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**CHARTER SCHOOLS IN NORTHWEST ARKANSAS:
PATTERNS IN ENROLLMENT AND CHARACTERISTICS OF
STUDENT MOVERS**

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Executive Summary

Charter schools in northwest Arkansas are frequently praised for their academic performance and criticized for their lack of diversity. Using publicly available anonymized data from the Arkansas Department of Education, we use 11 years of enrollment trends in northwest Arkansas public schools, considering student demographic characteristics, free- or reduced-price lunch status, limited English proficiency status, special education status, and performance on state standardized reading and math assessments, to analyze enrollment trends in northwest Arkansas traditional public schools and charter schools, as well as the characteristics of students who voluntarily switch sectors. We find that northwest Arkansas charter schools are not representative of the demographic characteristics of the region in terms of demographics, FRL status, LEP status, and SPED status, though these schools have grown in diversity as they have increased enrollments. Students who exit NWA district schools for NWA charter schools tend to be above both the state and their respective school averages in terms of standardized test performance. Students who exit NWA charter schools tend to be above the state average, but perform similarly to their peers in terms of standardized test performance.

Keywords: northwest Arkansas, charter schools, demographics, standardized tests

Charter schools in northwest Arkansas have been the subject of several recent stories in regional news outlets, at times receiving rapturous praise, at others harsh criticisms. *U.S. News & World Report* recently ranked Haas Hall Academy in Fayetteville the #7 public school, the #3 charter school in the nation, and the #1 public school in the state of Arkansas, a mantle it has held for the past seven years (Moody, 2019; Perozek, 2019a). Northwest Arkansas is home to some of the top public schools in the state, as two other northwest Arkansas charter schools joined Haas Hall Academy among the top five schools in Arkansas, and five northwest Arkansas traditional public schools were ranked among the top 20 schools in Arkansas (Perozek, 2019a).

Critics of charter schools in northwest Arkansas wonder if lack of diversity in their demographic composition has anything to do with their academic success. Haas Hall Academy has been sanctioned by state officials for having student demographics that are not representative of the larger community in terms of race, income, special education, and English language learners (Perozek, 2019b; Perozek, 2019c). State department of education commissioner Johnny Key “offered – and Haas Hall founder Martin Schoppmeyer embraced – the state’s help in showing the school can produce impressive results” as the school implements plans to increase in its student body’s diversity (Editorial Board of the NWA Democrat-Gazette, 2019b). While Haas Hall Academy in particular has received the most public attention, other charter schools in northwest Arkansas show similar levels of diversity or lack thereof.

It’s important to note that applications to Haas Hall or any other public charter school in the state of Arkansas “don’t ask about race, gender or other types of classification,” and so making the student bodies of northwest Arkansas charter schools more diverse will have to mean that a more diverse group of students seeks to enroll in them (Editorial Board of the NWA Democrat-Gazette, 2019b; Perozek, 2019b).

Northwest Arkansas charter schools serve a very small proportion of the public school population and pursue unique goals. The characteristics of these charter schools may provide a clue for what families and students in the region are demanding for their education, and for what district schools might be able to do to convince these students to stay. Some of these charter schools offer highly specialized curricula. Arkansas Arts Academy provides “an arts-based approach to learning” that “promotes creative expression and an enhanced academic experience” (Arkansas Arts Academy, 2019). Northwest Arkansas Classical Academy “provides the most time-tested methods of educating students,” including the Socratic method and instruction in Latin, to foster “intellectual curiosity, critical thinking, virtuous character building, and a lifelong passion for learning” (Northwest Arkansas Classical Academy, 2019). The four Haas Hall Academy campuses use an academic schedule that is “based on a semester block system” in order to prepare their students for higher education (Haas Hall Academy, 2019). Finally, LISA Academy, a network of public charter schools which recently sought (Howell, 2019a; Perozek, 2018) and won state approval “to absorb the struggling kindergarten-through-eighth grade Ozark Montessori Academy charter school in Springdale” (Howell, 2019b; Editorial Board of the NWA Democrat-Gazette, 2019a), prides itself in providing “Science, Technology, Engineering and Mathematics (STEM) field pioneer schools” (LISA Academy, 2019).

Nationally, it is unclear whether charter schools are associated with greater segregation or integration. Charter critics claim that “charter operators skirt legal requirements to accept all students” and ultimately “enroll fewer historically disadvantaged students” (Malkus, 2016, p. 479; Welner, 2013) or that students transferring into charter schools enter more segregated environments (Bifulco, Ladd, & Ross, 2009). On the other hand, charter proponents claim that “charter operators are mission driven to create opportunities for the least advantaged students” (Malkus, 2016, p. 480). Others argue that charter transfers do not “create dramatic shifts in the sorting of students by race or ethnicity” (Zimmer, et al., 2009). The challenge is determining an appropriate counterfactual school, district, or locality with which to compare

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a charter school (Ritter, Jensen, Kisida, & McGee, 2010). For example, researchers from the University of California, Los Angeles claimed that schools in Idaho were segregated because most students attended schools enrolling 90-100% White students (Frankenberg, Siegel-Hawley, & Wang, 2011), ignoring the fact that the state of Idaho was nearly 95% White.

Ultimately, the role a charter school plays in its community is highly context-specific as “[p]atterns in mean characteristics of all charters and all TPSs can disappear when charters are compared to neighboring TPSs,” and this masks differences in particular locales, as “charters’ student compositions frequently differ from their neighboring TPSs by significant amounts, but not in uniform ways” (Malkus, 2016, p. 480). This means that “charters’ student compositions differ from those in neighboring TPSs, but not in uniform ways” (Malkus, 2016, p. 479). Some charter schools may be more diverse, and others more homogenous, than the communities they serve, but to claim that charter schools generally have an integrating or segregating effect ignores underlying variation.

INTRODUCTION

With this context in mind, we turn now to addressing the following research questions concerning the recent trends in school integration in the Northwest Arkansas area:

1. How many students are enrolled in the Northwest Arkansas area and what are their characteristics?
 - a. What was the overall enrollment in the Northwest Arkansas area and Northwest Arkansas charter schools?
 - b. What percentage of enrolled students in each were Black, Hispanic, other students of color, White, eligible for Free or Reduced Price Lunch, or were students with Limited English Proficiency?
2. How many students voluntarily switch schools and what are their characteristics?
 - a. What percentage of movers in each year were students of color or eligible for FRL? How do movers’ academic achievement compare to their schools’ performance?
 - b. Are certain demographic groups over- or underrepresented among sector switchers?

DEFINITIONS

In this report, we examine patterns of enrollment and sector switches in the Northwest Arkansas school system, specifically in Northwest Arkansas’ open enrollment charter and traditional public schools. This section details the terminology and geographic definitions used throughout this report.

1. **Traditional public school (TPS):** Schools with geographic catchment areas; organized and operated by state-authorized school districts; funded by local, state, and federal sources, with the ability to raise local property taxes for school funding. Traditional

public schools (TPSs) are the default for students—students are assigned to specific schools depending on where they live, and must actively work to attend another school if they do not want to attend their neighborhood TPS.

2. **Open enrollment charter school (charter school):** Public schools without defined geographic catchment areas, authorized by the state Board of Education. Students need to complete an application to attend an open enrollment charter school in a non-competitive process that is determined by lottery if the school is oversubscribed—if there are more students who want to attend than there are seats available. Open enrollment charter schools can be run by for-profit charter management organizations, non-profit charter management organizations, or locally by the administration at that particular school. Charter schools are funded by the state, but do not have the authority to raise funds from local taxes. In this report, we focus solely on charters located in the Northwest Arkansas area—Arkansas Arts Academy, Benton County School of Arts, Haas Hall Academy (Bentonville), Haas Hall Academy (Fayetteville), Haas Hall Academy at the Lane (Rogers), Haas Hall Academy Jones Center (Springdale), Northwest Arkansas Academy of Fine Arts, Northwest Arkansas Classical Academy, and Ozark Montessori Academy (Springdale).
3. **Student Moves:** We track student moves by looking at student enrollment data in October of year 1 and the following October. A student is classified as a student switcher if they voluntarily transferred schools (they did not graduate and were not entering kindergarten) during this time. Thus, students identified as sector switchers between 07-08 to 08-09 were enrolled in a different sector for the 2007-08 school year than they were enrolled for the 2008-09 school year.
4. **Northwest Arkansas (NWA):** Geographic area in which students who attend one of the aforementioned charter schools generally live. For the purposes of our analysis, Northwest Arkansas includes Benton and Washington counties.
5. **Northwest Arkansas Traditional Public School (NWA TPS):** Any TPS in NWA, which include school districts in Benton County (Bentonville School District, Decatur, Gentry, Gravette, Pea Ridge, Rogers, and Siloam Springs) or in Washington County (Elkins School District, Farmington, Fayetteville, Greenland, Lincoln, Prairie Grove, Springdale, and West Fork).
6. **Free or Reduced Price Lunch (FRL):** Program administered by the federal Department of Agriculture to ensure students have access to adequate nutrition through schools. Students qualify for reduced price lunch if their household income is 185% or less of the federal poverty line, and for free lunch if their household income is 130% or less of the federal poverty line. FRL status is used as an indicator of student socioeconomic status.
7. **Limited English Proficiency (LEP):** Students are classified as having Limited English Proficiency (LEP) if they are not native English speakers and are not yet proficient in English. LEP students qualify for additional supports and services in public schools, and schools are provided with additional funding depending on the number of LEP students enrolled at the school.
8. **A note on race:** In this report, we focus on integration of schools along two main dimensions: race and socioeconomic status. Our data is drawn from the Arkansas Department of Education, and racial indicators are drawn from enrollment paperwork

submitted by parents when students enroll at school; when students move between schools, they resubmit this paperwork, and may change their racial identification in doing so. We retain those changes in our dataset.

DATA AND CONCEPTUAL CHALLENGES

Data

This report uses anonymized student level data from the 2007-08 through 2017-18 school years. The data, from the Arkansas Department of Education, includes 1,021,074 observations of student, district, school sector (traditional public school or charter public school), grade level, FRL status, ELL status, gender, race, and standardized scores in math and Reading Language Arts on their grade appropriate state assessment. For the majority of this report, we look at the school sectors (TPS and charter schools) for simplicity and to address concerns in the community about whether charter schools are contributing to educational segregation in northwest Arkansas or are fulfilling a need for quality educational opportunities for students. This aggregation by sector does not address the variation that exists within each sector—not all charters are alike, nor are all traditional public schools.

We have 11 years of data from the Arkansas Department of Education, allowing us to analyze 10 years of student moves: students who moved between October of the 2007-08 school year and October of the 2008-09 school year, from October 2008 to October 2009, from October 2009 to October 2010, etc., until October of the 2016-17 school year to October of the 2017-18 school year.

Conceptual Challenges

This report is descriptive in nature—it does not tell us what causes the demographic makeup of northwest Arkansas charter schools, nor what motivates certain students to switch sectors. Instead, this report presents observed patterns of enrollment and demographics in NWA charter schools, NWA TPSs, and public schools in other parts of Arkansas. We look at data over time to pull out patterns and the changing backdrop to education in NWA. The NWA education system offers several educational options to students and families in the K-12 system: traditional public schools (TPS) such as the Fayetteville School District, charter schools such as Haas Hall Academy, and private schools such as The New School. Additionally, families have the choice of homeschooling their students or moving out of NWA. As we will see in this report, families take advantage of all of their choices, finding the schooling option that works best for their student and their circumstances. This system of choice changes the discussion about integration in public schools. Open enrollment charter schools accept all students, regardless of where they live, disconnecting the longstanding link between residential and educational segregation. However, parents and students choose the charter schools to which they apply, and there are ever-present concerns that charter school staff may informally pressure certain students not to apply or drop out, thereby creating segregated schools. Parents and students, too, may choose to apply to charter schools where friends, neighbors, or other acquaintances have attended and had positive experiences, and in that way charter schools may come to reflect patterns of residential or social segregation. These nuances add complexity to the question of whether schools in NWA are integrated.

HOW MANY STUDENTS ARE ENROLLED IN NORTHWEST ARKANSAS?

Total Enrollment, All Sectors

In this section, we explore general enrollment trends in public charter and traditional public schools from 2007-08 to the 2017-18 school year. According to the U.S. Census Bureau, the largest four cities (Fayetteville, Springdale, Rogers, and Bentonville) in NWA have between 49,298 (Bentonville) and 85,257 (Fayetteville) people living in them. These communities have experienced tremendous growth since 2010, ranging from a modest 12.5% (Springdale) to a blistering 39.7% (Bentonville). These four cities are predominantly White, with non-Hispanic Whites composing between 49.1% (Springdale) and 77.5% (Fayetteville) of the overall population, but nonetheless feature substantial minority populations (36.5% Hispanic or Latino in Springdale, 32.6% Hispanic or Latino in Rogers, 10.9% Asian in Bentonville). In contrast, the state of Arkansas as a whole experienced less rapid growth (3.4% between 2010 and 2018) and is composed of a much greater proportion of Black or African American persons (15.7%) and a smaller proportion of Hispanic/Latino (7.6%) or Asian (1.6%) than can be found in NWA.

Table 1 shows that public school enrollment in NWA has grown at a commensurate rate between 2007-08 and 2017-18. In our final year of analysis, the total number of students enrolled in a public school in NWA (including those enrolled in TPSs and charter schools) was 87,893, a growth of 26% relative to the reference year of 2007-08, when NWA public schools enrolled 69,741 students. The charter school sector grew more rapidly over that period (266%), though they continue to enroll a relatively small population of students (2.9% of all public school students in NWA). These trends are distinct from an earlier report from the Office for Education Policy regarding integration in charter schools and TPSs in the Little Rock Metro Area, in which charter schools increased in enrollment over a seven year period, but enrollment in the Little Rock School District and in the TPSs in the Little Rock Metro Area decreased over the same span of time (Swanson, McKenzie, & Ritter, 2016).

Student Demographics, All Sectors

Charter schools continue to grow rapidly in NWA, and it is important to understand whether and how students enrolled in public charter schools differ from the peers who remain enrolled in TPSs. Table 2 reveals that NWA has grown increasingly diverse over this period, as the proportion of students who identify as White declined in both the TPS and charter school sectors, and the proportion of students who identify as a minority increased in both sectors.

White Students

The first panel in Table 2 shows the share of White students enrolled in each sector over time. The first row shows the percentage of White students relative to the entire population of students enrolled in NWA TPSs and the second row shows the percentage of White students relative to the entire population of NWA charter schools. In 2007-08, about 66% of all TPS students were White and nearly 90% of all NWA charter school students were White. White students are overrepresented in NWA charter schools for all 11 years of analysis. However, it is important to note that the proportion of White students in both sectors has decreased and that the gap between the two sectors has decreased over those 11 years. The proportion of White students in TPS has decreased by 8.8 percentage points and the proportion of White students in charter schools has decreased by 20 percentage points in that time. Importantly, the difference in proportion of White students in TPS and charter schools (23 percentage points in 2007-08) decreased by over 11 percentage points to a difference of 11.8 percentage points in 2017-18.

Black Students

The second panel in Table 2 shows the share of Black students enrolled in each sector over time. The percentage of Black students increased modestly in both sectors over the 11 years of analysis. In 2007-08, Black students constituted 2.5% of the TPS population and 1% of the charter school population. By 2017-18, the share of Black students in TPSs and charter schools grew to 3.0% and 1.3% respectively. However, this oversimplifies the differences between the two sectors, as the percentage of Black students grew from year to year and reached its high point in the final year of analysis. In contrast, Black students enrolled in NWA charter schools at the highest rate in 2014-15, when they comprised 2.2% of the charter school population, declining again to 1.3% by the final year of analysis. These fluctuations in the charter school sector are likely a function of the small size of the charter sector generally (enrolling only 706 students in 2007-08) and the small number of Black students particularly.

Hispanic Students

The third panel in Table 2 shows the share of Hispanic students enrolled in both sectors over time. The percentage of Hispanic students in both sectors has grown substantially over the 11 years of analysis. The growth, both by percent and by percentage points, was greater for charter schools than it was for NWA TPSs, though the charter sector continues to enroll a smaller proportion of Hispanic students. In 2007-08, Hispanic students constituted 24.2% of NWA TPSs and 5.5% of charter schools, a disparity of 18.7 percentage points. By 2017-18, the proportion of Hispanic students enrolled in TPSs had grown by 14%, reaching 28.3% of all students enrolled in TPSs, the highest share in the 11 years of analysis. The proportion of Hispanic students enrolled in charter schools also grew substantially, reaching 13.4% by 2017-18, a growth of 60% relative to the base year of 2007-08. While a substantial gap between the percentage of Hispanic students enrolled in charters and TPSs in NWA remains (14.9 percentage points in 2017-18), the gap has continued to decrease over the past 11 years.

Other Students of Color

The fourth panel in Table 2 shows the share of Asian students enrolled in both sectors over time. The percentage of Asian students has held relatively steady in the TPS sector. In 2007-08, Asian students composed 2.7% of the TPS sector. The share of Asian students enrolled in NWA TPSs grew to 3.0% in 2017-18, reaching its peak of 3.1% in 2016-17. In contrast, the proportion of Asian students enrolled in NWA charter schools has grown much more quickly. In 2007-08, Asian students made up 1.7% of all NWA charter school students, dipping to a low of 1.3% in 2009-10 before growing to 9.7% in 2017-18, a growth of 8 percentage points or 471% relative to the first year of analysis. The proportion of Asian students enrolled in NWA charter schools grew most rapidly between 2012-13, when Asian students composed 1.6% of all NWA charter school students, and 2013-14, when Asian students composed 5.0% of all NWA charter school students, a growth of 3.4 percentage points or 213%.

Another notable minority population in NWA is the Native Hawaiian/Pacific Islander (NH/PI) population (Table 2, panel 6). NH/PI students composed 1.2% of the TPS population in 2007-08 and grew to 3.9% of the TPS population by 2017-18, a growth of 2.7 percentage points or 225%. This trend may be partly explained by the recent and sudden growth of the Marshallese population in NWA particularly, and Arkansas generally, which is now the state with the second-largest share of Marshallese individuals in the United States behind Hawaii (Jimeno S., 2013). NH/PI students do not enroll in NWA charter schools in similar proportions (0.4% in 2017-18).

NWA TPSs and charter schools enrolled similar proportions of Native American/Alaskan students (Table 2, panel 5), as well as students who identify with multiple ethnicities (panel 7). In 2007-08, 1.5% of the TPS student population and 1.0% of the charter school population identified as Native American/Alaskan.

The share of these students in each sector declined by 2017-18, reaching 1.3% in TPSs and 0.8% in charter schools. In 2007-08, 1.5% of the TPS student population and 1.3% of the charter school population identified as having multiple ethnicities. The share of these students in each sector grew by 2017-18, reaching 3.0% in TPSs and 5.0% in charter schools.

FRL Students

A wide and persistent disparity exists between the percentage of students enrolled in charters and TPSs who are eligible for free and reduced price lunch (Table 2, panel 8). In 2007-08, 44.8% of all students enrolled in NWA TPSs and 8.5% of all students enrolled in charter schools were eligible for free or reduced priced lunch, a gap of 36.3 percentage points. By 2017-18, the share of FRL students enrolled increased in both sectors to 51.3% in TPSs (a growth of 6.5 percentage points or 14.5% since 2007-08) and to 13.8% in charter schools (a growth of 5.3 percentage points or 62.4% since 2007-08). The disparity between sectors grew in terms of percentage points (37.5 percentage points in 2007-08), but shrank as a percentage (charter schools enrolled FRL students at 19% the rate of TPSs in 2007-08 but 27% the rate of TPSs in 2017-18), which suggests that the charter sector is adding FRL students at a disproportionate rate relative to TPSs. Each sector enrolled the highest share of FRL students in 11 years in 2012-13, when 53.2% of TPS students and 24.0% of charter school students were eligible for free or reduced price lunch.

Students with Limited English Proficiency (English Learners)

Similar to FRL enrollment in the TPS and charter school sectors, a wide and persistent disparity exists between the percentage of students enrolled in charter schools and TPSs who are classified as having Limited English Proficiency (Table 2, panel 9). However, in contrast to FRL trends, enrollment trends for LEP students held relatively steady in both sectors. In 2007-08, 18.9% of all students enrolled in NWA TPSs were classified as LEP. The proportion of LEP students in TPSs grew to 20.9% in 2017-18, reaching a high point of 22.6% in 2016-17. Too few students enrolled in charter schools in 2007-08 were classified as LEP to be identified in our report. In 2009-10, 1.7% of all students enrolled in charter schools were LEP. The proportion of LEP students in charter schools grew to 1.9% in 2017-18, reaching a high point of 4.1% in 2013-14. In our final year of analysis, charter schools enrolled LEP students at 9% the rate at which TPSs enrolled LEP students, a gap of 19 percentage points.

Students with Disabilities

Similar to LEP enrollment trends in the TPS and charter school sectors, enrollment trends for students eligible for special education services (SPED) held relatively constant over the 11 years of analysis, though the SPED student enrollment gap between charters and TPSs is not as wide as the gap in FRL or LEP students (Table 2, panel 10). In 2008-09, 5.4% of all TPS students and 3.1% of all charter school students were eligible for special education students. SPED enrollment in both sectors grew to 6.1% in TPSs and 3.2% in charter schools by 2016-17, our final year of analysis with SPED data available. SPED enrollment in charter schools reached its highest point in 2014-15, when 4.5% of all students enrolled in charter schools were eligible for special education services, and reached the highest point in TPSs the following year, when 6.1% of all TPS students were eligible for special education services.

Enrollment Summary

Taken together, Tables 1 and 2 indicate that charter school enrollment is increasing in NWA, and that there are differences in student demographics between the charters and TPSs. TPSs in NWA enroll a higher percentage of Hispanic, FRL, and LEP students than do NWA charter schools. The share of Hispanic and FRL students enrolled in charter schools has been increasing, though the share of LEP

students enrolled in charter schools has held relatively constant. Enrollment numbers have increased and grown more diverse in both sectors in the past 11 years.

In the next section, we narrow our focus to students who voluntarily switch school sectors between traditional public and charter schools. Students who are required to leave a charter school because the school does not serve the subsequent grade level or because the school closed are excluded from the analysis. Furthermore, students leaving 12th grade or entering Pre-K or kindergarten are excluded in our analyses of students who switch out of our data, as these students would not appear in our data even if they were not switching between the traditional public and charter school sectors. In order to better understand the effect the charter sector has on integration in NWA, we must examine who is voluntarily transferring between sectors, where they choose to leave, and where they choose to enroll instead.

HOW MANY STUDENTS VOLUNTARILY SWITCH SCHOOL SECTORS?

In this section, we are interested in examining in greater detail the students enrolled in NWA charter schools or in NWA traditional public schools, and the choices they make about which school to attend from year to year. This analysis is summarized in Table 3, where panel 1 represents students enrolled in a charter school in the previous year, panel 2 represents students enrolled in a TPS in the previous year, and panel 3 represents students enrolled in a public school in another part of the state or who were not in our data in the previous year. For the first two panels, we exclude students who were identified as being 12th graders in the previous year, as these students would disappear from our data in the case that they graduated in the current year of analysis. Similarly, for the analysis of students who were not identified in our data in the previous year, we exclude students whose current grade level is either “Pre-K” or “Kindergarten,” as such students would not have appeared in our data in the previous year. The number and percentage of students initially enrolled in each sector who made various enrollment selections are presented. We observe 11 years of data, which allows us to analyze 10 years of sector switches.

Non-Movers

In Table 3, we see that the majority of students remain in the sector in which they completed their previous year of schooling. Of those who were enrolled in a charter school in the previous year, between 76.5% (08-09 to 09-10) and 82.2% (10-11 to 11-12) remain enrolled in a charter school in the following year. Of those who were enrolled in a TPS in the previous year, between 91.5% (07-08) and 92.9% (15-16 to 16-17) remain enrolled in a TPS in the following year.

TPSs to Charters

Despite the rapid growth of the charter sector in NWA over the past 10 years, a very small proportion of TPS students transfer to a charter school from year to year. Each year, between 0.2% (07-08 to 08-09 and 08-09 to 09-10) and 0.8% (16-17 to 17-18) of students enrolled in a TPS in the previous year transfer to a charter school in the following year. The share of students switching sectors from TPS to charter has quadrupled in 10 years of analysis, but remains a very small percentage of public school students served in NWA (less than 3% of the total public school population).

Charters to TPSs

A larger percentage of students exit a NWA charter school into a NWA district school than transfer in the opposite direction. Between 07-08 and 08-09, 14.7% of students enrolled in a NWA charter school transferred to a NWA TPS. The proportion of students transferring to a TPS declined over 10 years of analysis to 12.4% between 16-17 and 17-18. However, the rate held relatively constant over this period, reaching a high of 16.2% from 12-13 to 13-14 and a low of 11.1% from 10-11 to 11-12.

Exits to Other Public Schools

Each year, there is more movement out of the NWA TPS system than there is from NWA TPSs to NWA charter schools. Over the ten years of analysis, between 1.0% (school switches between 07-08 and 12-13) and 1.2% (school switches between 12-13 and 17-18) of students transferred from a NWA TPS to a public school (charter or TPS) in another part of the state of Arkansas. This figure includes students who may have enrolled in a virtual school. Similar rates of charter school students exited a NWA charter school for another public school in the state of Arkansas (between 0.5% from 08-09 to 09-10 and 1.2% from 12-13 to 13-14).

Students Who Move Out-of-System

We can also see the number of students who completely exit the Arkansas public school system each year. In the ten years of analysis, between 5.4% (13-14 to 14-15) and 7.2% (07-08 to 08-09) of all students enrolled in a NWA TPS transferred to a school that we do not observe in our data. As previously mentioned, this excludes students disappear from our data because they graduate. These students may be homeschooled, enroll in a private school in Arkansas, or enroll in a school outside of Arkansas. The proportion of students leaving NWA TPSs to a school outside of the public school system has generally decreased over time, reaching its nadir of 5.4% in 14-15 to 15-16. Similar rates of charter school students transferred to a school that we do not observe in our data (between 5.0% from 14-15 to 15-16 and 9.6% from 09-10 to 10-11).

Students New to the Area

For the purpose of our analysis, students who appear in our data as enrolled in an Arkansas public school in one year and enrolled in a NWA public school (TPS or charter) in the following year are considered “New from Other AR.” Students who do not appear in our data, but are enrolled in a NWA public school in the following year in a grade other than Pre-K or Kindergarten are considered “New from Unknown.” The total new enrollments refers to the sum of students who are “New from Other AR” and “New from Unknown.”

Between 2007-08 and 2017-18, roughly 800-1,100 students each year transferred from an Arkansas public school outside of NWA into a NWA public school the following year. The vast majority of these transfer students (between 96.9% and 99.5%) enrolled in a NWA TPS. A very small proportion of these transfer students (between 0.5% and 3.1%) enrolled in a NWA charter school. Values for transfer students are restricted between 2011-12 and 2012-13 because the number of students transferring into a NWA charter school is smaller than we can report.

In these years, a greater number of students transferred to a NWA public school from outside our data than from public school in another part of the state. Roughly 5,000-6,000 students each year transferred from outside of our data into a NWA public school the following year. Similar to students transferring from a public school in another part of the state, the vast majority of these transfers (between 95.4% and 98.5%) entered a NWA TPS, and a small proportion of these transfers (between 1.5% and 4.6%) entered a NWA charter school.

Section Summary

Northwest Arkansas has grown rapidly over the course of the past ten years. This trend is true in both the TPS and charter school sectors. Enrollment in the TPS sector grew from 65,081 to 80,185. Charter school enrollment grew even more rapidly, from 646 students to 2,029, though the charter sector continues to enroll a small proportion of all public school students in northwest Arkansas (less than 3%).

The majority of students enrolled in NWA TPSs (between 91.5% and 92.9% of students not in 12th grade) choose to remain enrolled in a NWA TPS in the following year. A small proportion of TPS students who switch sectors (between 0.2% and 0.8%) choose to enroll in a NWA charter school in the following year. A larger number of TPS students who transfer enroll in a public school in another part of Arkansas (between 1.0% and 1.2%) or exit our data (between 5.4% and 7.2%). NWA TPSs are predominantly White, though the proportion of minority students has grown rapidly over the past ten years (from 31.9% to 42.3%).

While the charter school sector in NWA has grown rapidly over the past 11 years, it continues to serve a relatively small proportion of public school students in this area. The majority of students enrolled in NWA charter schools (between 76.5% and 82.2%) choose to remain enrolled in a NWA charter school in the following year. In terms of demographic enrollment trends, the charter school sector appears to serve a distinct population compared to the TPS sector, enrolling a smaller proportion of minority, FRL, LEP, and SPED students. However, the charter school sector has grown more diverse over the past 11 years, as enrollment percentages for Black students, Hispanic students, Asian students, students with multiple ethnicities, FRL students, and LEP students have all increased.

Demographics of Sector Switchers, from NWA TPSs

Having discussed the magnitude of student switchers, we turn to an examination of the demographics of students transferring from NWA TPSs to other education sectors to determine if there are discrepancies in which type of students are the most likely to transfer. When we examine these numbers, it is most helpful to compare each percentage to the overall demographics of the sector. In this way, we can determine whether student switchers are representative of the sector as a whole, or whether particular groups are disproportionately represented among student switchers. If the share of a particular demographic group of students is less than the share of students in that demographic group in the sector as a whole, then they are underrepresented among student switchers. Conversely, if the share of a particular demographic group is greater than the share of that demographic group in the sector as a whole, then they are overrepresented among student switchers. Table 4 outlines the demographics of students transferring out of NWA TPSs.

In the first panel, we see again that total student enrollment in NWA TPSs has increased substantially in the past ten years. Enrollment in 2016-17 was 16,443 students more than it was in 2007-08, a growth of 23.4%. NWA TPSs have grown more diverse in that time period as well in terms of the proportion of minority (10.2 percentage points between 07-08 and 17-18), FRL (6.1 pp), LEP (3.7 pp), or SPED students (0.7 pp).

In the second panel, we see that the proportion of students who remain in NWA TPSs between years are similar to the proportions in which they were enrolled in NWA TPSs. This is consistent with the fact that the majority of students enrolled in a NWA TPS choose to remain enrolled in a NWA TPS in the following year (between 91.5% and 92.9% of students not in 12th grade; see Table 3).

NWA TPS to NWA Charters

We first examine student transfers out of NWA TPSs into NWA charter schools between 2007-08 and 2017-18. This analysis is summarized in Table 4, panel 3. Eleven years of data allows us to analyze 10 years of sector switches. Each year, minority students, students eligible for free and reduced price lunch, and students classified as having limited English proficiency were underrepresented among student movers. No clear pattern emerges with respect to students eligible for special education services, who were underrepresented overall in the 10 years of analysis, but overrepresented from 2010-11 to 2011-12 and from 2012-13 to 2013-14.

The proportion of FRL students switching from NWA TPSs to NWA charter schools held relatively constant over the ten years of analysis. Between 2007-08 and 2008-09, 26.9% of the 145 students switching from district public schools to charter schools were eligible for free- or reduced-price lunch. The proportion of FRL sector switches grew to its peak between 2010-11 and 2011-12, when 37.2% of the 188 students switching sectors were FRL-eligible. The year when the smallest proportion of FRL students switched sectors was between 2013-14 and 2014-15 (22.6%).

Just as the proportion of minority and LEP students enrolling in NWA TPSs increased from 2007-08 to 2017-18, the proportion of minority and LEP students choosing to switch from NWA TPSs into NWA charter schools increased in the same period of time. In our first year of analysis, of the 145 students switching from a district school to a charter school, only 11% identified as a racial minority and only 2.8% were LEP, the lowest percentage of either category in ten years of switches. The year when the greatest proportion of minority or LEP students switched from district schools to charter schools was between 2014-15 and 2015-16, when 35.2% of the 563 sector switchers identified as a minority and 10.1% were classified as having Limited English Proficiency. In our final year of analysis, 31.4% of sector switchers identified as a minority and 9% were classified as LEP. While these students are still underrepresented compared to the overall composition of public school students in NWA (41.9% minority, 22.6% LEP), it nonetheless represents substantial growth since the first year of analysis (a growth of 185% and 221% in the rate at which minorities and LEP students respectively switched from NWA TPSs to NWA charter schools).

NWA TPS to Other AR Public

Students switching out of a NWA TPS may choose to enroll in a public school in a different part of Arkansas. This analysis is summarized in Table 4, panel 4. Between 2007-08 and 2017-18, between 667 and 942 students switched from a NWA TPS to another public school in Arkansas outside of NWA each year. Among these students, minority and LEP students were underrepresented, while FRL and SPED students were overrepresented.

In the first year of analysis, of the 667 students who switched from a NWA TPS to another public school in Arkansas outside of NWA, 17.8% of switchers identified as a racial minority and 5.5% of switchers were classified as LEP. These students underrepresented minority (31.7%) and LEP (18.9%) students enrolled in NWA TPSs in 2007-08. Similar to the pattern of students who switched out of district schools into NWA charter schools, the proportion of minority or LEP students switching out of district schools into an Arkansas public school outside of NWA generally increased over the following ten years. The greatest proportion of minority students switched out of NWA TPSs into other Arkansas public schools between 2012-13 and 2013-14 when 32.4% of these geographic region switchers identified as a minority. The greatest proportion of LEP students switched out of NWA TPSs into other Arkansas public schools between 2015-16 and 2016-17 when 11.3% of these geographic region switchers were classified as LEP. Minority and LEP students switching in our final year of analysis (33.1% and 10.8% respectively) underrepresented minority and LEP students enrolled in NWA TPSs (41.9% and 22.6% respectively), but represented substantial growth since the first year.

In contrast, the FRL and SPED geographic region switchers overrepresented FRL and SPED students enrolled in NWA TPSs. In our first year of analysis, FRL students who switched out of NWA TPSs into public schools in other parts of Arkansas (52.5%) overrepresented FRL students enrolled in NWA TPSs (44.8%) by 7.7 percentage points. The rate at which FRL students switched sectors outpaced the proportion of FRL students enrolling in NWA TPSs, as 73.9% of sector switchers between 2011-12 and 2012-13 were eligible for free- and reduced-price lunch, 21.7 percentage points more than the proportion enrolled in NWA TPSs. This gap persisted until the final year of analysis, when 73.2% of switchers and 50.9% of NWA TPS students were FRL-eligible. Special education students were also overrepresented

among geographic region switchers relative to the proportion of NWA TPS students who eligible for special education services in every year between 2007-08 and 2017-18. Between 2013-14 and 2014-15, 8.5% of geographic region switchers were eligible for special education services, 2.9 percentage points higher than the percentage of NWA TPS students who were special education students.

NWA TPS to Out-of-System

Finally, students exiting from a NWA TPS may disappear from our data altogether if they are homeschooled, enroll in a private school, or enroll in a school outside of Arkansas. For the purposes of our analysis, we ignored students who were enrolled in 12th grade the initial year, as students who graduate would no longer appear in the system. Between 2007-08 and 2017-18, roughly four to five thousand students exit from a NWA TPS out of the Arkansas public school system altogether. Compared to students who switch out of NWA TPSs into NWA charter schools or Arkansas public schools outside of NWA, students who switch out-of-system are more representative of NWA TPS student enrollment patterns.

Minority students exit NWA TPSs to a school outside our data and enroll in NWA TPSs at more similar rates, relative to differences between other sector switchers. Between 2007-08 and 2008-09, 39.8% of the 4,680 students who exited the system identified as a minority. This was 8.1 percentage points higher than the proportion of students enrolled in NWA TPSs in 2007-08 who identified as a minority. Between 2016-17 and 2017-18, 44.8% of students who exited the system identified as a minority, the highest proportion of any year of our analysis. This was 2.9 percentage points higher than the proportion of students enrolled in NWA TPSs in 2016-17.

Students eligible for free- and reduced-price lunch also exited the system at more similar rates at which they enrolled in NWA TPSs, relative to differences between other sector switchers. Between 2007-08 and 2008-09, 55.8% of students exiting the system were eligible for FRL, 11 percentage points higher than the proportion of FRL students enrolled in NWA TPSs in 2007-08. Between 2010-11 and 2011-12, 60% of students exiting the system were FRL-eligible, the highest proportion of any year of analysis. In the final year of analysis, the gap between the exit rate and the enrollment rate of FRL students narrowed to 0.9 percentage points, when 51.8% of students exiting the system and 50.9% of NWA TPS students were FRL-eligible.

While a greater proportion of students exiting the system than were enrolled in NWA TPSs identified as a minority or were eligible for free- or reduced-price lunch for each year of analysis, by the final year of analysis, a smaller proportion of students exiting the system were classified as LEP or eligible for special education services than the proportion of these students enrolling in NWA TPSs. Between 2007-08 and 2008-09, a greater proportion of students exiting the system were classified as LEP (23.1%) than those enrolled in NWA TPSs (18.9%), but the rate at which LEP students exited the system declined to 21.1% by the final year of analysis, when 22.6% of all NWA TPS students were classified as having Limited English Proficiency. A smaller proportion of students receiving special education services exited the system than enrolled in NWA TPSs for each year of analysis. Between 2008-09 and 2009-10, 3.4% of all students exiting the system from a NWA TPS received special education services, two percentage points less than the proportion of SPED students enrolled in NWA TPSs. By our final year of analysis, 4.7% of sector switchers received special education services, 1.4 percentage points less than the proportion of SPED students enrolled in NWA TPSs.

Demographics of Sector Switchers, from NWA Charter Schools

In this section, we examine students transferring from NWA charter schools to traditional public schools in NWA. Because of the small number of students switching from NWA charter schools to Arkansas

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public schools outside of NWA or out of the Arkansas public school system altogether, we do not discuss those geographic region switchers. Table 5 presents the demographic characteristics of students transferring from NWA charter schools to TPSs.

NWA Charter to NWA TPS

Among students who switch from a NWA charter school to a NWA TPS, FRL students are overrepresented relative to proportion of students enrolled in a NWA charter school who are eligible for free- and reduced-price lunch, but minority students, LEP students, and SPED students exit NWA charter schools and enroll in NWA charter schools at similar rates.

Between 2007-08 and 2008-09, 12.6% of the 95 students exiting NWA charter schools to NWA TPSs were eligible for free- or reduced-price lunch. This is 4.6 percentage points higher than the proportion of students remaining in NWA charter schools who are FRL-eligible and 4.1 percentage points higher than the proportion of students enrolled in NWA charter schools in 2007-08 who are FRL-eligible. FRL students continued to exit NWA charter schools to NWA TPSs at a disproportionately high rate relative to the proportion of students enrolling or remaining in NWA charters who are FRL-eligible. Between 2012-13 and 2013-14, 36.6% of these sector switchers were FRL students, 12.6 percentage points higher than the proportion of students enrolled in NWA charters in 2012-13 who were FRL students. By the final year of analysis, 25.1% of these sector switchers were FRL students, 9.1 percentage points higher than the FRL enrollment rate in NWA charter schools in 2016-17.

Minority, LEP, and SPED students switched from NWA charter schools to NWA TPSs at representative rates at which they enrolled in NWA charter schools. Between 2007-08 and 2008-09, 13.7% of these sector switchers identified as a minority, 4.5 percentage points higher than the proportion of students enrolled in NWA charters schools in 2007-08 who identified as a minority. By the final year of analysis, this gap narrowed to 2.5 percentage points, when 32.7% of these sector switchers were minority students and 30.2% of NWA charter school students in 2016-17 were minority students. Between 2012-13 and 2013-14, 3.7% of these sector switchers were classified as LEP, 0.2 percentage points less than the 3.9% of all NWA charter school students who were classified as LEP in 2012-13. The gap reversed and grew by the final year, but remained economically small by the final year of analysis, when 5.2% of these sector switchers were classified as LEP, 1.9 percentage points more than the proportion of NWA charter school students classified as LEP in 2016-17. Between 2011-12 and 2012-13, 3.7% of these sector switchers were eligible for special education services, 0.1 percentage points greater than the proportion of NWA charter school students classified as SPED in 2011-12. By the final year, special education students continued to exit at a lower rate than at which they enrolled, as 2.4% of sector switchers were eligible for special education services, 0.8 percentage points less than the proportion of NWA charter school students eligible for special education services in 2016-17.

Section Summary

This section examined the demographics of students switching school sectors between 2007 and 2018. The charter school sector in northwest Arkansas has grown rapidly in those 11 years, from serving 706 students in 2007-08 to serving 2,581 students in 2017-18, a growth of 266%. Over the same period of time, the traditional public school sectors in both Benton County and Washington County also grew rapidly, and the charter sector continues to serve only a small percentage of all public school students in northwest Arkansas (less than 3% in 2017-18). Both in terms of raw numbers and as a percentage of all public school students, the charter sector in northwest Arkansas is substantially smaller than the charter sector in Little Rock analyzed by Swanson, McKenzie, and Ritter (2016).

Because of the small number of sector switchers into or out of northwest Arkansas charter schools, these switches will appear more volatile, particularly when examining the rates at which LEP or SPED students enter or exit NWA charter schools. In terms of demographic characteristics like race, FRL eligibility, and LEP or SPED classification, enrollment trends in NWA charter schools are not representative of demographic characteristics in NWA public schools as a whole. However, it is important to remember that enrolling in a charter school is a voluntary decision on the part of the student and the family, and an indiscriminate one on the part of the school. By law, charter schools that are oversubscribed must determine enrollment based on a randomized lottery.

The overall trend suggests that NWA is overall growing increasingly diverse, and this general trend is reflected in the way that minority, FRL, and LEP students are enrolling in NWA charter schools at increasing rates. While enrollment rates for special education students remained relatively constant, the rate at which minority, FRL, and LEP students enrolled in NWA charter schools each grew substantially over 11 years. In that time, minority student enrollment in NWA charter schools grew from 9.2% to 30.2% (an increase of 228%), FRL student enrollment from 8.5% to 16.0% (an increase of 88%), and LEP student enrollment from 1.7% to 3.3% (an increase of 94%).

Academic Achievement of Sector Switchers

Beyond examining demographic characteristics of students enrolling in NWA charter schools, we also examined the academic achievement levels of students who switched between school sectors.

Standardized test scores allow for comparison of student performance across subjects and time. Because students take different exams each year which may vary in difficulty, we first “standardize” the subject-specific scale scores to have a mean of 0 and a standard deviation of 1. These standardized scores or “Z scores” allow for comparison of students or schools across subjects and time. Students performing above the state average on any given assessment will have a positive Z score, and conversely students performing below the state average will have a negative Z score. These Z scores can be averaged at the school level. Students at a school with a positive Z score on average performed above the state average. Important to our analysis, standardization of test scores also allows us to compare a student with the average performance of his or her school. If the difference between an individual student’s Z score and her school’s Z score is positive, she is an above-average student at her school. Thus, standardization of test scores makes it possible for us to see if students switching sectors are on average performing better or worse than their school peers.

Each student’s Z score was generated by standardizing math and ELA test scores across the state population of test takers, within year, grade, and subject to have a mean of 0 and a standard deviation of 1, then averaging the two standardized scores together. If the student took only the math assessment, the student’s math Z score was used for his or her overall Z score. The same rule was used if the student only took the ELA assessment. Only students who completed criterion-referenced state assessments in ELA or math in grade 3 or higher during the years examined are included in the analysis.

We are also interested in whether sector switchers left relatively high or low performing schools. To evaluate this, we assigned each school to a tercile based on their average Z score relative to other schools. We then tracked whether student switchers came from schools in the top or bottom tercile of all public schools in northwest Arkansas, according to the school’s Z score.

Students Exiting NWA TPSs

Table 6 outlines the academic performance of students leaving NWA TPSs and the difference between their overall average score on state standardized assessments and the school-level average score on state standardized assessments.

As shown in Table 6, students switching from NWA TPSs to NWA charter schools scored above the state average on a composite measure of their math and ELA standardized assessments. Over the nine years of switches analyzed, these sector switchers were 0.66 standard deviations above the state average. Not only did these sector switchers score above the state average, they were on average higher performers than the average performance of the schools they left. Over the nine years of switches analyzed, these sector switchers left schools with an average Z score 0.31 standard deviations above the mean.

It follows that these sector switchers were leaving high performing schools, according to the schools' average Z scores. Between 2008-09 and 2009-10, 36.6% of these sector switchers left schools in the top tercile of average Z scores, almost three times the number of students leaving schools in the bottom tercile of average Z scores (12.9%). The proportion of students exiting top tercile NWA TPSs for NWA charter schools grew over the course of nine years, reaching a high of 66.6% between 2012-13 and 2013-14, and ultimately dropping to 60% in the final year of analysis. Over the nine years of switches analyzed, 57.8% of these sector switchers left schools in the top tercile of average Z score, more than four times the 13.7% of sector switchers leaving schools in the bottom tercile.

In contrast, students who exited NWA TPSs to an Arkansas public school outside of NWA performed below the state average and below their school average. Over the years analyzed, students exiting NWA TPS for Arkansas public schools outside of NWA scored 0.15 standard deviations below the state average. The schools these sector switchers exited were above average, scoring 0.14 standard deviations above the state average. A similar proportion of these students were drawn from schools in the top tercile of school Z score as were drawn from the bottom tercile of school Z score. Between 2008-09 and 2009-10, 31.8% of these sector switchers left schools in the top tercile of school Z score, 2.7 percentage points higher than the proportion of these sector switchers leaving schools in the bottom tercile of school Z score. These rates held relatively constant over nine years of analysis. In the final year, 30.5% of these sector switchers left schools in the top tercile and 33.6% of these sector switchers left schools in the bottom tercile.

Finally, students leaving NWA TPSs to a school outside the Arkansas public school system performed above the state average but below their respective school averages. Over the nine years of analysis, these sector switchers scored 0.05 standard deviations above the state average, but 0.15 standard deviations below their school average. The only exception was the final year of analysis, when these sector switchers performed below both the state average (0.05 standard deviations) and their school average (0.26 standard deviations). A greater proportion of these students left schools in the top tercile than schools in the bottom tercile, but the difference was not as disparate as it was for NWA TPS students switching into NWA charter schools. Over the years of analysis, 40% of these sector switchers left schools in the top tercile of composite Z score and 26% of these sector switchers left schools in the bottom tercile.

Students Exiting NWA Charters

Next, we consider students switching out of NWA charter schools to NWA TPSs or to a school outside the Arkansas public school system. We ignore students who leave a NWA charter school for an Arkansas public school outside of NWA because very few students made this switch over the nine years of analysis. These findings are summarized in Table 7.

We begin with students exiting NWA charter schools to enroll in a NWA TPS (Table 7, panel 1). Between 2008 and 2018, students exiting NWA charter schools to NWA TPSs on average scored above the state average on their composite math and ELA Z scores and performed roughly as well as their charter school peers. Over nine years of analysis, these sector switchers scored on average 0.32 standard deviations above the state average. On average, these sector switchers scored below their school's average Z score by 0.07 standard deviations. However, there is no clear pattern when relating student Z scores to their school Z scores. In early years of analysis, these sector switchers outperformed their charter school peers (0.14 standard deviations between 2008-09 and 2009-10, 0.09 standard deviations between 2009-10 and 2010-11). However, in the final three years of analysis, these students underperformed relative to their charter school peers (0.14 standard deviations between 2014-15 and 2015-16, 0.21 standard deviations between 15-16 and 16-17, and 0.08 standard deviations between 16-17 and 17-18).

The clearest pattern that emerges is that these charter schools improved fairly steadily in average Z score between 2008 and 2018. In 2008-09, the average Z score of NWA charter schools that students exited for NWA TPSs was 0.16 standard deviations above the state average and was actually 0.04 standard deviations below the state average the following year. In the final three years of analysis, the average Z score of NWA charter schools that students exited for NWA TPSs grew to 0.50, 0.56, and 0.57 standard deviations above the state average. The proportion of students exiting charter schools in the top tercile grew accordingly. Between 2009-10 and 2010-11, 100% of students exiting NWA charter schools for NWA TPSs left a school in the bottom tercile of school Z score. In the final three years of analysis, over 60% of these sector switchers left schools in the top tercile, and less than 20% left schools in the bottom tercile. Overall, 40.5% of these sector switchers left schools in the top tercile and 10.8% of these sector switchers left schools in the bottom tercile.

The pattern is similar for students exiting NWA charter schools for a school outside the Arkansas public school system (Table 7, panel 2). These students tend to be similar to their peers in the school they leave (0.57 student Z score and 0.55 school Z score over the nine years of analysis), though in some years they score substantially higher than these peers (0.49 standard deviations between 2008-09 and 09-10) and in others they score substantially lower than these peers (0.22 standard deviations between 2012-13 and 13-14). This erratic pattern is perhaps due to the small number of students exiting the Arkansas public school system from a NWA charter school in any given year (ranging from 63 between 2010-11 and 11-12 to 146 between 2016-17 and 17-18). These students also scored on average more than half a standard deviation above the state average on standardized tests, though it was not until the final four years of analysis that this pattern consistently held. Between 2009-10 and 2010-11, 100% of these sector switchers left a charter school in the bottom tercile of school Z score. However, in most years, a very small percentage of these sector switchers leave a school in the bottom tercile of school Z score (0% most years to 9.1% between 2015-16 and 16-17). In the final four years of switcher analysis, between 56.7% (13-14 to 14-15) and 78.8% (15-16 to 16-17) of these sector switchers left a NWA charter school in the top tercile of school Z score.

Section Summary – Academics

Students exiting NWA TPSs to NWA charter schools generally perform above both the state and respective school averages, while students exiting NWA TPSs to public schools in another part of Arkansas or out of the Arkansas public school system entirely tend to perform similarly or below their school and the state averages. Students exiting NWA TPSs to NWA charter schools are high performers (0.66 standard deviations above the state mean) and are above-average performers relative to the schools they leave, which average 0.31 standard deviations above the state mean. They disproportionately leave schools in the top third of schools in NWA (36.6%) than they do from schools in the bottom third (12.9%) in terms of school Z score. Students exiting NWA TPSs to public schools in another part of Arkansas tend to be below average performers relative to the state average (0.15 standard deviations below the mean)

and relative to the schools they leave (which average 0.14 standard deviations above the state mean). These students exit schools in the top third and bottom third of Z score at similar rates. Students exiting NWA TPS out of the Arkansas public school system altogether perform similarly to the state average, though they tend to be below the average performance of the schools they leave (0.15 standard deviations above the state mean). More of these students exit schools in the top third (40%) than they do schools in the bottom third (26%) in terms of school Z score.

Students exiting NWA charter schools tend to be high performers relative to the state average, but perform similarly relative to the peers of the schools they exit. Students exiting for a district school in NWA averaged 0.32 standard deviations above the state mean. On average, they scored 0.07 standard deviations below their school means, though there was no consistent pattern of performing below their school mean from year to year. Students exiting NWA charter schools to a public school in another part of Arkansas performed above the state average (approximately 0.5 standard deviations above the state mean) and performed similarly to the peers of the schools they exited.

CONCLUSIONS

Despite the successes charter schools in northwest Arkansas have enjoyed, there are concerns about the fact the region's charter schools do not reflect the demographic composition of the surrounding communities. Enrollment trends in both northwest Arkansas' traditional public school sector and charter school sector have grown increasingly diverse in several demographic categories. It is important to note that our analysis is descriptive in nature, and therefore we cannot claim with any confidence that the charter schools are causing the area's schools to become more integrated or segregated along any of these dimensions. It may simply be that students of all backgrounds, whether by race and ethnicity or in terms of their classification as FRL, LEP, or SPED, are making informed decisions according to their own needs and pursuing homeschooling or enrollment in one of the traditional public schools, public charter schools, or private schools that are available to them. The extent to which these individual decisions maximize each student's utility is unclear.

What is clear is that northwest Arkansas charter schools offer a diverse range of missions, which may explain why they serve a student population that is distinct from the overall demographic characteristics of northwest Arkansas. As mentioned in the introduction, these charter schools provide highly specialized curricula ranging from arts (Arkansas Arts Academy), classics (Northwest Arkansas Classical Academy), college prep (Haas Hall Academy), and STEM (LISA Academy). Plans are in place to open a charter school in 2020 for children who have experienced trauma (Perozek, 2019).

For a number of reasons, fixating on enrollment rates of demographic categories may disservice the students of northwest Arkansas. The educational offerings of these charter schools may not be of interest to these groups. For many students, the opportunity cost associated with enrolling in a regional charter school may exceed the marginal return, especially considering that most students who transfer out of a TPS into a charter school leave a school in the top tercile of schools in the state of Arkansas by school Z score. But the minority, FRL, LEP, and SPED students who choose to enroll in these charter schools stay enrolled in them at similar rates from year to year. We find little evidence of "cropping," or pressuring low performers to leave, overall in NWA charter schools. In fact, we find that students who transfer out of charter schools on average score above the state average on standardized tests and perform similarly to their peers.

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Tables

Table 1: Student enrollment in Northwest Arkansas traditional public schools and charter schools, 2007-08 through 2017-18

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Benton TPS Enrollment	34,925	36,331	37,098	37,918	38,756	39,920	40,664	41,477	42,376	43,472	43,453
Washington TPS Enrollment	34,110	35,224	36,270	37,240	37,994	38,853	39,900	40,701	41,348	42,006	41,859
NWA Charter Enrollment	706	794	898	1,020	1,098	1,113	1,526	1,616	2,124	2,186	2,581
<i>ALL NWA</i>	<i>69,741</i>	<i>72,349</i>	<i>74,266</i>	<i>76,178</i>	<i>77,848</i>	<i>79,886</i>	<i>82,090</i>	<i>83,794</i>	<i>85,848</i>	<i>87,664</i>	<i>87,893</i>
% in Benton TPS	50.1%	50.2%	50.0%	49.8%	49.8%	50.0%	49.5%	49.5%	49.4%	49.6%	49.4%
% in Washington TPS	48.9%	48.7%	48.8%	48.9%	48.8%	48.6%	48.6%	48.6%	48.2%	47.9%	47.6%
% in NWA Charter	1.0%	1.1%	1.2%	1.3%	1.4%	1.4%	1.9%	1.9%	2.5%	2.5%	2.9%

Table 2

Student demographics by public school sector, 2007-08 through 2017-18

		2009-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
White	TPS	66.4%	65.2%	64.0%	63.0%	62.2%	61.3%	60.4%	59.5%	58.7%	57.9%	57.6%
	Charter	89.4%	87.7%	86.2%	85.6%	84.5%	80.8%	75.8%	73.3%	70.5%	69.3%	69.4%
Black	TPS	2.5%	2.6%	2.6%	2.7%	2.7%	2.7%	2.8%	2.9%	2.9%	2.9%	3.0%
	Charter	1.0%	1.1%	1.8%	1.9%	1.5%	2.3%	1.7%	2.2%	1.9%	1.3%	1.3%
Hispanic	TPS	24.2%	24.7%	25.2%	25.6%	25.9%	26.3%	26.7%	27.3%	27.7%	28.0%	28.3%
	Charter	5.5%	7.4%	7.8%	7.1%	8.0%	9.7%	12.1%	12.1%	13.0%	13.2%	13.4%
Asian	TPS	2.7%	2.6%	2.6%	2.7%	2.8%	2.9%	2.9%	2.8%	3.0%	3.1%	3.0%
	Charter	1.7%	1.4%	1.3%	1.8%	1.8%	1.6%	5.0%	7.3%	9.1%	10.3%	9.7%
Native/Alaskan	TPS	1.5%	1.6%	1.5%	1.5%	1.4%	1.4%	1.3%	1.3%	1.3%	1.3%	1.3%
	Charter	1.0%	0.9%	1.3%	1.9%	1.6%	1.7%	1.5%	1.2%	1.2%	1.0%	0.8%
Native/Pacific Islander	TPS	1.2%	1.6%	2.0%	2.3%	2.5%	2.8%	3.0%	3.3%	3.5%	3.7%	3.9%
	Charter	<i>RV</i>	<i>RV</i>	<i>RV</i>	<i>RV</i>	<i>RV</i>	0.4%	0.3%	0.2%	0.4%	0.3%	0.4%
Multiple Ethnicities	TPS	1.5%	1.7%	2.1%	2.2%	2.5%	2.7%	2.8%	2.9%	2.9%	3.0%	3.0%
	Charter	1.3%	1.5%	1.6%	1.8%	2.4%	3.5%	3.7%	3.7%	4.0%	4.7%	5.0%
FRL	TPS	44.8%	47.1%	49.6%	51.2%	52.2%	53.2%	52.8%	52.7%	52.1%	50.9%	51.3%
	Charter	8.5%	12.5%	18.5%	20.1%	21.9%	24.0%	22.7%	22.6%	19.9%	16.0%	13.8%
LEP	TPS	18.9%	19.9%	20.5%	20.9%	21.1%	21.2%	21.6%	21.9%	21.8%	22.6%	20.9%
	Charter	<i>RV</i>	<i>RV</i>	1.7%	2.1%	2.1%	3.9%	4.1%	3.2%	3.8%	3.3%	1.9%
SPED	TPS		5.4%	5.5%	5.5%	5.6%	5.6%	5.6%	6.0%	6.1%	6.1%	
	Charter		3.1%	2.9%	1.9%	3.6%	3.4%	4.3%	4.5%	3.5%	3.2%	
<i>N</i>	TPS	69,035	71,555	73,368	75,158	76,750	78,773	80,564	82,178	83,724	85,478	85,312
	Charter	706	794	898	1,020	1,098	1,113	1,526	1,616	2,124	2,186	2,581

Table 3

Number and percentage of students voluntarily exiting and remaining, by sector, 2007-08 through 2017-18

		07-08 to 08-09	08-09 to 09-10	09-10 to 10-11	10-11 to 11-12	11-12 to 12-13	12-13 to 13-14	13-14 to 14-15	14-15 to 15-16	15-16 to 16-17	16-17 to 17-18
NWA Charter Starters	<i>Prior Year Enrollment</i>	646	729	814	934	996	993	1,404	1,500	1,977	2,029
	Stay in NWA Charter	78.9%	76.5%	78.3%	82.2%	78.3%	78.3%	79.6%	81.4%	80.2%	80.9%
	Switch to NWA TPS	14.7%	15.4%	12.8%	11.1%	13.6%	16.2%	13.2%	12.8%	13.2%	12.4%
	Switch to Other AR	0.6%	0.5%	0.7%	RV	0.6%	1.2%	1.1%	RV	0.7%	0.6%
	Switch to Unknown	8.7%	8.9%	9.6%	6.7%	8.7%	6.6%	6.5%	5.0%	7.1%	7.2%
NWA TPS Starters	<i>Prior Year Enrollment</i>	65,081	67,366	68,979	70,849	72,260	73,894	75,598	77,019	78,344	80,185
	Stay in NWA TPS	91.5%	92.6%	92.5%	92.3%	92.5%	92.6%	92.6%	92.8%	92.9%	91.9%
	Switch to NWA Charter	0.2%	0.2%	0.3%	0.3%	0.3%	0.7%	0.4%	0.7%	0.5%	0.8%
	Switch to Other AR	1.0%	1.0%	1.0%	1.0%	1.0%	1.2%	1.2%	1.1%	1.2%	1.2%
	Switch to Unknown	7.2%	6.4%	6.4%	6.2%	6.5%	6.0%	5.8%	5.4%	5.6%	5.9%
New to NWA	<i>Total new enrollments</i>	6,065	5,102	5,309	5,320	5,469	5,578	5,699	5,767	6,028	4,886
	<i>New from Other AR</i>	852	837	816	926	987	964	1,039	1,088	1,084	1,110
	Other AR to NWA CS	1.1%	1.6%	1.0%	0.5%	RV	1.2%	1.2%	1.7%	0.9%	3.1%
	Other AR to NWA TPS	98.9%	98.4%	99.0%	99.5%	RV	98.8%	98.8%	98.3%	99.1%	96.9%
	<i>New from Unknown</i>	5,213	4,265	4,493	4,394	4,482	4,614	4,660	4,679	4,944	3,776
	Unknown to NWA CS	1.5%	2.6%	2.3%	2.0%	2.2%	3.0%	2.3%	4.6%	2.5%	4.6%
	Unknown to NWA TPS	98.5%	97.4%	97.7%	98.0%	97.8%	97.0%	97.7%	95.4%	97.5%	95.4%

Notes. For students starting in NWA charters or NWA TPS, analysis ignores students for whom prior year grade level was listed as "12." For students new to NWA, analysis ignores students for whom current year grade level was listed as "P" or "K." In panel 3, "NWA CS" refers to Northwest Arkansas Charter Schools.

Table 4

Demographic characteristics of school sector switchers from Northwest Arkansas traditional public schools, 2007-08 to 2017-18

		07-08 to 08-09	08-09 to 09-10	09-10 to 10-11	10-11 to 11-12	11-12 to 12-13	12-13 to 13-14	13-14 to 14-15	14-15 to 15-16	15-16 to 16-17	16-17 to 17-18
PRIOR YEAR CHARACTERISTICS	<i>Total Enrollment</i>	69,035	71,555	73,368	75,158	76,750	78,773	80,564	82,178	83,724	85,478
	Minority	31.7%	32.7%	35.5%	36.7%	37.4%	38.4%	39.3%	40.3%	41.2%	41.9%
	FRL	44.8%	47.1%	49.6%	51.2%	52.2%	53.2%	52.8%	52.7%	52.1%	50.9%
	LEP	18.9%	19.9%	20.5%	20.9%	21.1%	21.2%	21.6%	21.9%	21.8%	22.6%
	SPED		5.4%	5.5%	5.5%	5.6%	5.6%	5.6%	6.0%	6.1%	6.1%
STAY IN NWA TPS	<i>Prior Year Enrollment</i>	59,532	62,403	63,812	65,382	66,813	68,459	70,035	71,481	72,809	73,653
	Minority	31.9%	32.9%	36.0%	37.1%	37.9%	38.8%	39.9%	40.8%	41.7%	42.3%
	FRL	45.2%	47.4%	50.1%	51.6%	52.4%	53.7%	53.4%	53.4%	52.7%	51.6%
	LEP	19.4%	20.5%	21.3%	21.7%	21.9%	22.1%	22.5%	22.9%	22.8%	23.5%
	SPED		5.8%	5.9%	6.0%	6.1%	6.1%	6.1%	6.6%	6.7%	6.7%
SWITCH TO NWA CHARTER	<i>Prior Year Enrollment</i>	145	167	219	188	183	488	274	563	361	611
	Minority	11.0%	15.0%	14.2%	18.1%	26.2%	30.5%	28.1%	35.2%	31.9%	31.4%
	FRL	26.9%	29.3%	27.9%	37.2%	33.3%	29.7%	22.6%	26.1%	28.3%	25.0%
	LEP	2.8%	4.8%	4.1%	4.8%	6.6%	4.5%	7.3%	10.1%	7.8%	9.0%
	SPED		5.4%	3.2%	7.4%	2.7%	5.7%	5.5%	4.4%	2.8%	4.1%
SWITCH TO OTHER AR	<i>Prior Year Enrollment</i>	667	673	710	705	712	880	885	873	919	942
	Minority	17.8%	22.1%	21.5%	25.1%	30.1%	32.4%	28.4%	32.2%	31.2%	33.1%
	FRL	52.5%	65.5%	64.4%	64.5%	73.9%	70.5%	70.6%	71.7%	71.2%	73.2%
	LEP	5.5%	5.2%	6.6%	7.4%	9.3%	10.6%	8.0%	9.0%	11.3%	10.8%
	SPED		5.5%	6.2%	6.7%	8.4%	6.5%	8.5%	6.4%	8.3%	7.3%
SWITCH TO UNKNOWN	<i>Prior Year Enrollment</i>	4,680	4,289	4,403	4,420	4,677	4,405	4,392	4,161	4,353	4,736
	Minority	39.8%	38.8%	38.6%	39.1%	39.9%	39.6%	39.7%	41.3%	43.2%	44.8%
	FRL	55.8%	56.7%	57.4%	60.0%	58.7%	59.7%	56.6%	58.7%	54.5%	51.8%
	LEP	23.1%	23.2%	20.1%	20.2%	19.6%	18.5%	18.9%	20.0%	19.0%	21.1%
	SPED		3.4%	3.7%	3.7%	4.0%	3.6%	3.8%	3.5%	3.9%	4.7%

Table 5

Demographic characteristics of school sector switchers from Northwest Arkansas public charter schools, 2007-08 to 2017-18

	07-08 to 08-09	08-09 to 09-10	09-10 to 10-11	10-11 to 11-12	11-12 to 12-13	12-13 to 13-14	13-14 to 14-15	14-15 to 15-16	15-16 to 16-17	16-17 to 17-18
<i>Total Enrollment</i>	706	794	898	1,020	1,098	1,113	1,526	1,616	2,124	2,186
Minority	9.2%	10.7%	14.0%	13.8%	14.7%	19.0%	23.9%	26.8%	29.2%	30.2%
PRIOR YEAR CHARACTERISTICS										
FRL	8.5%	12.5%	18.5%	20.1%	21.9%	24.0%	22.7%	22.6%	19.9%	16.0%
LEP	<i>RV</i>	<i>RV</i>	1.7%	2.1%	2.1%	3.9%	4.1%	3.2%	3.8%	3.3%
SPED		3.1%	2.9%	1.9%	3.6%	3.4%	4.3%	4.5%	3.5%	3.2%
<i>Prior Year Enrollment</i>	510	558	637	768	780	778	1,118	1,221	1,586	1,641
Minority	7.8%	12.0%	12.9%	13.8%	14.7%	20.6%	25.8%	27.9%	29.9%	29.4%
STAY IN NWA CHARTER										
FRL	8.0%	14.5%	16.5%	20.4%	21.0%	22.4%	22.5%	20.9%	19.5%	15.6%
LEP	<i>RV</i>	<i>RV</i>	1.7%	2.6%	2.3%	4.5%	4.9%	3.2%	4.0%	3.1%
SPED		3.4%	3.3%	2.2%	4.2%	4.0%	5.0%	5.0%	3.8%	3.6%

Table 6

Academic achievement of NWA TPS switchers, 2008-09 through 2017-18

		08-09 to 09-10	09-10 to 10-11	10-11 to 11-12	11-12 to 12-13	12-13 to 13-14	13-14 to 14-15	14-15 to 15-16	15-16 to 16-17	16-17 to 17-18	Total
NWA TPS to NWA Charter	<i>Total Movers</i>	167	219	188	183	488	274	563	361	611	3,054
	<i>N with Scores</i>	93	127	104	108	287	155	442	252	495	2,063
	Student Z	0.42	0.39	0.48	0.48	0.45	0.46	0.86	0.75	0.82	0.66
	School Z	0.21	0.26	0.29	0.27	0.29	0.31	0.38	0.30	0.31	0.31
	% in Top 1/3 School	36.6%	52.8%	59.6%	45.4%	66.6%	54.8%	58.8%	58.7%	60.0%	57.8%
	% in Bot. 1/3 School	12.9%	15.7%	11.5%	13.0%	7.3%	12.3%	15.4%	12.7%	17.2%	13.7%
NWA TPS to Other AR	<i>Total Movers</i>	673	710	705	712	880	885	873	919	942	7,299
	<i>N with Scores</i>	289	307	315	339	375	433	486	530	577	3,651
	Student Z	-0.04	-0.03	-0.20	-0.16	-0.15	-0.11	-0.14	-0.23	-0.21	-0.15
	School Z	0.12	0.14	0.12	0.14	0.10	0.16	0.17	0.15	0.15	0.14
	% in Top 1/3 School	31.8%	36.8%	31.7%	31.6%	25.6%	27.7%	28.0%	30.9%	31.9%	30.5%
	% in Bot. 1/3 School	29.1%	30.3%	35.9%	33.0%	36.0%	34.2%	30.7%	35.5%	35.4%	33.6%
NWA TPS to Unknown	<i>Total Movers</i>	4,289	4,403	4,420	4,677	4,405	4,392	4,161	4,353	4,736	39,836
	<i>N with Scores</i>	1,037	1,146	1,110	1,245	1,177	1,108	1,403	1,526	1,731	11,483
	Student Z	0.03	0.05	0.08	0.07	0.07	0.11	0.12	0.02	-0.05	0.05
	School Z	0.16	0.19	0.20	0.20	0.20	0.22	0.24	0.20	0.21	0.20
	% in Top 1/3 School	40.5%	43.4%	42.9%	38.9%	44.9%	36.4%	37.6%	38.7%	38.4%	40.0%
	% in Bot. 1/3 School	24.3%	24.9%	24.1%	25.8%	23.4%	26.6%	26.4%	28.7%	28.1%	26.0%

Notes. The percentage of students exiting a school in the top or bottom third of standardized test performance was calculated based on the distribution of schools in northwest Arkansas.

Table 7

Academic achievement of NWA charter switchers, 2008-09 through 2017-18

		08-09 to 09-10	09-10 to 10-11	10-11 to 11-12	11-12 to 12-13	12-13 to 13-14	13-14 to 14-15	14-15 to 15-16	15-16 to 16-17	16-17 to 17-18	Total
	<i>Total Movers</i>	112	104	104	135	161	186	192	260	251	1,505
NWA	<i>N with Scores</i>	56	53	38	73	100	105	138	200	190	953
Charter	Student Z	0.30	0.05	0.10	0.12	0.09	0.38	0.36	0.35	0.57	0.32
to NWA	School Z	0.16	-0.04	0.10	0.17	0.18	0.27	0.50	0.56	0.65	0.39
TPS	% in Top 1/3 School	0.0%	0.0%	10.5%	4.1%	0.0%	44.8%	61.6%	63.5%	63.2%	40.5%
	% in Bot. 1/3 School	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.5%	18.4%	10.8%
	<i>Total Movers</i>	65	78	63	87	66	91	75	141	146	812
NWA	<i>N with Scores</i>	9	16	19	25	14	30	33	66	86	298
Charter	Student Z	0.65	-0.18	0.17	0.57	-0.04	0.20	0.53	0.78	0.87	0.57
to	School Z	0.16	-0.04	0.29	0.19	0.18	0.32	0.65	0.74	0.82	0.55
Unknown	% in Top 1/3 School	0.0%	0.0%	36.8%	16.0%	0.0%	56.7%	66.7%	78.8%	77.9%	56.7%
	% in Bot. 1/3 School	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	1.2%	7.7%

Notes. Very few students switched out of a charter school in northwest Arkansas into a public school in another part of the state. The percentage of students exiting a school in the top or bottom third of standardized test performance was calculated based on the distribution of schools in northwest Arkansas.