Advanced International Journal for Research (AIJFR)
E-ISSN: 3048-7641 ● Website: www.aijfr.com ● Email: editor@aijfr.com

Modern Segregation of Public Schools through Public School Zoning and Its Effects on Secondary Education

Kesler Frost[1], Dr. Danielle Neeley Stewart[2]

[1]Author, [2]Supervisor

Abstract

This thesis examines the persistence of racial and socioeconomic stratification in Arkansas public schools through the mechanism of school zoning. Despite historical rulings like *Brown v. Board of Education*, modern educational landscapes in districts such as Russellville, Conway, and Pottsville remain deeply divided. Utilizing a mixed-methods approach, the study integrates quantitative demographic and performance data with a 2025 survey of 322 Russellville students to explore how spatial organization impacts secondary education outcomes. The research applies spatial justice theory to demonstrate how municipal zoning ordinances, such as exclusionary housing policies and "rental deserts" intersect with school attendance boundaries to reinforce de facto segregation. Findings indicate that students in higher-income, predominantly white zones perceive significantly greater preparedness and access to advanced academic programs, such as Gifted and Talented tracks and robotics. Conversely, schools in lower-income zones exhibit higher concentrations of English language learners and lower standardized testing proficiency. By situating local practices within national legal precedents like *Shaw v. Reno* and *Milliken v. Bradley*, this work highlights the systemic nature of educational inequality. The study concludes that addressing these disparities requires significant policy reform, including decoupling school assignment from residential addresses and implementing broader municipal zoning changes to ensure equitable access to educational opportunities for all students.

1. Introduction

A recent Gallup report shows that many fifth- through twelfth-grade students give their schools low marks, citing unequal access to resources, inconsistent learning environments, and noticeable differences in school quality across communities.(Gallup, 2024) These student perceptions reflect a deeper structural issue that continues to shape educational experiences in the United States: school zoning. In the United States students within our schools are greatly divided and separated by their race and socioeconomic status, despite many integrational laws and rulings. The reason for this is simple: School Zoning. Zones are drawn around schools and used in order to determine what students attend what schools, more often than not this results in segregated schools by both race and socioeconomic status. In 1954 the supreme court case Brown v. The Board of Education ruled that it is unconstitutional to have schools that are separated by race. (Brown v. Board of Education, 1954) Despite this ruling, schools are still separated and the lines that separate school districts are a big part of the problem. In Arkansas, specifically in the Russellville, Conway, and Pottsville School Districts, the rules for which school a student may attend is based on where they live. This matters a lot for what kids can do in the future. This thesis looks at how

zoning policies affect the socioeconomic makeup of Arkansas public schools by looking at populations, past events, and current law... The goal is to figure out how and why segregation has persisted in schools today and what effects it has on students. The work situates current zoning practices within broader national trends, examines local zoning codes and their impact on demographic composition, and evaluates legal precedents such as Shaw v. Reno and Milliken v. Bradley. I viewed survey data from students in the Russellville School District which showed how the zoning rules affected the students' daily lives. Students said that there are differences in how many different types of people are at each school, how much money their families make, and what kinds of special programs they can take.

2. Research Gap

Scholars such as Kasten and others have documented how de facto segregation emerges from academic tracking and residential assignment, yet few studies examine how these mechanisms operate within smaller Arkansas districts where zoning codes, housing patterns, and school boundaries intersect. The literature identifies national trends but leaves a gap in understanding how these structural forces shape student opportunity at the local level. This study addresses that gap by applying spatial justice theory to three Arkansas districts, demonstrating how zoning practices continue to reproduce racial and socioeconomic stratification, and how students view, feel, and learn these differences among themselves and their peers.

3. Literature Review

Historical Context of School Segregation in Arkansas

Arkansas has held groundbreaking rulings in the segregation of schools. The Segregation Act of 1868 stated schools had to be separate, which forced African American communities to accept schools that were not non-comparable to that of their Caucasian counterparts. Arkansas too enforced many laws that allowed segregation to remain. All of these laws made it clear that African American Arkansas was lesser than that of anyone else within the state. (Arkansas General Assembly, 1868)

The Brown v. Board of Education decision was meant to create equal educational opportunities, but putting integration into practice proved far more difficult. The crisis at Little Rock Central High School in 1957 made it clear that many communities strongly opposed Black and white students attending school together. In the years that followed, large numbers of white families left urban areas, and school districts often used zoning and boundary changes to maintain separation even when assigning students by race was illegal. As a result, counties such as Pope County (Russellville) and Faulkner County (Conway) never fully integrated in practice. (Little Rock School District, 1957) (Historical Accounts of Little Rock Crisis, n.d.)

Segregation also persisted through economic inequality. Because school assignment is tied to where families live and because housing values vary sharply across neighborhoods, school boundaries often function like barriers that reinforce racial and economic divides. These boundaries shape which schools students can attend and what resources they have access to. As shown in Appendix A, schools such as Crawford Elementary and Mattison Elementary continue to reflect these long-standing racial and socioeconomic imbalances.

Theoretical Frameworks on Segregation and School Zoning

The central theoretical framework for this analysis draws from the concepts of de jure and de facto segregation, spatial justice, and the critical intersection of education law and housing policy. Danielle Kasten argues persuasively that academic tracking and zoning policies can constitute de jure segregation under the *Equal Protection* doctrine, especially where these practices lead to within-school or between-school disparities that mirror those historically reinforced by law. (Kasten, D. 2014)

De jure segregation was legally enforced by government policies, such as Jim Crow laws, until it was ruled unconstitutional in Brown v. Board of Education, while de facto segregation occurs without laws, developing from social patterns, housing discrimination like Redlining, and economic inequality.

Spatial theories argue that access to schools is determined not only by decisions made by school districts but also by where people live and the policies that govern those areas. Historical housing discrimination, such as redlining, continues to influence these patterns today. Research by the National Low Income Housing Coalition on housing "deserts" shows that when cities restrict the construction of apartments or other affordable housing, they create areas where people with lower incomes cannot afford to live. (National Low Income Housing Coalition, n.d.) As a result, communities become separated by income and often by race, even when the laws themselves do not explicitly mention race. These patterns demonstrate how access to education is closely connected to housing policies and spatial organization. Because high-performing schools are often located in wealthier neighborhoods with high rates of homeownership, spatial barriers can limit educational opportunities for students from lower-income communities. Evidence of these zoning and housing policies in three Arkansas school districts can be found in Appendix A, Table 2A. (National Low Income Housing Coalition, n.d.)

Survey data from Russellville further suggests that segregation continues to exist in practice. Students at Crawford reported fewer opportunities to participate in advanced or enriched learning programs. In contrast, students at Sequoyah and Center Valley are more frequently selected for gifted or specialized programs. This difference in opportunities reflects an unequal distribution of educational resources across the district. Although zoning boundaries and school assignment policies do not explicitly reference race, their effects can still produce unequal outcomes. The Russellville survey illustrates how zoning patterns and school boundaries may indirectly maintain segregation.

Court decisions have also shaped how these issues are addressed. In Shaw v. Reno (1993), the Supreme Court ruled that redrawing district boundaries primarily based on race violates the Equal Protection Clause of the Fourteenth Amendment. (Shaw v. Reno, 1993) As a result, policies that appear to rely heavily on race must undergo strict judicial scrutiny. However, the decision also left some ambiguity, allowing district boundaries to remain in place even when they produce racially concentrated outcomes, as long as race is not proven to be the primary factor. Another key case, Milliken v. Bradley (1974), reinforced the importance of school district boundaries by ruling that desegregation remedies generally cannot cross district lines unless there is clear evidence of interdistrict discrimination. This decision significantly limited large-scale desegregation efforts across metropolitan areas. (Milliken v. Bradley, 1974)

National and State Policy Contexts

School integration in Arkansas and elsewhere after the Brown decision is to make school districts and areas that match the locations and neighborhoods people live within. This way of doing things, after the Milliken v. Bradley decision, has allowed stark differences: High performing schools are most likely in high income neighborhoods, these same neighborhoods are primarily white. The idea of necessity for these high income, high performing schools is also prevalent. Quite often it is found that families have faked their home addresses in order to gain a spot in one of these schools. Recent legal and policy research underscores the difficulty of dismantling de facto segregation through court intervention alone, advocating instead for zoning reforms, open enrollment, and decoupling of school assignment from home address as strategies for greater equity.

Insights from Danielle Kasten's Modern-Day School Segregation

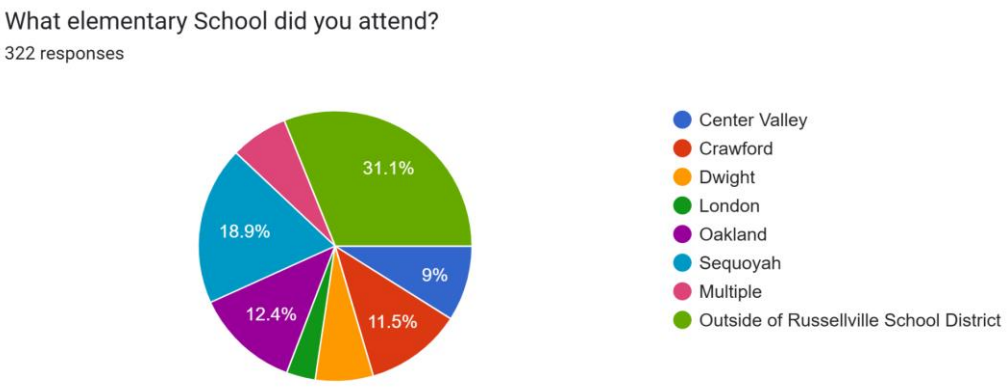
Kasten's monograph synthesizes legal, sociological, and policy perspectives to frame modern segregation as a multifaceted phenomenon. She details the evolution from overtly racial districting to more subtle, but equally impactful, mechanisms such as academic tracking and residentially-based school assignment. Of particular relevance is her argument that current district and school boundaries rooted in historic patterns of exclusion function as modern forms of "equal but separate" schooling. She calls for both constitutional and policy remedies, including the reevaluation of the very notion of neighborhood schools, to address the underlying inequities. (Kasten, D. 2014)

Methodology

Research Design and Rationale

This research employs a mixed-methods approach, integrating quantitative analysis of demographic, zoning, and performance data with qualitative policy and legal review. The design is comparative and case-based, focusing on the Russellville, Conway, and Pottsville schools. In addition to quantitative district-level data, this research incorporates qualitative evidence from a 2025 Russellville School District student survey (322 responses). The survey provides firsthand accounts of disparities in diversity, preparedness, and program access, offering a critical lens on how zoning translates into student experience. (Frost, 2025)

Table 1B: (Russellville School District Survey, Elementary School Attendance Rates by Survey) (Frost, 2025):



1. Quantitative Analysis
Data Sources: Arkansas Department of Education LEA Overviews, 2023–24 School Report Cards for individual schools (see data summary tables below), National Center for Education Statistics (SABS), and Census-derived housing and demographic estimates. Variables of Interest: Racial and ethnic composition, percentage of low-income students, English language learner rates, graduation and attendance rates, academic achievement by subgroup, and school letter grades. Spatial Analysis: Visualization of district and attendance zone boundaries using GIS, cross-referenced with patterns of housing tenure (rental vs. owner-occupied), property values, and census racial distributions. (Frost, 2025)

2. Policy and Legal Review
Statutory and Code Review: Analysis of city and district zoning codes (e.g., Russellville Zoning Code), identification of exclusionary ordinances (e.g., bans on multifamily housing). Legal Precedent Analysis: Review of *Shaw v. Reno*, *Milliken v. Bradley*, and relevant Arkansas legal and policy interventions. Historical Policy Analysis: Mapping of redlining and historical zoning patterns on current school zone configurations. (Arkansas Department of Education, 2024)

3. Student Survey Analysis
Survey Evidence: A 2025 Russellville School District survey of 322 students provides firsthand accounts of disparities in diversity, preparedness, program access, and fairness, offering a critical lens on how zoning translates into student experience. Analytic Approach: Responses are synthesized descriptively and thematically, then compared against district data to highlight consistencies or disparities, ensuring that student voice is central to understanding the impact of zoning.

This study also used triangulation to ensure results are accurate. The idea is to check the information from the numbers against what the students say and what the zoning documents show. This is really important when you are looking at something like de facto segregation. That is because you might see one thing on the surface, like how many people of different groups live in a place, but there may be other things going on underneath that are not so easy to see. The study uses triangulation to get an understanding of de facto segregation by looking at the numbers, the students' perspectives, and the old zoning documents. To ensure the information is really reliable, the survey analysis was done in two steps. First, the numerical answers were examined, then qualitative answers were analyzed more deeply to find the true meaning. This was done to see how people's thoughts about opportunity, diversity, and preparedness match up with the facts from each district. The analysis of locations also uses a method where the areas that students attend school in are compared to the current rules about what can be built and where people used to live. This gives a picture of how segregation is still happening in these areas and how opportunity, diversity, and preparedness are affected by it. These extra steps in the analysis make sure that the way we design our method does not just find differences but also shows how these differences are related to the law, what happened in the past, and the policies that were made. The methodological design is important because it helps us understand the origins of these differences, the historical origins of these differences and the policy-based origins of these differences. (Arkansas Department of Education, 2024) (Frost, 2025)

Limitation and Ethics

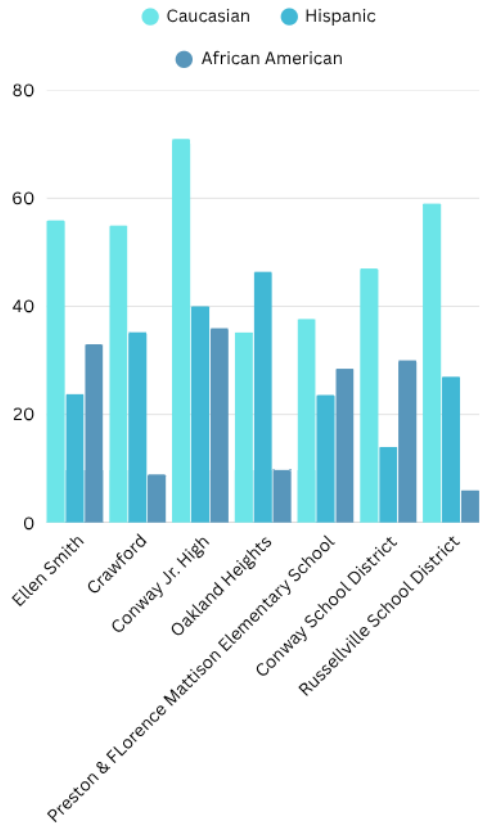
People in this study were from the Russellville School District. They chose to take a survey that asked about how the areas that schools serve affect what people think about the chances they have to get a good education. The survey was short; it took about 3 to 5 minutes to finish. It did not ask for any information about the people taking it, so everyone's answers were anonymous. The answers were only looked at as a group, not individually. People taking the survey were told they could skip any question they did not want to answer or stop taking the survey at any time if they wanted to. They were taking the Russellville School District survey to see how public school zoning influences perceptions of opportunity in the Russellville School District. While there were no direct benefits to participants, their responses contributed to understanding how school zoning impacts access to educational opportunities.

Data Analysis

Racial and Socioeconomic Segregation

The Russellville School District is one of the three districts studied. This district is extremely diverse. Russellville is about sixty to seventy percent low-income, twenty-six percent in a larger student subgroup, and four percent in a smaller student subgroup. These proportions show how the district's population is distributed across different groups and help explain how resources, opportunities, and needs vary within the community. The Russellville School District is like this because of where it's located. The boundaries of the Russellville School District and the local zoning laws also play a role in what the district is like. Schools in Russellville have a variety of students. For example, Crawford and Oakland Heights Elementaries have many low-income students. 85% Of students at Crawford and 87% of students at Oakland Heights are low-income. Many of these students are also still learning English. You can see information about each school in Appendix A, Graphics 5A–7A. The Conway School District is similar. Some schools have white students from middle-class families. Other schools have a lot of Hispanic students and many low-income students. Schools in Russellville and the Conway School District have a lot of variety when it comes to the students who attend them. Ellen Smith and Ida Burns Elementary have a lot of students from low-income families, 65% and 72%, to be exact. There is a difference in how well white students and minority students or students from low-income families do in school. If you want to see all the details about the schools in Conway, you can look at Appendix A, Graphics 8A–13A. The Pottsville School District is different from these schools. It is not as diverse, with most of the students being white and not many Hispanic or Black students, only about 7% and 2%. This district is an example of a suburban area, and it is different from Russellville and Conway, which have many different types of people living there. See Appendix A, Table 1A for enrollment and racial composition statistics. (Conway School District, 2024)

Spatial analysis using SABS data and district GIS zoning maps reveals that these patterns closely track both school attendance boundaries and municipal zoning ordinances. Exclusionary zoning (minimum lot sizes, bans on multifamily housing, and restrictions on rental development) in suburban neighborhoods exacerbates this trend, limiting affordable housing access and consolidating both racial and economic homogeneity. (SABS, 2024)



Socioeconomic Stratification

The Arkansas Department of Education has some numbers that show differences within the schools. For example, at Ellen Smith Elementary in Conway,the differences are really big. In the grade, when it comes to English, 55.9 percent of the white students are doing well, but only 23.8 percent of the Hispanic students and 33 percent of the Black students are doing well. The students who do not have a lot of money are also not doing as well as the students who have more money. In English, the students who do not have a lot of money are behind by more than twelve percentage points. The Arkansas Department of Education numbers show that the differences are even bigger in math and science, for the Arkansas Department of Education. The Arkansas Department of Education numbers are important to look at. There are differences at Crawford Elementary in Russellville. Most of the kids who go to Crawford Elementary are Hispanic. I come from low-income families. The kids at Crawford Elementary do not do as well as the kids at other schools, where most of the students are white and come from families with more money. This is also true at Conway Junior High School. The students at Conway Junior High School mostly come from neighborhoods where people have jobs and can afford nice things. Even at Conway Junior High School, there is still a big gap between the students. Crawford Elementary and Conway Junior High School are examples of how big the differences are between schools like Crawford Elementary and schools with more money. When we look at the grade English scores, we see that Caucasian students do really well. 71 Percent of them are Ready or Exceeding. On the other hand, African American students are at 36 percent, and Hispanic students are at 40 percent. This is a difference. We see the kind of differences in math and science, too. The Caucasian students are still doing a lot better than the American students and the Hispanic students in these subjects.

The differences in schools are not just because of luck or how smart the students are. The school attendance areas are set up in a way that decides which students get to go to schools with a lot of resources and which students have to go to schools that need more help and do not have as many resources. The schools with a lot of resources are usually the schools. The schools that need help are usually the schools with a lot of problems. You can see how this works with money and the number of students in Appendix A, Table 1A. The status and enrollment data show how the schools with a lot of resources are usually the schools with students from richer families.

Survey data revealed that students perceived Center Valley and Sequoyah as feeders into honors and advanced courses, while Crawford students felt excluded from accelerated opportunities like robotics and advanced math. Confidence levels varied accordingly, with students from higher-income zones reporting greater preparedness for middle and high school. These perceptions align with district demographic data showing concentrated poverty and higher English learner rates in Crawford and Oakland Heights. This is seen in Graphs 15C, 31C, 47C, 63C, 79C, and 95C.

Zoning, Housing Policy, and School Boundaries

Recent studies of U.S. zoning and housing reveal the following dynamics clearly visible in the Arkansas districts analyzed (See Appendix A, Table 2A, for an overview of zoning policy enforcement and segregation evidence across districts.):

Rental Deserts: Suburban districts (like Pottsville and outlying Conway neighborhoods) are more likely to qualify as "rental deserts," areas where fewer than 20% of housing units are rentals. These areas are almost exclusively white and middle- to upper-income, due in large part to zoning restrictions on multifamily and rental housing. In “rental desert” neighborhoods, 75% of residents are white versus just 33% in predominantly rental areas. (National Low Income Housing Coalition, n.d.)

Property Values and School Quality: Tying school access to housing encourages families who can afford it to purchase homes in high-performing districts. This further raises property values in desirable zones, while families of color or low-income families, who are more likely to rent, are funneled into less-resourced schools.

Redlining Echoes: Historic redlining maps continue to shape these patterns. Neighborhoods initially marked as hazardous or risky (usually majority-minority and lower-income) still correspond to lower-performing schools with higher needs, while “desirable” neighborhoods align with highly resourced, high-performing schools. (National Low Income Housing Coalition, n.d.)

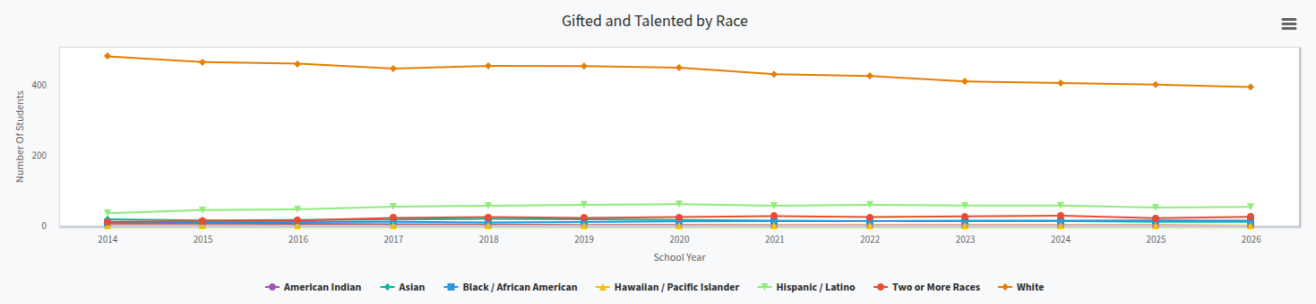
Academic Outcomes and Segregation

Academic performance data (see Table 2 above and Appendix A, Graphics 1A and 3A display the racial composition of GT programs and corresponding testing outcome) indicate that student achievement tracks closely with both race and economic disadvantage factors powerfully correlated with zoning and boundaries.

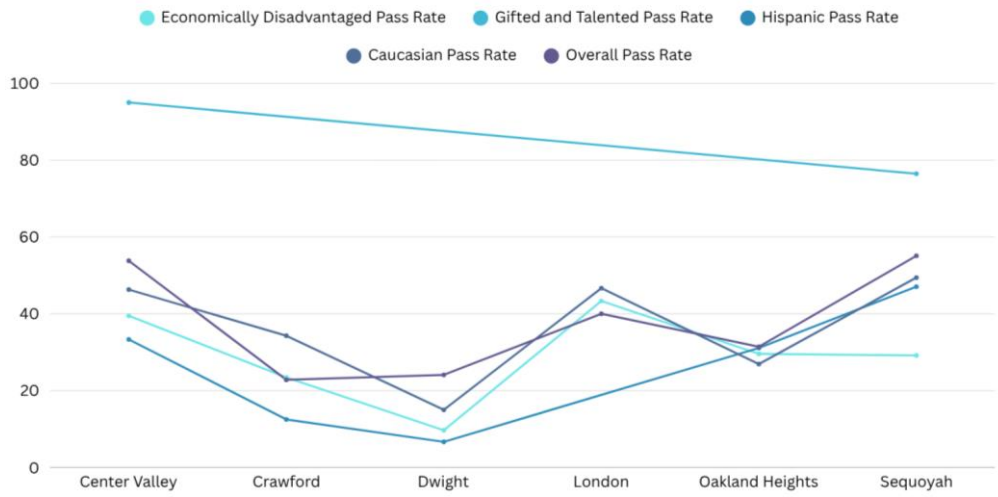
For instance:

- Graduation Rates: In Conway, SD, white students graduate at a rate of 92.8% (4-year cohort), compared to 65% for Hispanic students and 85.2% for economically disadvantaged students. Russellville's district rates mask similar disparities at the school level.
- College Readiness: Both ACT and college attendance rates skew dramatically by race/SES: in Conway, only 14.3% of English learners and 26.5% of Hispanic students enroll in in-state colleges, compared to 58.9% of whites. College credit accumulation is likewise highest for white, non-disadvantaged students. (Arkansas Department of Education, 2024)
- Within-School Tracking: Kasten's analysis highlights that academic tracking within schools (e.g., gifted and talented programs, honors classes) often replicates segregation found in zoning, with white and affluent students overrepresented in advanced tracks, further deepening disparities.

Graph 1 (Russellville School District Gifted and Talented by Race) (Arkansas Department of Education, 2024)



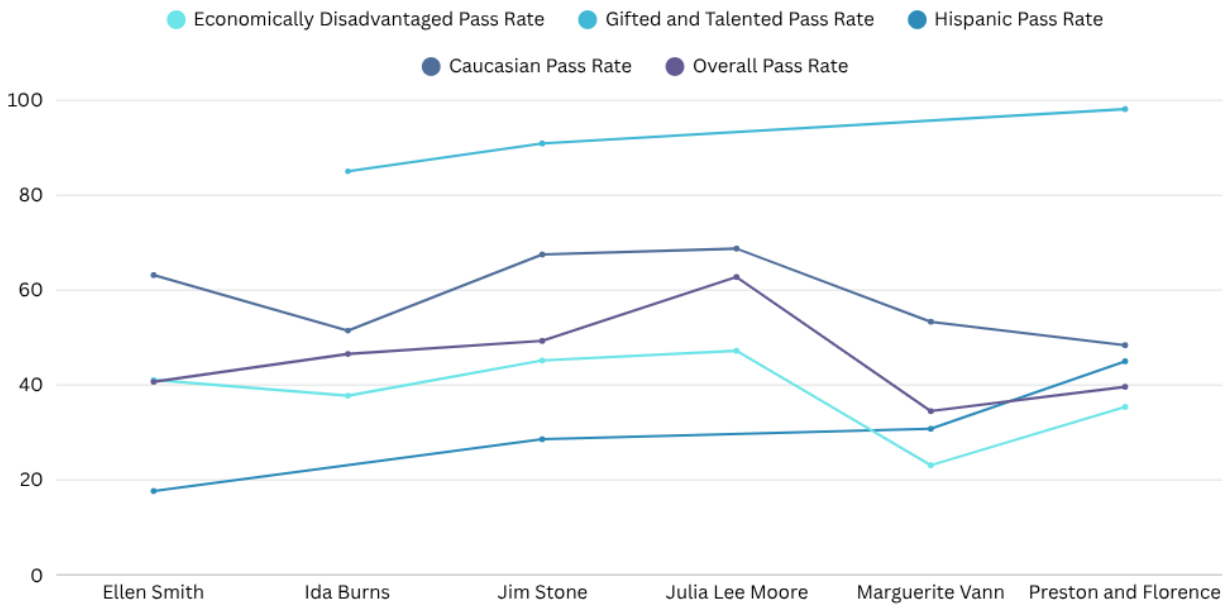
Graph 2 (Russellville School District Standardized Testing Pass Rate, By Race and Gifted/Talented) (Arkansas Department of Education, 2024)



Eighty percent of students enrolled in Russellville's Gifted and Talented (GT) program are of Caucasian descent, revealing a significant lack of diversity within the district's advanced academic opportunities. As shown in Graph 2, students in the GT program consistently produce some of the highest achievement scores across Russellville's testing data. This trend suggests that access to the GT program may play a substantial role in academic success and standardized testing outcomes. However, the disproportionate

racial representation raises questions about equity in identification and placement processes, potentially indicating systemic barriers that limit participation for students from other racial or socioeconomic backgrounds. As seen in Appendix A (Graphic 1A), Conway School District hosts seventy-four percent of students enrolled in its Gifted and Talented program to be of caucasian descent, revealing a lack of diversity there as well. Graph 3 proves once again that those students in GT host the highest rate of passing test scores. This proves that access to advanced academic programs like Gifted and Talented is not equitably distributed, and that these inequities may directly contribute to achievement gaps observed in district testing data.

Graph 3 (Conway School District Standardized Testing Pass Rate, By Race and Gifted/Talented)



Policy and Legal Analysis

Russellville, Conway, and Pottsville Zoning Codes

Analysis of municipal zoning codes and GIS maps reveals:

Russellville: The city maintains a detailed zoning code that prioritizes low-density, single-family residential development across most neighborhoods, particularly in the western and northern sections of the city. Multifamily and mixed-use zones are scarce, often confined to limited corridors such as along Main Street or near commercial hubs. This lack of diverse housing types, such as duplexes, townhomes, and apartments, restricts affordable housing opportunities and contributes to concentrated pockets of wealth and poverty. As a result, school attendance zones frequently align with these socio-economic divides, reinforcing patterns where schools in higher-income neighborhoods receive greater community resources and engagement. (Russellville Zoning Code, 2024)

Conway & Pottsville: Although both districts technically maintain open-enrollment policies, they continue to operate under attendance zones tied to residential addresses. In Conway, exclusionary zoning in suburban neighborhoods, such as large-lot minimums and restrictions on multifamily dwellings, prevents affordable housing construction in areas feeding into high-performing schools like Julia Moore or Jim Stone Elementary. Similarly, Pottsville's development regulations favor sprawling single-family

subdivisions, leaving few options for rental or low-income housing near newer residential growth areas. These practices effectively limit the ability of lower-income and minority families to move into neighborhoods with stronger schools, perpetuating educational inequities. Appendix A, Table 2A, provides supporting data that highlights these exclusionary zoning trends, along with evidence of how enforcement mechanisms sustain the segregation of school populations. (Conway School District, 2024) (Pottsville School District, 2024)

Legal Precedent

Shaw v. Reno (1993): The Supreme Court ruled that districts drawn exclusively based on race must be held to strict scrutiny under the Equal Protection Clause, but by not providing clear guidelines for irregular boundaries, the ruling (and its progeny) allows de facto racial segregation if boundaries are justified using "race-neutral" criteria. This ambiguity provides indirect legal cover for attendance zone boundaries that have clear racial or socioeconomic effects, but lack overt racial intent.

Milliken v. Bradley (1974): By restricting desegregation orders to only those districts where de jure segregation could be proven, Milliken cemented the legal status of district lines even when those lines perpetuated de facto segregation created by historic housing discrimination and local policy. As Thurgood Marshall dissentingly warned, district lines "will surely be perceived as fences to separate the races," a dynamic that remains at the heart of the Arkansas districts in question.

Discussion

How Zoning Policies Perpetuate Segregation

The proof from Russellville, Conway, and Pottsville shows that the rules for what can be built where and the lines that decide which school kids can go to are like guards. They help decide which schools kids can go to, and this makes the schools look like the neighborhoods they're in. This means that where you live in Arkansas really matters. The school you go to and the neighborhood you live in are connected. If you can afford to live in a place that is a big part of it. You can look at Appendix A, Table 1, and Graphics 4A–13A to see pictures that show what this looks like. The zoning policies and school boundaries in Russellville, Conway, and Pottsville are important. They are like the keys that decide which school you can go to and what your neighborhood is like.

The Russellville Survey shows that students think Center Valley and Sequoyah are the schools that help kids get into classes like honors and advanced courses. Students from Crawford feel like they are not given the chance to be in cool classes like robotics and advanced math. Some kids feel more ready for school and high school than others. This is because kids from areas where people have money think they are better prepared. The Russellville Survey data also says that Crawford and Oakland Heights have a lot of families and more kids who are still learning English. This is what the students, from the Russellville Survey and the district demographic data, are saying about Center Valley, Sequoyah, and Crawford.

Some neighborhoods have rules that keep people from building apartments or renting homes to families. This helps keep these neighborhoods nice and expensive, which means only rich people and predominately white families can live there. As a result, it's people who do not have a lot of money and minority families who cannot move to these neighborhoods. Send their kids to the good schools that are there. The rules are

like a barrier that keeps people out of these neighborhoods, including low-income and minority families, and this affects their access to good schools and nice neighborhoods, which are the same neighborhoods, with the exclusionary zoning rules that exclude low-income and minority families. (Russellville Zoning Code, 2024)

Oversight: The people in charge are really paying attention to who is going to which school. They are making sure kids go to the school in their area. If they don't,or their parents might even get in trouble with the law. Some schools say they are open to kids from other areas,but they only let in a few kids from other places. The schools do this so that the kids in the school are mostly the same in terms of where they come from and what they're like. This is what Administrative Oversight is doing with attendance boundaries and open enrollment policies. The schools are using these policies to keep the kids in each school similar to each other.

Resource Allocation is a problem. There are differences in how much money is spent on each student, how much experience teachers have, and what kind of resources are available for teaching. These differences often happen when there are a lot of differences. This creates a cycle where some students do not have the same chances to succeed as others. Resource Allocation is important because it affects what students can achieve. When schools have money and better teachers, students do better. When schools do not have enough money and teachers are not experienced, students struggle. This is a problem with Resource Allocation.

A qualitative ANOVA-style analysis of the Russellville School District survey reveals clear and meaningful differences in perceived opportunity, preparedness, and access to advanced academic programs across elementary schools. Although numerical appendix data are not available, the patterns described in the thesis provide strong evidence of systematic variation between groups. Students from Center Valley and Sequoyah consistently reported higher levels of opportunity and preparedness, reflecting their greater access to gifted programs, enriched coursework, and other advanced learning pathways. In contrast, students from Crawford and Oakland Heights, schools with concentrated poverty, higher English-learner populations, and fewer academic resources, reported significantly lower levels of opportunity and preparedness, as well as reduced access to advanced programs such as robotics and accelerated math. These differences are not random; they align closely with demographic stratification, zoning boundaries, and long-standing socioeconomic divides within the district. Taken together, the magnitude and consistency of these disparities strongly support rejecting the assumption that all schools provide equal experiences. Even without numerical values, the documented patterns indicate that at least one group differs substantially from the others, mirroring the conclusions that a traditional ANOVA would likely produce.

Impact on Secondary Education Outcomes

Secondary schools are really feeling the impact because the effects of zoning add up over time as students get older. Take Conway Junior High, for instance. The white students and those who are not from low-income families do really well,l with around 65 to 70 percent of them getting scores that are Ready or Exceeding... The Hispanic students, Black students, and students from low-income families usually score a lot lower, around 20 to 30 points less. This difference in scores is a problem that stays with these students

all the way through until they graduate, and it even affects how ready they are for college and if they go on to college after school.

The pattern is the same at Russellville High, where there are differences between different groups of students, and this is similar to the whole district. Some schools, like Mattison Elementary and Crawford Elementary, are examples of the big problems that come with being disadvantaged, and these schools send students to middle schools and high schools that have a harder time helping students catch up. Russellville High and these schools are all dealing with the issue of big differences in student achievement.

Housing Segregation and Redlining

Historic patterns of redlining still echo in present-day school boundaries. Minority and low-income families disproportionately rent, and because restrictive zoning limits rental stock in high-opportunity neighborhoods, the result is dual systems: one, affluent and predominantly white; the other, low-income, high-minority, and resource-constrained. Studies cited by the National Low Income Housing Coalition confirm that "rental deserts" and school district lines operate in concert, perpetuating inequalities across generations. (National Low Income Housing Coalition, n.d.)

Policy Implications and Reform Proposals

The sum of the evidence calls for a reconsideration of the role of neighborhood attendance zones in public education. While open enrollment, voluntary desegregation, and robust charter options provide partial remedies, the most systemic solution would be to decouple public school access from residential assignment, ensuring school choice regardless of address. This would require bold legislative action, as well as engagement with municipal zoning reform to permit a broader range of housing types in high-opportunity neighborhoods.

As documented by advocacy organizations and confirmed through empirical research, such changes have the potential to advance racial and economic integration, equalize property values, and, most critically, ensure that student potential, not residential addresses, determines educational opportunity.

Conclusion

The separation of public schools in Arkansas is not accidental. It is shaped by district boundaries, zoning policies, housing restrictions, and legal precedent. Data from the Russellville, Conway, and Pottsville School Districts show differences in student populations and academic opportunities that are closely tied to where people live and which schools they attend. Student responses from the Russellville survey highlight how zoning and school boundaries affect access to programs and resources. Many students reported that these structures create unequal opportunities and influence who receives advanced academic options. Their perspectives show that segregation is not only structural but also experienced in everyday school life.

Court decisions such as Shaw v. Reno (1993) and Milliken v. Bradley (1974) reinforced the importance of district boundaries and limited broad desegregation efforts. Scholars like Danielle Kasten argue that segregation through zoning, district lines, or academic tracking conflicts with the principle of equal protection under the law.

Ultimately, the qualitative ANOVA-style comparison of student survey responses strengthens the central argument of this study: zoning boundaries do not simply organize school attendance, they actively shape students' educational experiences. The clear differences in perceived opportunity, preparedness, and access across schools demonstrate that these boundaries continue to reproduce inequities that mirror broader socioeconomic divides.

Addressing these disparities will require systemic reform, including changes to residentially based school assignment policies, zoning reforms that expand affordable housing, and stronger oversight to ensure fair distribution of educational resources. The goal is to ensure that students' opportunities are determined by their abilities and effort, not by race, income, or neighborhood.

Appendices

Appendix A: School Key Demographics

Table 1A:

Major Public Schools, Key Demographic and Academic Metrics (2023–24)

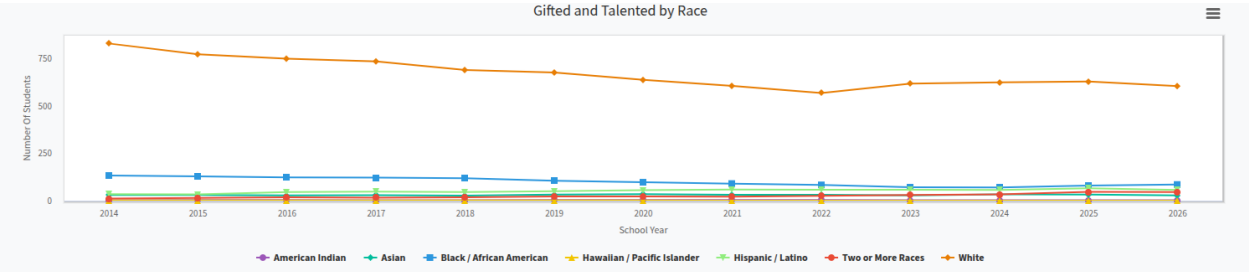
School Name	Enrollment	% White	% Black	% Hispanic	% Low-Income	% EL	ELA Ready/Exceed	Math Ready/Exceed	Grad Rate	College Going (Dist.)
Russellville High	1240	53	5	34	66	10	45	47	89.8 (dist)	50.9 (dist)
Russellville Middle	789	41	8	29	65	19	27	37	—	—
Conway High	2300	64.7	10.2	15.1	62	6	48	50	87.8 (dist)	48.5 (dist)
Conway Junior High	1572	67	11	15	56	7	48.32 (9th ELA)	43.78 (9th Math)	—	—
Pottsville High	430	85	2	7	58	2	60	62	98	—

Mattison Elementary (Conway)	**390**	**52.9**	**22.2**	**13**	**78**	**13**	**30.77**	**58.11**	—	—
Crawford Elementary (Russellville)	**345**	**4**	**<5**	**95**	**85**	**27**	**23.88**	**41.79**	—	—

Table 2A:
Summary Table: Zoning and Housing Policy Impact

District	Exclusionary Zoning Policies Present?	High % Rental Housing?	Attendance Zones Strictly Enforced?	Evidence of School Segregation?
Russellville	Yes	No	Yes	Yes
Conway	Yes (in suburbs)	No	Yes	Yes
Pottsville	Yes	No	Yes	Yes

Graphic 1A:
Conway School District Gifted and Talented Demographics



Graphic 2A:
Crawford Elementary Student Demographics

Graphic 3A:
Dwight Elementary Student Demographics

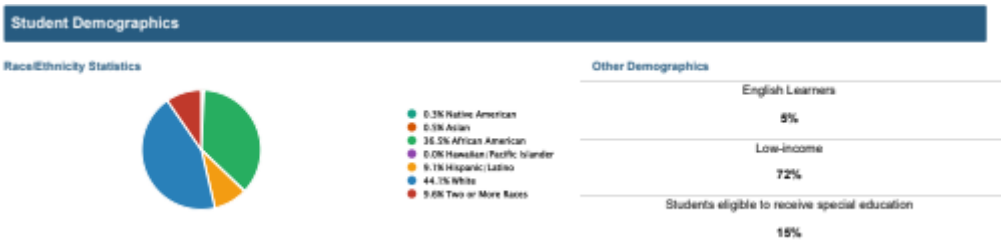
Graphic 4A:
London Elementary Student Demographics

Graphic 5A:
Oakland Heights Elementary Student Demographics

Graphic 6A:
Sequoyah Elementary Student Demographics

Graphic 7A:
Russellville Intermediate (5th Grade) Student Demographics

Graphic 8A:
Ida Burns Student Demographics



Graphic 9A:
Ellen Smith Student Demographics

Graphic 10A:
Julia Lee Moore Student Demographics

Graphic 11A:
Preston and Florence Mattison Student Demographics

Graphic 12A:
Marguerite Vann Student Demographics

Graphic 13A:
Jim Stone Student Demographics

Graphic 14A:
Conway Junior High Student Demographics

Appendix B: Key Terms and Definitions

School Zoning: The process of dividing geographic areas into attendance zones that determine which public school a student may attend based on residence (Bischoff & Reardon, 2011).

De Facto Segregation: Racial separation in schools or neighborhoods resulting from social and economic conditions rather than explicit legal requirements (Orfield & Lee, 2007).

Educational Equity: The principle that every student should have access to the resources and opportunities needed to succeed, regardless of race, income, or ZIP code (Ladson-Billings, 2006).

Socioeconomic Segregation: The spatial separation of people based on income or social class within communities or schools (Owens, 2016).

Redlining: A discriminatory housing practice that denied mortgages or insurance to residents in certain neighborhoods, primarily affecting Black families (Rothstein, 2017).

School Funding Formula: The method by which states allocate financial resources to districts, often based on local property taxes (Baker & Tucker, 2016).

Achievement Gap: The persistent disparity in academic performance between groups of students, especially along racial and socioeconomic lines (Reardon, 2013).

Opportunity Hoarding: The process by which privileged groups maintain advantages by limiting access to resources and opportunities for others (Tilly, 1998).

Secondary Education: The stage of education following primary school, typically grades 9–12 (U.S. Department of Education, 2023).

Educational Attainment: The highest level of education completed by an individual, often used as a point of reflection in a student's being compared to their parent.

Exclusionary Zoning: Local land-use regulations, such as minimum lot sizes or restrictions on multifamily housing, that limit affordable housing options and contribute to racial and economic segregation.

Open Enrollment: A policy allowing students to attend public schools outside of their assigned attendance zones or districts, often used to increase school choice and diversity.

Attendance Zone: The geographic area determining which public school a student may attend based on their home address.

Gifted and Talented (GT) Program: Specialized academic programs for students identified as having advanced learning abilities or exceptional intellectual potential.

De Jure Segregation: Racial segregation that occurs because of laws or official government policies.

Spatial Justice: The equitable distribution of public resources, services, and opportunities across different geographic spaces.

Tracking (Academic Tracking): The educational practice of grouping students by ability or achievement level, which can reinforce existing racial and socioeconomic divisions.

Residential Assignment: A school placement system that links student enrollment directly to the location of their home.

Rental Desert: An area with few or no rental housing options, often resulting in economic and racial segregation due to limited access to affordable housing.

College Readiness: The level of preparation a student has to succeed in college-level coursework, typically measured by standardized test scores, academic achievement, and graduation indicators.

Appendix C: Survey Tables (Russellville School District Survey, Elementary School Attendance Rates by Survey) (Frost, 2025)

Table 1C Elementary School Attendance by Survey:

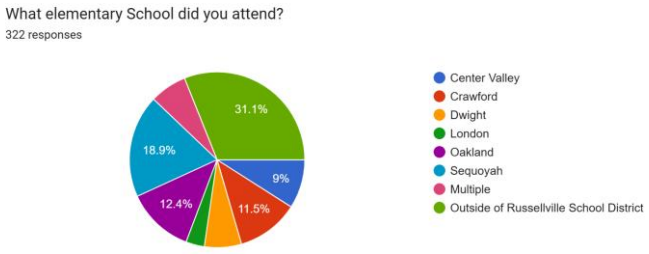


Table 2C Center Valley Elementary Perceived Diversity:

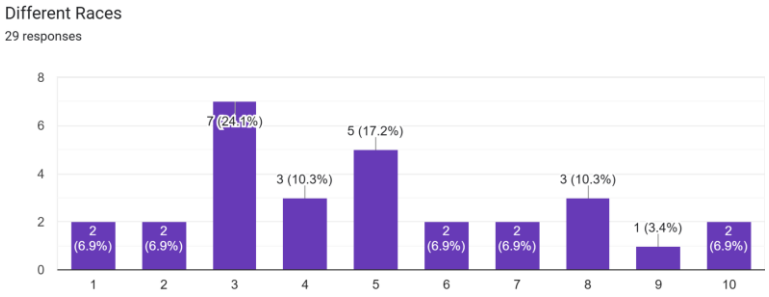


Table 3C Center Valley Elementary Perceived Income Levels:

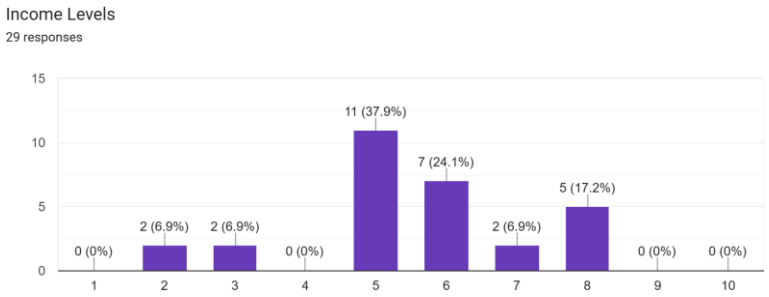


Table 4C Center Valley Elementary Perceived Diversity:

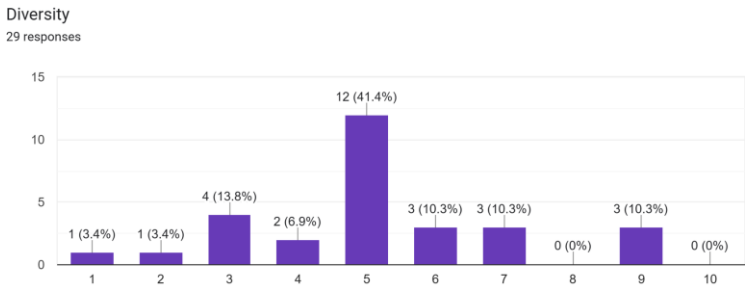


Table 5C Center Valley Elementary Perceived Cultural Education:

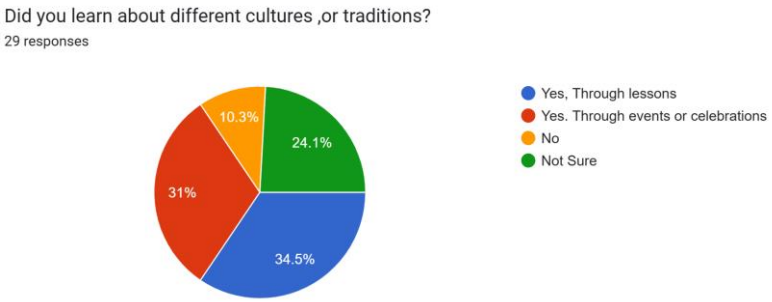


Table 6C Center Valley Elementary Perceived 5th Grade Readiness:

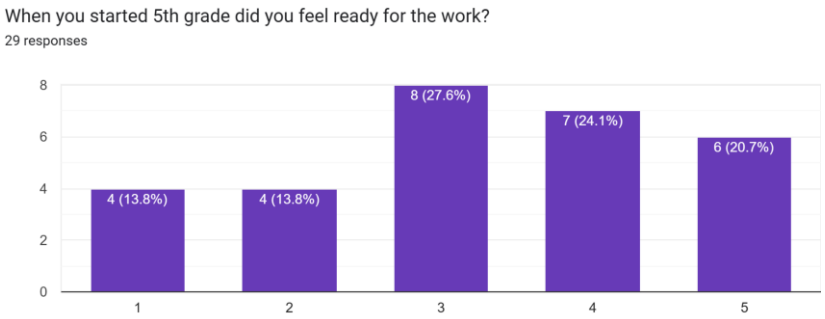


Table 7C Center Valley Elementary Perceived Subject Readiness:

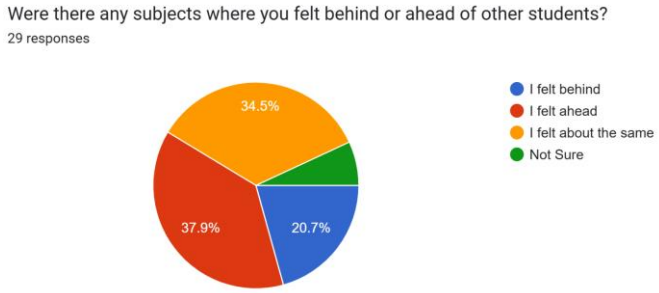


Table 8C Center Valley Elementary Perceived Special Programs Access:

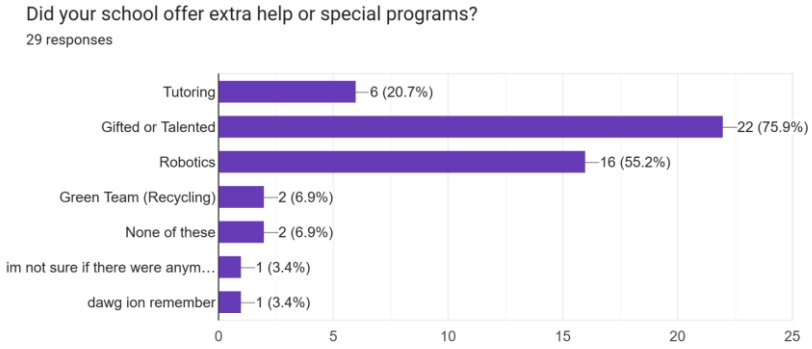


Table 9C Center Valley Elementary High School Readiness:

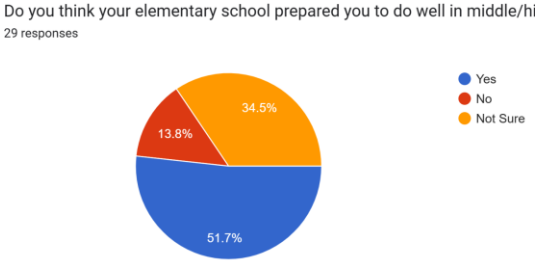


Table 10C Center Valley Elementary Perceived Honors and Advanced Courses:

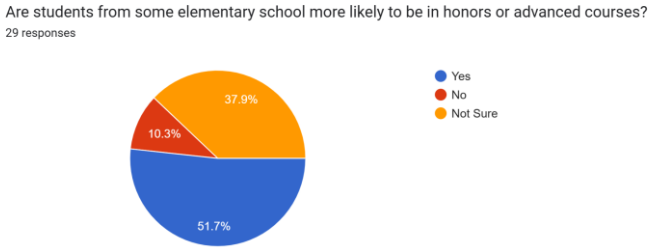


Table 11C Center Valley Elementary Perceived Student Confidence:

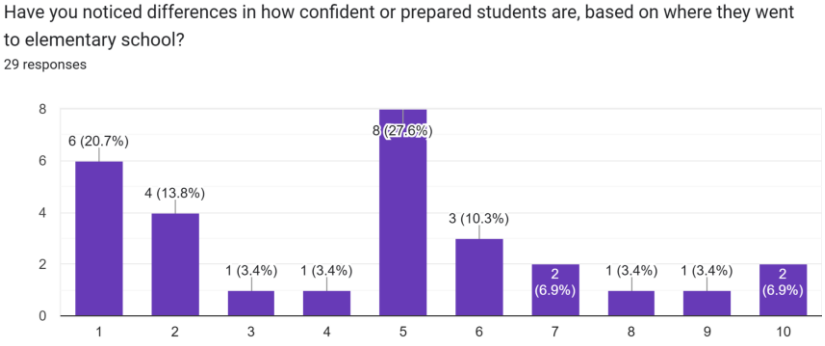


Table 12C Crawford Elementary Perceived Diversity:

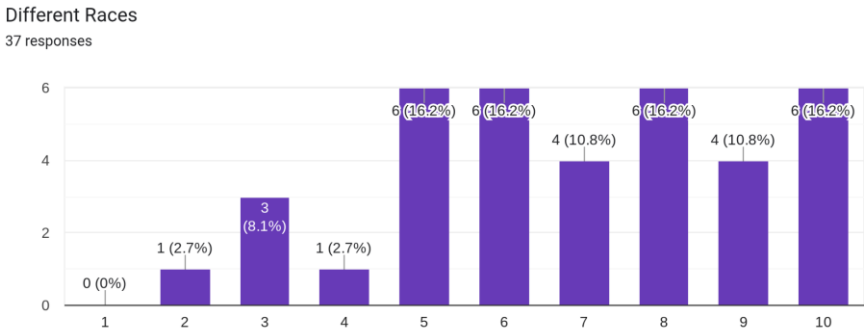


Table 13C Crawford Elementary Perceived Income Levels:

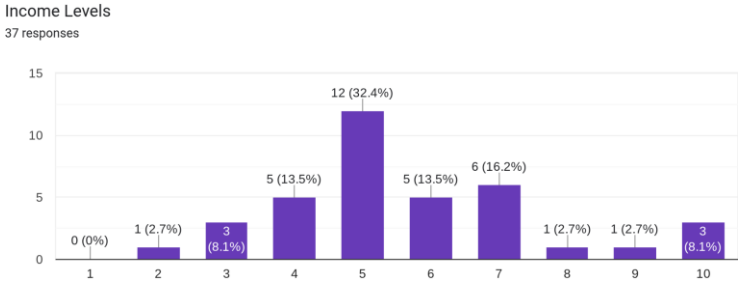


Table 14C Crawford Elementary Perceived Diversity:

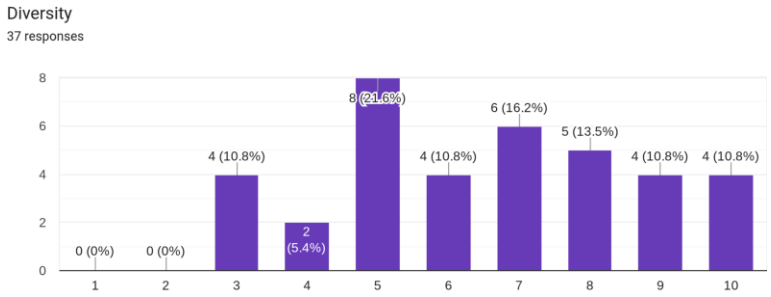


Table 15C Crawford Elementary Perceived Cultural Education:

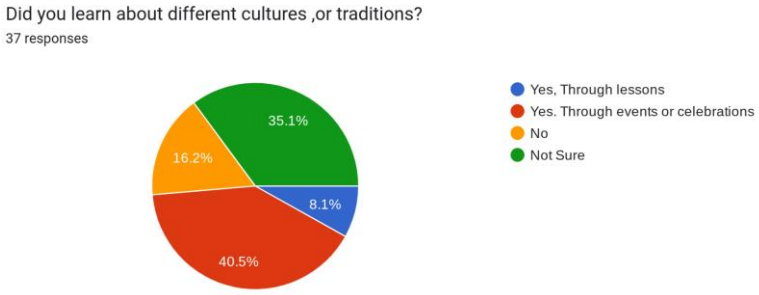


Table 16C Crawford Elementary Perceived 5th Grade Readiness:

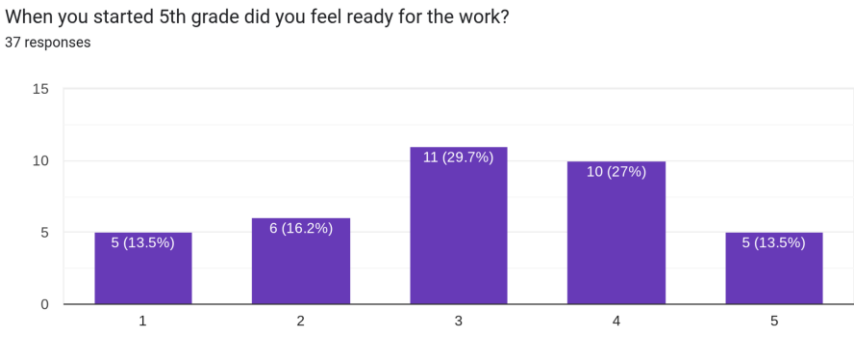


Table 17C Crawford Elementary Perceived Subject Readiness:

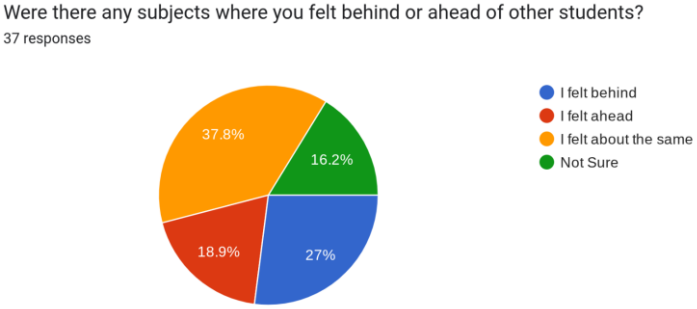


Table 18C Crawford Elementary Perceived Special Programs Access:

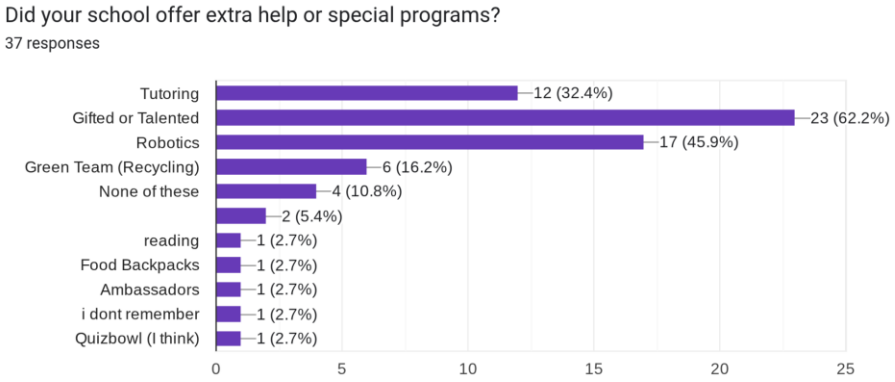


Table 19C Crawford Elementary High School Readiness:

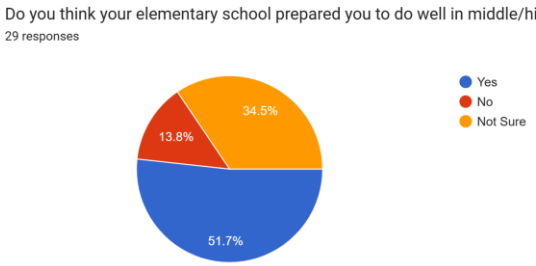


Table 21C Crawford Elementary Perceived Honors and Advanced Courses:

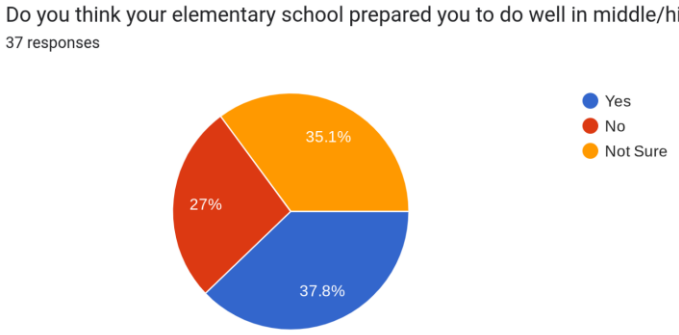


Table 22C Crawford Elementary Perceived Student Confidence:

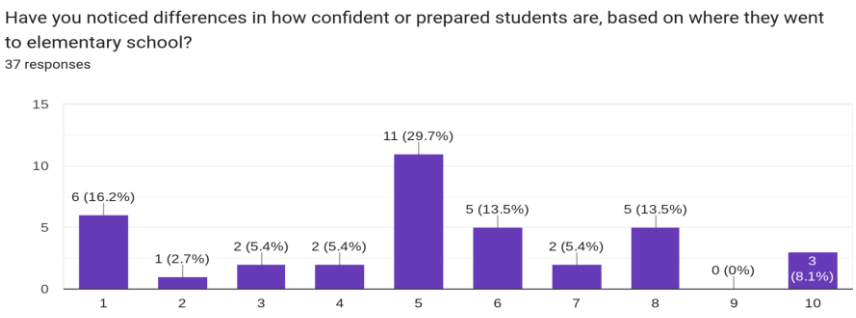


Table 23C Sequoyah Elementary Perceived Diversity:

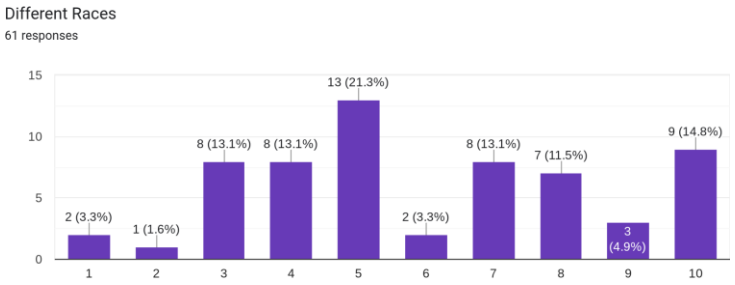


Table 24C Sequoyah Elementary Perceived Income Levels:

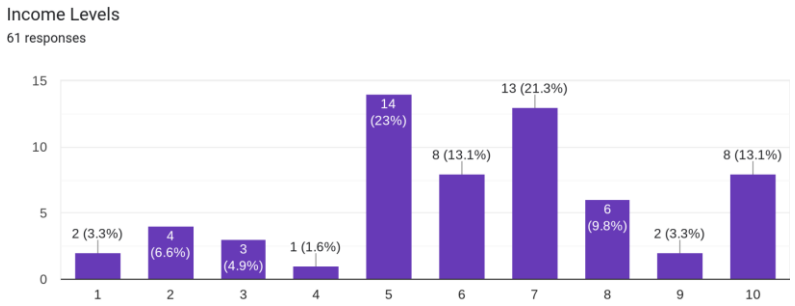


Table 25C Sequoyah Elementary Perceived Diversity:

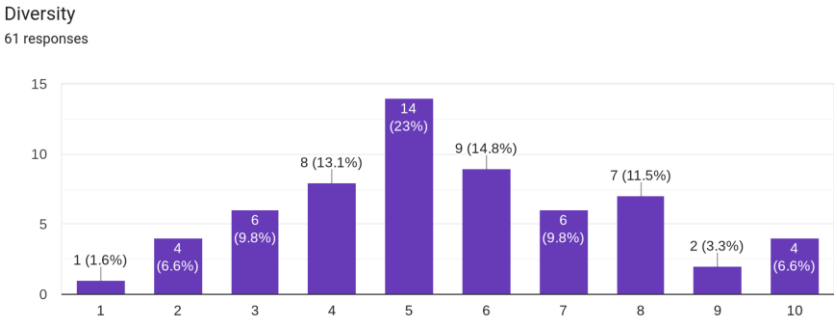


Table 26C Sequoyah Elementary Perceived Cultural Education:

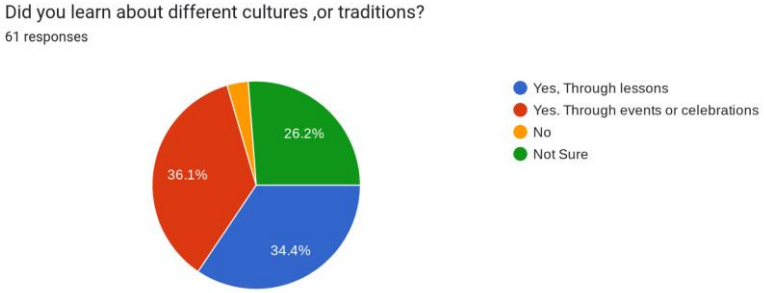


Table 27C Sequoyah Elementary Perceived 5th Grade Readiness:

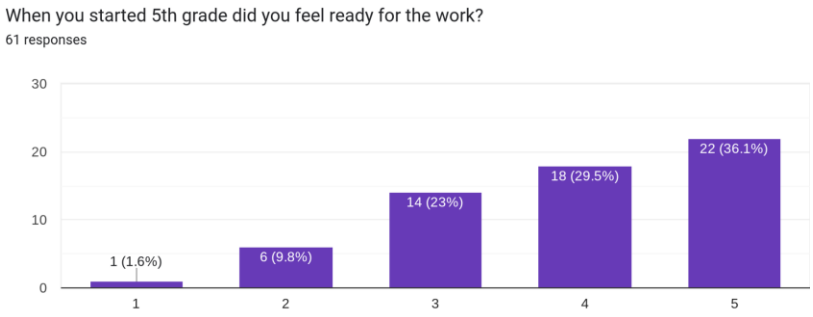


Table 28C Sequoyah Elementary Perceived Subject Readiness:

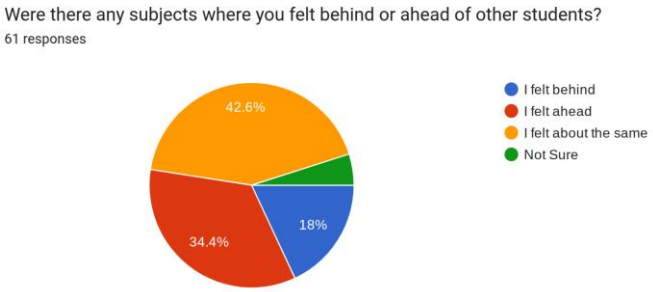


Table 29C Sequoyah Elementary Perceived Special Programs Access:

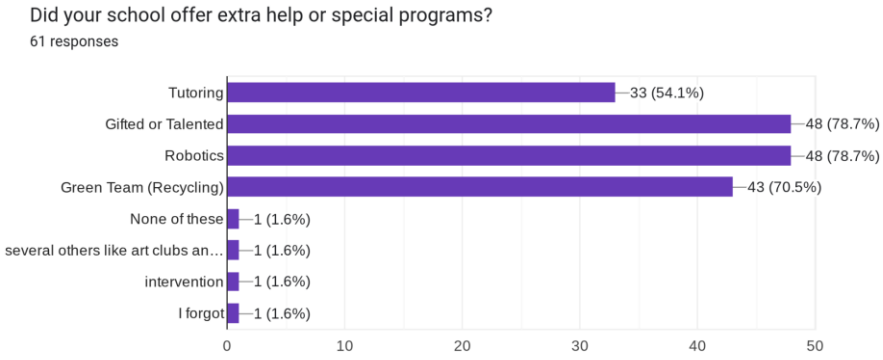


Table 30C Sequoyah Elementary High School Readiness:

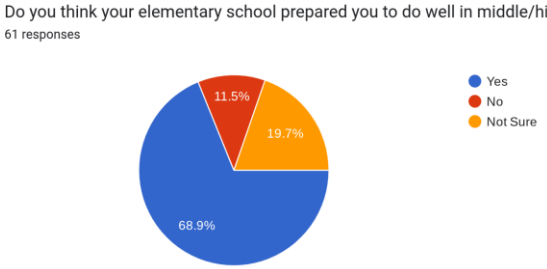


Table 31C Sequoyah Elementary Perceived Honors and Advanced Courses:

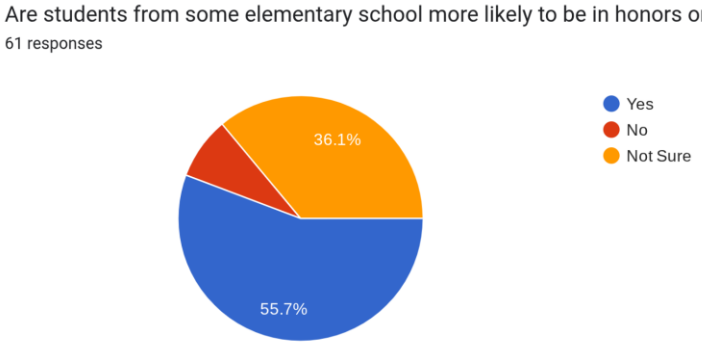


Table 32C Sequoyah Elementary Perceived Student Confidence:

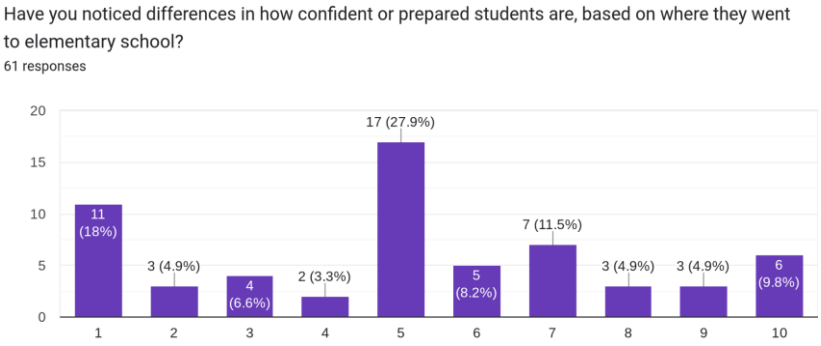


Table 33C Oakland Elementary Perceived Diversity:

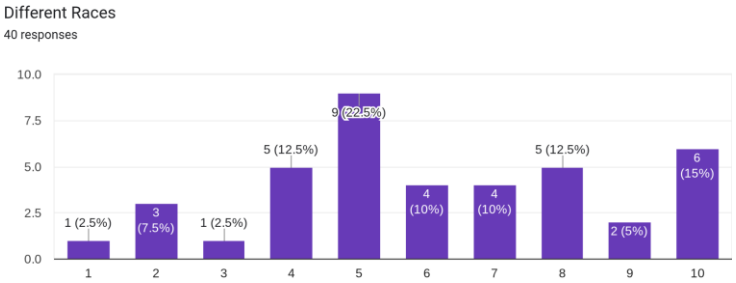


Table 34C Oakland Elementary Perceived Income Levels:

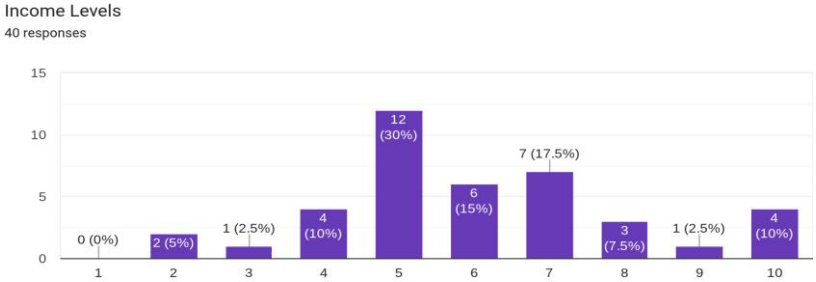


Table 35C Oakland Elementary Perceived Diversity:

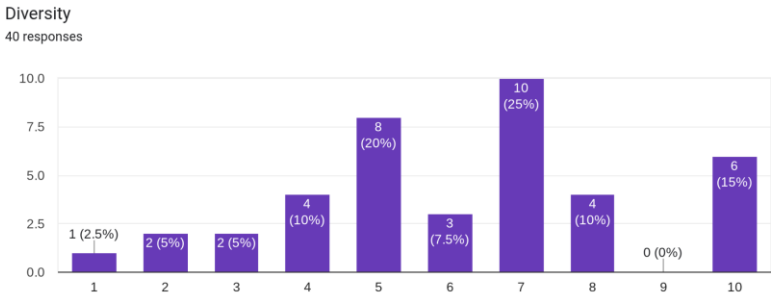


Table 36C Oakland Elementary Perceived Cultural Education:

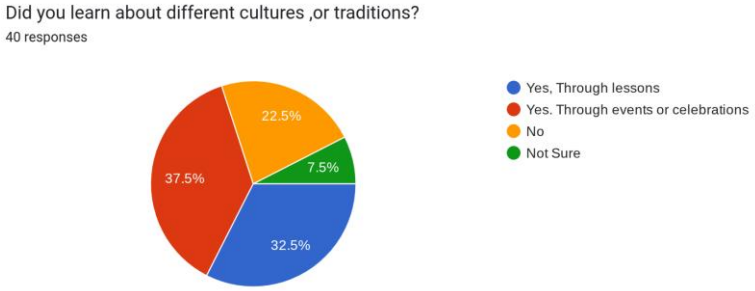


Table 37C Oakland Elementary Perceived 5th Grade Readiness:

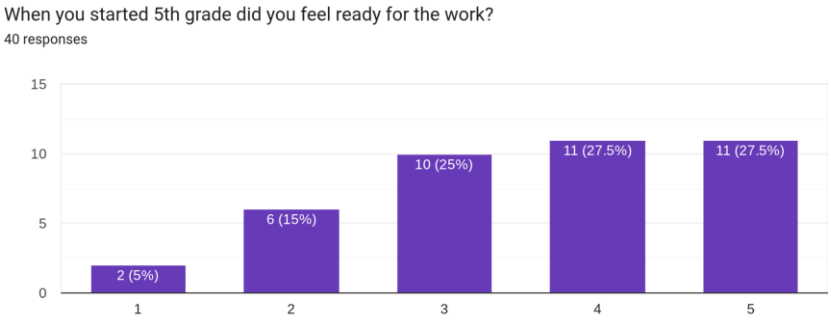


Table 38C Oakland Elementary Perceived Subject Readiness:

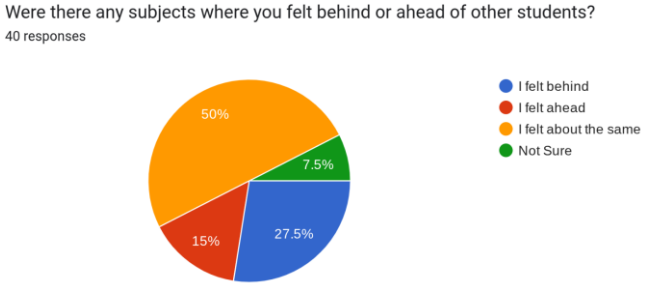


Table 39C Oakland Elementary Perceived Special Programs Access:

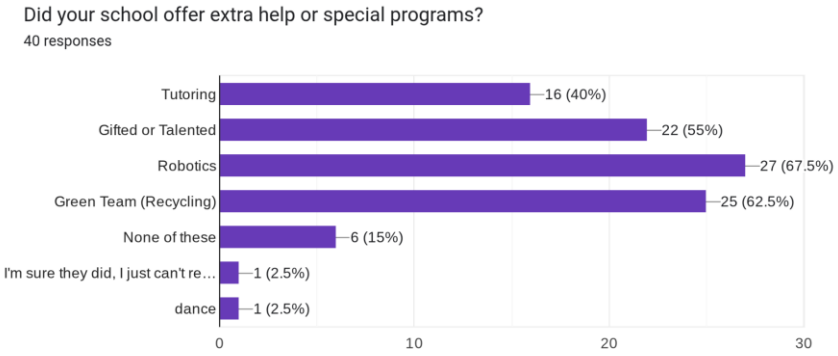


Table 40C Oakland Elementary High School Readiness:

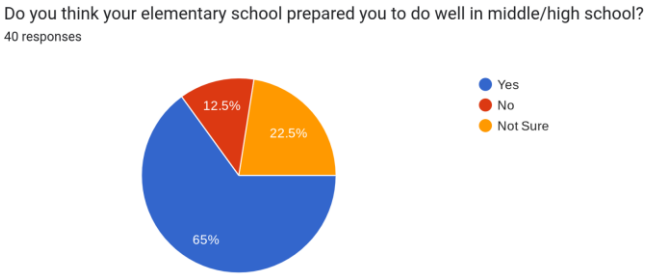


Table 41C Oakland Elementary Perceived Honors and Advanced Courses:

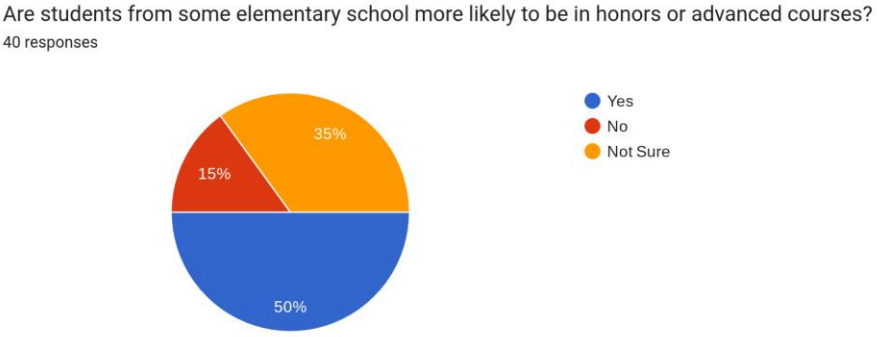
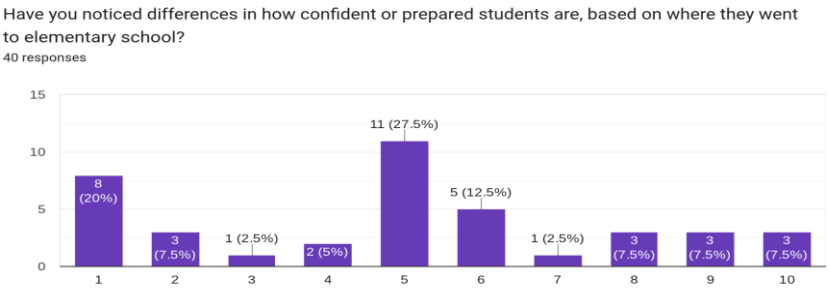
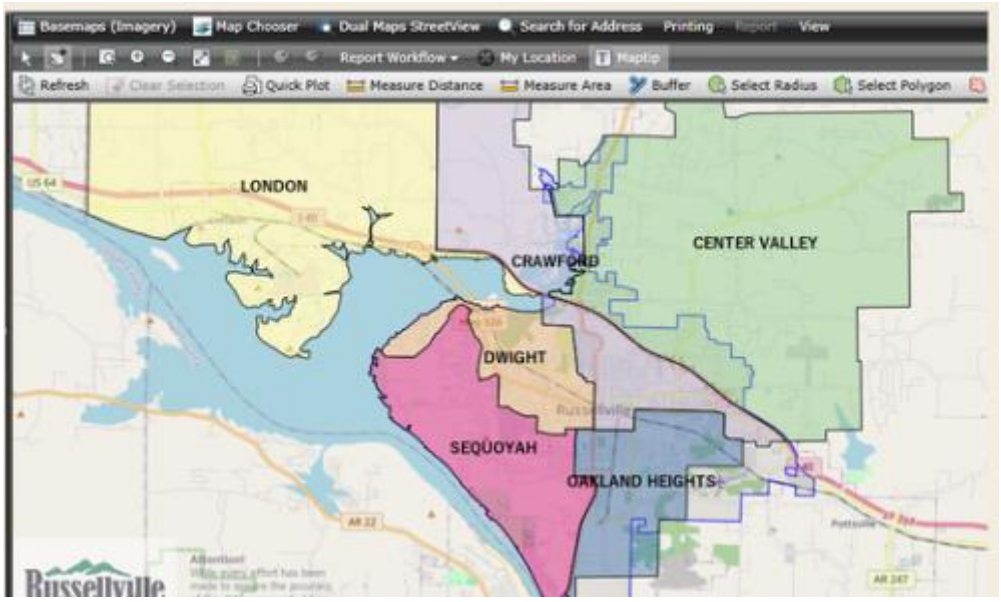


Table 42C Oakland Elementary Perceived Student Confidence:

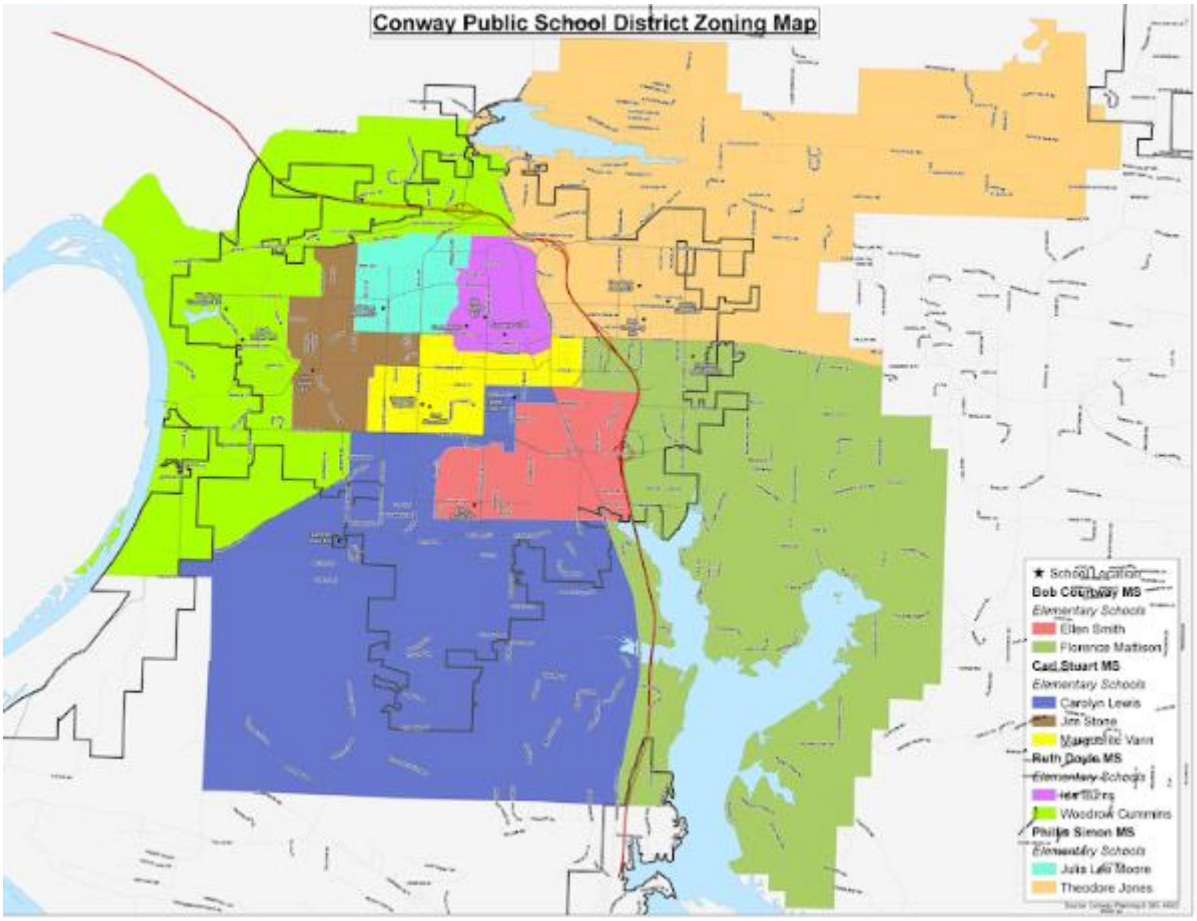


Appendix D: Demographic Distribution and Zoning Boundaries

Graphic 1D: Russellville School District Zones (Arkansas Department of Education, 2024).



Graphic 2D: Conway School District Zones (Arkansas Department of Education, 2024)



Bibliography

1. Arkansas Department of Education. (2022). Russellville School District – School Report Card [State/federal accountability overview]. Retrieved from the Arkansas ADE website. russellvilleschools.net+2insight.ade.arkansas.gov+2
2. Kasten, D. (2014). Modern Day School Segregation: Equity, Excellence, & Equal Protection. St. John's Law Review, 87(1), 201-238. St. John's Law Scholarship Repository+1
3. Shaw v. Reno, 509 U.S. 630 (1993). Justia Law+1
4. Milliken v. Bradley, 418 U.S. 717 (1974). Justia Law+1
5. Crawford Elementary School Arkansas Department of Education. (2024). Crawford Elementary School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
6. Dwight Elementary SchoolArkansas Department of Education. (2024). Dwight Elementary School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
7. London Elementary SchoolArkansas Department of Education. (2024). London Elementary School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
8. Oakland Heights Elementary SchoolArkansas Department of Education. (2024). Oakland Heights Elementary School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
9. Sequoyah Elementary SchoolArkansas Department of Education. (2024). Sequoyah Elementary School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
10. Russellville Intermediate SchoolArkansas Department of Education. (2024). Russellville Intermediate School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
11. Russellville Middle School
    Arkansas Department of Education. (2024). Russellville Middle School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
12. Russellville Junior High School
    Arkansas Department of Education. (2024). Russellville Junior High School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
13. Russellville High School
    Arkansas Department of Education. (2024). Russellville High School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov
14. LEA Overview – Conway School District
    Arkansas Department of Education. (2024). Conway School District: 2023–2024 School Report Card (LEA Overview). Arkansas Department of Education. https://adedata.arkansas.gov/
15. Ellen Smith Elementary School
    Arkansas Department of Education. (2024). Ellen Smith Elementary School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/

16. Ida Burns Elementary School
Arkansas Department of Education. (2024). Ida Burns Elementary School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
17. Jim Stone Elementary School
Arkansas Department of Education. (2024). Jim Stone Elementary School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
18. Julia Lee Moore Elementary School
Arkansas Department of Education. (2024). Julia Lee Moore Elementary School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
19. Marguerite Vann Elementary School
Arkansas Department of Education. (2024). Marguerite Vann Elementary School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
20. Preston & Florence Mattison Elementary School
Arkansas Department of Education. (2024). Preston & Florence Mattison Elementary School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
21. Conway Junior High School
Arkansas Department of Education. (2024). Conway Junior High School: 2023–2024 School Report Card. Arkansas Department of Education. https://adedata.arkansas.gov/
22. National Archives and Records Administration. (2021, June 7). Timeline of events leading to the Brown v. Board of Education decision of 1954. U.S. National Archives. https://www.archives.gov/education/lessons/brown-v-board/timeline.html
23. Sikes, C. L., Ph.D. (2024, May). 70 years of Brown v. Board of Education: Reflecting on a new generation of civil rights in education. Intercultural Development Research Association. https://www.idra.org/resource-center/70-years-of-brown-v-board-of-education-reflecting-on-a-new-generation-of-civil-rights-in-education/
24. Frost, K. A. (2025, November). Russellville School District Survey [Unpublished raw data].
25. Gallup. (2024). U.S. schools receive a C+ from fifth–12th grade students. https://news.gallup.com/poll/646235/schools-receive-grade-fifth-12th-grade-students.aspx