locales (urban and rural), and demographic characteristics. Each site visit included interviews with school administrators, district administrators, and at least four teachers. In addition, staff reviewed school improvement documents and staffing data and conducted informal observations in four classrooms.

Following are interview protocols used during site visits.

### Teacher Interview

**Overall Strengths And Challenges**

1. What are the greatest strengths of this school related to teaching and learning?

2. What are the greatest challenges faced by the school?

**Curriculum**

3. What determines the content of the curriculum you teach each week?

**Instruction**

4. Are you expected to follow particular instructional model(s) in your teaching?

5. Are there any other schoolwide expectations for teachers related to the quality of instruction? Otherwise?

**Data**

6. What sources of data (formal or informal) do you use to monitor student learning in your classroom?

**PD/Feedback And Coaching**

7. In what ways do you receive feedback, coaching, or other instructional support?

8. What types of professional development are typical on professional development days?

9. Which models of professional development do you find most effective?

**Additional Academic Support For Students**

10. What type of additional support is available for your students who struggle to master academic content?
    - In your classroom
    - During the school day, outside your classroom
    - Outside of the regular school day/year

11. What practices are in place to support students who are ready to move beyond required academic content?

**Teacher Working Conditions**

12. How would you characterize teacher working conditions in this school?
    - Positive qualities
    - Challenges

**Student Behavior And Engagement**

13. What school strategies are successful at promoting positive student behavior? Engagement?

14. To what degree does student behavior present a challenge to you as a classroom teacher? Engagement?

**Resources**

15. Is teaching and learning in your school negatively affected by lack of resources?

16. Are teacher working conditions or morale negatively affected by lack of resources?

17. Are there any other areas that are negatively affected by lack of resources?

**State Policies**

18. How important are each of the following in assisting you to improve teaching and learning?
    - Comprehensive School Improvement Planning (CSIP)
    - Teacher Evaluations
    - Professional development requirements
    - SBDM
    - If relevant: intervention and assistance (CSI, TSI)
    - Other

# School Administrators Interview

## Overall Strengths And Challenges

1. What are the greatest strengths of this school related to teaching and learning?

2. What are the greatest challenges faced by the school?

## Curriculum

3. What determines the content of the curriculum in each grade and subject?

## Instruction

4. Has the school adopted particular models of instruction in reading or mathematics? Other subjects?

5. What do you look for in high-quality instruction?

6. Please provide an overview of special education staffing and instructional models in your school.
   - Pull out or resource
   - Regular classroom
   - Any additional time or resources provide for special education students

## Data

7. What sources of data (formal or informal) do you use to monitor student learning in your school?

8. Which other sources of data inform your work as principal/instructional leaders?

## Leadership Support

9. What have been your greatest sources of support or learning as a school leader?

10. How do you receive feedback on your role as principal?

## District Role

11. Please describe the district role in supporting/improving the quality of teaching and learning in your school in the following areas:
    - Curriculum
    - Assessment
    - Instructional support
    - Student behavior, engagement

**PD/Feedback And Coaching**

12. Which school staff are designated to provide coaching or other instructional support to teachers?

13. What types of professional development are typical on professional development days?

14. Which models of professional development do you find most effective?

**Additional Academic Support For Students**

15. What practices are in place to support students struggling to master academic content?
    - In the regular classroom
    - During the school day, outside the regular classroom
    - Outside of the regular school day/year

16. What practices are in place to support students who are ready to move beyond required academic content?

**Student Behavior And Engagement**

17. What strategies at the school are successful at promoting positive student behavior?

18. What practices at the school are successful at engaging students?

**Teacher Working Conditions**

19. How would you characterize teacher working conditions?
    - Positive qualities
    - Challenges

**Teacher Recruitment and Retention**

20. Compared with other schools, does your school have any advantages in its ability to recruit and retain teachers?

21. Are there challenges related to recruiting and retaining teachers that are beyond your control?

**State Policies**

22. How important are each of the following in assisting you to improve teaching and learning?
    - Comprehensive School Improvement Planning (CSIP)
    - Teacher evaluations
    - Professional development requirements
    - SBDM
    - As relevant: federal intervention and assistance (CSI, TSI)
    - Other?

# District Administrators Interview

## Overall Strengths And Challenges

1. What are the greatest strengths of this district related to teaching and learning?

2. What are the greatest challenges faced by the district?

3. What are the greatest strengths of the site visit school related to teaching and learning?

4. What are the greatest challenges faced by the site visit school?

## Curriculum

5. Does the district play a role in determining the scope and sequence of academic content taught in each grade and subject?

## Instruction

6. Has the district adopted particular models of instruction in reading or mathematics? Other subjects?

7. What do you look for in high-quality instruction?

8. Do you have districtwide policies or practices related to special education staffing and instructional models?
   - Pull out or resource
   - Regular classroom
   - Any additional time or resources provide for special education students

## Data

9. What sources of data (formal or informal) do you use to monitor student learning in your district?

10. Are there other sources of data that inform your work as district leaders?

## Leadership Support

11. What type of instructional leadership is important at the school level?

12. What type of training or support does the district provide to principals or other instructional leaders?

13. What sources of leadership training or support have you found most useful in developing your own skills?

**PD/Feedback And Coaching**

14. Which district staff are designated to provide coaching or other instructional support?

15. What types of professional development are typical on district professional development days?

16. Which models of professional development do you find most effective, generally?

17. What professional development resources outside the district do you use most?

**Teacher Working Conditions**

18. How would you characterize teacher working conditions in the district?
    - Positive qualities
    - Challenges

19. How would you characterize teacher working conditions at the site visit school?
    - Positive qualities
    - Challenges

**Additional Academic Support For Students**

20. Are there any districtwide practices in place to support students struggling to master academic content?
    - In the regular classroom
    - During the school day, outside the regular classroom
    - Outside of the regular school day/year

21. Are there any districtwide practices in place to support students who are ready to move beyond required academic content?

**State Policies**

22. How important are each of the following in assisting you to improve teaching and learning?
    - Comprehensive District Improvement Planning (CDIP)
    - Certified staff evaluation requirements
    - Professional development requirements
    - SBDMs
    - Federal intervention and assistance (CSI, TSI)
    - Other?

## Teacher Recruitment and Retention

23. Compared with other districts, does your district have any advantages in its ability to attract and retain teachers?

24. Are there challenges related to attracting and retaining teachers that are beyond your control?

# Appendix B

## Statistical Methods Used To Determine District Effectiveness

This appendix describes the ordinary least squares (OLS) linear regression model that staff used to calculate the impact scores reported in the report.

The OLS model was used to generate a predicted score for each tested student for each subject. The differences between the predicted scores and the actual scores for each student for each tested subject is the impact score for that student observation. The impact scores were aggregated to the school level to determine overall impact scores for schools.

This appendix continues with a more detailed description of the OLS model used for this analysis.

### Ordinary Least Squares Linear Regression Models Reading And Math Model

OLS regression modeling was used to quantify the relationship between student, community, and school characteristics with the academic performance of students across multiple subjects. The models were structured with the standard scores for each academic area by grade and year as the dependent variable.[a]

The students included in the OLS model were 3rd- through 8th-grade and 10th-grade students with Kentucky Summative Assessment (KSA) reading and math scores, students with KSA science scores for 4th, 7th, and 11th grades, students with social studies and writing KSA scores for 5th, 8th, and 11th grades, and 11th-grade students with ACT composite scores for school years 2022 and 2023. Scores for each tested subject were treated as separate observations for all students in the data.

A model with all tested students for each school level (elementary, middle, and high) was conducted using the school-level distinctions used by the Kentucky Department of Education for accountability reporting.

The model controlled for student-level subgroup categories for race and ethnicity, gender, eligibility for free or reduced-price lunch (FRPL), participation in an individualized education program (IEP), students with limited English proficiency (LEP), and whether a student was homeless. These student-level characteristics are represented in the equations for the model as ($\beta DEMO$).

[a] Standard scores were computed for each subject, grade, and year independently. For instance, 3rd-grade Kentucky Summative Assessment (KSA) reading standard scores were computed at the student level for school years 2022 and 2023. The standard scores were computed for 3rd-grade KSA mathematics, and then repeated for all grades, subjects, and years.

The model also controlled for whether a student attended a school where 75 percent or more of the student population received free or reduced-price lunch, as an indicator for attending a "high-poverty" school (βSchoolPoverty).

The final student-level control was whether a student moved schools during school year 2022 and/or 2023 (βMoved).

The model also included a community characteristic control for the percentage of residents who had earned a bachelor's degree or more by zip code (βBachelorZip). The bachelor's degree data by zip code was obtained from the American Community Survey and was matched up to the zip code of student residence for each observation.[b] The residual error term finishes the equation (ε). The full equation is represented by Model 1.

***Model 1: Standard Score = α + βDEMO + βSchoolPoverty + βMoved + βBachelorZip + ε***

## Computed Beta Coefficients And Explained Variance

Table B.1 shows the beta coefficients and standard errors for the model by school level. Each of the school level models had R-squared values greater than 16 percent. The middle school model had the highest R-squared value, at nearly 20 percent. The R-squared value represents the percentage of variance explained by the model.

Nearly all the control variables in each version of the model have strong statistical significance; the exception is the gender variable in the elementary school model.[c]

Most of the control variables have negative coefficients, which means those factors according to the model were associated with lower reading and math scores relative to other students. LEP status and IEP status were the strongest negative predictors from the student demographic controls.

The percentage bachelor's degree by zip code and other race were associated with higher scores relative to other students according to the model. The beta coefficient for percentage bachelor's degree by zip code indicates that for every 1 percent increase in the percent of the population with a bachelor's degree, the expected scores for reading and math would increase by approximately 0.007 standard deviations. For example, if 50 percent of residents in a particular zip code had bachelor's degrees, that would be associated with an expected increase in reading and math scores by more than ⅓ of one standard deviation.

The other control variables are categorical and not continuous like the percent bachelor's degree variable. Therefore, the coefficients are applied only to students who are in the populations of controlled variables in the model. For example, a middle school student with FRPL status would

[b] If a student-level zip code was not available, a district-level percentage of residents who earned a bachelor's degree or more was used.

[c] All but one of the control variables from the three school level models had t-statistics and p-values that indicate a confidence interval for the beta coefficients greater than 99 percent. The gender variable in the elementary school model was not statistically significant, but gender was statistically significant in the middle and high school models. Male students had negative coefficients for the middle and high school models.

have a negative beta coefficient of -0.3748, but a student ineligible for FRPL would not have this coefficient applied when the expected scores were computed.

Students can be in more than one control group. For instance, a student could be eligible for FRPL and could have moved at least once during the observation period. In this instance, the coefficients for each of those variables would be applied to that student observation during the computation of expected scores.

**Table B.1**
**Regression Output For All School Levels**
**School Years 2022 And 2023**

| | Elementary Model | | Middle Model | | High Model | |
|---|---|---|---|---|---|---|
| **Controls** | **Coefficient** | **Standard Error** | **Coefficient** | **Standard Error** | **Coefficient** | **Standard Error** |
| Black | **-0.3674** | 0.0028 | **-0.3702** | 0.0026 | **-0.3138** | 0.0035 |
| Hispanic | **-0.0291** | 0.0043 | **-0.0863** | 0.0037 | **-0.1188** | 0.0047 |
| Other race | **0.2513** | 0.0055 | **0.2920** | 0.0056 | **0.2717** | 0.0067 |
| Male | 0.0010 | 0.0014 | **-0.0677** | 0.0020 | **-0.1559** | 0.0025 |
| IEP | **-0.4919** | 0.0029 | **-0.6300** | 0.0028 | **-0.6193** | 0.0045 |
| LEP | **-0.5860** | 0.0051 | **-0.7745** | 0.0056 | **-0.8081** | 0.0071 |
| Homeless | **-0.1339** | 0.0061 | **-0.0664** | 0.0061 | **-0.1157** | 0.0079 |
| FRPL | **-0.3594** | 0.0023 | **-0.3748** | 0.0022 | **-0.3197** | 0.0027 |
| School FRPL population of 75 percent or greater | **-0.1275** | 0.0025 | **-0.1064** | 0.0026 | **-0.1477** | 0.0040 |
| Moved ever | **-0.2620** | 0.0048 | **-0.3477** | 0.0039 | **-0.3706** | 0.0048 |
| Percent bachelor's degree by zip code | **0.0065** | 0.0001 | **0.0070** | 0.0001 | **0.0072** | 0.0001 |
| Intercept | **0.2864** | | **0.2874** | | **0.2338** | |
| R-squared | 0.1663 | | 0.1975 | | 0.1711 | |
| Number of observations | 823,476 | | 848,235 | | 543,436 | |

Note: The intercept (α) represents the control group mean for all included subjects for each model for school years 2022 and 2023. Beta coefficients have been rounded to the nearest ten-thousandth. IEP = individualized education program; LEP = limited English proficiency; FRPL = free or reduced-price lunch. All control variables for each model other than Male for the elementary school model had t-statistics and p-values that indicate a confidence interval for beta coefficients greater than 99 percent.
Source: Staff analysis of data from the Kentucky Department of Education and the US Census Bureau.

## School Impact Categories, Standard Scores And Thresholds

As stated earlier in this appendix, school impact scores were computed by aggregating at the school level the difference between predicted scores and actual scores for each tested student for each subject. The impact categories for schools were determined by computing the standard scores of the school impact scores for each school level.

**Standard Scores.** The report groups schools into categories using a "standard score" that represents the data by units that can be compared across data sets. Standard scores take into account the difference of each data point from the mean, as well as the general distribution of data from the mean, as determined by the measure of standard deviation. Data that are more

widely distributed have relatively higher standard deviations of units measured, and data that are packed close together have lower standard deviations. A standard score of 0 is equal to the average, and most measures fall between 0 and a standard score of +1 or -1 standard score.

## Categories

Following commonly used cut points, OEA considers data that are within ⅓ standard deviation of the mean as average, and data that are more than ⅓ standard deviation above or below the mean are considered high or low.[23] The report further divides high and low categories into highest or lowest; these categories are based on data that are 1 or more standard deviations above or below the mean. Because of differences in the way that different data sets are distributed in relation to the mean, different numbers of schools fall into each category, depending on the data set used.

## Standard Scores And Thresholds On Additional Data Points

The methodology used to determine the impact categories for schools was also applied to determine school-level categories for the percentage of students eligible for FRPL and for average school-level favorability on the working conditions survey. Tables B.2 to B.4 list the minimum and maximum values for school FRPL percentage, working conditions survey average favorability, actual scores, and impact scores by category for each school level.

**Table B.2**
**Thresholds For Categories Used In The Report For Elementary Schools**

| Category Of Metric | Range Of Metric | School FRPL Percent | Working Conditions Favorability Percent | Standard Score Actual | Impact Residual |
|---|---|---|---|---|---|
| Highest | Min | 82 | 77 | 0.358 | 0.270 |
| | Max | 97 | 95 | 1.082 | 1.095 |
| High | Min | 70 | 69 | 0.119 | 0.099 |
| | Max | 82 | 77 | 0.353 | 0.268 |
| Average | Min | 59 | 62 | -0.114 | -0.069 |
| | Max | 70 | 69 | 0.117 | 0.097 |
| Low | Min | 47 | 54 | -0.353 | -0.238 |
| | Max | 58 | 62 | -0.119 | -0.071 |
| Lowest | Min | 4 | 30 | -1.132 | -0.813 |
| | Max | 47 | 54 | -0.360 | -0.241 |

Note: FRPL = students eligible for free and reduced-price lunch.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table B.3
## Thresholds For Categories Used In The Report For Middle Schools

| Category Of Metric | Range Of Metric | School FRPL Percent | Working Conditions Favorability Percent | Standard Score Actual | Impact Residual |
|---|---|---|---|---|---|
| Highest | Min | 80 | 73 | 0.293 | 0.255 |
| | Max | 95 | 91 | 1.094 | 0.809 |
| High | Min | 69 | 65 | 0.107 | 0.107 |
| | Max | 79 | 73 | 0.288 | 0.246 |
| Average | Min | 58 | 57 | -0.090 | -0.039 |
| | Max | 69 | 65 | 0.098 | 0.100 |
| Low | Min | 47 | 48 | -0.283 | -0.184 |
| | Max | 58 | 56 | -0.095 | -0.041 |
| Lowest | Min | 4 | 30 | -0.813 | -0.551 |
| | Max | 47 | 48 | -0.286 | -0.186 |

Note: FRPL = students eligible for free and reduced-price lunch.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table B.4
## Thresholds For Categories Used In The Report For High Schools

| Category Of Metric | Range Of Metric | School FRPL Percent | Working Conditions Favorability Percent | Standard Score Actual | Impact Residual |
|---|---|---|---|---|---|
| Highest | Min | 73 | 67 | 0.246 | 0.196 |
| | Max | 95 | 90 | 1.012 | 0.636 |
| High | Min | 62 | 60 | 0.079 | 0.076 |
| | Max | 72 | 65 | 0.235 | 0.186 |
| Average | Min | 52 | 52 | -0.086 | -0.039 |
| | Max | 62 | 59 | 0.076 | 0.074 |
| Low | Min | 42 | 44 | -0.257 | -0.154 |
| | Max | 52 | 52 | -0.093 | -0.041 |
| Lowest | Min | 9 | 28 | -0.778 | -0.443 |
| | Max | 41 | 44 | -0.258 | -0.160 |

Note: FRPL = students eligible for free and reduced-price lunch.
Source: Staff analysis of data from the Kentucky Department of Education.

# Appendix C

## Actual And Impact Scores Of IEP And Non-IEP Students

### Unadjusted Academic Performance Of IEP Students Relative To Non-IEP Students

Kentucky districts range broadly in the percentage of students identified as eligible for special education. This variation may reflect naturally occurring differences among the student populations in each district. It may also reflect, in part, differences among districts in the standards or practices used to identify students for special education. Should these differences in identification practices exist, they could affect the scores of individual districts in the impact model.

An analysis comparing the aggregated standard scores for all tested subjects for students not using an individualized education program (IEP) relative to the standard scores for only IEP students revealed 61 elementary schools in which IEP students outperformed non-IEP students. There were 17 middle schools with higher-performing IEP students relative to the other students, and 2 high schools.

### Residual Categories—All Students Relative To Only Non-IEP Students

This analysis included the ordinary least squares regression models for all students, and the same model for only non-IEP students for all tested subjects. Standard scores for each student were computed by year, subject, and grade. Residuals for non-IEP students were aggregated by school and placed into categories using the same methodology used for the Impact model containing all students. The standard scores for IEP students relative to non-IEP students were compared for each school.

Tables C.1 to C.3 show the counts of schools in the residual category for non-IEP students according to the categories for all students by school level.

Six elementary schools from the highest Impact category were in the average category when IEP students were removed from the analysis. Two elementary schools in the high Impact category for all schools were in the lowest residual category for schools when IEP students were excluded from the model. At both the middle and high school levels, one school in the highest Impact category was in the low category when IEP students were excluded from the analysis.

This source of the discrepancy in the impact scores of IEP students and non-IEP students in some schools is not clear. The data suggest the need for greater attention to possible reasons for the discrepancy. Reasons could include broad variation among schools in the way that students are identified as eligible for special education and could also include variation in the way that special education testing accommodations are carried out. Several previous OEA reports have noted these unusual variations among districts and schools.

## Table C.1
## Count Of Elementary Schools In Residual Categories Without IEP Students For Schools Grouped By Impact Categories For All Students

| Elementary Schools | Residual Category—No IEP Students | | | | | |
|---|---|---|---|---|---|---|
| Residual Category | Highest | High | Average | Low | Lowest | Total |
| Highest | 85 | 8 | 6 | 0 | 0 | 99 |
| High | 18 | 92 | 17 | 2 | 2 | 131 |
| Average | 0 | 32 | 148 | 14 | 3 | 197 |
| Low | 0 | 0 | 36 | 133 | 9 | 178 |
| Lowest | 0 | 0 | 0 | 12 | 85 | 97 |
| Total | 103 | 132 | 207 | 161 | 99 | 702 |

Note: IEP = individualized education program.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table C.2
## Count Of Middle Schools In Residual Categories Without IEP Students For Schools Grouped By Impact Categories For All Students

| Middle Schools | Residual Category—No IEP Students | | | | | |
|---|---|---|---|---|---|---|
| Residual Category | Highest | High | Average | Low | Lowest | Total |
| Highest | 40 | 5 | 1 | 1 | 0 | 47 |
| High | 9 | 41 | 2 | 0 | 0 | 52 |
| Average | 0 | 18 | 74 | 8 | 0 | 100 |
| Low | 0 | 0 | 8 | 63 | 0 | 71 |
| Lowest | 0 | 0 | 0 | 3 | 44 | 47 |
| Total | 49 | 64 | 85 | 75 | 44 | 317 |

Note: IEP = individualized education program.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table C.3
## Count Of High Schools In Residual Categories Without IEP Students For Schools Grouped By Impact Categories For All Students

| High Schools | Residual Category—No IEP Students | | | | | |
|---|---|---|---|---|---|---|
| Residual Category | Highest | High | Average | Low | Lowest | Total |
| Highest | 27 | 1 | 0 | 1 | 0 | 29 |
| High | 5 | 44 | 4 | 0 | 0 | 53 |
| Average | 0 | 7 | 51 | 4 | 0 | 62 |
| Low | 0 | 0 | 3 | 48 | 2 | 53 |
| Lowest | 0 | 0 | 0 | 1 | 29 | 30 |
| Total | 32 | 52 | 58 | 54 | 31 | 227 |

Note: IEP = individualized education program.
Source: Staff analysis of data from the Kentucky Department of Education.

# Appendix D

## Demographic Differences Of Schools By Actual And Impact Categories

Table D.1 provides an example of the demographic differences between schools grouped by actual and impact categories by showing the percentage of students eligible for free or reduced-price lunch (FRPL) by school level. At all three levels, the FRPL percentages in the actual categories were highest in the lowest-performing schools and were lowest in the highest-performing schools. This was not the trend for schools grouped by Impact categories. The proportion of FRPL students was more evenly distributed across categories when adjusting for student demographics and school characteristics.

**Table D.1**
**Average Percentage Of FRPL Population, Actual And Impact**
**By Category And School Level**

| | Free And Reduced-Price Lunch Percent | | | | | |
|---|---|---|---|---|---|---|
| | Elementary (n=702) | | Middle (n=317) | | High (n=227) | |
| Category | Actual | Impact | Actual | Impact | Actual | Impact |
| Highest | 48% | 67% | 46% | 65% | 42% | 59% |
| High | 55 | 59 | 61 | 62 | 52 | 55 |
| Average | 66 | 63 | 62 | 62 | 56 | 59 |
| Low | 71 | 67 | 71 | 66 | 63 | 57 |
| Lowest | 82 | 68 | 75 | 62 | 74 | 56 |
| All schools | 64% | 64% | 63% | 63% | 57% | 57% |

Source: Staff analysis of data from the Kentucky Department of Education.

For schools at all three levels, there were much stronger trends when grouping the schools by Actual categories. After adjusting for the student demographics and school characteristics in the model, these trends were greatly diminished, or in some cases eliminated. Tables D.2 to D.7 show the demographics for actual and impact categories for all three school levels.

**Table D.2**
**Select School Demographics For Elementary Schools By Actual Performance Category**

| | | Percent | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Actual Category | School Count | IEP | Black | Hispanic | Other Race | Moved | LEP | FRPL | Bachelor's Degree |
| Highest | 106 | 15% | 7% | 4% | 5% | 3% | 3% | 48% | 31% |
| High | 146 | 16 | 9 | 6 | 4 | 3 | 4 | 55 | 26 |
| Average | 197 | 18 | 10 | 6 | 2 | 4 | 4 | 66 | 20 |
| Low | 143 | 19 | 11 | 8 | 3 | 4 | 5 | 71 | 19 |
| Lowest | 110 | 17 | 39 | 16 | 4 | 6 | 18 | 82 | 21 |
| All | 702 | 17% | 14% | 8% | 3% | 4% | 6% | 64% | 23% |

Note: IEP = individualized education program; LEP = limited English proficiency; FRPL = free and reduced-price lunch.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table D.3
## Select School Demographics For Elementary Schools By Impact Category

| | | Percent | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Impact Category | School Count | IEP | Black | Hispanic | Other Race | Moved | LEP | FRPL | Bachelor's Degree |
| Highest | 99 | 19% | 7% | 5% | 3% | 4% | 3% | 67% | 21% |
| High | 131 | 17 | 11 | 7 | 4 | 3 | 5 | 59 | 26 |
| Average | 197 | 16 | 14 | 8 | 4 | 4 | 7 | 63 | 23 |
| Low | 178 | 16 | 18 | 10 | 4 | 4 | 8 | 67 | 24 |
| Lowest | 97 | 17 | 20 | 8 | 2 | 5 | 6 | 68 | 21 |
| All | 702 | 17% | 14% | 8% | 3% | 4% | 6% | 64% | 23% |

Note: IEP = individualized education program; LEP = limited English proficiency; FRPL = free and reduced-price lunch.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table D.4
## Select School Demographics For Middle Schools By Actual Performance Category

| | | Percent | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Actual Category | School Count | IEP | Black | Hispanic | Other Race | Moved | LEP | FRPL | Bachelor's Degree |
| Highest | 48 | 11 | 8 | 5 | 5 | 4 | 2 | 46 | 32 |
| High | 59 | 14 | 6 | 5 | 2 | 5 | 1 | 61 | 19 |
| Average | 96 | 13 | 9 | 6 | 3 | 5 | 2 | 62 | 21 |
| Low | 62 | 16 | 13 | 6 | 2 | 6 | 2 | 71 | 19 |
| Lowest | 52 | 15 | 21 | 11 | 3 | 6 | 7 | 75 | 19 |
| All | 317 | 14 | 11 | 6 | 3 | 5 | 3 | 63 | 21 |

Note: IEP = individualized education program; LEP = limited English proficiency; FRPL = free and reduced-price lunch.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table D.5
## Select School Demographics For Middle Schools By Impact Category

| | | Percent | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Impact Category | School Count | IEP | Black | Hispanic | Other Race | Moved | LEP | FRPL | Bachelor's Degree |
| Highest | 47 | 17% | 5% | 3% | 2% | 5% | 1% | 65% | 20% |
| High | 52 | 13 | 7 | 6 | 3 | 5 | 2 | 62 | 21 |
| Average | 100 | 13 | 13 | 7 | 3 | 5 | 3 | 62 | 22 |
| Low | 71 | 14 | 15 | 8 | 3 | 6 | 4 | 66 | 22 |
| Lowest | 47 | 14 | 13 | 7 | 3 | 5 | 3 | 62 | 22 |
| All | 317 | 14% | 11% | 6% | 3% | 5% | 3% | 63% | 21% |

Note: IEP = individualized education program; LEP = limited English proficiency; FRPL = free and reduced-price lunch.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table D.6
## Select School Demographics For High Schools By Actual Performance Category

| Actual Category | School Count | Percent | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | IEP | Black | Hispanic | Other Race | Moved | LEP | FRPL | Bachelor's Degree |
| Highest | 29 | 7% | 10% | 6% | 6% | 3% | 2% | 42% | 33% |
| High | 51 | 10 | 7 | 5 | 3 | 5 | 1 | 52 | 23 |
| Average | 71 | 10 | 10 | 6 | 3 | 5 | 2 | 56 | 21 |
| Low | 49 | 10 | 10 | 6 | 3 | 6 | 2 | 63 | 19 |
| Lowest | 27 | 11 | 31 | 12 | 4 | 6 | 9 | 74 | 19 |
| All | 227 | 10% | 12% | 7% | 3% | 5% | 3% | 57% | 22% |

Note: IEP = individualized education program; LEP = limited English proficiency; FRPL = free and reduced-price lunch.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table D.7
## Select School Demographics For High Schools By Impact Category

| Impact Category | School Count | Percent | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | IEP | Black | Hispanic | Other Race | Moved | LEP | FRPL | Bachelor's Degree |
| Highest | 29 | 11% | 8% | 5% | 3% | 4% | 1% | 59% | 23% |
| High | 53 | 9 | 10 | 5 | 4 | 6 | 2 | 55 | 22 |
| Average | 62 | 10 | 15 | 7 | 3 | 6 | 3 | 59 | 21 |
| Low | 53 | 9 | 12 | 8 | 3 | 4 | 3 | 57 | 23 |
| Lowest | 30 | 9 | 8 | 7 | 3 | 4 | 3 | 56 | 21 |
| All | 227 | 10% | 12% | 7% | 3% | 5% | 3% | 57% | 22% |

Note: IEP = individualized education program; LEP = limited English proficiency; FRPL = free and reduced-price lunch.
Source: Staff analysis of data from the Kentucky Department of Education.

# Appendix E

## School-Level Categorical Change From Actual To Impact

This appendix provides the data for school counts for schools in the Impact categories according to the Actual categories those schools were in by school level.

Of the 230 elementary schools in the two higher Impact categories, 177 (77 percent) were also in the two higher Actual categories. Of the 275 elementary schools in the two lower Impact categories, 197 (72 percent) were also in the two lower Actual categories.

**Table E.1**
**Elementary Schools By Impact And Actual Categories**

| | Actual Category | | | | | |
|---|---|---|---|---|---|---|
| **Impact Category** | **Highest** | **High** | **Average** | **Low** | **Lowest** | **All Elementary** |
| Highest | 65 | 22 | 12 | 0 | 0 | 99 |
| High | 33 | 57 | 33 | 7 | 1 | 131 |
| Average | 5 | 56 | 88 | 31 | 17 | 197 |
| Low | 3 | 11 | 63 | 57 | 44 | 178 |
| Lowest | 0 | 0 | 1 | 48 | 48 | 97 |
| All elementary | 106 | 146 | 197 | 143 | 110 | 702 |

Source: Staff analysis of data from the Kentucky Department of Education.

Of the 99 middle schools in the two higher Impact categories, 80 (80 percent) were also in the two higher Actual categories. Of the 118 middle schools in the two lower Impact categories, 83 (70 percent) were also in the two lower Actual categories.

**Table E.2**
**Middle Schools By Impact And Actual Categories**

| | Actual Category | | | | | |
|---|---|---|---|---|---|---|
| **Impact Category** | **Highest** | **High** | **Average** | **Low** | **Lowest** | **All Middle Schools** |
| Highest | 28 | 13 | 5 | 1 | 0 | 47 |
| High | 11 | 28 | 10 | 3 | 0 | 52 |
| Average | 9 | 17 | 47 | 18 | 9 | 100 |
| Low | 0 | 1 | 28 | 26 | 16 | 71 |
| Lowest | 0 | 0 | 6 | 14 | 27 | 47 |
| All middle schools | 48 | 59 | 96 | 62 | 52 | 317 |

Source: Staff analysis of data from the Kentucky Department of Education.

Of the 82 high schools in the two higher Impact categories, 74 percent were also in the two higher Actual categories. Of the 83 high schools in the two lower Impact categories, 64 percent were also in the two lower Actual categories.

**Table E.3**
**High Schools By Impact And Actual Categories**

| | Actual Category | | | | | |
|---|---|---|---|---|---|---|
| **Impact Category** | **Highest** | **High** | **Average** | **Low** | **Lowest** | **All High Schools** |
| Highest | 15 | 9 | 5 | 0 | 0 | 29 |
| High | 13 | 24 | 10 | 4 | 2 | 53 |
| Average | 1 | 14 | 30 | 8 | 9 | 62 |
| Low | 0 | 4 | 22 | 21 | 6 | 53 |
| Lowest | 0 | 0 | 4 | 16 | 10 | 30 |
| All high schools | 29 | 51 | 71 | 49 | 27 | 227 |

Source: Staff analysis of data from the Kentucky Department of Education.

## CSI Schools By Actual And Impact Categories

Tables E.4 to E.9 show the school counts for CSI schools and all other schools by level for both unadjusted and Impact categories.

**Table E.4**
**CSI Elementary School Counts Relative To Other Elementary Schools**
**By Actual Performance Category**

| | Actual Category | | | | | |
|---|---|---|---|---|---|---|
| **School Type** | **Highest** | **High** | **Average** | **Low** | **Lowest** | **Total** |
| CSI school | 0 | 0 | 0 | 1 | 32 | 33 |
| All other elementary | 106 | 146 | 197 | 142 | 78 | 669 |
| Total elementary schools | 106 | 146 | 197 | 143 | 110 | 702 |

Source: Staff analysis of data from the Kentucky Department of Education.

**Table E.5**
**CSI Elementary School Counts Relative To Other Elementary Schools**
**By Impact Performance Category**

| | Impact Category | | | | | |
|---|---|---|---|---|---|---|
| **School Type** | **Highest** | **High** | **Average** | **Low** | **Lowest** | **Total** |
| CSI school | 0 | 0 | 2 | 12 | 19 | 33 |
| All other elementary | 99 | 131 | 195 | 166 | 78 | 669 |
| Total elementary schools | 99 | 131 | 197 | 178 | 97 | 702 |

Source: Staff analysis of data from the Kentucky Department of Education.

**Table E.6**
**CSI Middle School Counts Relative To Other Middle Schools**
**By Actual Performance Category**

| | Actual Category | | | | | |
|---|---|---|---|---|---|---|
| **School Type** | **Highest** | **High** | **Average** | **Low** | **Lowest** | **Total** |
| CSI school | 0 | 0 | 0 | 1 | 11 | 12 |
| All other middle schools | 48 | 59 | 96 | 61 | 41 | 305 |
| Total middle schools | 48 | 59 | 96 | 62 | 52 | 317 |

Source: Staff analysis of data from the Kentucky Department of Education.

## Table E.7
## CSI Middle School Counts Relative To Other Middle Schools
## By Impact Performance Category

| | Impact Category | | | | | |
|---|---|---|---|---|---|---|
| **School Type** | **Highest** | **High** | **Average** | **Low** | **Lowest** | **Total** |
| CSI school | 0 | 0 | 1 | 6 | 5 | 12 |
| All other middle schools | 47 | 52 | 99 | 65 | 42 | 305 |
| Total middle schools | 47 | 52 | 100 | 71 | 47 | 317 |

Source: Staff analysis of data from the Kentucky Department of Education.

## Table E.8
## CSI High School Counts Relative To Other High Schools
## By Actual Performance Category

| | Actual Category | | | | | |
|---|---|---|---|---|---|---|
| **School Type** | **Highest** | **High** | **Average** | **Low** | **Lowest** | **Total** |
| CSI school | 0 | 0 | 0 | 0 | 6 | 6 |
| All other high schools | 29 | 51 | 71 | 49 | 21 | 221 |
| Total high schools | 29 | 51 | 71 | 49 | 27 | 227 |

Source: Staff analysis of data from the Kentucky Department of Education.

## Table E.9
## CSI High School Counts Relative To Other High Schools
## By Impact Performance Category

| | Impact Category | | | | | |
|---|---|---|---|---|---|---|
| **School Type** | **Highest** | **High** | **Average** | **Low** | **Lowest** | **Total** |
| CSI school | 0 | 0 | 4 | 1 | 1 | 6 |
| All other high schools | 29 | 53 | 58 | 52 | 29 | 221 |
| Total high schools | 29 | 53 | 62 | 53 | 30 | 227 |

Source: Staff analysis of data from the Kentucky Department of Education.

# Appendix F

## Teacher Working Conditions Survey Individual Question Responses

### Table F.1
### Average Overall Favorable Responses, 2022 And 2024 Teacher Working Conditions Survey By Impact And School Level

| Residual Category | All | Elementary | Middle | High |
|---|---|---|---|---|
| Highest | 71.6% | 74.0% | 66.8% | 61.2% |
| High | 65.3 | 68.9 | 61.1 | 59.0 |
| Average | 62.3 | 64.9 | 60.2 | 55.5 |
| Low | 59.2 | 62.4 | 56.0 | 51.2 |
| Lowest | 57.5 | 60.3 | 54.5 | 51.6 |
| Average | 62.5% | 65.7% | 58.9% | 55.2% |
| Percentage point difference, highest and lowest | 14.1 | 13.7 | 12.3 | 9.6 |

Source: Staff analysis of data from the Kentucky Department of Education.

### Table F.2
### Average Percentage Of Favorable Responses By Question For Adjusted Performance Categories

| | Percentage Of Favorable Responses, Adjusted Performance Category | | | | | | Percentage Point Difference, Highest And Lowest |
|---|---|---|---|---|---|---|---|
| Question | Highest | High | Average | Low | Lowest | Question Average | |
| ***Educating All Students*** | | | | | | | |
| When it comes to promoting culturally responsive practices, how helpful are your colleagues' ideas for improving your practice? | 65 | 58 | 58 | 55 | 53 | 57 | 12 |
| How often do teachers use assessment data to inform their instruction? | 95 | 91 | 91 | 88 | 85 | 90 | 10 |
| How knowledgeable are you regarding where to find resources for working with students who have unique learning needs? | 75 | 71 | 68 | 66 | 65 | 68 | 10 |
| When a sensitive issue of diversity arises in class, how easily can you think of strategies to address the situation? | 58 | 54 | 53 | 51 | 50 | 53 | 8 |
| How often do adults at your school have important conversations about sensitive issues of diversity, even when they might be uncomfortable? | 39 | 36 | 36 | 34 | 32 | 35 | 7 |
| If students from different backgrounds struggled to get along in your class, how comfortable would you be intervening? | 83 | 80 | 79 | 77 | 76 | 79 | 7 |

| Question | Percentage Of Favorable Responses, Adjusted Performance Category | | | | | Question Average | Percentage Point Difference, Highest And Lowest |
|---|---|---|---|---|---|---|---|
| | Highest | High | Average | Low | Lowest | | |
| How easy do you find interacting with students at your school who are from different cultural background than your own? | 89 | 88 | 86 | 85 | 84 | 86 | 5 |
| How comfortable would you be having a student who could not communicate well with anyone in class because his/her home language was unique? | 54 | 53 | 52 | 51 | 50 | 52 | 4 |
| In response to events that might be occurring in the world, how comfortable would you be having conversations about race with your students? | 65 | 63 | 62 | 60 | 62 | 62 | 3 |
| How easy would it be for you to teach a class with groups of students from very different religions from each other? | 78 | 78 | 77 | 75 | 75 | 77 | 3 |
| How comfortable would you be incorporating new material about people from different backgrounds into your curriculum? | 82 | 81 | 81 | 80 | 80 | 81 | 2 |
| ***Emotional Well-Being*** | | | | | | | |
| How concerned are you about the emotional well-being of your colleagues as a result of their work? | 43 | 35 | 30 | 26 | 26 | 31 | 17 |
| How effective do you feel at your job right now? | 76 | 69 | 66 | 61 | 59 | 66 | 17 |
| How concerned are you about your own emotional well-being as a result of your work? | 50 | 44 | 39 | 37 | 36 | 40 | 14 |
| Overall, how much do you feel like you belong at your school? | 81 | 76 | 74 | 70 | 70 | 74 | 11 |
| ***Feedback And Coaching*** | | | | | | | |
| How much do you learn from the teacher evaluation processes at your school? | 62 | 50 | 48 | 44 | 44 | 49 | 18 |
| How much feedback do you receive on your teaching? | 65 | 54 | 52 | 47 | 48 | 52 | 17 |
| How often do you receive feedback on your teaching? | 70 | 60 | 57 | 53 | 53 | 58 | 17 |
| At your school, how thorough is the feedback you receive in covering all aspects of your role as a teacher? | 72 | 63 | 60 | 55 | 55 | 60 | 17 |
| How useful do you find the feedback you receive on your teaching? | 73 | 64 | 63 | 59 | 58 | 62 | 15 |
| ***Managing Student Behavior*** | | | | | | | |
| How often does student misconduct disrupt the learning environment at your school? | 50 | 42 | 33 | 28 | 26 | 34 | 24 |
| How respectful are the relationships between teachers and students? | 83 | 77 | 72 | 66 | 62 | 72 | 21 |

| Question | Percentage Of Favorable Responses, Adjusted Performance Category | | | | | Question Average | Percentage Point Difference, Highest And Lowest |
|---|---|---|---|---|---|---|---|
| | Highest | High | Average | Low | Lowest | | |
| How effective are the school leaders at developing rules for students that facilitate their learning? | 74 | 68 | 62 | 59 | 55 | 63 | 19 |
| How well do school administrators support teachers' classroom management efforts? | 77 | 71 | 67 | 63 | 60 | 67 | 17 |
| How effective do you think you are at managing disruptive classes? | 85 | 81 | 78 | 75 | 71 | 78 | 14 |
| Overall, how safe is the school environment? | 92 | 89 | 85 | 80 | 79 | 85 | 13 |
| ***Professional Learning*** | | | | | | | |
| At your school, how valuable are the available professional development opportunities? | 60 | 52 | 49 | 46 | 45 | 50 | 15 |
| Through working at your school, how many new teaching strategies have you learned? | 77 | 72 | 69 | 65 | 63 | 69 | 15 |
| How relevant have your professional development opportunities been to the content that you teach? | 60 | 53 | 50 | 47 | 46 | 50 | 14 |
| Overall, how much do you learn about teaching from the leaders at your school? | 67 | 57 | 56 | 52 | 53 | 56 | 14 |
| How often do your professional development opportunities help you explore new ideas? | 58 | 52 | 49 | 45 | 44 | 49 | 13 |
| Overall, how supportive has the school been of your growth as a teacher? | 82 | 76 | 74 | 70 | 69 | 73 | 13 |
| How helpful are your colleagues ideas for improving your teaching? | 80 | 74 | 72 | 69 | 68 | 72 | 12 |
| How much input do you have into individualizing your own professional development opportunities? | 56 | 53 | 49 | 47 | 45 | 49 | 11 |
| ***Resources*** | | | | | | | |
| Overall, how much does your school struggle due to a lack of resources? | 73 | 65 | 58 | 53 | 49 | 59 | 24 |
| To what extent does the quality of the resources at your school need to improve? | 60 | 49 | 45 | 42 | 38 | 46 | 22 |
| How many more resources do you need to adequately support your students' learning? | 70 | 63 | 58 | 54 | 51 | 59 | 19 |
| When students need help from an adult, how often do they have to wait to get help? | 72 | 64 | 59 | 56 | 53 | 60 | 19 |
| To what extent does the access to instructional technology, including computers, printers, software and internet access at your school need to improve? | 70 | 62 | 59 | 55 | 54 | 59 | 16 |
| For students who need extra support, how difficult is it for them to get the support they need? | 80 | 76 | 72 | 68 | 65 | 72 | 15 |

| Question | Percentage Of Favorable Responses, Adjusted Performance Category | | | | | Question Average | Percentage Point Difference, Highest And Lowest |
|---|---|---|---|---|---|---|---|
| | Highest | High | Average | Low | Lowest | | |
| How often do your school's facilities need repairs? | 48 | 40 | 38 | 35 | 33 | 38 | 15 |
| How urgently does your school's technology need to be updated? | 73 | 67 | 64 | 61 | 61 | 65 | 12 |
| At your school, how crowded do the learning spaces feel? | 58 | 50 | 49 | 45 | 46 | 49 | 12 |
| How important is it for your school to hire more specialists to help students? | 28 | 26 | 23 | 21 | 20 | 23 | 8 |
| How much of your own money do you spend on your classroom? | 20 | 19 | 16 | 15 | 16 | 17 | 4 |
| ***School Climate*** | | | | | | | |
| How supportive are students in their interactions with each other? | 75 | 67 | 61 | 55 | 49 | 60 | 26 |
| On most days, how enthusiastic are the students about being at school? | 70 | 60 | 56 | 52 | 46 | 56 | 23 |
| How often do you see students helping each other without being prompted? | 81 | 74 | 69 | 64 | 59 | 69 | 21 |
| How respectful are the relationships between teachers and students? | 83 | 77 | 72 | 66 | 62 | 72 | 21 |
| How positive are the attitudes of your colleagues? | 64 | 57 | 52 | 47 | 47 | 53 | 17 |
| Overall, how positive is the working environment at your school? | 73 | 66 | 62 | 56 | 56 | 62 | 17 |
| When new initiatives to improve teaching are presented at your school, how supportive are your colleagues? | 69 | 60 | 56 | 52 | 52 | 57 | 17 |
| How optimistic are you that your school will improve in the future? | 78 | 72 | 68 | 63 | 63 | 68 | 15 |
| To what extent are teachers trusted to teach in the way they think is best? | 79 | 75 | 70 | 66 | 64 | 70 | 15 |
| ***School Leadership*** | | | | | | | |
| How effective are the school leaders at developing rules for students that facilitate their learning? | 74 | 68 | 62 | 59 | 55 | 63 | 19 |
| How knowledgeable are your school leaders about what is going on in teachers' classrooms? | 74 | 66 | 63 | 59 | 57 | 63 | 17 |
| How effectively do school leaders communicate important information to teachers? | 74 | 68 | 64 | 61 | 58 | 64 | 16 |
| When the school makes important decisions, how much input do teachers have? | 59 | 53 | 51 | 46 | 44 | 50 | 16 |
| How responsive are school leaders to your feedback? | 72 | 66 | 62 | 59 | 58 | 63 | 14 |
| How clearly do your school leaders identify their goals for teachers? | 82 | 76 | 73 | 69 | 69 | 73 | 13 |
| Overall, how positive is the influence of the school leaders on the quality of your teaching? | 78 | 73 | 70 | 66 | 66 | 70 | 12 |

| Question | Percentage Of Favorable Responses, Adjusted Performance Category | | | | | Question Average | Percentage Point Difference, Highest And Lowest |
|---|---|---|---|---|---|---|---|
| | Highest | High | Average | Low | Lowest | | |
| For your school leaders, how important is teacher satisfaction? | 75 | 69 | 68 | 64 | 63 | 67 | 12 |
| How positive is the tone that school leaders set for the culture of the school? | 79 | 75 | 72 | 69 | 69 | 72 | 11 |
| ***Staff Leadership Relations*** | | | | | | | |
| How much trust exists between school leaders and faculty? | 76 | 71 | 67 | 63 | 62 | 67 | 14 |
| At your school, how motivating do you find working with the leadership team? | 70 | 62 | 61 | 56 | 56 | 60 | 14 |
| When you face challenges at work, how supportive are your school leaders? | 80 | 76 | 74 | 71 | 69 | 73 | 10 |
| How fairly does the school leadership treat the faculty? | 80 | 77 | 75 | 72 | 70 | 74 | 9 |
| How confident are you that your school leaders have the best interests of the school in mind? | 84 | 81 | 79 | 75 | 76 | 79 | 8 |
| How much do your school leaders care about you as an individual? | 81 | 79 | 78 | 74 | 74 | 77 | 7 |
| When challenges arise in your personal life, how understanding are your school leaders? | 89 | 87 | 86 | 85 | 83 | 86 | 6 |
| How friendly are your school leaders toward you? | 87 | 85 | 83 | 81 | 81 | 83 | 6 |
| How respectful are your school leaders towards you? | 88 | 86 | 85 | 83 | 83 | 85 | 5 |

Note: Some differences do not sum due to rounding.
Source: Staff analysis of data from the Kentucky Department of Education.

# Appendix G

## Teacher Exit Data

These data, received from the Kentucky Department of Education (KDE) in February 2024, included 226 responses entered between July 20, 2023, and February 20, 2024. KDE noted limitations in the data due to the low response rate and potentially unrepresentative sample. KDE also noted that it is difficult to enforce collection of survey data, as districts have no authority over teachers who leave and the teachers may not leave forwarding information. Table G.1 lists factors in descending order of respondents citing each one as a major factor that prompted them to leave the district. Factors most often cited as major were work life balance, appreciation, compensation, leadership style, and workload. Safety, classroom management, and parent teacher communication were cited least. The table does not capture data of teachers who leave individual schools but remain within a district.

**Table G.1**
**Factors Cited For Leaving A District In Teacher Exit Survey**
**School Year 2023 Or Early School Year 2024**

| | Number Of Respondents Citing Item As Factor In Decision To Leave | | | | | | Percent Of Respondents | |
|---|---|---|---|---|---|---|---|---|
| All Respondents | Did Not Factor | Played Little Factor | Was Somewhat Of A Factor | Was A Factor | Was A Major Factor | Total Respondents | At Least Somewhat Of A Factor | Little Or No Factor |
| Work life Balance | 64 | 18 | 29 | 21 | 67 | 199 | 59% | 41% |
| Appreciation | 83 | 18 | 23 | 13 | 56 | 193 | 48 | 52 |
| Compensation | 70 | 19 | 19 | 27 | 48 | 183 | 51 | 49 |
| Leadership style | 85 | 16 | 23 | 16 | 47 | 187 | 46 | 54 |
| Workload | 71 | 21 | 32 | 33 | 46 | 203 | 55 | 45 |
| School culture | 69 | 26 | 30 | 26 | 44 | 195 | 51 | 49 |
| Career advancement | 85 | 20 | 15 | 22 | 38 | 180 | 42 | 58 |
| Trust | 93 | 22 | 13 | 19 | 37 | 184 | 38 | 63 |
| Retiring | 66 | 1 | 3 | 6 | 28 | 104 | 36 | 64 |
| Relocation | 86 | 10 | 7 | 13 | 27 | 143 | 33 | 67 |
| Politics | 99 | 16 | 25 | 13 | 20 | 173 | 34 | 66 |
| Autonomy | 95 | 29 | 24 | 17 | 19 | 184 | 33 | 67 |
| Collaboration | 124 | 16 | 24 | 11 | 18 | 193 | 27 | 73 |
| Resources | 106 | 35 | 21 | 12 | 16 | 190 | 26 | 74 |
| Mentorship | 128 | 20 | 12 | 14 | 15 | 189 | 22 | 78 |
| Safety | 124 | 20 | 11 | 18 | 10 | 183 | 21 | 79 |
| Classroom management | 100 | 27 | 23 | 20 | 8 | 178 | 29 | 71 |
| Parent teacher communication | 137 | 21 | 12 | 9 | 7 | 186 | 15 | 85 |

Source: Staff analysis of data from the Kentucky Department of Education.

# Appendix H

## Comparison Of School-Level Expenditures By Unadjusted And Impact Categories

### Summary

This section provides analysis on school-level expenditures from school years 2022 and 2023. Tables show the percentage of total expenditures by school for instructional services, instructional support, school administration support, and plant operations. Expenditures for food and transportation were not included in this analysis because these costs can vary based on district geographic dispersion, which is outside of administrators' control.

The tables also show expenditures for these categories per member for school years 2022 and 2023 for schools grouped by unadjusted performance and for Impact categories.

On average, schools in the higher residual categories at all three levels were above the average for instructional services, and schools in the lower residual categories at each level were slightly below the average for this metric.

There was a general trend of proportionally more expenditures used for instructional support and school administration support for lower-performing schools at all three levels.

### Expenditures Per Student, School Years 2022 And 2023

A slight trend at the elementary level shows that schools in the higher Impact categories spend less per student relative to the lower-performing schools.

Middle schools in the highest Impact category spent the most per student for these years, with slight variation for the schools in the other Impact categories.

High schools did not exhibit a trend across the Impact categories for this metric.

The following tables show the comparison of school-level expenditures by Unadjusted and Impact categories for all three school levels.

## Elementary Schools

### Table H.1
### Elementary School Expenditures By Unadjusted Performance Category
### School Years 2022 And 2023

| Unadjusted Category | School Count | Percent | | | | Average Expenditures Per Member |
|---|---|---|---|---|---|---|
| | | Instruction Services | Instructional Support | School Admin Support | Plant Operations | |
| Highest | 106 | 78% | 8% | 7% | 7% | $9,753 |
| High | 146 | 77 | 9 | 7 | 7 | 9,801 |
| Average | 197 | 78 | 8 | 7 | 8 | 10,207 |
| Low | 143 | 77 | 8 | 8 | 7 | 10,544 |
| Lowest | 110 | 72 | 13 | 9 | 6 | 12,697 |
| All elementary schools | 702 | 77% | 9% | 8% | 7% | $10,513 |

Note: Some percentages do not sum to 100 due to rounding.
Source: Staff analysis of data from the Kentucky Department of Education.

### Table H.2
### Elementary School Expenditures By Impact Performance Category
### School Years 2022 And 2023

| Impact Category | School Count | Percent | | | | Average Expenditures Per Member |
|---|---|---|---|---|---|---|
| | | Instruction Services | Instructional Support | School Admin Support | Plant Operations | |
| Highest | 99 | 78% | 8% | 7% | 8% | $10,366 |
| High | 131 | 77 | 8 | 7 | 7 | 10,089 |
| Average | 197 | 77 | 9 | 7 | 7 | 10,478 |
| Low | 178 | 76 | 9 | 8 | 7 | 10,670 |
| Lowest | 97 | 75 | 10 | 8 | 7 | 11,022 |
| All elementary schools | 702 | 77% | 9% | 8% | 7% | $10,513 |

Note: Some percentages do not sum to 100 due to rounding.
Source: Staff analysis of data from the Kentucky Department of Education.

## Middle Schools

### Table H.3
### Middle School Expenditures By Unadjusted Performance Category
### School Years 2022 And 2023

| Unadjusted Category | School Count | Percent | | | | Average Expenditures Per Member |
|---|---|---|---|---|---|---|
| | | Instruction Services | Instructional Support | School Admin Support | Plant Operations | |
| Highest | 48 | 77% | 7% | 8% | 7% | $9,289 |
| High | 59 | 77 | 7 | 8 | 8 | 9,133 |
| Average | 96 | 77 | 7 | 8 | 8 | 9,328 |
| Low | 62 | 76 | 7 | 9 | 8 | 9,841 |
| Lowest | 52 | 72 | 9 | 10 | 8 | 10,479 |
| All middle schools | 317 | 76% | 7% | 9% | 8% | $9,574 |

Note: Some percentages do not sum to 100 due to rounding.
Source: Staff analysis of data provided by the Kentucky Department of Education.

### Table H.4
### Middle School Expenditures By Impact Performance Category
### School Years 2022 And 2023

| Impact Category | School Count | Percent | | | | Average Expenditures Per Member |
|---|---|---|---|---|---|---|
| | | Instruction Services | Instructional Support | School Admin Support | Plant Operations | |
| Highest | 47 | 77% | 7% | 8% | 8% | $10,255 |
| High | 52 | 78 | 6 | 8 | 8 | 9,459 |
| Average | 100 | 76 | 7 | 9 | 8 | 9,437 |
| Low | 71 | 75 | 8 | 9 | 8 | 9,379 |
| Lowest | 47 | 75 | 8 | 10 | 8 | 9,604 |
| All middle schools | 317 | 76% | 7% | 9% | 8% | $9,574 |

Note: Some percentages do not sum to 100 due to rounding.
Source: Staff analysis of data provided by the Kentucky Department of Education.

## High Schools

### Table H.5
### High School Expenditures By Unadjusted Performance Category
### School Years 2022 And 2023

| Unadjusted Category | School Count | Percent | | | | Average Expenditures Per Member |
|---|---|---|---|---|---|---|
| | | Instruction Services | Instructional Support | School Admin Support | Plant Operations | |
| Highest | 29 | 79% | 7% | 7% | 6% | $9,267 |
| High | 51 | 77 | 7 | 7 | 9 | 9,260 |
| Average | 71 | 77 | 6 | 8 | 9 | 9,190 |
| Low | 49 | 76 | 7 | 8 | 9 | 9,514 |
| Lowest | 27 | 73 | 10 | 10 | 8 | 11,931 |
| All high schools | 227 | 77% | 7% | 8% | 8% | $9,613 |

Note: Some percentages do not sum to 100 due to rounding.
Source: Staff analysis of data provided by the Kentucky Department of Education.

### Table H.6
### High School Expenditures By Impact Performance Category
### School Years 2022 And 2023

| Impact Category | School Count | Percent | | | | Average Expenditures Per Member |
|---|---|---|---|---|---|---|
| | | Instruction Services | Instructional Support | School Admin Support | Plant Operations | |
| Highest | 29 | 79% | 7% | 7% | 8% | $9,813 |
| High | 53 | 77 | 6 | 8 | 9 | 9,445 |
| Average | 62 | 76 | 7 | 8 | 8 | 10,073 |
| Low | 53 | 76 | 7 | 8 | 8 | 9,299 |
| Lowest | 30 | 74 | 8 | 9 | 9 | 9,329 |
| All high schools | 227 | 77% | 7% | 8% | 8% | $9,613 |

Note: Some percentages do not sum to 100 due to rounding.
Source: Staff analysis of data provided by the Kentucky Department of Education.

# Appendix I

## Staffing Metrics By School Level

### Summary

Tables I.1 to I.3 show select staffing metrics for schools grouped by Impact categories by school level. On average, teacher attrition and student-to-teacher ratios trend lower for the groups of schools in the higher Impact categories at all three school levels. Schools in the higher Impact categories also had principals with more years at their current school, but fewer administrators overall than the lower Impact category schools.

**Table I.1**
**Select Staffing Metrics For Elementary Schools Grouped By Impact Category**

| Impact Category | School Count | Teacher Attrition Percent | Student-To-Teacher FTE Ratio | Ratio Student/ Instruct. CSD | Teacher/ Admin FTE Ratio | Student-To-Admin FTE Ratio | Principal Years At School | Supt. Years At District |
|---|---|---|---|---|---|---|---|---|
| Highest | 99 | 14.8% | 14.1 | 37.4 | 19.2 | 271.7 | 6.5 | 6.6 |
| High | 131 | 15.5 | 14.5 | 47.5 | 19.1 | 276.2 | 6.0 | 5.2 |
| Average | 197 | 16.6 | 14.1 | 43.8 | 19.1 | 267.4 | 5.6 | 5.1 |
| Low | 178 | 17.7 | 14.1 | 47.7 | 19.1 | 266.6 | 5.6 | 5.3 |
| Lowest | 97 | 21.3 | 14.2 | 40.6 | 17.2 | 241.2 | 4.6 | 4.8 |
| Total/ average | 702 | 17.1% | 14.2 | 44.1 | 18.8 | 265.8 | 5.6 | 5.4 |

Note: FTE = full-time equivalent; CSD = classified staff data; Supt. = superintendent.
Source: Staff analysis of data from the Kentucky Department of Education.

**Table I.2**
**Select Staffing Metrics For Middle Schools Grouped By Impact Category**

| Impact Category | School Count | Teacher Attrition Percent | Student-To-Teacher FTE Ratio | Ratio Student/ Instruct. CSD | Teacher/ Admin FTE Ratio | Student-To-Admin FTE Ratio | Principal Years At School | Supt. Years At District |
|---|---|---|---|---|---|---|---|---|
| Highest | 47 | 16.9% | 14.9 | 87.5 | 16.7 | 248.9 | 7.0 | 6.3 |
| High | 52 | 16.1 | 15.3 | 105.2 | 15.8 | 243.2 | 5.9 | 6.0 |
| Average | 100 | 21.1 | 15.2 | 111.0 | 15.1 | 226.5 | 4.7 | 5.0 |
| Low | 71 | 20.4 | 15.5 | 102.4 | 15.5 | 236.3 | 4.4 | 4.5 |
| Lowest | 47 | 24.0 | 15.8 | 131.9 | 14.0 | 219.1 | 3.0 | 5.6 |
| Total/ average | 317 | 19.9% | 15.3 | 107.6 | 15.4 | 233.7 | 4.9 | 5.3 |

Note: FTE = full-time equivalent; CSD = classified staff data; Supt. = superintendent.
Source: Staff analysis of data from the Kentucky Department of Education.

**Table I.3**
**Select Staffing Metrics For High Schools Grouped By Impact Category**

| Impact Category | School Count | Teacher Attrition Percent | Student-To-Teacher FTE Ratio | Ratio Student/ Instruct. CSD | Teacher/ Admin FTE Ratio | Student-To-Admin FTE Ratio | Principal Years At School | Supt. Years At District |
|---|---|---|---|---|---|---|---|---|
| Highest | 29 | 14.8% | 15.2 | 132.1 | 20.1 | 307.4 | 5.6 | 5.1 |
| High | 53 | 16.7 | 16.7 | 164.1 | 16.9 | 281.1 | 5.4 | 5.8 |
| Average | 62 | 17.7 | 16.2 | 135.8 | 14.9 | 242.3 | 4.0 | 5.2 |
| Low | 53 | 19.1 | 17.3 | 125.9 | 15.6 | 269.0 | 4.6 | 5.6 |
| Lowest | 30 | 17.9 | 17.6 | 174.6 | 15.1 | 264.1 | 3.5 | 5.1 |
| Total/ average | 227 | 17.5% | 16.6 | 144.8 | 16.2 | 268.8 | 4.6 | 5.4 |

Note: FTE = full-time equivalent; CSD = classified staff data; Supt. = superintendent.
Source: Staff analysis of data from the Kentucky Department of Education.

## Teacher Years Of Experience By Impact Category

Academic performance and teacher experience share a strong positive relationship when schools are grouped by Impact category. At all three school levels, average teacher experience increases for schools as they reach higher Impact categories. Middle schools had the largest difference of average teacher experience between the highest and lowest Impact categories at 2.5 years. Middle schools also have the largest proportion of teachers with less than 1 year of experience overall.

**Table I.4**
**Average Years Of Teachers' Experience And Proportion Of Teachers By Experience Level For Elementary Schools Grouped By Impact Category**

| | | Percent Teachers | | |
|---|---|---|---|---|
| Impact Category | Teacher Years Of Experience | Less Than 1 Year | 1 To 5 Years | 6 Years Or More |
| Highest | 12.2 | 6.6% | 22.1% | 71.3% |
| High | 12.7 | 6.0 | 21.2 | 72.8 |
| Average | 11.8 | 6.8 | 22.7 | 70.5 |
| Low | 11.6 | 7.1 | 24.3 | 68.6 |
| Lowest | 10.5 | 8.6 | 28.8 | 62.7 |
| All elementary schools | 11.8 | 7.0% | 23.5% | 69.5% |

Note: Some percentages do not sum to 100 due to rounding.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table I.5
## Teacher Average Years Of Experience And Proportion Of Teachers By Experience Level For Middle Schools Grouped By Impact Category

| Impact Category | Teacher Years Of Experience | Percent Teachers | | |
|---|---|---|---|---|
| | | Less Than 1 Year | 1 To 5 Years | 6 Years Or More |
| Highest | 12.1 | 7.0% | 23.6% | 69.3% |
| High | 12.1 | 7.2 | 21.7 | 71.1 |
| Average | 11.1 | 9.3 | 24.4 | 66.3 |
| Low | 10.8 | 7.6 | 27.9 | 64.4 |
| Lowest | 9.6 | 10.8 | 33.2 | 56.0 |
| All middle schools | 11.1 | 8.5% | 25.9% | 65.6% |

Note: Some percentages do not sum to 100 due to rounding.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table I.6
## Teacher Average Years Of Experience And Proportion Of Teachers By Experience Level For High Schools Grouped By Impact Category

| Impact Category | Teacher Years Of Experience | Percent Teachers | | |
|---|---|---|---|---|
| | | Less Than 1 Year | 1 To 5 Years | 6 Years Or More |
| Highest | 12.3 | 5.4% | 23.0% | 71.7% |
| High | 12.4 | 6.3 | 23.5 | 70.2 |
| Average | 11.8 | 6.6 | 24.4 | 69.0 |
| Low | 11.5 | 9.2 | 24.2 | 66.6 |
| Lowest | 10.7 | 8.5 | 30.3 | 61.2 |
| All high schools | 11.8 | 7.2% | 24.7% | 68.0% |

Note: Some percentages do not sum to 100 due to rounding.
Source: Staff analysis of data from the Kentucky Department of Education.

# Appendix J

## Impact Survey Results For Schools Grouped By Unadjusted Categories

### Table J.1
### Impact Survey Categories Comparison By Unadjusted Categories For Elementary Schools

| Category | Highest | High | Average | Low | Lowest | Category Average | Percentage Point Difference, Highest And Lowest |
|---|---|---|---|---|---|---|---|
| School climate | 79% | 74% | 70% | 67% | 55% | 69% | 24 |
| Managing student behavior | 77 | 74 | 71 | 67 | 56 | 69 | 21 |
| School leadership | 75 | 71 | 70 | 68 | 58 | 69 | 17 |
| Emotional well-being | 61 | 57 | 55 | 52 | 44 | 54 | 17 |
| Resources | 57 | 52 | 50 | 46 | 43 | 50 | 14 |
| Feedback and coaching | 66 | 62 | 62 | 58 | 52 | 60 | 14 |
| Staff/leadership relationships | 83 | 80 | 78 | 79 | 69 | 78 | 13 |
| Professional learning | 68 | 65 | 63 | 61 | 56 | 63 | 12 |
| Educating all students | 71 | 70 | 68 | 68 | 71 | 69 | 0 |
| Overall impact average | 71% | 67% | 65% | 63% | 56% | 65% | 15 |

Note: Some differences do not sum due to rounding.
Source: Staff analysis of data from the Kentucky Department of Education.

### Table J.2
### Impact Survey Categories Comparison By Unadjusted Categories For Middle Schools

| Category | Highest | High | Average | Low | Lowest | Category Average | Percentage Point Difference, Highest And Lowest |
|---|---|---|---|---|---|---|---|
| School climate | 71% | 70% | 64% | 60% | 47% | 63% | 24 |
| Managing student behavior | 64 | 64 | 59 | 56 | 41 | 57 | 22 |
| School leadership | 57 | 56 | 52 | 50 | 42 | 52 | 15 |
| Emotional well-being | 55 | 52 | 49 | 47 | 40 | 49 | 15 |
| Resources | 66 | 68 | 66 | 66 | 52 | 64 | 15 |
| Feedback and coaching | 60 | 62 | 58 | 58 | 46 | 57 | 14 |
| Staff/leadership relationships | 77 | 79 | 78 | 77 | 67 | 76 | 11 |
| Professional learning | 56 | 61 | 56 | 58 | 47 | 56 | 9 |
| Educating all students | 68 | 67 | 67 | 68 | 62 | 66 | 6 |
| Overall impact average | 64% | 64% | 61% | 60% | 49% | 60% | 14 |

Note: Some differences do not sum due to rounding.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table J.3
## Impact Survey Categories Comparison By Unadjusted Categories For High Schools

| Category | Highest | High | Average | Low | Lowest | Category Average | Percentage Point Difference, Highest And Lowest |
|---|---|---|---|---|---|---|---|
| School climate | 64% | 65% | 60% | 56% | 44% | 59% | 20 |
| Managing student behavior | 57 | 54 | 50 | 47 | 40 | 50 | 17 |
| School leadership | 52 | 52 | 46 | 46 | 37 | 47 | 16 |
| Emotional well-being | 52 | 52 | 48 | 46 | 41 | 48 | 11 |
| Resources | 52 | 50 | 48 | 46 | 43 | 48 | 9 |
| Feedback and coaching | 57 | 59 | 56 | 53 | 49 | 55 | 7 |
| Staff/leadership relationships | 73 | 73 | 72 | 69 | 66 | 71 | 7 |
| Professional learning | 44 | 49 | 46 | 44 | 40 | 45 | 4 |
| Educating all students | 66 | 62 | 62 | 60 | 65 | 62 | 0 |
| Overall impact average | 57% | 57% | 54% | 52% | 47% | 54% | 10 |

Note: Some differences do not sum due to rounding.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table J.4
## Overall Impact Survey Average By School Level

| | Overall Impact Average | | |
|---|---|---|---|
| Unadjusted Category | Elementary | Middle | High |
| Highest | 71% | 64% | 57% |
| High | 67 | 64 | 57 |
| Average | 65 | 61 | 54 |
| Low | 63 | 60 | 52 |
| Lowest | 56 | 49 | 47 |
| Total | 65% | 60% | 54% |
| Percentage point difference, highest and lowest | 15 | 14 | 10 |

Note: Some differences do not sum due to rounding.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table J.5
## Average Teacher Turnover Percentage For Schools Grouped By Unadjusted Performance By School Level

| | Average Teacher Turnover Percent | | |
|---|---|---|---|
| Unadjusted Category | Elementary | Middle | High |
| Highest | 15% | 17% | 13% |
| High | 15 | 17 | 16 |
| Average | 16 | 19 | 18 |
| Low | 17 | 22 | 19 |
| Lowest | 23 | 25 | 20 |
| All | 17% | 20% | 17% |

Source: Staff analysis of data from the Kentucky Department of Education.

# Appendix K

## Comparison Of CSI And TSI Schools In School Years 2022 Or 2023 To All Others By Level

### Elementary Schools

**Table K.1**
**Teacher Turnover, Percentage Of Teachers With 5 Years Or Less, Principal Tenure, FRPL Percentage, Percentage Of Students Who Moved Schools, And LEP Percentage For Elementary Schools Grouped By CSI, TSI, And All Other Schools**

| School Type | School Count | Teacher Turnover | Percent Of Teachers 5 Years Or Less | Principal Years At School | Percent FRPL | Percent Students Who Moved Schools | LEP Percent |
|---|---|---|---|---|---|---|---|
| CSI elementary | 33 | 26.3% | 39.3% | 5.4 | 85.8% | 7.3% | 14.1% |
| TSI elementary | 156 | 19.2 | 32.4 | 5.4 | 71.2 | 4.9 | 13.1 |
| All other elementary | 518 | 15.9 | 29.4 | 5.8 | 61.2 | 3.5 | 3.7 |
| All elementary schools | 702* | 17.1% | 30.5% | 5.6 | 64.5% | 3.9% | 6.2% |

Note: FRPL = free and reduced-price lunch; LEP = limited English proficiency; CSI = Comprehensive Support and Improvement; TSI = Targeted Support and Improvement.
* Five elementary schools were both CSI and TSI during school year 2022 and/or 2023.
Source: Staff analysis of data from the Kentucky Department of Education.

**Table K.2**
**Percentage Of Elementary Schools In Highest And Lowest Teacher Turnover Categories For CSI, TSI, And All Other Schools**

| | Percent Of Schools | |
|---|---|---|
| School Type | Highest Teacher Turnover | Lowest Teacher Turnover |
| CSI elementary | 51.5% | 3.0% |
| TSI elementary | 23.1 | 8.3 |
| All other elementary | 10.6 | 16.2 |
| All elementary schools | 15.0% | 14.0% |

Note: CSI = Comprehensive Support and Improvement; TSI = Targeted Support and Improvement.
* Five elementary schools were both CSI and TSI during school year 2022 and/or 2023.
Source: Staff analysis of data from the Kentucky Department of Education.

## Middle Schools

### Table K.3
### Teacher Turnover, Percentage Of Teachers With 5 Years Or Less, Principal Tenure, FRPL Percentage, Percentage Of Students Who Moved Schools, And LEP Percentage For Middle Schools Grouped By CSI, TSI, And All Other Schools

| School Type | School Count | Teacher Turnover | Percent Of Teachers 5 Years Or Less | Principal Years At School | FRPL Percent | Percent Students Who Moved Schools | LEP Percent |
|---|---|---|---|---|---|---|---|
| CSI middle | 12 | 23.9% | 37.1% | 2.3 | 79.8% | 6.8% | 12.7% |
| TSI middle | 165 | 21.8 | 36.1 | 3.9 | 60.9 | 5.0 | 3.7 |
| All other middle | 143 | 17.5 | 32.2 | 6.3 | 64.6 | 5.4 | 0.6 |
| All middle schools | 317* | 19.9% | 34.4% | 4.9 | 63.2% | 5.3% | 2.6% |

Note: FRPL = free and reduced-price lunch; LEP = limited English proficiency; CSI = Comprehensive Support and Improvement; TSI = Targeted Support and Improvement.
* Three middle schools were both CSI and TSI during school year 2022 and/or 2023.
Source: Staff analysis of data from the Kentucky Department of Education.

### Table K.4
### Percentage Of Middle Schools In Highest And Lowest Teacher Turnover Categories For CSI, TSI, And All Other Schools

| | Percent Of Schools | |
|---|---|---|
| School Type | Highest Teacher Turnover | Lowest Teacher Turnover |
| CSI middle | 25.0% | 0.0% |
| TSI middle | 22.4 | 9.1 |
| All other middle | 9.8 | 21.7 |
| All middle schools | 16.7% | 14.5% |

Note: CSI = Comprehensive Support and Improvement; TSI = Targeted Support and Improvement.
* Three middle schools were both CSI and TSI during school year 2022 and/or 2023.
Source: Staff analysis of data from the Kentucky Department of Education.

## High Schools

### Table K.5
### Teacher Turnover, Percentage Of Teachers With 5 Years Or Less, Principal Tenure, FRPL Percentage, Percentage Of Students Who Moved Schools, And LEP Percentage For High Schools Grouped By CSI, TSI, And All Other Schools

| School Type | School Count | Teacher Turnover | Percent Of Teachers 5 Years Or Less | Principal Years At School | FRPL Percent | Percent Students Who Moved Schools | LEP Percent |
|---|---|---|---|---|---|---|---|
| CSI high | 6 | 22.0% | 34.6% | 2.8 | 82.3% | 8.3% | 18.5% |
| TSI high | 83 | 17.4 | 30.8 | 4.5 | 56.7 | 5.5 | 4.8 |
| All other high | 142 | 17.5 | 32.7 | 4.7 | 56.6 | 4.5 | 0.9 |
| All high schools | 227 | 17.5% | 32.0% | 4.6 | 56.9% | 4.9% | 2.5% |

Note: FRPL = free and reduced-price lunch; LEP = limited English proficiency; CSI = Comprehensive Support and Improvement; TSI = Targeted Support and Improvement.
Source: Staff analysis of data from the Kentucky Department of Education.

### Table K.6
### Percentage Of High Schools In Highest And Lowest Teacher Turnover Categories For CSI, TSI, And All Other Schools

| | Percent Of Schools | |
|---|---|---|
| School Type | Highest Teacher Turnover | Lowest Teacher Turnover |
| CSI high | 16.7% | 0.0% |
| TSI high | 12.0 | 9.6 |
| All other high | 17.6 | 16.9 |
| All high schools | 15.4% | 14.1% |

Note: CSI = Comprehensive Support and Improvement; TSI = Targeted Support and Improvement.
Source: Staff analysis of data from the Kentucky Department of Education.

## Comparison Of Working Conditions Survey Favorability For CSI And TSI Schools Relative To All Others By Level

Tables K.7 to K.9 show favorability ratings by category, of teachers in Comprehensive Support and Improvement (CSI) schools, Targeted Support and Improvement (TSI) schools, and all other schools. Data for each group of schools is calculated from all of the teachers who responded to the survey in those schools.

Note that, overall, teacher response rates are much lower in CSI schools, especially middle schools.[a] It is possible that the data reported in these tables reflect response bias from differences in the teachers who responded to the survey and those who did not. Student climate and safety

[a] While 64 percent of schools overall reached the OEA threshold of 50 percent of teachers for any schools to be included in a school-level analysis, only 35 percent of CSI schools met that threshold. Response rates were particularly low in CSI middle schools; only 1 of 12 (8 percent) met the threshold.

survey data shown in Table K.10 provide an additional, representative source of data suggesting greater climate and safety challenges in CSI schools compared with all lowest-impact schools.

**Table K.7**
**Average Working Conditions Favorability Rates**
**For CSI, TSI, And All Other Elementary Schools**

| Category | CSI Elementary Schools | TSI Elementary Schools | All Other Elementary Schools | All Elementary Schools |
|---|---|---|---|---|
| Educating all students | 68.9% | 69.6% | 69.2% | 69.3% |
| Emotional well-being | 40.2 | 47.4 | 56.9 | 54.1 |
| Feedback and coaching | 48.5 | 53.1 | 63.2 | 60.4 |
| Managing student behavior | 47.1 | 62.3 | 72.7 | 69.4 |
| Professional learning | 53.4 | 57.1 | 65.1 | 62.8 |
| Resources | 38.6 | 44.9 | 52.1 | 49.9 |
| School climate | 48.3 | 61.3 | 72.8 | 69.3 |
| School leadership | 54.4 | 61.7 | 71.6 | 68.7 |
| Staff/leadership relationships | 66.0 | 72.9 | 80.2 | 78.0 |
| Overall impact average | 51.7% | 58.9% | 67.1% | 64.7% |

Note: CSI = Comprehensive Support and Improvement; TSI = Targeted Support and Improvement.
Source: Staff analysis of data from the Kentucky Department of Education.

**Table K.8**
**Average Working Conditions Favorability Rates**
**For CSI, TSI, And All Other Middle Schools**

| Category | CSI Middle Schools | TSI Middle Schools | All Other Middle Schools | All Middle Schools |
|---|---|---|---|---|
| Educating all students | 60.2% | 64.7% | 68.8% | 66.3% |
| Emotional well-being | 32.0 | 46.8 | 59.4 | 51.8 |
| Feedback and coaching | 36.2 | 51.4 | 62.9 | 55.8 |
| Managing student behavior | 33.8 | 56.3 | 73.0 | 62.8 |
| Professional learning | 36.5 | 52.3 | 64.6 | 57.0 |
| Resources | 33.6 | 44.6 | 55.3 | 48.7 |
| School climate | 28.5 | 50.4 | 68.4 | 57.4 |
| School leadership | 38.3 | 60.1 | 71.1 | 64.2 |
| Staff/leadership relationships | 54.5 | 73.5 | 80.8 | 76.1 |
| Overall impact average | 39.3% | 55.6% | 67.1% | 60.0% |

Note: CSI = Comprehensive Support and Improvement; TSI = Targeted Support and Improvement.
Source: Staff analysis of data from the Kentucky Department of Education.

**Table K.9**
**Average Working Conditions Favorability Rates**
**For CSI, TSI, And All Other High Schools**

| Category | CSI High Schools | TSI High Schools | All Other High Schools | All High Schools |
|---|---|---|---|---|
| Educating all students | 67.9% | 61.5% | 62.6% | 62.2% |
| Emotional well-being | 33.4 | 45.5 | 50.4 | 48.4 |
| Feedback and coaching | 35.9 | 42.8 | 46.8 | 45.1 |
| Managing student behavior | 26.5 | 53.6 | 62.6 | 58.8 |
| Professional learning | 40.4 | 45.6 | 49.7 | 48.0 |
| Resources | 28.6 | 45.0 | 48.8 | 47.1 |
| School climate | 29.0 | 45.2 | 52.9 | 49.7 |
| School leadership | 39.9 | 52.2 | 57.6 | 55.4 |
| Staff/leadership relationships | 56.1 | 68.3 | 72.4 | 70.7 |
| Overall impact average | 39.8% | 51.1% | 56.0% | 53.9% |

Note: CSI = Comprehensive Support and Improvement; TSI = Targeted Support and Improvement.
Source: Staff analysis of data from the Kentucky Department of Education.

As shown in Table K.10, average safety and climate index data derived from student surveys in 2022 and 2023 show that index data for CSI schools are lower than for lowest-impact schools as a group.

**Table K.10**
**Average Safety And Climate Index By School Level and CSI Schools**
**2022 And 2023**

| | Elementary | | Middle | | High | |
|---|---|---|---|---|---|---|
| School Category | Number Of Schools | Average Index | Number Of Schools | Average Index | Number Of Schools | Average Index |
| Highest impact | 99 | 81 | 47 | 74 | 28 | 67 |
| Lowest impact | 96 | 73 | 47 | 63 | 30 | 60 |
| CSI | 33 | 70 | 12 | 60 | 6 | 58 |
| Total | 700 | 77 | 316 | 68 | 226 | 62 |

Note: CSI = Comprehensive Support and Improvement.
Source: Staff analysis of data from the Kentucky Department of Education.

## Teacher Turnover, Principal Tenure, And Other Metrics For Schools Grouped By Average Percentage Of Students Eligible For FRPL

This section provides data for schools grouped by the average percentage of students eligible for free and reduced-price lunch (FRPL). For schools in each category, Tables K.11 to K.17 show data for teacher turnover, percentage of teachers with 5 years of experience or less, principal tenure, percentage of students who moved schools, and percentage of LEP students.

Tables showing the percentages of schools in the highest and lowest categories for teacher turnover grouped by the percentage of students eligible for FRPL for each school level also appear below.

## Elementary

The 110 elementary schools in the highest category for FRPL had average FRPL percentages that were more than 2.5 times that of the elementary schools in the lowest FRPL category. Elementary schools in the highest FRPL category had the highest rates of teacher turnover and the most teachers with 5 years of experience or less. These highest-poverty elementary schools did have principals with the most years at the current school on average. The elementary schools in the highest FRPL category also had nearly 3 times the percentage of students who moved schools at least once, and 3.4 times the percentage of LEP students, relative to the elementary schools in the lowest FRPL category.

**Table K.11**
**Teacher Turnover, Principal Tenure, And Select Student Characteristic Metrics For Elementary Schools Grouped By Percentage Of Students Eligible For FRPL**

| FRPL Category | School Count | Teacher Turnover | Percent Teachers 5 Years Or Less | Principal Years At School | FRPL Percent | Percent Of Students Who Moved Schools | LEP Percent |
|---|---|---|---|---|---|---|---|
| Highest | 110 | 21.2% | 36.7% | 6.3 | 88.3% | 6.3% | 14.1% |
| High | 175 | 16.7 | 32.6 | 5.8 | 75.8 | 4.6 | 6.2 |
| Average | 185 | 16.6 | 30.9 | 5.5 | 64.9 | 3.5 | 3.8 |
| Low | 126 | 15.3 | 26.2 | 5.4 | 53.0 | 3.1 | 4.5 |
| Lowest | 106 | 16.3 | 25.0 | 5.3 | 33.8 | 2.2 | 4.1 |
| All elementary schools | 702 | 17.1% | 30.5% | 5.6 | 64.5% | 3.9% | 6.2% |

Note: FRPL = free or reduced-price lunch; LEP = limited English proficiency.
Source: Staff analysis of data from the Kentucky Department of Education.

Table K.12 shows the percentage of elementary schools in the highest and lowest teacher turnover categories for elementary schools grouped by the percentage of students eligible for FRPL. Elementary schools in the highest FRPL category were in the highest teacher turnover category at more than twice the rate of elementary schools in the lowest FRPL category.

**Table K.12**
**Percentage Of Elementary Schools In Highest And Lowest Categories For Teacher Turnover Grouped By Percentage Of Students Eligible For FRPL**

| FRPL Category | Highest Teacher Turnover | Lowest Teacher Turnover |
|---|---|---|
| Highest | 29.1% | 10.0% |
| High | 15.4 | 16.0 |
| Average | 11.9 | 13.5 |
| Low | 7.9 | 17.5 |
| Lowest | 13.2 | 11.3 |
| All elementary schools | 15.0% | 14.0% |

Note: FRPL = free or reduced-price lunch.
Source: Staff analysis of data from the Kentucky Department of Education.

## Middle Schools

Middle schools in the highest FRPL category also had the highest rates of teacher turnover and percentage of teachers with 5 years of experience or less. These highest-poverty middle schools also had principals with the most years at their current school on average relative to the middle schools in the other categories. The highest average percentages of students who moved schools and LEP students were also in the highest FRPL category middle schools.

**Table K.13**
**Teacher Turnover, Principal Tenure, And Select Student Characteristic Metrics For Middle Schools Grouped By Percentage Of Students Eligible For FRPL**

| FRPL Category | School Count | Teacher Turnover | Percent Teachers 5 Years Or Less | Principal Years At School | FRPL Percent | Percent Of Students Who Moved Schools | LEP Percent |
|---|---|---|---|---|---|---|---|
| Highest | 50 | 21.7% | 40.5% | 5.6 | 84.2% | 7.7% | 4.0% |
| High | 76 | 20.3 | 36.7 | 4.5 | 73.5 | 5.6 | 2.5 |
| Average | 96 | 19.7 | 33.7 | 4.6 | 63.0 | 5.1 | 2.3 |
| Low | 44 | 18.3 | 29.3 | 4.7 | 52.6 | 4.7 | 2.4 |
| Lowest | 51 | 19.4 | 30.8 | 5.5 | 36.7 | 3.3 | 2.3 |
| All middle schools | 317 | 19.9 | 34.4 | 4.9 | 63.2 | 5.3 | 2.6 |

Note: FRPL = free or reduced-price lunch; LEP = limited English proficiency.
Source: Staff analysis of data from the Kentucky Department of Education.

Table K.14 shows the percentage of middle schools in the highest and lowest teacher turnover categories for elementary schools grouped by the percentage of students eligible for FRPL. Middle schools in the highest FRPL category had the most schools from the highest teacher turnover category and the least schools in the lowest teacher turnover category on average.

**Table K.14**
**Percentage Of Middle Schools In Highest And Lowest Categories For Teacher Turnover Grouped By Percentage Of Students Eligible For FRPL**

| FRPL Category | Highest Teacher Turnover | Lowest Teacher Turnover |
|---|---|---|
| Highest | 24.0% | 12.0% |
| High | 22.4 | 13.2 |
| Average | 13.5 | 12.5 |
| Low | 6.8 | 18.2 |
| Lowest | 15.7 | 19.6 |
| All middle schools | 16.7% | 14.5% |

Note: FRPL = free or reduced-price lunch.
Source: Staff analysis of data from the Kentucky Department of Education.

## High Schools

The trends found in elementary and middle schools in the highest FRPL category were also found in high schools.

**Table K.15**
**Teacher Turnover, Principal Tenure, And Select Student Characteristic Metrics For High Schools Grouped By Percentage Of Students Eligible For FRPL**

| FRPL Category | School Count | Teacher Turnover | Percent Teachers 5 Years Or Less | Principal Years At School | FRPL Percent | Percent Of Students Who Moved Schools | LEP Percent |
|---|---|---|---|---|---|---|---|
| Highest | 38 | 19.9% | 37.3% | 5.2 | 79.4% | 7.5% | 6.2% |
| High | 47 | 17.2 | 33.6 | 5.3 | 67.2 | 4.2 | 2.0 |
| Average | 56 | 17.0 | 32.6 | 3.9 | 57.0 | 5.1 | 1.5 |
| Low | 50 | 17.6 | 29.5 | 4.6 | 47.3 | 4.4 | 2.0 |
| Lowest | 36 | 15.8 | 26.7 | 4.3 | 32.9 | 3.3 | 1.7 |
| All high schools | 227 | 17.5% | 32.0% | 4.6 | 56.9% | 4.9% | 2.5% |

Note: FRPL = free or reduced-price lunch; LEP = limited English proficiency.
Source: Staff analysis of data from the Kentucky Department of Education.

Table K.16 shows the percentage of high schools in the highest and lowest teacher turnover categories for high schools grouped by the percentage of students eligible for FRPL. High schools in the highest FRPL category had the most schools in the highest turnover category, and the lowest percentage of schools in the lowest teacher turnover category for schools at all levels in the lowest FRPL category.

**Table K.16**
**Percentage Of High Schools In Highest And Lowest Categories For Teacher Turnover Grouped By Percentage Of Students Eligible For FRPL**

| FRPL Category | Highest Teacher Turnover | Lowest Teacher Turnover |
|---|---|---|
| Highest | 23.7% | 2.6% |
| High | 17.0 | 23.4 |
| Average | 16.1 | 14.3 |
| Low | 12.0 | 10.0 |
| Lowest | 8.3 | 19.4 |
| All high schools | 15.4% | 14.1% |

Note: FRPL = free or reduced-price lunch.
Source: Staff analysis of data from the Kentucky Department of Education.

## Table K.17
## Number And Percentage Of Schools Identified For CSI In 2022 Or 2023 And Average Teacher Turnover, All Schools And Schools With Higher Percentages Of FRPL, Black, Or LEP Students

| School Type | Count | CSI Count | Percent CSI | Teacher Turnover |
|---|---|---|---|---|
| All schools | 1,246 | 51 | 4% | 18% |
| 75% or more FRPL | 321 | 46 | 14 | 20 |
| 50% or more Black | 58 | 29 | 50 | 24 |
| 20% or more LEP | 80 | 15 | 19 | 22 |

Note: CSI = Comprehensive Support and Improvement; FRPL = free or reduced-price lunch; LEP = limited English proficiency.
Source: Staff analysis of data provided by the Kentucky Department of Education.

# Appendix L

## Count Of Schools By District With 75 Percent Or More FRPL, 50 Percent Or More Black Students, And 20 Percent Or More LEP Students

### Table L.1
### Number And Percentage Of Schools With At Least 75 Percent Of Students Eligible For FRPL, With At Least 50 Percent Black Students, And With At Least 20 Percent LEP Students, By District

| | Count Of Schools | | | | Percent Of Schools In District | | |
|---|---|---|---|---|---|---|---|
| District | All Schools | FRPL 75% Or More | Black 50% Or More | LEP 20% Or More | FRPL 75% Or More | Black 50% Or More | LEP 20% Or More |
| Adair County | 3 | 1 | 0 | 0 | 33.3% | 0.0% | 0.0% |
| Allen County | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Anchorage Ind. | 2 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Anderson County | 5 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Ashland Ind. | 7 | 1 | 0 | 0 | 14.3 | 0.0 | 0.0 |
| Augusta Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Ballard County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Barbourville Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Bardstown Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Barren County | 9 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Bath County | 4 | 3 | 0 | 0 | 75.0 | 0.0 | 0.0 |
| Beechwood Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Bell County | 13 | 10 | 0 | 0 | 76.9 | 0.0 | 0.0 |
| Bellevue Ind. | 3 | 1 | 0 | 0 | 33.3 | 0.0 | 0.0 |
| Berea Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Boone County | 25 | 1 | 0 | 3 | 4.0 | 0.0 | 12.0 |
| Bourbon County | 5 | 1 | 0 | 0 | 20.0 | 0.0 | 0.0 |
| Bowling Green Ind. | 7 | 3 | 0 | 2 | 42.9 | 0.0 | 28.6 |
| Boyd County | 6 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Boyle County | 5 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Bracken County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Breathitt County | 5 | 3 | 0 | 0 | 60.0 | 0.0 | 0.0 |
| Breckinridge County | 6 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Bullitt County | 22 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Burgin Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Butler County | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Caldwell County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Calloway County | 5 | 1 | 0 | 0 | 20.0 | 0.0 | 0.0 |
| Campbell County | 7 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Campbellsville Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Carlisle County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Carroll County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Carter County | 10 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Casey County | 5 | 1 | 0 | 0 | 20.0 | 0.0 | 0.0 |
| Caverna Ind. | 3 | 3 | 0 | 0 | 100.0 | 0.0 | 0.0 |
| Christian County | 12 | 3 | 2 | 0 | 25.0 | 16.7 | 0.0 |
| Clark County | 8 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |

| | Count Of Schools | | | | Percent Of Schools In District | | |
|---|---|---|---|---|---|---|---|
| District | All Schools | FRPL 75% Or More | Black 50% Or More | LEP 20% Or More | FRPL 75% Or More | Black 50% Or More | LEP 20% Or More |
| Clay County | 9 | 6 | 0 | 0 | 66.7 | 0.0 | 0.0 |
| Clinton County | 3 | 2 | 0 | 0 | 66.7 | 0.0 | 0.0 |
| Cloverport Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Corbin Ind. | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Covington Ind. | 7 | 7 | 1 | 2 | 100.0 | 14.3 | 28.6 |
| Crittenden County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Cumberland County | 3 | 2 | 0 | 0 | 66.7 | 0.0 | 0.0 |
| Danville Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Daviess County | 17 | 0 | 0 | 1 | 0.0 | 0.0 | 5.9 |
| Dawson Springs Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Dayton Ind. | 3 | 3 | 0 | 0 | 100.0 | 0.0 | 0.0 |
| East Bernstadt Ind. | 2 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Edmonson County | 6 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Elizabethtown Ind. | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Elliott County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Eminence Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Erlanger-Elsmere Ind. | 6 | 1 | 0 | 0 | 16.7 | 0.0 | 0.0 |
| Estill County | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Fairview Ind. | 3 | 1 | 0 | 0 | 33.3 | 0.0 | 0.0 |
| Fayette County | 56 | 18 | 5 | 13 | 32.1 | 8.9 | 23.2 |
| Fleming County | 6 | 1 | 0 | 0 | 16.7 | 0.0 | 0.0 |
| Floyd County | 17 | 11 | 0 | 0 | 64.7 | 0.0 | 0.0 |
| Fort Thomas Ind. | 5 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Frankfort Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Franklin County | 10 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Fulton County | 3 | 1 | 0 | 0 | 33.3 | 0.0 | 0.0 |
| Fulton Ind. | 3 | 3 | 3 | 0 | 100.0 | 100.0 | 0.0 |
| Gallatin County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Garrard County | 5 | 1 | 0 | 0 | 20.0 | 0.0 | 0.0 |
| Glasgow Ind. | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Grant County | 6 | 2 | 0 | 0 | 33.3 | 0.0 | 0.0 |
| Graves County | 8 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Grayson County | 6 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Green County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Greenup County | 7 | 3 | 0 | 0 | 42.9 | 0.0 | 0.0 |
| Hancock County | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Hardin County | 20 | 1 | 0 | 0 | 5.0 | 0.0 | 0.0 |
| Harlan County | 17 | 16 | 0 | 0 | 94.1 | 0.0 | 0.0 |
| Harlan Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Harrison County | 6 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Hart County | 11 | 2 | 0 | 0 | 18.2 | 0.0 | 0.0 |
| Hazard Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Henderson County | 11 | 1 | 0 | 0 | 9.1 | 0.0 | 0.0 |
| Henry County | 5 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Hickman County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Hopkins County | 14 | 1 | 0 | 0 | 7.1 | 0.0 | 0.0 |
| Jackson County | 5 | 1 | 0 | 0 | 20.0 | 0.0 | 0.0 |
| Jackson Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Jefferson County | 134 | 74 | 44 | 46 | 55.2 | 32.8 | 34.3 |
| Jenkins Ind. | 3 | 3 | 0 | 0 | 100.0 | 0.0 | 0.0 |
| Jessamine County | 10 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |

| District | Count Of Schools | | | | Percent Of Schools In District | | |
|---|---|---|---|---|---|---|---|
| | All Schools | FRPL 75% Or More | Black 50% Or More | LEP 20% Or More | FRPL 75% Or More | Black 50% Or More | LEP 20% Or More |
| Johnson County | 7 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Kenton County | 18 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Knott County | 14 | 9 | 0 | 0 | 64.3 | 0.0 | 0.0 |
| Knox County | 11 | 10 | 0 | 0 | 90.9 | 0.0 | 0.0 |
| LaRue County | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Laurel County | 15 | 3 | 0 | 0 | 20.0 | 0.0 | 0.0 |
| Lawrence County | 7 | 2 | 0 | 0 | 28.6 | 0.0 | 0.0 |
| Lee County | 3 | 3 | 0 | 0 | 100.0 | 0.0 | 0.0 |
| Leslie County | 9 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Letcher County | 11 | 6 | 0 | 0 | 54.5 | 0.0 | 0.0 |
| Lewis County | 6 | 3 | 0 | 0 | 50.0 | 0.0 | 0.0 |
| Lincoln County | 7 | 2 | 0 | 0 | 28.6 | 0.0 | 0.0 |
| Livingston County | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Logan County | 11 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Ludlow Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Lyon County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Madison County | 17 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Magoffin County | 5 | 2 | 0 | 0 | 40.0 | 0.0 | 0.0 |
| Marion County | 7 | 1 | 0 | 0 | 14.3 | 0.0 | 0.0 |
| Marshall County | 9 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Martin County | 5 | 1 | 0 | 0 | 20.0 | 0.0 | 0.0 |
| Mason County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Mayfield Ind. | 3 | 1 | 0 | 1 | 33.3 | 0.0 | 33.3 |
| McCracken County | 11 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| McCreary County | 4 | 4 | 0 | 0 | 100.0 | 0.0 | 0.0 |
| McLean County | 5 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Meade County | 8 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Menifee County | 3 | 3 | 0 | 0 | 100.0 | 0.0 | 0.0 |
| Mercer County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Metcalfe County | 3 | 1 | 0 | 0 | 33.3 | 0.0 | 0.0 |
| Middlesboro Ind. | 3 | 2 | 0 | 0 | 66.7 | 0.0 | 0.0 |
| Monroe County | 5 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Montgomery County | 6 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Morgan County | 6 | 2 | 0 | 0 | 33.3 | 0.0 | 0.0 |
| Muhlenberg County | 8 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Murray Ind. | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Nelson County | 11 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Newport Ind. | 3 | 3 | 0 | 0 | 100.0 | 0.0 | 0.0 |
| Nicholas County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Ohio County | 8 | 1 | 0 | 0 | 12.5 | 0.0 | 0.0 |
| Oldham County | 16 | 0 | 0 | 1 | 0.0 | 0.0 | 6.3 |
| Owen County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Owensboro Ind. | 8 | 4 | 0 | 0 | 50.0 | 0.0 | 0.0 |
| Owsley County | 3 | 3 | 0 | 0 | 100.0 | 0.0 | 0.0 |
| Paducah Ind. | 5 | 2 | 3 | 0 | 40.0 | 60.0 | 0.0 |
| Paintsville Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Paris Ind. | 3 | 2 | 0 | 0 | 66.7 | 0.0 | 0.0 |
| Pendleton County | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Perry County | 16 | 11 | 0 | 0 | 68.8 | 0.0 | 0.0 |
| Pike County | 26 | 11 | 0 | 0 | 42.3 | 0.0 | 0.0 |
| Pikeville Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |

| District | Count Of Schools | | | | Percent Of Schools In District | | |
|---|---|---|---|---|---|---|---|
| | All Schools | FRPL 75% Or More | Black 50% Or More | LEP 20% Or More | FRPL 75% Or More | Black 50% Or More | LEP 20% Or More |
| Pineville Ind. | 3 | 3 | 0 | 0 | 100.0 | 0.0 | 0.0 |
| Powell County | 5 | 1 | 0 | 0 | 20.0 | 0.0 | 0.0 |
| Pulaski County | 12 | 4 | 0 | 0 | 33.3 | 0.0 | 0.0 |
| Raceland-Worthington Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Robertson County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Rockcastle County | 5 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Rowan County | 6 | 2 | 0 | 0 | 33.3 | 0.0 | 0.0 |
| Russell County | 5 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Russell Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Russellville Ind. | 3 | 2 | 0 | 0 | 66.7 | 0.0 | 0.0 |
| Science Hill Ind. | 2 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Scott County | 14 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Shelby County | 12 | 0 | 0 | 3 | 0.0 | 0.0 | 25.0 |
| Simpson County | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Somerset Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Southgate Ind. | 2 | 2 | 0 | 0 | 100.0 | 0.0 | 0.0 |
| Spencer County | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Taylor County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Todd County | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Trigg County | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Trimble County | 4 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Union County | 5 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Walton-Verona Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Warren County | 23 | 5 | 0 | 7 | 21.7 | 0.0 | 30.4 |
| Washington County | 5 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Wayne County | 3 | 3 | 0 | 0 | 100.0 | 0.0 | 0.0 |
| Webster County | 6 | 1 | 0 | 1 | 16.7 | 0.0 | 16.7 |
| Whitley County | 8 | 6 | 0 | 0 | 75.0 | 0.0 | 0.0 |
| Williamsburg Ind. | 3 | 3 | 0 | 0 | 100.0 | 0.0 | 0.0 |
| Williamstown Ind. | 3 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Wolfe County | 5 | 4 | 0 | 0 | 80.0 | 0.0 | 0.0 |
| Woodford County | 6 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| State total | 1,246 | 321 | 58 | 80 | 25.8% | 4.7% | 6.4% |

Note: FRPL = free or reduced-price lunch; LEP = limited English proficiency; Ind. = independent.
Source: Staff analysis of data from the Kentucky Department of Education.

# Endnotes

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[3] Paul Manna. "States As Leaders, Followers, And Partners: Lessons From The ESSA Leadership Learning Community And The University Principal Preparation Initiative." Wallace Foundation, Nov. 2022, p. 1.
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[7] Ibid.
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[12] Kentucky. Legislative Research Commission. Office of Education Accountability. *Overview Of Achievement Gaps In Kentucky Schools*, Research Report no. 429. 2016.
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[16] Kentucky. Legislative Research Commission. Office of Education Accountability. *Assistance To Low-Achieving Schools And Districts: Strengths, Limitations, And Continuing Challenges*, Research Report no. 378. 2010.
[17] Carlos Jamieson et al. "50-State Comparison: States' School Improvement Policies." Education Commission of the States, Sept. 2022.
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[21] Kelly Foster, associate commissioner, Office of Continuous Improvement and Support, Kentucky Department of Education. "Re: two quick questions re KRS 160.346 & key dates for OEA School Impact Report." Email to Deborah Nelson, Oct. 11, 2024.
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