Understanding the At-Risk Indicator

Nevada's Pupil-Centered Funding Plan

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Executive Summary

In 2022, Nevada began implementation of its new Pupil-Centered Funding Plan (PCFP). The new funding formula was structured to direct additional resources to students in Nevada who require extra support. The PCFP provides supplemental funding based on weights for students in three categories: English Learner, At-risk, and Gifted and Talented. This report focuses on the indicator used for the At-risk weight in the PCFP.

Nevada was the first state in the nation to use a machine learning–generated indicator of student need—the At-risk indicator—as a part of its funding formula rather than a more traditional measure of student need (e.g., eligibility for free and reduced-price lunch). Nevada's At-risk indicator is designed to identify students who are at risk of not graduating with their cohort and directs additional funding through the PCFP to the schools serving these students. To do this, each student is assigned a Graduation Related Analytic Data (GRAD) score within the Infinite Campus system used by the Nevada Department of Education. The GRAD score is calculated by a machine learning algorithm from Infinite Campus that analyzes approximately 70 data points about a student, including academic performance, attendance, behavior, and economic stability. The program uses these factors to predict how likely a student is to graduate on time, based on prior cohorts of students with similar factors. The At-risk status is assigned to students with the lowest likelihood of graduating on time—those within the lowest fifth of GRAD scores.

Using data from the 2022/23 and 2023/24 school years, WestEd and Augenblick, Palaich, and Associates (APA) analyzed

- the demographic characteristics of those students identified as being At-risk;
- the overlap between At-risk identification and other indicators of student need such as free and reduced-price lunch eligibility and direct certification;[1]
- the stability of the At-risk indicator at the state level and local education agency (LEA) level between 2022/23 and 2023/24; and
- the relationship between At-risk status, academic outcomes, and the school rating system of the Nevada School Performance Framework (NSPF).

[1] Direct certification is a process whereby students are automatically qualified for free and reduced-price lunch based on their family's participation in certain assistance programs, without needing to complete a separate application.

Key Findings

There is considerable overlap between students identified for support using more traditional measures of need and students identified based on the At-risk indicator (the GRAD score). For example, students with individualized education programs (IEPs), students in the foster care system, and English Learners are all more likely to be identified as At-risk. This finding provides some face validity that Infinite Campus's machine learning algorithm is identifying students who need additional support.

The current At-risk indicator is more targeted than traditional measures of student need. In most student-weighted funding formulas, additional resources are allocated to all students in a particular group. For example, California's funding formula allocates additional funding to all English Learners, to students in the foster care system, and to economically disadvantaged students. In contrast, the At-risk indicator identifies a subset of students in those categories for additional funding based on their GRAD score. Assuming Infinite Campus's algorithm accurately identifies a student's risk of not graduating, identifying all students in a particular student group (e.g., all foster youth or all students who are at the lowest proficiency levels on the Smarter Balanced Assessment Consortium, or SBAC) is a less precise measure of identifying a student's risk of not graduating than identifying students who are both foster youth and struggling academically, for example.

There were larger proportional shifts in which students were identified for At-risk funding using the GRAD score than there would be if students were identified for such funding using direct certification. Though the overall count of students in the At-risk category remained relatively stable at the state level between 2022/23 and 2023/24, there was a large change in which students were identified as At-risk. Most of this change is attributable to students moving out of eligibility for At-risk funding due to a change in their GRAD score, but student mobility (due to transfer to another school outside of Nevada's public education system or due to graduation) and student eligibility for another program (i.e., students moving to other funding categories such as special education or English Learner) were also reasons for the change. If districts and schools wish to target At-risk funding at the student level, they need to account for the fact that the individual eligible students will change from year to year. This has the potential to make budget planning more challenging from year to year because funding is based on students identified as At-risk on October 1 of the prior year.

Students with low academic achievement are also more likely to be identified as At-risk. Students with lower performance on state standardized tests and the ACT test were more likely to be eligible for At-risk funding. This finding suggests that the At-risk indicator is identifying students who are in need of additional academic support.

Schools that receive the lowest performance rating (One-Star schools) serve a large proportion of students identified as At-risk. Thirty-nine percent of students eligible for At-risk funding attended One-Star schools in the 2023/24 school year, whereas 2 percent of At-risk eligible students attended Five-Star schools. A third of students attending One-Star schools

were identified as At-risk, compared with less than 5 percent of students attending Five-Star schools.

The support given to One-Star schools is improving outcomes for students in Clark County who are identified as At-risk. The bundle of interventions that are provided to students attending One-Star schools has had a generally positive effect on math and English language arts (ELA) performance, particularly in Clark County, but the impacts are somewhat smaller for students identified as At-risk than for their peers in the same schools. Students identified as At-risk are overrepresented in One-Star schools, so it is important to understand whether they are improving academically in these schools. Although a full analysis of the impact of At-risk funding on student performance was out of scope for this report, the report's analysis of the impact of attending a One-Star school provides an example of the importance of understanding how the state's investment in education is impacting student outcomes.

Considerations

These findings have several implications for the state as it considers how best to deliver resources to students who are identified as At-risk.

First, an At-risk indicator that is empirically linked to risk for a particular outcome (e.g., not graduating with one's cohort) will more effectively target that outcome than an indicator based on a single demographic category (e.g., direct certification). Using broad demographic categories to target funding assumes that all students within the group are equally in need of support, whereas using the At-risk indicator for funding does not and instead allows for a more needs-based allocation of resources.

Second, policymakers must consider the trade-off between precision in targeting funding for particular students and providing stability in funding for school districts. All things being equal, the smaller the number of identified students is, the greater the potential for instability in funding is at the student level and LEA level—a greater concern in smaller LEAs. At the same time, identifying a larger number of students for support will inherently reduce the additional funding available for each student identified as At-risk if the overall pool of funding available stays the same.

Finally, tracking the progress of the state's efforts in helping students who are identified as At-risk to succeed will require more than annual performance summaries. As the analysis of students in the At-risk category in One-Star schools presented in this report shows, some interventions can have a positive impact on the academic outcomes for those students even if they continue to have lower test scores than their peers. A more comprehensive evaluation will be necessary to understand and improve the effectiveness of targeted supports for students identified as At-risk.

Introduction

In 2022, Nevada began implementation of its new Pupil-Centered Funding Plan (PCFP). The PCFP is structured to direct additional resources to Nevada students who require additional support. The PCFP provides additional funding to students based on weights in three categories: English Learner, At-risk, and Gifted and Talented. A separate funding stream is provided for students eligible for special education services. Weights are calculated as a percentage of the Statewide Base allocation that every student receives.[2] The count of students in each of these three categories and in special education is unduplicated, meaning students are counted in the highest funded category in which they qualify, and they do not qualify for funding in multiple categories.

Overview of At-Risk Weight

This report focuses on the indicator used for the At-risk weight in the PCFP. Nevada was the first state in the nation to use in its funding formula an indicator of student need—the At-risk indicator—that is generated by machine learning. Nevada's At-risk indicator is designed to identify students who are at risk of not graduating with their cohort, and it directs additional funding through the PCFP to the schools serving these students. To do this, each student is assigned a Graduation Related Analytic Data (GRAD) score within the Infinite Campus system used by the Nevada Department of Education (NDE). The GRAD score is calculated by a machine learning program from Infinite Campus that analyzes approximately 70 data points about a student in areas including academic performance, attendance, behavior, home, and economic stability. The program uses these factors to determine how likely a student is to graduate on time.

To determine the count of students in the At-risk category each year, the NDE calculates the lowest quintile GRAD score on or around October 1, then determines the number of students in each district who have a GRAD score at or below this threshold on that same date, using student data from Infinite Campus. While exact student counts change from one year to the next, Nevada's funding formula, like that of many other states, uses counts from the prior fiscal year to allow budgets to be set by district and school leaders before the beginning of the upcoming school year.

[2] In fiscal year 2025, students in the English Learner category were weighted at 0.45, At-risk at 0.35, and Gifted and Talented at 0.12. Counts for these categories are based on October 1 validation day data submitted to the Nevada Department of Education from the previous year.

Funding for students identified as At-risk is determined by multiplying the Statewide Base allocation amount by 0.35. For example, in fiscal year 2025, the Statewide Base was $9,414 per student. Therefore, local education agencies (LEAs) that served students identified as At-risk received an additional $3,294 above their Adjusted Per-Pupil Base amount for each student identified as At-risk to provide additional support to these students.

Because students who are counted as At-risk for funding purposes are identified through a statewide calculation to determine the bottom quintile (20th percentile) of scores rather than by a school or district calculation, districts vary in the number (and percentage) of students identified and funded with the At-risk weight. Additionally, some of the students with GRAD scores in the bottom quintile statewide may also qualify for special education services or be designated as English Learners, in which case they would be supported with the Local Special Education allocation or generate the higher English Learner weight. In other words, if a student who is designated as At-risk is also categorized as an English Learner or qualifies for special education, their school does not receive funding for them based on their At-risk status.

Purpose of the Report

In December 2024, Nevada's State Board of Education (SBE) requested further analysis of the At-risk indicator by the NDE. The SBE was interested in understanding more about which students qualified for At-risk funding (e.g., the demographic characteristics of these students) as well as the degree to which At-risk status overlapped with other indicators of student need, such as free and reduced-price lunch eligibility and direct certification (see the definition in Characteristics of Students Designated as At-Risk below). Accordingly, this report includes an analysis of the demographics of students identified as At-risk and the overlap between At-risk identification and other indicators of student need. The report also provides an analysis of the stability of the At-risk indicator at the state and district levels over the 2-year period for which data are available on student eligibility for the At-risk designation (2022/23 through 2023/24).

The SBE also requested an investigation of the relationship between At-risk status, academic outcomes, and the school rating system of the Nevada School Performance Framework (NSPF). Accordingly, this report presents a summary of performance on multiple academic indicators by student risk status in the most recent year of outcome data (2023/24). While these summary measures provide a broad overview of how students identified as At-risk are performing, they do not yield insight into how the state's resources are shaping that performance. To underscore the limitations of relying solely on summary measures, this report concludes with a causal analysis of how the identification of schools as needing intensive support under the NSPF has impacted the math and English language arts (ELA) scores of those schools' students who are designated as At-risk.

Characteristics of Students Designated as At-Risk

This section provides an overview of the demographic characteristics of those students who are designated as At-risk, including a breakdown by race and ethnicity, gender, and eligibility for other state programs, such as direct certification for free and reduced-price lunch (FRL). Direct certification is a process whereby students are automatically qualified for FRL based on their family's participation in certain assistance programs, without needing to complete a separate application. The purpose of analyzing these demographic characteristics is to provide additional information on the overlap between identification for At-risk funding and other indicators of student need.

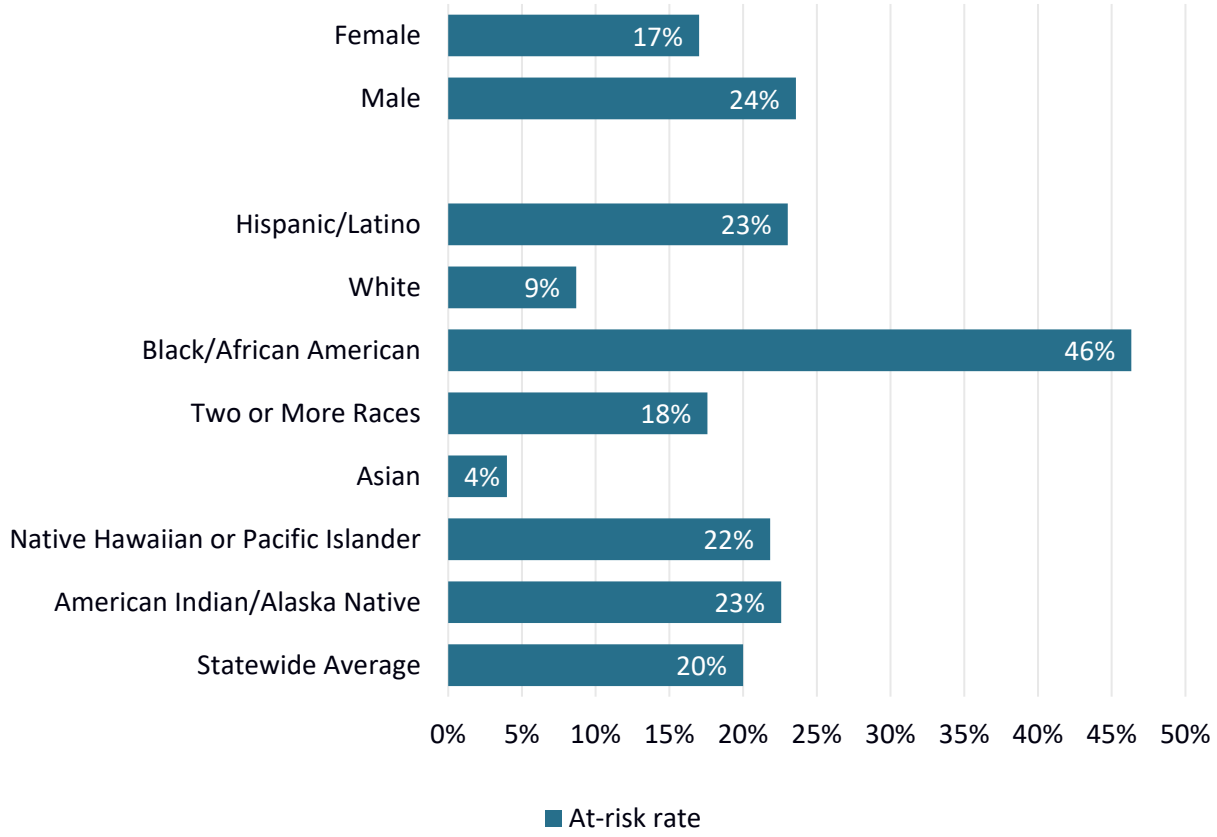
The analysis shows that there is considerable overlap between students identified for support using more traditional measures of need and students identified based on the At-risk indicator (the GRAD score).

Race and Ethnicity and Gender of Students Designated as At-Risk

Twenty-three percent (close to one in four) of Hispanic/Latino students and 46 percent of Black/African American students across the state were identified as At-risk (Figure 1). On the other hand, 9 percent of White students across the state were identified as At-risk, or approximately 1 in 10 white students (Figure 1). Asian students were also less likely to be identified as At-risk (4%).

Differences in At-risk identification are also observed by gender. Only 17 percent of female students were identified as At-risk, compared with 24 percent of male students.

Figure 1. Percentage of All Students Identified as At-Risk, by Demographic Characteristic



Appendix A provides additional information on the proportion of each student group that is identified as At-risk or Not At-risk.

Overlap Between At-Risk Status and Other Measures of Need

In 2023/24, students identified as At-risk were also frequently eligible for other state and federal programs. Table 1 shows the overlap between students identified as At-risk and student qualification for direct certification, students eligible for FRL, English Learners, students with individualized education programs (IEPs), and students who are engaged with the foster care system. Additionally, Table 1 shows the proportion of students designated as At-risk who qualify for each state or federal program compared to the proportion of each group statewide.

Poverty

Both direct certification and FRL can be used as a proxy for student poverty level and are used in funding formulas in other states as indicators of student need. Table 1 demonstrates the near total overlap in At-risk identification with eligibility for FRL: 96 percent of all At-risk-

designated students were also enrolled in the FRL program. Table 1 shows that there is also considerable overlap between students designated as At-risk and students who are enrolled in the FRL program through direct certification: 74 percent of students identified as At-risk are enrolled in the FRL program through direct certification, while only 42 percent of students statewide qualify for FRL through direct certification.

Students With Individualized Education Programs, in the Foster Care System, and English Learners

An analysis of English Learners and students with IEPs also shows considerable overlap with At-risk identification. Of all students who were designated as At-risk in 2023/24, 21 percent were English Learners, yet such students represent only 14 percent of students statewide. Similarly, 20 percent of students identified as At-risk have an IEP, yet students with IEPs represent only 13 percent of students statewide.

Students enrolled in foster care were also frequently identified as At-risk. Although students in the foster system represent only a small proportion of students designated as At-risk (1.1 percent), this is still higher than the percentage of students in the foster system statewide (0.9 percent). Furthermore, 54 percent of students in foster care were identified as At-risk. Students in foster care were more than two times as likely to be At-risk compared to the average student (Appendix A).

Table 1. Percentage of Students Identified as At-Risk by Eligibility for Other State and Federal Programs

	At-risk students	Not At-risk students	Statewide
Direct certification	74%	34%	42%
FRL	96%	79%	82%
Limited English Proficient	21%	13%	14%
IEP	20%	11%	13%
Foster	1.1%	0.2%	0.9%

Student Achievement and At-Risk Status

This section reports academic performance levels by At-risk status[3] on the following measures of student achievement from the 2023/24 school year:

- Math and ELA for grades 3–8 on the Smarter Balanced Assessment (SBAC)
- Science SBAC for grades 5, 8, 9, and 10

For each of these academic indicators, we analyzed the number and percentage of students designated as At-risk and Not At-risk at each performance level.[4] **These analyses show the degree to which students with low academic achievement are also more likely to be identified as At-risk**.

As shown in Tables 2 and 3, students identified as At-risk have lower performance than their non-At-risk peers in ELA, math, and science. For example, 60 percent of students identified as At-risk scored at a Level 1 on the ELA SBAC, while only 26 percent of students who were not identified as At-risk scored at Level 1. On the other end of the performance range, only 2 percent of students identified as At-risk scored at a Level 4, whereas 20 percent of students who were not identified as At-risk scored at a Level 4.

Similar patterns emerge for math performance, with lower performance scores for students identified as being At-risk. Seventy percent of students designated as At-risk scored at a Level 1 on SBAC Math, while 32 percent of students who were not identified as At-risk scored at a Level 1. At the high end of performance, only 1 percent of students identified as At-risk scored a Level 4, whereas 18 percent of students Not At-risk scored at Level 4.

[3] At-risk status is taken from the October 1 count in the 2023/24 school year. The testing outcomes are observed roughly 7 months after identification and so provide a picture of how At-risk students perform in a given school year.

[4] Level 1 is the lowest performance level, and Level 4 is the highest performance level on the SBAC. The cut points determining which scores correspond to which levels are different across grades.

Table 2. Comparison of At-Risk and Not At-Risk Students in English Language Arts and Math, 2023/24

	Students designated At-risk	Students not designated At-risk	Statewide
ELA Level 1	60%	26%	34%
ELA Level 2	20%	23%	23%
ELA Level 3	11%	29%	25%
ELA Level 4	2%	20%	16%
Math Level 1	70%	32%	41%
Math Level 2	16%	27%	24%
Math Level 3	5%	21%	18%
Math Level 4	1%	18%	14%

The differences in performance between students identified as At-risk and their peers follow a similar pattern for science. Seventy-three percent of students designated as At-risk scored a Level 1 (the lowest level) on science, compared to 38 percent of Not At-risk students who scored at Level 1. At the highest performance level, only 1 percent of students designated as At-risk scored a Level 4, compared to 7 percent of Not At-risk students.

Table 3. Comparison of At-Risk and Not At-Risk Students in Science, 2023/24

	Students designated At-risk	Students not designated At-risk	Statewide
Science Level 1	73%	38%	45%
Science Level 2	21%	33%	31%
Science Level 3	5%	22%	19%
Science Level 4	1%	7%	6%

Appendix B provides additional analyses on the proportion of students at each performance level who are designated as At-risk. These analyses show that there is a negative relationship between student performance on standardized tests and At-risk identification. In other words (and as to be expected), students who achieve higher performance levels in ELA, math, and science are less likely to be identified as At-risk.

Appendix B contains a similar analysis for ACT ELA and math, as well as performance on the alternative assessments.

In addition to demonstrating the overlap between the At-risk indicator and more traditional measures of student need, these analyses also show that the current At-risk indicator is more targeted than traditional measures of student need. In most student-weighted funding formulas, additional resources are allocated to all students in a particular group. For example, California's funding formula allocates additional funding for all English Learners, foster youth, and/or from economically disadvantaged families. In contrast, Nevada's At-risk indicator identifies a subset of students in those categories for additional funding based on their GRAD score. Assuming Infinite Campus's algorithm accurately identifies a student's risk of not graduating, identifying all students in a particular student group (e.g., students in the foster system or all students who are at lowest proficiency levels on the SBAC) is a less precise measure of identifying a student's risk of not graduating than identifying students who are both in the foster system and struggling academically, for example. Given that resources for education in Nevada are constrained, the state wants to ensure resources get to those students with the highest need. Using broad categories for funding assumes all students in a particular group are in need of those most targeted resources, whereas using the At-risk indicator for funding does not make that assumption.

Stability of At-Risk Status

This section outlines the stability of the GRAD score from one year to the next and compares the stability of the GRAD score with that of direct certification. The research team analyzed the stability of At-risk identification between 2022/23 and 2023/24. Stability is an important feature of education funding formulas because it provides education systems with predictable and consistent funding levels over time.

In 2022/23, 63,047 students in Nevada were eligible for the At-risk weight based on their GRAD scores. Because Nevada uses an unduplicated count in its funding formula, these students were *not* also counted as students in special education (those with IEPs) or as English Learners. In 2023/24, the total number of students identified as At-risk decreased by nearly 4 percent to 60,793, a decrease of 2,254 students.

To understand the reason for the change in the number of students who were eligible for the At-risk weight from one year to the next, the research team analyzed the stability of the At-risk indicator over the two school years for which At-risk data were available, 2022/23 (Year 1) and 2023/24 (Year 2). For this analysis, students were grouped into one of four categories in each year.

1. **At-risk eligible**. This category includes students who were designated as At-risk based on their GRAD score in Year 1 and Year 2 and were not also an English Learner and did not qualify for special education services. Consequently, this group of students was eligible for the weighted At-risk funding through the PCFP in Year 1 and Year 2.
2. **Not At-risk.** The second category includes students who were identified as At-risk in Year 1 but no longer identified as At-risk in Year 2 based on their GRAD scores.
3. **Not in public school system.** The third category includes students who were identified as At-risk in Year 1 but were no longer in Nevada's public school system in Year 2. This category is necessary in order to track students who move in and out of Nevada public schools over time.
4. **At-risk but funded by IEP or English Learner status.** The fourth category includes students who were identified as At-risk based on their GRAD scores in Years 1 and 2 but qualified for special education services or were classified as English Learners in Year 2. These students did not generate At-risk funding for their schools through the PCFP in Year 2 due to the PCFP's unduplicated weight counts.

Using these four categories, the WestEd research team analyzed the change in the number of students classified as At-risk from 2022/23 to 2023/24 using the GRAD score. To understand how the stability of At-risk status compares to other indicators of student need, the research team conducted a similar analysis of the stability of student identification as At-risk using direct certification as the measure. As noted earlier, direct certification refers to students automatically qualifying for FRL based on their family's involvement in specific assistance programs, eliminating the need for a separate application. Therefore, direct certification of FRL could hypothetically be considered another indicator of At-risk status.

Notably, the analyses show there were larger proportional shifts in students identified for At-risk funding using the GRAD score than the shifts in students identified for funding using direct certification.

Stability of At-Risk Status From 2022/23 to 2023/24: GRAD Score and Direct Certification

As shown in the analyses in Appendix C, there are students entering and exiting At-risk status for a variety of reasons, including moving in or out of the public system (mobility), change in program eligibility (changing from At-risk status to special education or English Learner or vice versa) and actual changes in a student's At-risk eligibility (GRAD score or direct certification).

Table 4 shows the count and percentage loss and gain in each of these categories as well as the net change for At-risk eligibility under the GRAD score.

Table 4. Deconstructing the Net Change in At-Risk Status by Various Reasons

Change area	Loss of At-risk eligible	Percent loss of At-risk eligible	Gain of At-risk eligible	Percent gain of At-risk eligible	Net change	Net percent change
Mobility	10,428	17%	7,361	12%	–3,067	–4.9%
Program eligibility	1,996	3%	738	1%	–1,258	–2.0%
GRAD score	16,984	27%	19,055	30%	2,071	3.3%
Total	29,408	47%	27,154	43%	–2,254	–3.6%

Table 5 shows the count and percentage loss and gain in each of these categories under the hypothetical scenario if direct certification had been used for At-risk eligibility.

Table 5. Deconstructing the Net Change in Hypothetical At-Risk Status Based on Direct Certification by Various Reasons

Change area	Loss of At-risk eligible	Percent loss of At-risk eligible	Gain of At-risk eligible	Percent gain of At-risk eligible	Net change	Net percent change
Mobility	20,487	14%	19,138	13%	–1,349	–0.9%
Program eligibility	4,244	3%	3,157	2%	–1,087	–0.7%
Direct Certification	17,443	12%	13,976	9%	–3,467	–2.3%
Total	42,174	28%	36,271	24%	–5,903	–4.0%

From 2022/23 to 2023/24, based on GRAD scores, there was a loss of 10,428 students in the At-risk category due to mobility and a gain of 7,361 students—meaning that 3,067 more students classified as At-risk left the system than entered, resulting in a –4.9 percent change in At-risk status students due to mobility (Table 4). Using direct certification, there would have been a loss of 20,487 students classified as At-risk due to mobility and a gain of 19,138 students—meaning that 1,340 more students designated as At-risk would have left the system than would have entered, resulting in a –.9 percent change in At-risk status students due to mobility (Table 5).

In that same time span, 1,996 students who had been classified as At-risk lost that status because their GRAD score made them eligible for an IEP or English Learner status. In addition, 738 more students were classified as At-risk when they became ineligible for an IEP or English Learner status. These changes resulted in a –2.0 percent change in At-risk status due to program eligibility changes (Table 4). Using direct certification, there would have been At-risk status loss of 4,244 students due to those students becoming eligible for an IEP or English Learner status and a gain of 3,157 students due to those students becoming ineligible for special education or English Learner status. These changes would have resulted in a –0.7 percent change in At-risk status due to program eligibility changes (Table 5).

As noted earlier, the most significant shifts in student eligibility for the At-risk weight were due to changes in students' GRAD scores, a substantially larger proportional change than there would have been had the NDE used direct certification as the measure for At-risk eligibility. There was a loss of 16,984 students classified as At-risk (27%) due to a change in GRAD scores that made them ineligible for At-risk and a gain of 19,055 students (30%) due to a change in GRAD scores that made them eligible for the At-risk weight. Because the magnitude of the loss of eligibility was nearly equal to the gain in eligibility, these changes resulted in only a 3.3 percent net gain of students with At-risk status due to the GRAD score. Using direct certification, there would have been a loss of 17,443 students with At-risk status and a gain of 13,876 students classified as At-risk. Notably, although the loss and gain of eligibility using direct certification represents a similar number of students, it is a much smaller proportion of students: a 12 percent loss under direct certification compared to 27 percent using the GRAD score and 9 percent gain under direct certification compared to 30 percent using the GRAD score. These changes in eligibility under direct certification would have resulted in a 2.3 percent net loss of students with At-risk status.

Taken together, 29,408 students moved out of At-risk status using the GRAD score, and 27,154 students entered the status, resulting in a net percent change of –3.6 percent of students being eligible for the status. The most substantial changes in At-risk status were due to changes in students' GRAD scores followed by student mobility in and out of the public school system. Using direct certification, 42,171 students would have moved out of At-risk status, and 36,271 students would have entered the status, resulting in a 4.0 percentage point decrease in the students being eligible for the status.

Table 6 shows the net changes for various reasons (mobility and changes in program eligibility and the At-risk metric) for the current method of determining At-risk (GRAD score) versus a hypothetical scenario using direct certification. The net percent change is similar for both methods, indicating that the stability across either method is similar. One key difference in stability under direct certification compared to the GRAD score, however, is the reason underlying changes in At-risk status. Using direct certification, the changes in At-risk status are comparatively similar for mobility (no longer in the public school system [14%] and new to the public school system [13%]) and eligibility for direct certification (no longer directly certified [12%] and newly directly certified [9%]). Under the GRAD score, by far the most substantial changes in At-risk status were due to changes in students' GRAD scores (27% were no longer eligible due to their GRAD score and 30% were newly eligible due to their GRAD score) followed by student mobility in and out of the public school system (no longer in the public school system [17%] and new to the public school system [12%]).

Table 6. Comparing the Net Change Between Methods of Determining At-Risk

	At-risk count based on GRAD score (current method)		At-risk count based on direct certification (hypothetical)	
Change area	**Net change**	**Net percent change**	**Net change**	**Net percent change**
Mobility	–3,067	–4.9%	–1,349	–0.9%
Program eligibility	–1,258	–2.0%	–1,087	–0.7%
GRAD score and/or direct certification	2,071	3.3%	–3,467	–2.3%
Total	–2,254	–3.6%	–5,903	–4.0%

Stability at the Local Education Agency Level

The preceding section analyzed state-level stability in the numbers of students classified as At-risk, showing that, while there was considerable churn due to students moving in and out of At-risk status, the overall count of such students did not markedly change from 2022/23 to 2023/24. There was less stability at the LEA level. Table 7 contains the net change figures for each LEA (or district). For this LEA analysis, due to privacy concerns associated with small numbers of students, the research team combined the mobility (moving in and out of a district) and program eligibility (gaining or losing IEP or English Learner status) categories. Most of the change in that combined category comes from mobility. Even with those categories combined,

some of the LEA cells have fewer than five students. In those cases, the entire LEA row is suppressed to avoid disclosing identifiable student information.

As can be seen in Table 7, the magnitude of change varied widely by district, with Clark experiencing a reduction in the number of At-risk status students of only 49 students from a baseline of 53,670, while Washoe lost over a third of its original count of 5,057 At-risk status students. Naturally, the largest percentage changes in At-risk counts happened in the smaller LEAs. Douglas lost close to half of its At-risk count of 171 students, whereas Lincoln gained nearly two-thirds of its original count of 43 students classified as At-risk.

Furthermore, within each district, the relative influence of changes in the GRAD score and mobility/program eligibility on the number of students classified as At-risk from one year to the next varied widely as well. In both Clark and Washoe, the proportion of change due to the GRAD score was roughly equal to the proportion of change due to mobility and program eligibility combined. In the smaller districts, the proportion of overall change from mobility and program eligibility was typically larger than the proportion of change due to the GRAD score. Put differently, for a typical small district, year-to-year change in the At-risk count was driven more by students leaving and entering than by changes in the At-risk status of students who remained.

Table 7. Change in At-Risk Counts by Local Education Agency (GRAD Score)

District name	At-risk count in 2022/23	Total change in At-risk count	Percent change in At-risk count	Change due to GRAD score	Percent change due to GRAD score	Change due to mobility and program eligibility	Percent change due to mobility and program eligibility
Carson City	292	–20	–7%	41	14%	–61	–21%
Churchill	177	9	5%	32	18%	–23	–13%
Clark	53,670	–49	0%	3,529	7%	–3,578	–7%
Douglas	171	–73	–43%	–36	–21%	–37	–22%
Elko	361	–80	–22%	6	2%	–86	–24%
Humboldt	81	–16	–20%	–6	–7%	–10	–12%
Lincoln	43	27	63%	11	26%	16	37%

District name	At-risk count in 2022/23	Total change in At-risk count	Percent change in At-risk count	Change due to GRAD score	Percent change due to GRAD score	Change due to mobility and program eligibility	Percent change due to mobility and program eligibility
Lyon	526	–194	–37%	–98	–19%	–96	–18%
Nye	449	–126	–28%	–43	–10%	–83	–18%
Washoe	5,057	–1,833	–36%	–981	–19%	–852	–17%
State Public Charter School Authority	1,898	105	6%	185	10%	–80	–4%

***Note*. Due to disclosure risk regarding small counts, the data for Esmeralda, Eureka, Lander, Mineral, Pershing, Storey, and White Pine have been suppressed and are not shown in this table.**

Table 8 compares the total change in counts and percentages of students classified as At-risk for the two approaches to measuring risk: the GRAD score (the actual policy) and direct certification of FRL (a hypothetical measure). Among the 11 LEAs for which data are displayed, direct certification counts were more stable year to year than counts based on the GRAD score for 8 districts and less stable in 3. In general, districts had a larger decrease in At-risk status students under the direct certification measure, but those decreases were smaller as a percentage of the baseline count because the baseline for direct certification was far larger than the baseline for the GRAD score. Among the two largest districts, Clark's At-risk count remained virtually unchanged when using the GRAD score but would have decreased by 5 percent with direct certification of FRL, whereas Washoe saw a decrease of over a third of its At-risk count when using GRAD scores compared with the 7 percent decrease it would have had with direct certification of FRL.

Table 8. Comparison of Stability of At-Risk Status at the Local Education Agency Level Using the GRAD Score and Direct Certification

District name	GRAD score—Total change in At-risk count	GRAD score—Percent change in At-risk count	Direct certification—Total change in At-risk count	Direct certification—Percent change in At-risk count
Carson City	–20	–7%	197	10%
Churchill	9	5%	Not available	Not available
Clark	–49	0%	–4,857	–5%
Douglas	–73	–43%	15	1%
Elko	–80	–22%	10	0%
Humboldt	–16	–20%	33	4%
Lincoln	27	63%	8	4%
Lyon	–194	–37%	–463	–19%
Nye	–126	–28%	–87	–3%
Pershing	9	23%	15	9%
Washoe	–1,833	–36%	–1,120	–7%
State Public Charter School Authority	105	6%	1,357	10%

***Note*. Churchill's direct certification counts could not be obtained for the 2023/24 school year. Due to disclosure risk regarding small counts, the data for Esmeralda, Eureka, Lander, Mineral, Storey, and White Pine have been suppressed and are not shown in this table.**

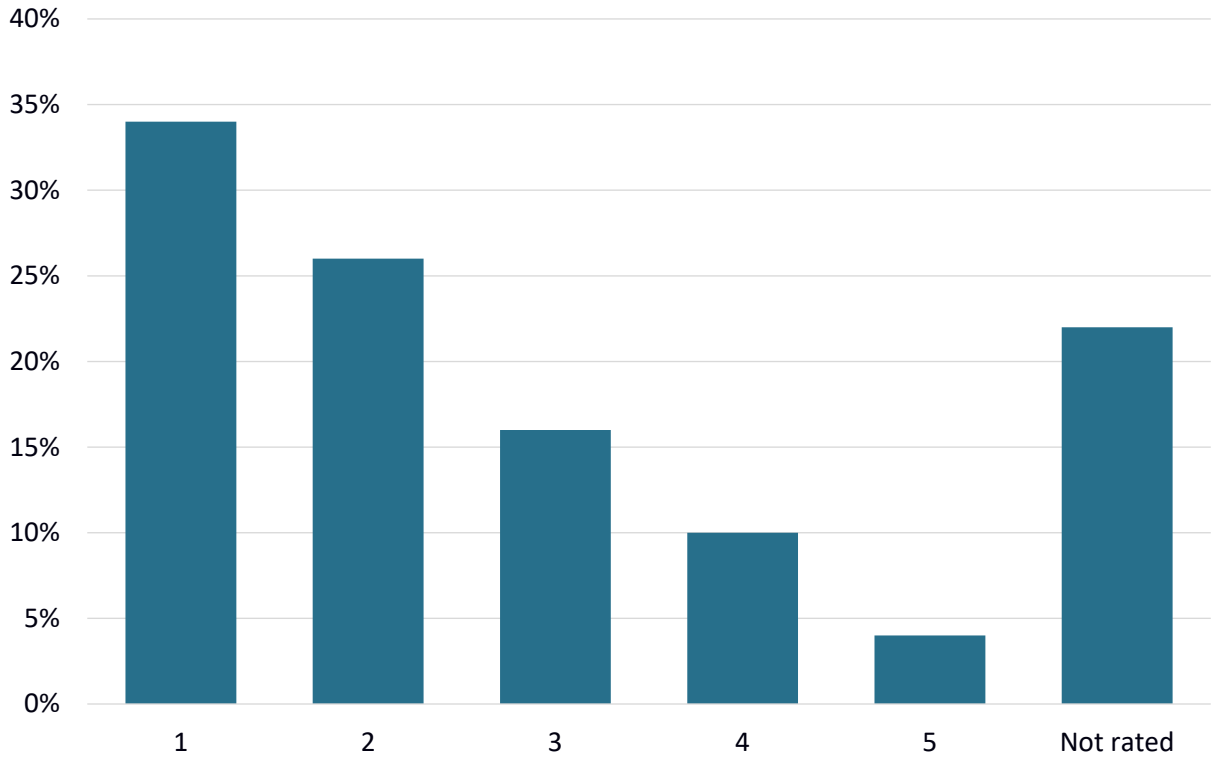
School Star Scores and Correlation With At-Risk Status

To determine whether the current At-risk measure directs resources to schools in Nevada serving students with the highest needs, this section presents data on the relationship between student identification for At-risk status and school ratings based on the state's accountability system, the NSPF. The NSPF is the state's system for identifying schools in need of additional

support. The school rating methodology incorporates multiple measures of performance, including growth, achievement levels, gaps among student groups, and additional academic success into a single composite score on a scale of 0 to 100. Schools are then assigned a star rating based on their composite score. One-Star schools have the lowest composite score, and Five-Star schools have the highest composite score.[5]

Analysis of the relationship between At-risk status and star ratings reveals that schools with lower star ratings serve greater shares of students in the At-risk category. Furthermore, students identified as At-risk are more likely to attend lower star rating schools. As shown in Figure 2, more than one third of students in One-Star schools are designated as At-risk, compared with only 4 percent of students in Five-Star schools. Moreover, the percentage of students in the At-risk category gradually decreases with each increase in star rating.

Figure 2. Percentage of At-Risk Students by School Star Rating, 2023/24



As shown in Table 9, 39 percent of students identified as At-risk attended One-Star schools, compared with 19 percent of students not designated as At-risk and 23 percent of students statewide. On the other end of the performance range, only 2 percent of At-risk status students attended Five-Star schools, compared with 18 percent of students not designated as At-risk.

[5] Certain schools are ineligible for a rating due to data availability, size, and other considerations.

Taken together with the analysis included in Figure 2, this analysis shows that students classified as At-risk are substantially overrepresented in One-Star schools.

Table 9. Comparison of At-Risk to Not At-Risk Student Populations by School Star Rating, 2023/24

Star rating	Students designated At-risk	Students not designated At-risk	Statewide
One	39%	19%	23%
Two	31%	23%	25%
Three	18%	24%	23%
Four	8%	17%	16%
Five	2%	18%	12%
Not rated	1.1%	0.7%	1.1%

The Impact of One-Star Schools on At-Risk Performance

To help the state understand the impact of its resource policies on students while the PCFP is still in early implementation, the research team conducted a preliminary analysis of how the state's school star ratings in its accountability system, the NSPF, are impacting the performance of students classified as At-risk. As the analyses in the preceding section illustrate, At-risk status students are overrepresented in schools with lower star ratings in the NSPF, especially in schools that receive a One-Star rating, which educate 39 percent of students classified as At-risk statewide. The high representation of At-risk status students in One-Star schools highlights the need to understand how the state's accountability system and associated resources (programs and interventions) may be bolstering performance in schools with lower performance. Notably, programs and interventions that support students in One-Star schools have the potential to reach a substantial proportion of the state's At-risk status students.

Specifically, this section provides analyses to help the state understand how its resource policies are affecting the performance of students designated as At-risk through a review of the impact of One-Star schools on their students' math and ELA performance. In the NSPF, One-Star schools are identified for additional support, which is planned and implemented within the first year after they are designated as a One-Star school. This analysis considers One-Star designation as the treatment, which includes the entire bundle of interventions, programmatic

changes, and resource allocation decisions that are triggered by designation as a One-Star school. Discovering exactly which types of support are more efficacious than others would yield further important insights for the state and may be pursued in future work. This report takes the first step of asking how the One-Star rating, as a whole, affects student achievement. **The analyses show that the bundle of services and programs supporting One-Star schools is improving outcomes for students identified as At-risk in Clark County. Statewide, however, a statistically significant impact was not found.**

Data

This analysis relied on school-level NSPF ratings, student-level math and ELA tests, and the student administrative data that identify At-risk status. School-level NSPF ratings come from the 2022/23 identification year—the first post-pandemic school year in which ratings were assigned to schools. Schools were given their rating in late summer 2023. As noted earlier in the report, school scores have a potential range of 0 to 100 and are a composite index of performance levels and growth across a number of academic indicators, including math, ELA, science, and chronic absenteeism. School ratings range from one to five and are based on the composite score and grade level of the school.[6] The figures in this report center the school scores at those values so that 0 is the threshold for a One-Star rating across both elementary and middle schools. Negative values indicate a One-Star rating, whereas values of 0 and above indicate a higher star rating. Schools ineligible for a rating have been removed from the data set. Student-level math and ELA performance data are from the standardized assessments given in spring 2024 for students in grades 3 through 8. To facilitate comparisons across grade levels, researchers standardized the math and ELA scores to have a mean of 0 and a standard deviation of 1 for each grade, separated by subject. More information on the data used for the analysis is included in Appendix D.

Research Design

As the state seeks to leverage its resources to improve outcomes for students classified as At-risk, it is imperative to use a statistical methodology that can separate cause from correlation. The preceding section describes how students classified as At-risk are performing in an absolute sense. Such analyses are useful in monitoring students' overall academic success but do not allow researchers, policymakers, and practitioners to separate the direct impact of specific policies and services from the influence of additional factors.

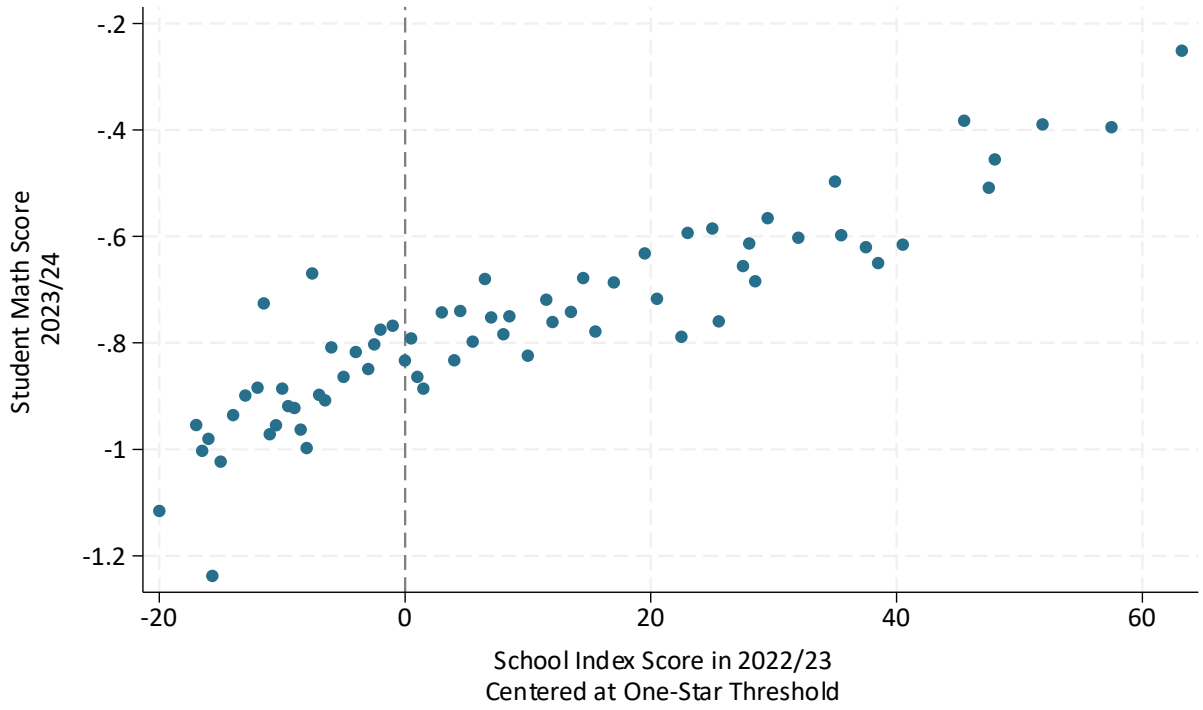
Illustrating this point, Figure 3 shows the relationship between a school's composite score in 2022/23 and the performance of the students classified as At-risk who attended those schools on the standardized math tests in spring 2024. The *x*-axis is the school composite score and ranges from –20 to 70, with the threshold for One-Star rating (0) indicated with a vertical line. The *y*-axis is subsequent student achievement and ranges from roughly –1.2 to –0.2. These

[6] In the 2022/23 school year, an elementary school was given a One-Star rating if its composite score was lower than 27, whereas a middle school was given a One-Star rating if its composite score was lower than 29.

negative values show that the performance of students classified as At-risk tends to be below average in all schools, even those with higher ratings on the NSPF.

The upward slope of the scatterplot shows that students designated as At-risk who attend One-Star schools tend to perform worse than their peers attending schools with higher star ratings. One might conclude that the bundle of interventions provided by One-Star schools is less effective at improving the academic achievement of students designated as At-risk, but such a conclusion is unwarranted for several reasons. First, At-risk status students are not a homogenous group—some will be only temporarily designated as At-risk, whereas others may be persistently At-risk across many years; some may be At-risk but may nevertheless perform well on math tests, whereas others' risk status may be heavily influenced by their math performance. These disparate groups of students sort into schools in ways that cannot be measured or accounted for, and this sorting may be the cause of the apparent relationship in Figure 3. Moreover, the schools themselves are influenced by many factors that are unrelated to the support their students receive if they get a One-Star rating—teacher turnover and chronic absenteeism, for example, are both likely to be higher in One-Star schools.

Figure 3. NSPF Index Scores and Performance of At-Risk Students



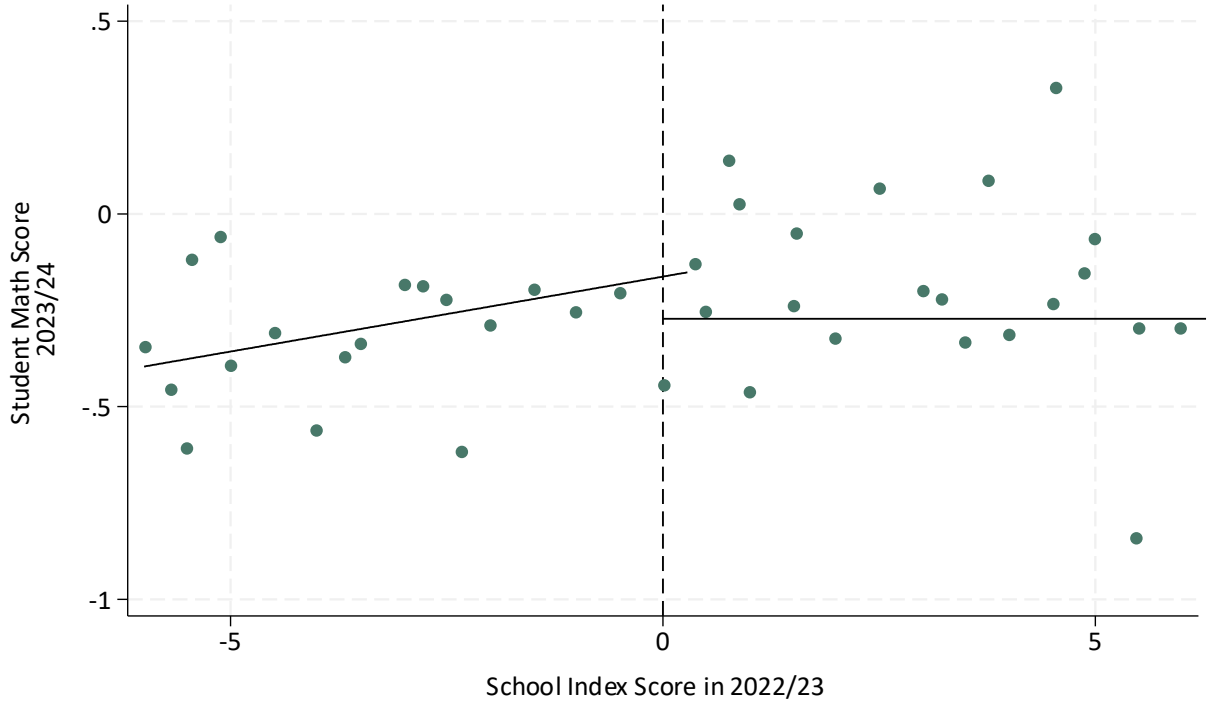
The research design separated the impact of the One-Star rating from the other school and student factors by focusing on the schools that are close to the One-Star threshold (on either side). In doing so, the researcher team employed a regression discontinuity design (RDD) to

reveal the causal impact of the One-Star rating on subsequent student outcomes. The RDD is a research method with strong causal validity[7] that can be used when access or eligibility for a program is clearly defined by a cutoff—in this case, the school index score thresholds that determine One-Star status. The statistical details are somewhat complex, but conceptually, schools that fall closely on either side of the eligibility threshold are not expected to differ meaningfully, save for access to the bundle of treatments delivered with the One-Star rating. In this way, the RDD analysis mimics a randomized control trial at the eligibility threshold. Additional technical information on this analysis is in Appendix D.

Results

To begin the analysis, the research team assessed the impact of the One-Star rating on the math and ELA performance of all students statewide. Figure 4 provides the school index score on the *x*-axis and standardized math scores the subsequent spring on the *y*-axis. The dashed vertical line is the threshold below which schools are assigned a One-Star rating, and the solid lines are the trend lines for performance on either side of that threshold. Moving from right (just barely not a One-Star school) to left (just barely a One-Star school), there is a small jump up in the trend line—that jump is the effect of the One-Star rating.

Figure 4. NSPF Scores and School Star Rating

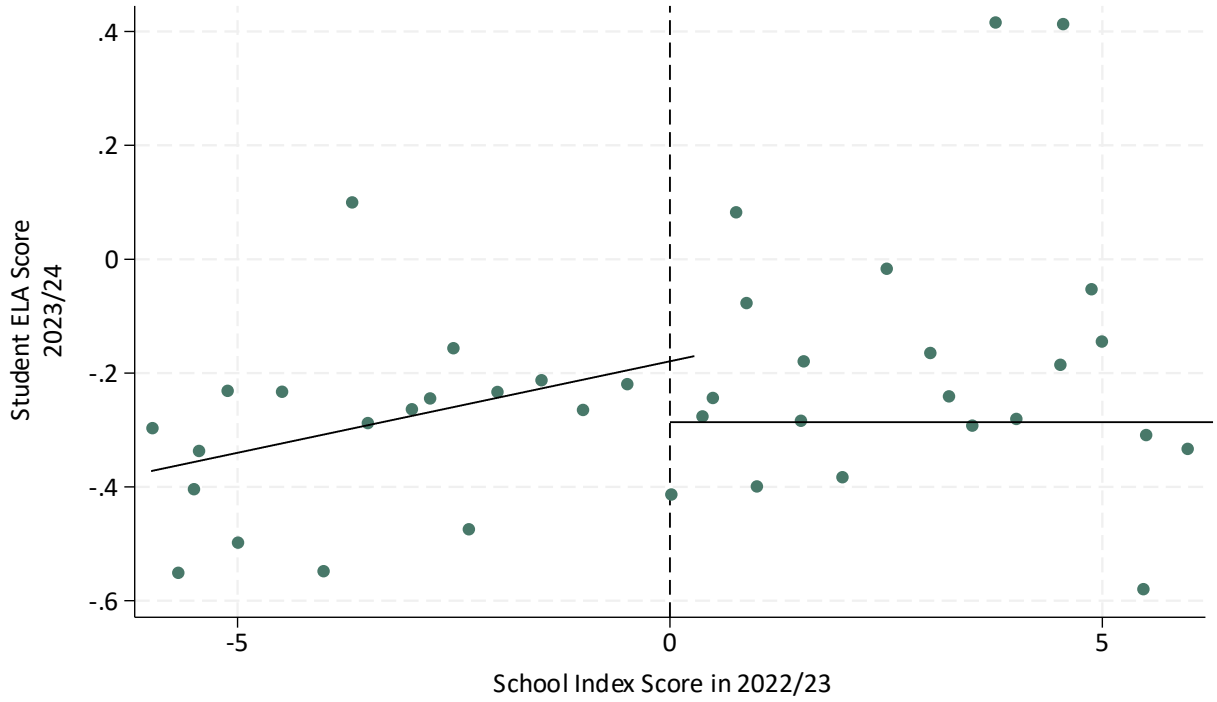


[7] Imbens, G. W. (2017). Regression discontinuity designs in the econometrics literature. *Observational Studies*, *3*(2), 147–155.

However, the jump of 0.09 standard deviations is not large enough to be statistically significant—even if there is absolutely no effect associated with a One-Star rating, one could see jumps of that magnitude between schools just by happenstance. In other words, there seems to be a small, promising sign of a positive effect on math scores in One-Star schools, but it is not big enough to distinguish from random chance.

The graph for ELA scores in Figure 5 shows a larger positive effect of a One-Star rating—the jump is 0.15 standard deviations. Unlike the effect on math scores, this effect on ELA scores is large enough to be statistically significant. The One-Star rating, along with every intervention that comes with it, is causing a modest increase in students' ELA scores statewide.

Figure 5. NSPF Scores and School Star Rating



The preceding analyses are of the effect of a One-Star rating on the academic performance of all students statewide. To further illuminate how the One-Star rating is affecting the achievement of students classified as At-risk, the following presents results for all students in the Clark County School District (Clark County) and then separately for the students in the district who have been classified as At-risk. Clark County educates more than two thirds of the state's students, including more than 80 percent of those designated as At-risk.

Figure 6 shows the effect of a One-Star rating on math scores for all students in Clark County. There is a marked jump at the One-Star threshold of 0.33 standard deviations. This effect is statistically significant, indicating that the resources flowing to One-Star schools in Clark County are having a substantial positive effect on students' math scores.

Figure 6. NSPF English Language Arts Scores and School Star Rating in Clark County

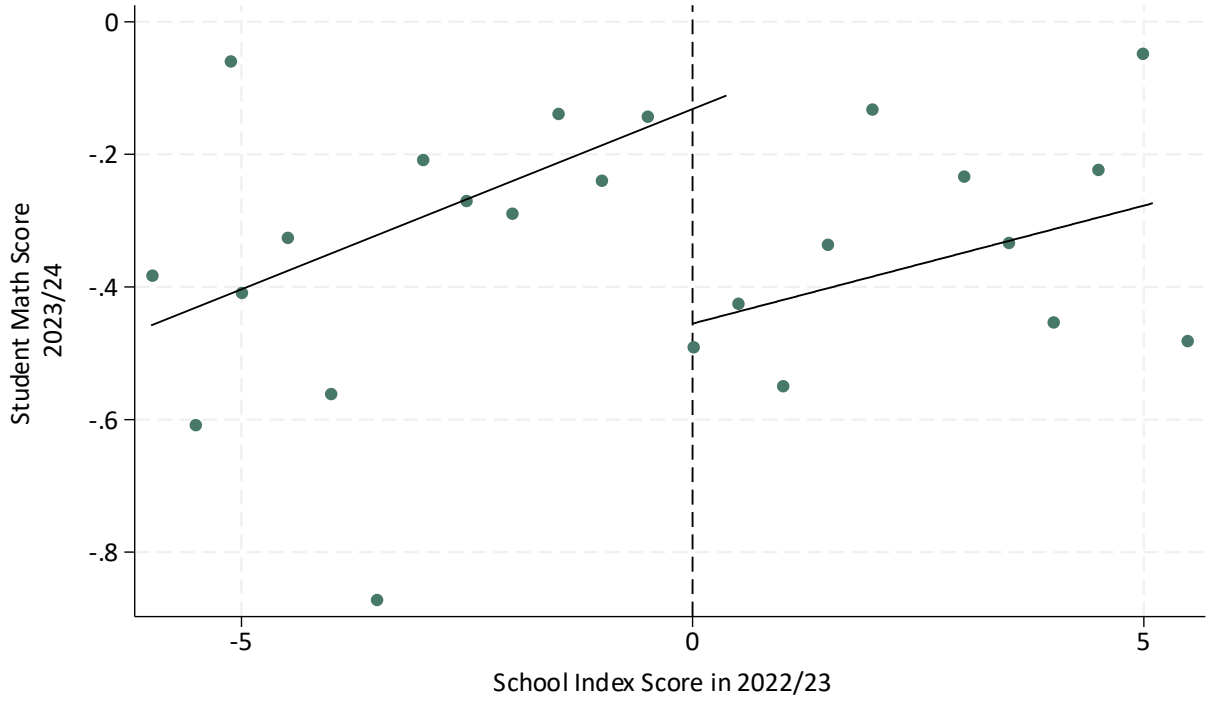
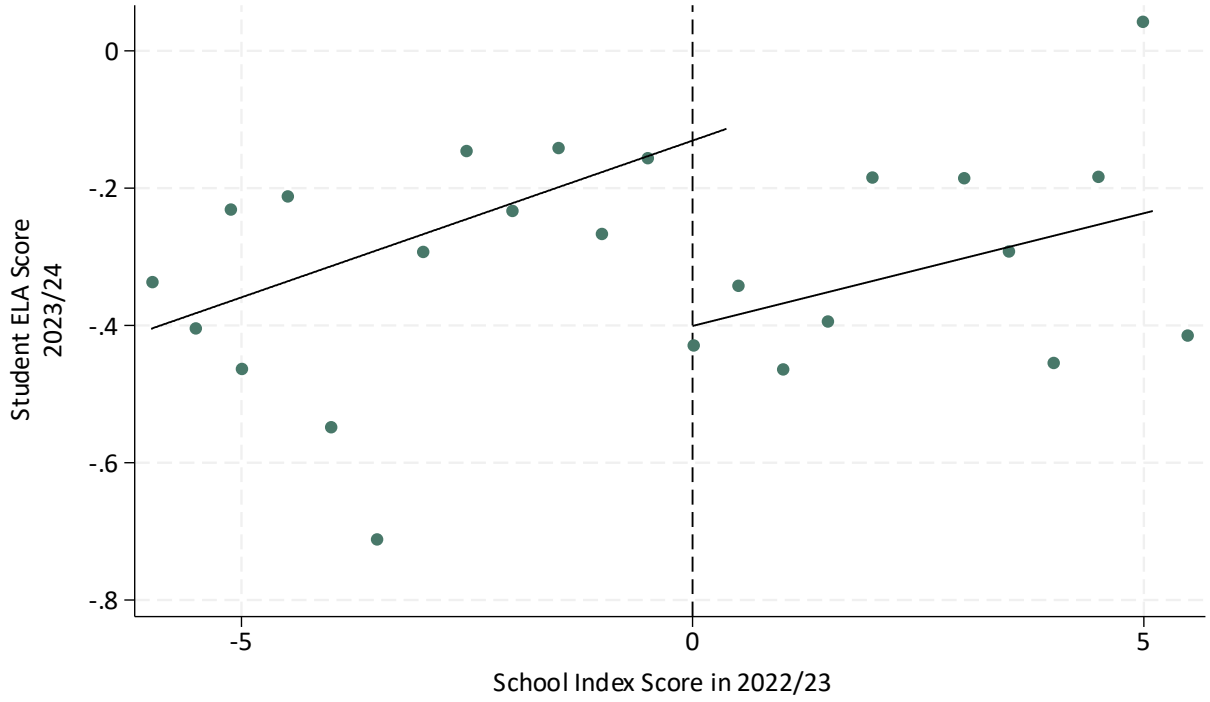


Figure 7 shows the effect of a One-Star rating on ELA scores for all students in Clark County. The jump of 0.29 standard deviations at the One-Star threshold is statistically significant. This large positive effect on ELA scores is very similar in magnitude to the effect on math scores. Together, the analyses for math and ELA indicate that the bundle of interventions that comes with a One-Star rating in Clark County schools is working to raise student performance.

Figure 7. NSPF English Language Arts Scores and School Star Rating in Clark County



Next, the research team evaluated the impact of a One-Star rating on the math and ELA scores of students in Clark County classified as At-risk. Figure 8 shows the effect for math scores: a 0.2 standard deviation increase due to One-Star status. This is smaller than the effect for students overall, but it is still large enough to be statistically significant.

Figure 8. NSPF Math Scores and School Star Rating in Clark County for At-Risk Students

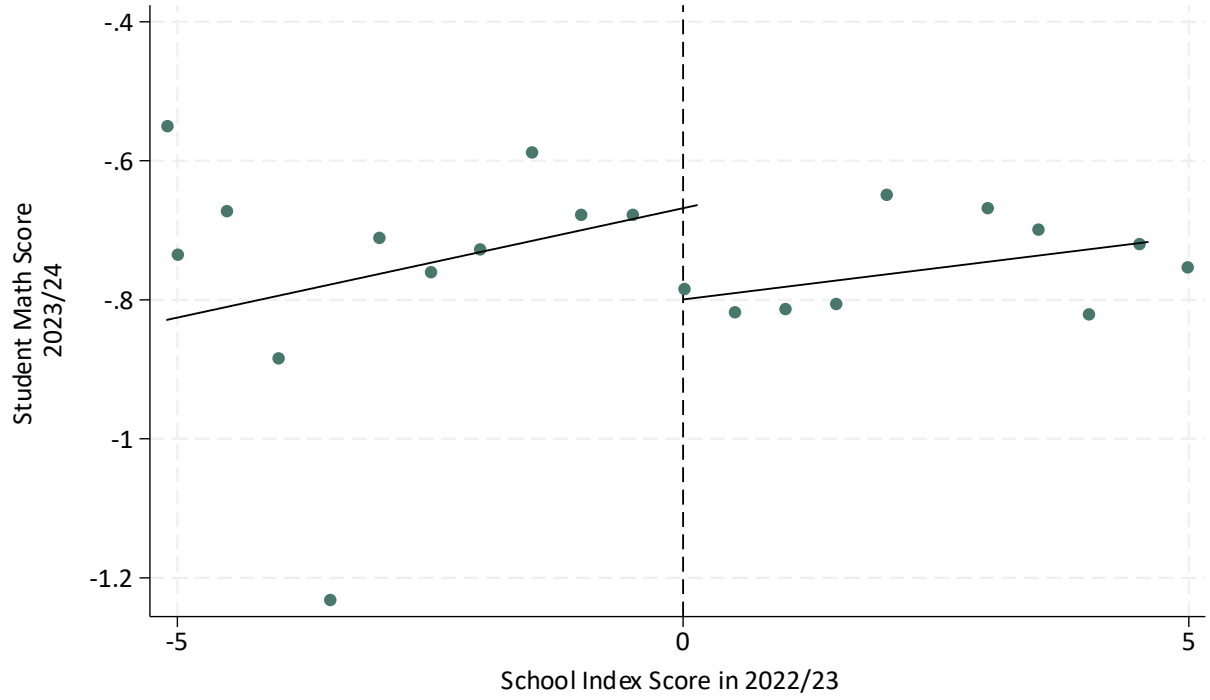


Figure 9 shows the effect of a One-Star rating on the ELA scores of students in Clark County designated as At-risk. The smaller effect of 0.08 is not statistically significant—an effect of that size could appear by random chance.

Figure 9. NSPF English Language Arts Scores and School Star Rating in Clark County for At-Risk Students

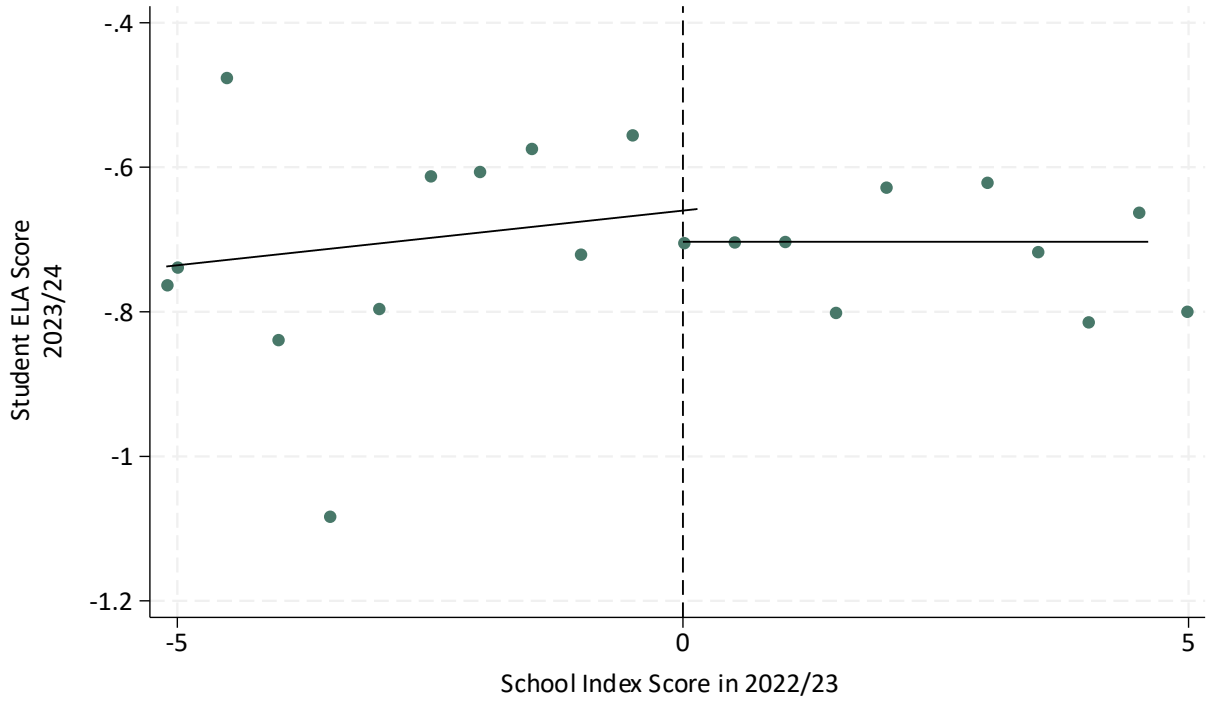


Table 10 summarizes the effects from all the preceding graphs. Overall, the bundle of interventions that the NSPF directs to schools with a One-Star rating appears to be having a modest positive impact on subsequent ELA scores statewide. In Clark County, the One-Star rating is having large positive effects on both the math and ELA scores of students in general. For students in Clark County classified as At-risk, the effect on math scores is smaller than for students generally but is still positive and meaningful, while the effect on ELA scores is not large enough to distinguish it from random chance.

Table 10. The Impact of a One-Star Rating on Subsequent Achievement

	Math	ELA
All LEAs, all students	.09	.15*
Clark County, all students	.33**	.29*
Clark County, students designated At-risk	.20*	.08

* $p < .1$; ** $p < .01$.

This pattern of results may be caused by a number of factors. Clark County serves hundreds of schools, and it is therefore not surprising that it may use formal indicators like One-Star ratings to direct a distinct set of resources to struggling schools, whereas smaller districts may allocate interventions on a school-by-school basis without the same focus on such indicators. It is also possible that the economies of scale in Clark County allow it to serve One-Star schools more efficiently than would be possible in a smaller district with only a single One-Star school. These are just a couple of potential explanations for the positive impact of the One-Star rating observed in Clark County.

There are several potential explanations for the smaller effects on students in Clark County designated as At-risk. First, such students are, by definition, a group that struggles academically and may therefore be less responsive to the type of "whole school" interventions that are initiated by a One-Star rating. Conversely, students designated as At-risk may already be receiving intensive support across all types of schools. Therefore, the additional support found in One-Star schools may have less of an effect on students who are already getting supplemental interventions.

Conclusion

This report presents a close investigation of students across the state classified as At-risk. Many of the findings are in line with prior expectations. The At-risk indicator is unevenly distributed across student demographic categories, with students designated as At-risk more likely to be eligible for FRL (by direct certification or otherwise), to have English Learner and IEP status, and to be in the foster care system. Black students and boys are also more likely than their peers to be designated as At-risk.

The count of students with At-risk status is fairly stable at the state level, but that stability masks churn at the student level and some instability at the LEA level. As an alternative measure of At-risk status, direct certification of FRL has a similar stability at the state level but is more stable at the LEA level—at least partially, due to the larger number of students who would be identified by direct certification.

Across ELA, math, and science, the performance of students designated as At-risk is substantially lower than that of their peers. At-risk status students are also overrepresented in schools with a One-Star rating under the NSPF, but these schools are, at the margin, having a positive impact on the ELA and math performance of those students.

These findings have several implications for the state as it considers how best to deliver resources to its most vulnerable students. First, there will very likely be a trade-off between trying to direct resources to a small proportion of students who are most in need and ensuring the year-over-year stability of which students are identified and which schools they attend. The smaller the number of identified students is, the more carefully the state should consider stability. Second, tracking the progress of the state's efforts in helping students classified as At-risk to succeed will require more than annual performance summaries. As shown by the analysis of the performance of students with At-risk status in One-Star schools, some interventions will be adding to their success even if the students receiving those interventions continue to have lower testing outcomes relative to their peers.

Appendix A. Additional Analysis of Demographic Characteristics of Students in the At-Risk Category

Table A1 shows the breakdown by demographic characteristics of students classified as At-risk. Hispanic/Latino students were overrepresented, representing 51 percent of students designated as At-risk but only 45 percent of the overall student population (Table A1). Similarly, Black/African American students, Native Hawaiian or Pacific Islander students, and American Indian/Alaska Native students were all overrepresented among students designated as At-risk: 46 percent of Black/African American students, 22 percent of Native Hawaiian or Pacific Islander, and 23 percent of American Indian/Alaska Native were designated as At-risk (see Figure 1 in the main body of the report).

Conversely, White students were underrepresented, making up just 12 percent of students classified as At-risk but accounting for 28 percent of the overall statewide student population (Table A1). This analysis indicates that White students were less likely to be identified as At-risk when compared to other student groups. Similarly, students classified as two or more races or Asian were also less likely to be identified as At-risk.

Table A1. Percentage of Students Identified as At-Risk by Demographic Characteristic

	At-risk students	Not At-risk students	Statewide
Hispanic/Latino	51%	43%	45%
White	12%	32%	28%
Black/African American	28%	8%	12%
Two or more races	7%	8%	8%
Asian	1.1%	6.8%	6%

	At-risk students	Not At-risk students	Statewide
Native Hawaiian/Pacific Islander	1.6%	1.5%	1.5%
American Indian/Alaska Native	0.8%	0.7%	0.7%
Male	59%	49%	51%
Female	41%	51%	49%

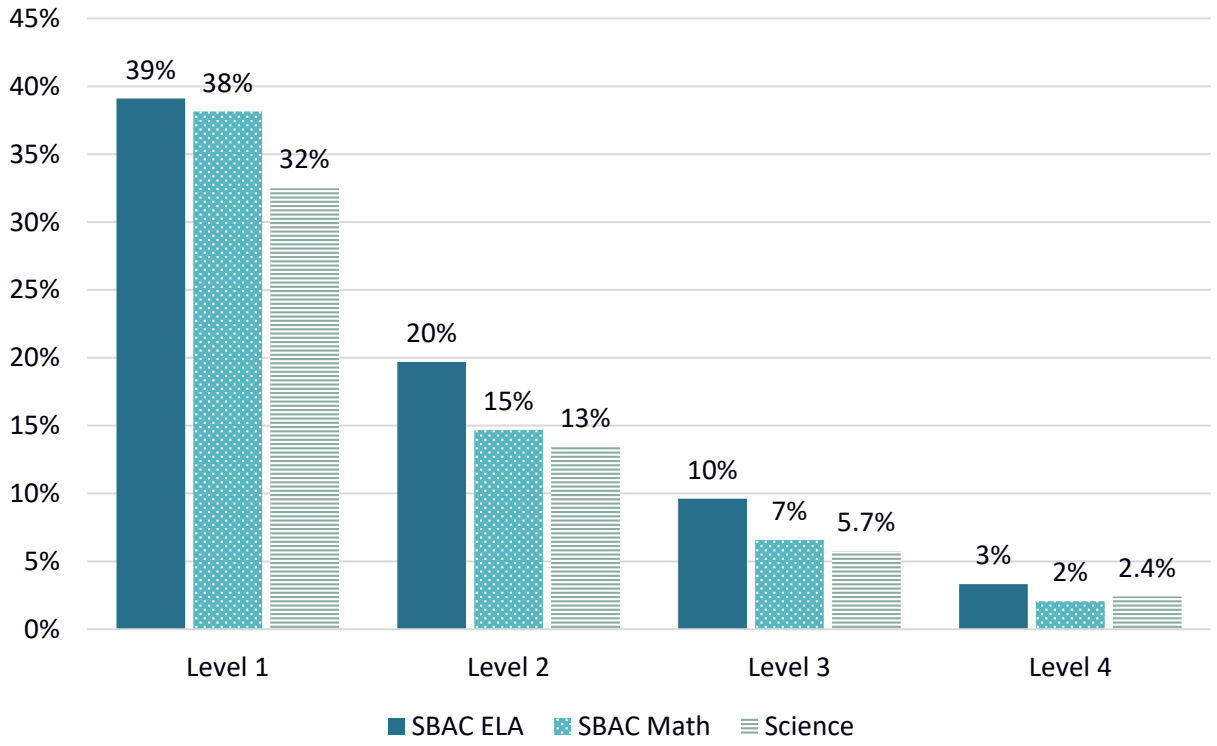
The analysis in Table A1 helps illustrate the demographic composition of students classified as At-risk and which student groups are more or less likely to be identified as At-risk.

Appendix B. Additional Analyses of Relationship Between At-Risk and Academic Achievement

Figure B1 presents the proportion of students at each performance level who are designated as At-risk. When we observe the scores of all students who took the SBAC ELA test, 39 percent of students who scored Level 1 on SBAC ELA (or the lowest level), 20 percent of those who scored Level 2, 10 percent of those who scored Level 3, and 3 percent of those who scored Level 4 (the highest level) are classified as At-risk.

For the SBAC Math test, 38 percent of students who scored Level 1 on SBAC Math (or the lowest level), 15 percent of those who scored Level 2, 7 percent of those who scored Level 3, and 2 percent of those who scored Level 4 (the highest level) are classified as At-risk. For Science, 32 percent of students who scored Level 1 on Science (or the lowest level), 13 percent of those who scored Level 2, 6 percent of those who scored Level 3, and 2 percent of those who scored Level 4 (the highest level) are classified as At-risk. These analyses show that there is a negative relationship between student performance on standardized tests and At-risk identification. In other words (and as to be expected), students who achieve higher performance levels in ELA, math, and science are less likely to be identified as At-risk.

Figure B1. Proportion of Students at Each Performance Level in English Language Arts, Math, and Science, 2023/24



***Note*. Students at lower performance levels are more likely to be designated as At-risk.**

ACT Test Performance and Correlation With At-Risk Status

ACT ELA

When we observe the scores of all students who took the ACT ELA test, 36 percent of students who scored a Level 1 (or the lowest level), 17 percent of those who scored a Level 2, 5 percent of those who scored a Level 3, and 0.8 percent of those who scored a Level 4 (the highest level) are classified as At-risk.

When we look at At-risk status students only, 35 percent of those students scored a Level 1 (or the lowest level) on ACT ELA compared to 17 percent statewide; 34 percent of those students scored a Level 2 compared to 33 percent statewide, 9 percent scored a Level 3 compared to 32 percent statewide, and 0.5 percent scored a Level 4 (or the highest level) compared to 11 percent statewide.

ACT Math

When we observe the scores of all students who took the ACT Math test, 28 percent of students who scored a Level 1 (or the lowest level), 12 percent of those who scored a Level 2, 1 percent of those who scored a Level 3, and 0.2 percent of those who scored a Level 4 (the highest level) are classified as At-risk.

When we look at students designated as At-risk only, 51 percent of those students scored a Level 1 (or the lowest level) on ACT Math compared to 31 percent of students statewide; 31 percent of those students scored a Level 2 compared to 45 percent statewide, 1 percent scored a Level 3 compared to 13 percent statewide, and 0.1 percent scored a Level 4 (or the highest level) compared to 6 percent statewide.

Alternative Assessment Performance and Correlation With At-Risk Status

The Nevada Alternative Assessment (NAA) is given to less than 1 percent of all students in Nevada. A student may participate in the NAA if their IEP team has determined that they cannot participate in a particular general assessment, even with modifications and accommodations. At-risk level is not correlated with performance level on the NAA. Similar rates of students who scored a Level 1, 2 or 3 on the assessment are designated as At-risk. This is not surprising given that the students who are administered the NAA tend to have significant special education needs.

English Language Arts Alternative Assessment

When we observe the scores of all students who took the ELA NAA, 57 percent of students who scored Level 1 (or the lowest level), 59 percent of those who scored Level 2, and 62 percent of those who scored Level 3 are designated as At-risk.

When we look only at students designated as At-risk, 52 percent scored a Level 1 (or the lowest level) on ELA NAA, compared to 51 percent statewide, 45 percent scored a Level 2 compared to 45 percent statewide, 3 percent scored a Level 3 compared to 4 percent statewide, and 0.1 percent scored a Level 4 (or the highest level) compared to 0 percent statewide.

Math Alternative Assessment

When we observe the scores of all students who took the Math NAA, 51 percent of students who scored a Level 1 (or the lowest level), 59 percent of those who scored a Level 2, and 65 percent of those who scored a Level 3 are designated as At-risk.

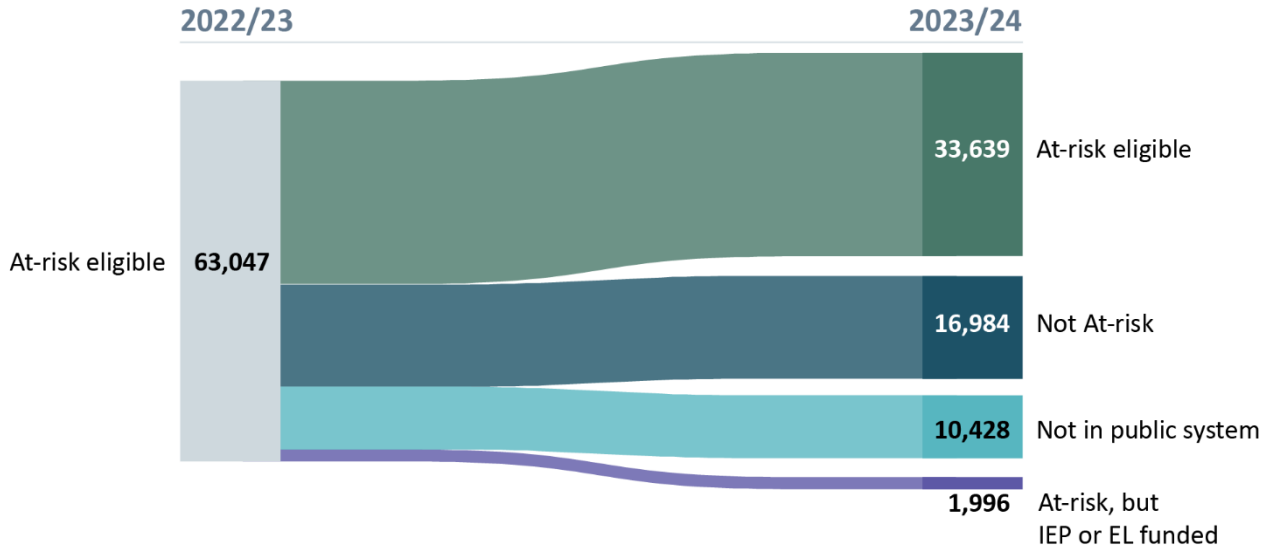
When we look only at students classified as At-risk, 25 percent scored a Level 1 (or the lowest level) on ACT ELA compared to 21 percent statewide, 66 percent scored a Level 2 compared to 67 percent statewide, 9 percent scored a Level 3 compared to 11 percent statewide, and 0 percent scored a Level 4 (or the highest level) compared to 0.4 percent statewide.

Appendix C. Stability in At-Risk Status

Students No Longer Eligible for At-Risk Designation (GRAD Score)

Figure C1 illustrates that, of the 63,047 students classified as At-risk in 2022/23, 33,639 (approximately half) remained eligible for At-risk funding through the PCFP in 2023/24. Another 16,984 students were no longer classified as At-risk, based on their GRAD score in 2023/24 (Category 2). Another 10,428 formerly At-risk status students were no longer in the public education system in 2023/24 because they graduated, transferred to a private school, or left the state (Category 3). Finally, a much smaller number of students—just under 2,000—remained in the At-risk category but no longer qualified for At-risk funding because they also qualified for special education and/or English Learner services (Category 4).

Figure C1. Change in At-Risk Eligibility From 2022/23 to 2023/24

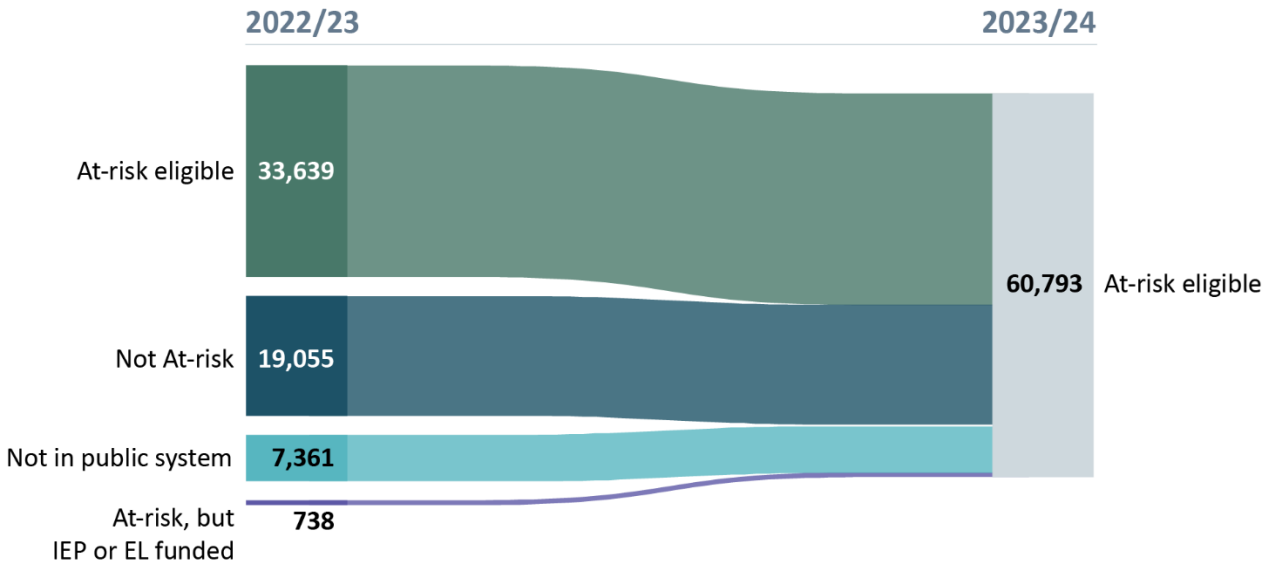


Students Newly Eligible for At-Risk Designation (GRAD Score)

In addition to the change in the number of students classified as At-risk due to those students who were *no longer eligible* from Year 1 to Year 2, a considerable number of students who were not eligible for At-risk funding in Year 1 became *newly eligible* in Year 2 (Figure C2). As noted previously, between 2022/23 and 2023/24, the total number of students in the At-risk category declined by 2,254 students. Of the 60,793 students that remained At-risk in 2023/24,

most (33,639 students) had retained their At-risk eligibility status from the previous year. Another 19,055 were students who had not been designated as At-risk in Year 1 but were so designated the following year (Year 2). Accordingly, the most common reason for students to be newly classified At-risk was due to a change in the student's GRAD score, which made them eligible for the At-risk weight in 2023/24. In 2022/23, 7,361 students entered the public education system (i.e., started kindergarten or transferred from a private school or from out of state) and qualified for At-risk status. A much smaller number of students (738), who had previously been designated as At-risk but had not received funding because they also qualified for special education and/or English Learner services in Year 1, became At-risk eligible (i.e., no longer qualified as an English Learner student or special education services).

Figure C2. 2022/23 Status of Students Who Were Designated as At-Risk in SY2023–2024



No Longer Eligible At-Risk (Direct Certification)

As with the GRAD score, we can assume that if direct certification was used for At-risk funding, there could be multiple reasons why a student would move in or out of this status from one year to the next: The student could move out of the public system; they could change program eligibility; and/or a student's eligibility for direct certification could change, resulting in a change in their At-risk status. Analyses of how these changes would impact the number of students designated as At-risk in the 2022/23 and 2023/24 school years—using direct certification as the measure of At-risk status—are illustrated in Figures C3 and C4.

Figure C3. Hypothetical Change in At-Risk Eligibility Based on Direct Certification, 2023/24

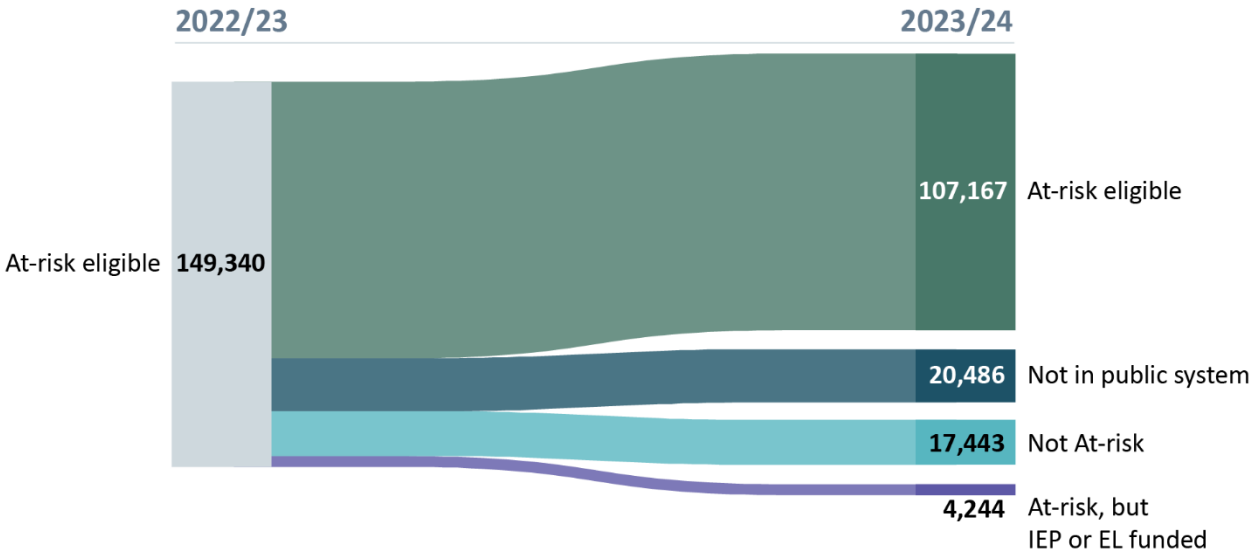


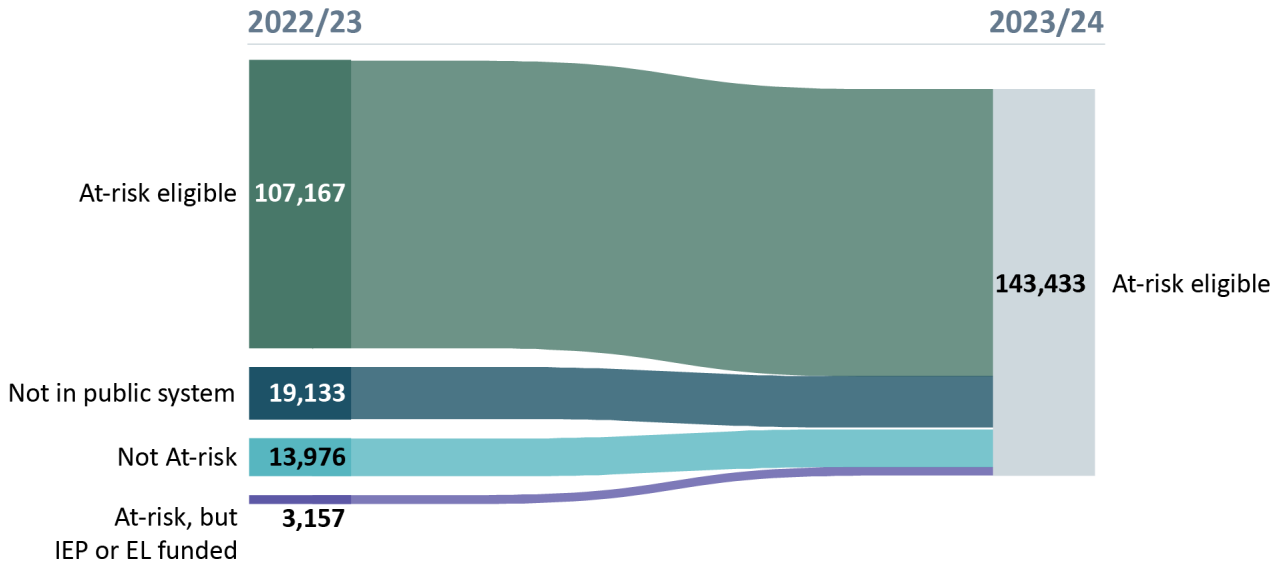
Figure C3 illustrates that nearly 150,000 students would be considered At-risk if Nevada were to adopt direct certification. That would more than double the number of students designated as At-risk in the public school system. Of the 149,340 students who would hypothetically be classified as At-risk due to direct certification in 2022/23, 107,167 students (approximately two thirds) would have remained eligible for At-risk funding through direct certification in 2023/24. Another 20,486 students would have no longer been classified as At-risk, based on their direct certification status (i.e., they were no longer directly certified in Year 2). Another 17,443 formerly At-risk status students due to direct certification would have left the public education system in 2023/24. Finally, 4,244 students would have remained At-risk due to their direct certification status but would no longer have qualified for At-risk funding because they also qualified for special education and/or English Learner services.

Newly Eligible At-Risk (Direct Certification)

As it did for the GRAD score, the research team analyzed the number of students newly eligible for the At-risk designation, using direct certification as the hypothetical measure of At-risk status. Between 2022/23 and 2023/24, the total number of students designated as At-risk would have hypothetically declined by 5,907 students if Nevada had used direct certification as their At-risk indicator instead of the GRAD score. Of the 143,433 students that would have hypothetically been identified as At-risk in 2023/24 due to direct certification, most (107,167 students) would have retained their At-risk eligibility status from the previous year. Another 19,133 would not have been At-risk due to direct certification the previous year but would have become eligible for At-risk status because of a change in their direct certification status in

Year 2. Furthermore, 13,976 students who entered the system in 2022/23 would have qualified as At-risk through direct certification. Finally, 3,157 students would have become ineligible for special education services or funding as an English Learner student and thus become eligible for additional At-risk funding. Figure C4 illustrates these changes.

Figure C4: Hypothetical Change in At-Risk Eligibility Based on Direct Certification, 2022/23



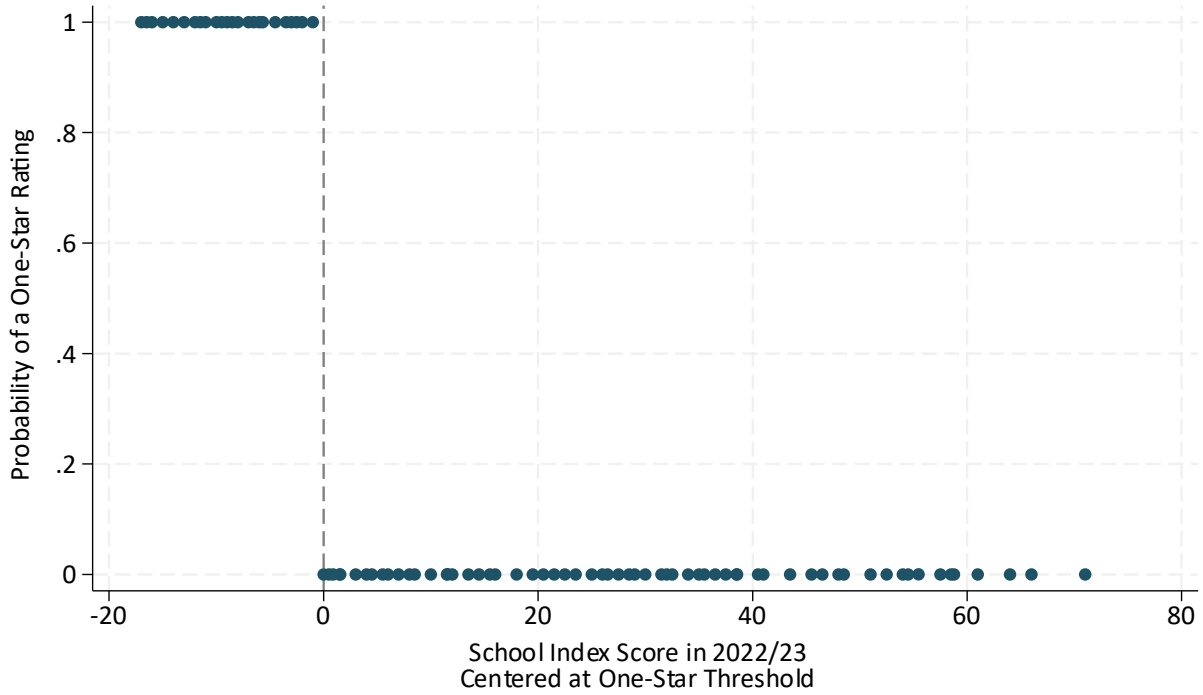
Appendix D. Research Design for Causal Analysis

Student-level math and ELA performance data are from the standardized assessments given in spring 2024 for students in grades 3 through 8. To facilitate comparisons across grade levels, we standardized the math and ELA scores to have a mean of 0 and a standard deviation of 1 for each grade, separated by subject. This means that a score of 0 would place the student at the average for their grade in that subject in that year. A score of –1 would place the student one standard deviation below the average, while a score of 1 would place the student one standard deviation above the average.

Student At-risk status comes from the administrative count of October 1, 2023, which is based on the students' data in the 2022/23 school year. For this analysis, we do not make a distinction between students whose At-risk status would have been included in the weights for the PCFP and those whose status would not have been counted because they are also identified as an English Learner student or are eligible for special education services.

To help illustrate why this design works, Figure D1 shows the jump in treatment status for schools that cross into the One-Star score region. The *x*-axis is the school score (centered at 0), and the *y*-axis is the probability of receiving a One-Star rating. As can be seen, all of the schools with a rating of 0 or higher do not receive the One-Star rating. As soon as the school rating falls below 0, there is a 100 percent chance of receiving the One-Star rating. This should come as no surprise: It is merely the rating system working as intended. However, as a result of this rating system working as intended, there is a sharp distinction between the ratings (and all the support that is triggered by them) of schools with nearly identical scores. A school with an NSPF index score of –0.001 is not markedly different from a school with an NSPF index score of 0.001, yet the former receives the One-Star rating, and the latter does not. Because of that sharp difference in treatment status, any subsequent difference in test scores between those nearly identical schools can be attributed to the One-Star rating (and all the support that it comes with). That is the statistical logic of the RDD.

Figure D1. NSPF Index Scores and School Star Rating



Finding these differences in performance across schools with One-Star ratings and higher star ratings requires focusing on a narrow range of schools around the One-Star assignment threshold, as is illustrated by the red box in Figure D2.

Figure D2. NSPF Index Scores and At-Risk Student Performance