NORTH CAROLINA
State Board of Education
Department of Public Instruction

Report to the North Carolina General Assembly: An Impact Analysis of Student Learning During the COVID-19 Pandemic

Findings from the third-party entity contract to collect, analyze, and report data related to overall impacts of COVID-19 on public schools units.

SL2021-3, HB196, Section 1.2. S.L. 2021-1 is amended by adding Section 5A (4)

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Executive Summary

During the 2019-20 and 2020-21 school years, the COVID-19 pandemic dramatically impacted traditional methods of student learning. Traditional methods of delivery were uprooted by school closures and an unplanned shift to remote learning. Understanding the extent of the impact of students' lost instructional time and how it can vary among student groups – is critical to understanding current education needs and developing recovery plans to meet those needs.

To further this understanding about the impact of students' lost instructional time, the North Carolina Department of Public Instruction (NCDPI) and SAS Institute Inc. (SAS) collaborated to leverage existing student assessment data and yield insight into how the pandemic disrupted student learning.

Although the pandemic's impacts are likely far-ranging across many domains, this report focuses on an Impact Analysis that assesses student performance and lost instructional time by comparing students' pre-pandemic expected performance with their post-pandemic actual performance in the 2020-21 school year.

This data is unique to North Carolina as it is individual, student level data and not based on representative samples of students. This is one of the most comprehensive reports done to date on the effects of the pandemic as it pertains to individual students and should be considered to be the authoritative source within North Carolina on the issue of learning loss during the 2020-21 school year. This analysis is the first of its kind in the state and one of the first nationally.

NCDPI is in a unique position because North Carolina has one of the only statewide student information systems, a cross-sector longitudinal data system, custom-designed standard accountability models, and a longtime partnership with the EVAAS team at SAS. Though student achievement for the 2020-21 school year was presented to the State Board of Education in September 2021, this report goes beyond how many students met grade level proficiency and presents the difference between where we expected students to perform and how they actually performed. Taken together these two pieces of information can provide the state and local educators a more complete picture of the impact of the pandemic on student performance and how to move forward.

More specifically, this analysis uses student projections to the 2020-21 school year, which represents their pre-pandemic expected performance based on the average schooling experience and then compares these projections to students' actual performance on the 2020-21 statewide assessments. A negative difference indicates that students did not perform as expected based on their pre-pandemic learning trajectories. The impacts are disaggregated in several different contexts including subject, grade, student demographic. The disaggregation of data assists in our understanding of those groups that were disproportionately impacted by the pandemic.

This report focuses on two key questions at the state-level:

- Question 1: To what extent do students' pre-pandemic trajectories and their actual performance results vary by subgroup and contextual factors?
- Question 2: How do any observed differences compare to historical trends?

The impact analysis incorporates additional data variables to investigate student performance and learning across targeted areas of exploration to assess differences in patterns in learning:

- *Across subjects and grades*
- *Across geographic regions and urbanicity indicators*
- *Across student subpopulations* such as those in a specific demographic category or socioeconomic status
- *According to students' entering achievement*
- *According to students' education delivery* such as in person, virtual, etc.

Using these strategies offers NCDPI empirical results to realistically assess the impact of lost instructional time and more effectively monitor students' recovery during the 2020-21 school year and beyond.

The analysis presented below used the state's summative assessment data from end-of-grade (EOG), end-of-course (EOC), and early grades (mCLASS). Where available, the analysis used data from prior years through the 2020-21 school years as historical data was used to establish students' projected performance as well as to provide context for interpreting the 2020-21 findings.

NCDPI's initial findings from this analysis include:

- On average, at the state level, all students were significantly impacted by the pandemic and lost instructional time.
- Results show that there was a negative impact for all students, for all grades, for almost every subject (except English II). These negative impacts were especially true for Math (5th-9th grades) and Science (Biology).
- Most students continued to progress during the pandemic but at a slower pace than they would have done otherwise.
- Students who returned to the classroom for face-to-face learning and where specific and targeted resources and supports were immediately put in place, did better than the students who were purely remote and disengaged from their school community.

Based on these preliminary findings, NCDPI will be able to better understand learning recovery and acceleration programs and interventions across the state and set benchmarks to monitor progress over time. This report allows the department to better target resources and prioritize funding for students who were most affected and for areas of the state that are most in need. The Office of Learning Recovery and Acceleration offered these key takeaways with a focus on eliminating opportunity gaps:

- Connectivity - Students need access to reliable broadband internet at home, which directly impacts their ability to access robust, dynamic instructional materials and resources. Cross-sector partnerships should focus on solving the rural and economic broadband divide.
- In-Person Instruction - The majority of students need regular interaction and direct personal engagement with their principals, teachers, and peers.
- Students Disproportionately Impacted by the Pandemic – Education leaders and teachers should focus resources and targeted interventions on students who have been most negatively impacted by disrupted learning caused by the pandemic.
- Focus on Content Areas of Highest Need - Education leaders and teachers should focus resources and targeted interventions for early grades reading, middle grades math, and science in the transition years.

The following sections provide more details about the data used, methods of analysis, results, and interpretation of the results for the Impact Analysis. State-level student and aggregated files are provided separately to NCDPI and to individual LEAs via secure file transfer protocol accounts.

Data

Assessment Data

The analysis in this report leveraged student-level assessment data, where available, from 2007-2008 through the 2020-21 school year in order to compile a longitudinal data set based on the following assessments:

- EOG Mathematics in grades 3–8
- BOG Reading in grade 3 (Note: These scores were used as predictors only; no projections were made to this assessment)
- EOG Reading in grades 3–8
- EOG Science in grades 5 and 8
- EOC Biology, English II, Math 1 and Math 3
- mCLASS in grades K-2 (used as predictors only)

The state EOG tests are administered in the spring semester whereas the EOC assessments are typically given at the end of the fall and spring semesters with the occasional summer administration. The BOG Reading in grade 3 assessment is given at the start of the fall semester. The mCLASS assessments are administered in equal intervals three times throughout the year.

For each administration, SAS used the following student identifiers, assessment data, and district/school/student flags; definitions of these identifiers and flags are available in Appendix A:

- Student Identifiers
  - Student Last Name
  - Student First Name
  - Student Middle Initial
  - Student Date of Birth
  - Student Identification Number
- Assessment Information
  - Scale Score
  - Test Taken
  - Tested Grade
  - Test Semester
  - School Number
  - District Number
  - Administration Window
- Student Flags
  - Academically or Intellectually Gifted (Y, N)
  - Sex (M, F)
  - English Learners (EL) (Y, N)
  - Economically Disadvantaged Students (Y, N)
  - Students with Disabilities (Y, N)

- Homeless (Y, N)
- Military Connected (Y, N)
- Chronically Absent (Y, N)
- Migrant Student (Y, N)
- Education Delivery
- Race
    - American Indian/Alaskan Native
    - Asian/Pacific Islander
    - Black (not Hispanic)
    - Hispanic
    - Two or More Races
    - White (not Hispanic)
    - Other

- District/School Flags
    - School Designation (Public, Charter)
    - State Board Region
    - Urbanicity
    - Education Delivery: Number of Days Remote

SAS merged the individual student records over time using an algorithm that incorporated all student identifiers to create a longitudinal database that tracks individual students' performance across grade levels on state assessments each year. As explained in Section 0, student flags were not included in the analysis for determining students' projected performance but were used to aggregate students into different student groups for comparison. Furthermore, some student flags are used to generate school-level variables that indicate the school's concentration of student composition in the form of quartiles. For example, the student-level Economically Disadvantaged flag was used to create quartiles based on the percentage of the school's students who are considered Economically Disadvantaged.

Business Rules

In creating the longitudinal database, the following business rules were applied regarding student scores.

Missing Grade

In North Carolina, the grade used in the analyses and reporting is the tested grade, not the enrolled grade. If a grade is missing on an early grade or end-of-grade test record, then that record will be excluded from all analyses. The grade is required to include a student's score in the appropriate part of the models.

Duplicate (Same) Scores

If a student has a duplicate score for a particular subject and tested grade in a given testing period in a given school, then the extra score will be excluded from the analysis.

Students with Missing Districts or Schools for Some Scores but Not Others

If a student has a duplicate score with a missing district or school for a particular subject and grade or course in a given testing period, then the duplicate score that has a district and/or school will be included over the duplicate score that has the missing data.

Students with Multiple (Different) Scores in the Same Testing Administration

If a student has multiple scores in the same period for a particular subject and grade or course and the test scores are not the same, then those scores will be excluded from the analysis. If duplicate scores for a particular subject and tested grade in a given testing period are at different schools, then both scores will be excluded from the analysis. For grade 3 Reading and Math scores, the most recent score is used.

Students with Multiple Grade Levels in the Same Subject in the Same Year

A student should not have different tested grade levels in the same subject in the same year. If that is the case, then the student's records are checked to see whether the data for two separate students were inadvertently combined. If this is the case, then the student data are adjusted so that each unique student is associated with only the appropriate scores. If the scores appear to all be associated with a single unique student, then scores that appear inconsistent are excluded from the analysis. For the historical data based on K-2 scores, the analysis excludes K-2 students with a grade change.

Students with Records That Have Unexpected Grade Level Changes

If a student skips more than one grade level (e.g., moves from sixth in 2018 to ninth in 2019) or is moved back by one grade or more (i.e., moves from fourth in 2018 to third in 2019) in the same subject, then the student's records are examined to determine whether two separate students were inadvertently combined. If this is the case, then the student data is adjusted so that each unique student is associated with only the appropriate scores. These scores are removed from the analysis if it is the same student. Per DPI's decision, the analysis does not remove students with scores that appear to be associated with inconsistent grades. The analysis leaves students in the analysis at the tested grade that EVAAS receives from DPI.

Students with Records at Multiple Schools in the Same Test Period

If a student is tested at two different schools in a given testing period, then the student's records are examined to determine whether two separate students were inadvertently combined. If this is the case, then the student data is adjusted so that each unique student is associated with only the appropriate scores. When students have valid scores at multiple schools in different subjects, all valid scores are used at the appropriate school.

Outliers

Student assessment scores are checked each year to determine whether they are outliers in context with all the other scores in a reference group of scores from the individual student. These reference scores are weighted differently depending on proximity in time to the score in question. Scores are checked for outliers using related subjects as the reference group. For example, when searching for outliers for EOC Math test scores, all EOG and EOC Math subjects are examined simultaneously, and any scores that appear inconsistent, given the other scores for the student, are flagged. Outlier identification for college readiness assessments use all available college readiness data alongside state assessments in the respective subject area (e.g., Math subjects with EOC, EOG). Lastly, K-2 data are used solely for outlier identification with K-2.

Scores are flagged in a conservative way to avoid excluding any student scores that should not be excluded. Scores can be flagged as either high or low outliers. It should also be noted that test scores within a year, subject and grade are normalized before checking begins. This helps mitigate any unnecessary flagging of outliers due to a year of assessments shifting across the state as might happen in 2021.

This process is part of a data quality procedure to ensure that no scores are used if they were,

in fact, errors in the data, and the approach for flagging a student score as an outlier is fairly conservative. Again, students were expected to score lower in 2021 due to the pandemic, and this process is more about flagging data that might be erroneous.
Considerations included in outlier detection are:

- Is the score in the tails of the distribution of scores? Is the score very high or low achieving?
- Is the score "significantly different" from the other scores as indicated by a statistical analysis that compares each score to the other scores?
- Is the score also "practically different" from the other scores? Statistical significance can sometimes be associated with numerical differences that are too small to be meaningful.
- Are there enough scores to make a meaningful decision?

To decide whether student scores are considered outliers, all student scores are first converted into a standardized normal Z-score. Then each individual score is compared to the weighted combination of all the reference scores described above. The difference of these two scores provides a t-value of each comparison. Using this t-value, the models can flag individual scores as outliers.

There are different business rules for the low outliers and the high outliers, and this approach is more conservative when removing a very high-achieving score.
For low-end outliers, the rules are:

- The percentile of the score must be below 50.
- The t-value must be below -3.5 for EOGs in Math and Reading when determining the difference between the score in question and the weighted combination of reference scores (otherwise known as the comparison score). In other words, the score in question must be at least 3.5 standard deviations below the comparison score. For EOC and EOG Science assessments, the t-value must be below -4.0
- The percentile of the comparison score must be above a certain value. This value depends on the position of the individual score in question but will range from 10 to 90 with the ranges of the individual percentile score.

For high-end outliers, the rules are:

- The percentile of the score must be above 50.
- The t-value must be above 4.5 for EOGs in Math and Reading when determining the difference between the score in question and the reference group of scores. In other words, the score in question must be at least 4.5 standard deviations above the comparison score. For EOC and EOG Science assessments, the t-value must be above 5.0.
- The percentile of the comparison score must be below a certain value. This value depends on the position of the individual score in question but will need to be at least 30 to 50 percentiles below the individual percentile score.
- There must be at least three scores in the comparison score average.

Membership

To include as many students as possible and given the research purpose of the analysis, students were not excluded based on membership, a designation based on student enrollment at a school and used for accountability purposes.

First Year English Learner
Given the research purpose of the analysis and need for historical data to calculate a pre-

pandemic projection, students were excluded based on first year English Learner designation. Students who were flagged as English Learner after their first year were included in the analysis.
Based on the business rules in this section and the analytic criteria outlined in the next section (such as the three-predictor minimum), 3,143,764 test records out of a total 3,394,169 were included in this analysis, which is about 93%. NCDPI has made more details available about student participation rates in the 2020-21 school year here: https://www.dpi.nc.gov/media/12854/download?attachment.

Methods of Analysis

Overview

This report focuses on a comparison between students' projected 2021 performance prior to the pandemic with their actual 2021 performance as a viable method to assess lost instructional time. In order to provide this assessment, this analysis engaged in five key steps:

1. **The most recent cohort of students from the 2018-19 school year is used to establish the pre-pandemic experience.** A model is constructed with this cohort of students where the response variables are each individual subject and grade on the 2018-19 school year regressed on the prior testing histories of that students. Establishing the relationships of past tests to this current 2018-19 test determines the pre-pandemic experience or, in other words, an expected score on the response given a specific set of prior testing data.
2. **Students' prior assessment data (2018-19 and earlier) is used to establish a projected or expected score on a future assessment (2020-21).** This projection is based on the students' own prior testing history as well as how the cohort of students who just took the assessment prior to the pandemic performed. In other words, the students with testing data in 2020-21 use their previous tests (2018-19 and earlier) as independent variables in the model established in the step above. For example, a student who last tested as a third grader in 2018-19 might have a projected score of 548 on the next summative assessment as a fifth grader in 2020-21.
3. **Projected scores represent students' expected or average progress trajectories prior to the pandemic.** Each student receives a projected score based on their prior testing history, which assumes that each student had an "average" schooling experience. An average schooling experience in this study is determined by the observed progress of students who took the assessment prior to the pandemic. While schooling experiences inevitably vary across the state in any given year, the analysis uses the average schooling experience to avoid assumptions that certain students will have more than or less than the average schooling experience during the pandemic year and to avoid assumptions that students at individual schools would have the same schooling experience during the pandemic as they had prior to the pandemic.
4. **With assessment data available during the 2020-2021 school year, it is possible to compare a student's trajectory prior to the pandemic to the student's current performance.** The student's projected score is compared to the current score for the same tested content area. Although the projected score is based on the average pre-pandemic schooling experience, the 2020-21 school year is likely to be different because of the pandemic. This comparison will indicate the extent to which students have experienced lost instructional time and diverged from their projected trajectory established prior to the pandemic.

5. **The individual student scores can be aggregated among students to assess the pandemic's impact on specific student groups.** This aggregation may yield insights into patterns among student subpopulations, subjects, and grades.

This approach was conducted for the most recent year of assessment data (2020-21 school year) as well as using historical years to provide context for interpreting results. The historical analysis made projections to the 2017-18 and 2018-19 school years using prior test scores from 2016-17 and earlier school years to define the average schooling experience. The historical analysis considered multiple years as a comparison due to changes in the assessments' content standards and state administration policies.

The sections below provide a more technical explanation of the analytic approach as well as business rules. The Results section summarizes these differences and provides a few ways to contextualize and interpret them.

Determining Students' Projected Scores

As part of the current EVAAS reporting for NCDPI, SAS provides student projections to future statewide assessments, such as the EOG and EOC. This information indicates students' likely performance on future tests based on their prior performance given an "average" schooling experience, and the projections are a resource for educators to plan for students' future success.

The analysis for this report uses a similar methodology to provide student projections to their 2020-21 state assessments. The model provides a projected score for each student based on that student's prior testing performance and assuming the average schooling experience of the most recent cohort of test takers, which was defined prior to the pandemic.
This modeling approach offers the following statistical advantages:

- Projected scores based on multiple scores are more reliable estimates of where students might perform than just a single prior test score. They include more predictive information about students' future performance than the prior year's single score by incorporating multiple subjects, grades, and years of data.[1] This mitigates challenges with measurement error.
- The model does not require students to have all predictors or the same set of predictors as long as a student has at least three prior test scores in any subject and grade. This flexibility is critical in avoiding selection bias as more students can be included in the model itself, even if they have missing data.

These advantages are important features for creating reasonable expectations of student performance for the purposes of this analysis.

It should be noted that, historically in North Carolina and in the other states that use the SAS projection model, it is not necessary to add demographic or socioeconomic indicators into the projection model because, to the extent that these factors influence student performance, they are captured indirectly in the students' prior test scores. Other researchers have reported similar findings in their assessments of value-added models (which are similar to the projection model in their construction and use of prior test scores).

1 See, for example, data and results from Ohio's Growth Model Application and Information available at: https://www2.ed.gov/admins/lead/account/growthmodel/oh/index.html.

As a 2004 Education Trust study stated, specifically with regards to the SAS EVAAS value-added modeling, which again has a similar use of prior test scores to the projection model in this analysis:

> [I]f a student's family background, aptitude, motivation, or any other possible factor has resulted in low achievement and minimal learning growth in the past, all that is taken into account when the system calculates the teacher's contribution to student growth in the present.[2]

UCLA researchers Kilchan Choi, Pete Goldschmidt, and Kyo Yamashiro reported:
First, adding in an adjustment for student SES (as measured by eligibility for free- or reduced-price lunch) adds very little once a student's initial status is controlled...This indicates that student initial status captures many of the effects that SES is attempting to measure. In other words, by controlling for initial status, the model already captures the preceding effects that SES might have on students.[3]For this analysis, there is indication that specific student groups had different experiences during the pandemic that are related to their student characteristics. To investigate these differences, the projection model in this analysis does not include demographic or socioeconomic indicators. However, the aggregation of student residuals based on student characteristics will indicate their potential impact or relationship to lost instructional time.

More specifically, the projection model is an analysis of covariance (ANCOVA) model. The model parameters are established using the most recent cohort of test takers of that assessment prior to the pandemic. The response variable (y) is the observed score of students from the 2018-19 year, the covariates (xs) are scores on tests the student has already taken up to that point, and the categorical variable is the school at which the student received instruction in the subject, grade, and year of the response variable (y). Algebraically, the model can be represented as follows for the i^{th} student.

$$y_i = \mu_y + \alpha_j + \beta_1(x_{i1} - \mu_1) + \beta_2(x_{i2} - \mu_2) + \cdots + \epsilon_i \quad (1)$$

The μ terms are means for the response and the predictor variables. α_j is the school effect for the j^{th} school, the school attended by the i^{th} student. The β terms are regression coefficients. Projections to the future are made by using this equation with estimates for the unknown parameters (μs, βs, sometimes α_j). The parameter estimates (denoted with carets or "hats," e.g., $\hat{\mu}$, $\hat{\beta}$) are obtained using the cohort of test takers in the 2018-19 school year with their observed tests as the response variables. These estimates are then used to establish a projection for students based on the experiences of students in a normal year (2018-19) prior to the pandemic. The resulting projection equation for the i^{th} student is as follows:

$$\hat{y}_i = \hat{\mu}_y + \hat{\beta}_1(x_{i1} - \hat{\mu}_1) + \hat{\beta}_2(x_{i2} - \hat{\mu}_2) + \cdots + \epsilon_i \quad (2)$$

The corresponding $\hat{\alpha}_j$term from equation (1) is omitted to assume the "average schooling experience" such that the average schooling experience equates to the average progress observed among the population of test-takers with the average school across the state from the 2018-19 school year for each tested content area.

2 Carey, Kevin. 2004. "The Real Value of Teachers: Using New Information About Teacher Effectiveness to Close the Achievement Gap." *Thinking K-16* 8(1):27.

3 Choi, Kilchan, Pete Goldschmidt, and Kyo Yamashiro. 2006. Exploring Models of School Performance: From Theory to Practice (CSE Report 673) Los Angeles, CA: National Center for Research on Evaluation, Standards, and Student Testing (CRESST), 24.

To state again, parameter estimates (i.e., $\hat{\mu}$, $\hat{\beta}$) were derived using the 2018-19 cohort of test takers to create projections out to the 2020-2021 school year using data up through the 2018-19 data as predictors (x). For historical comparisons, parameter estimates (i.e., $\hat{\mu}$, $\hat{\beta}$) were derived using the 2016-17 cohort of test takers to create projections out to the 2017-18 school year using data up through the 2016-17 school year as predictors (x). They were also used to create projections out to the 2018-19 school year using data up through the 2017-18 school year.

Two difficulties must be addressed to implement the estimation and use of this model. First, not all students will have the same set of predictor variables due to missing test scores. Second, because this is an ANCOVA model with school as a random effect, the regression coefficients must be "pooled-within-school" regression coefficients. The strategy for dealing with missing predictors is to estimate the joint covariance matrix (C) of the response and the predictors. Let C be partitioned into response (y) and predictor (x) partitions, that is,

$$C = \begin{bmatrix} C_{yy} & C_{yx} \\ C_{xy} & C_{xx} \end{bmatrix} \quad (3)$$

This matrix is estimated using the Expectation Maximization algorithm for estimating covariance matrices in the presence of missing data provided by the Multiple Imputation procedure in SAS/STAT® (although no imputation is actually used). It should also be noted that, because this model is an ANCOVA model, *C* is a pooled-within school covariance matrix. This is accomplished by providing scores to the EM algorithm that are centered around group means (i.e., the group means are subtracted from the scores) rather than around grand means. Obtaining *C* is an iterative process since group means are estimated within the EM algorithm to accommodate missing data. Once new group means are obtained, another set of scores is fed into the EM algorithm again until *C* converges. This overall iterative EM algorithm is what accommodates the two difficulties mentioned above. The estimation only includes students who had a test score for the response variable in the most recent administration *and* who had at least three predictor variables. Given such a matrix, the vector of estimated regression coefficients for the projection equation (2) can be obtained as:

$$\hat{\beta} = C_{xx}^{-1} C_{xy} \quad (4)$$

This allows one to use whichever predictors a student has to get that student's projected y-value ($\hat{y}_i$). Specifically, the C_{xx} matrix used to obtain the regression coefficients *for a particular student* is that subset of the overall C matrix that corresponds to the set of predictors for which this student has scores. Once the parameter estimates for the projection equation have been obtained, projections can be made for any student with any set of predictor values. Again, to protect against bias due to measurement error in the predictors, projections are typically made only for students who have at least three available predictor scores.

The table below summarizes the data used to generate projections representing a pre-pandemic average schooling experience.

Table 1: Data Used to Determine Students' Projected Score

Projected score in SY20-21 on…	**Prior years' data through SY18-19 used to calculate projected score**
EOG Reading for grades 3 and 4*	mCLASS in grades K-2 BOG Reading in grade 3

EOG Reading and Math for grades 5-8	EOG Reading and Math in grades 3-6** EOG Science in grade 5
EOG Science for grade 8	EOG Reading and Math in grades 3-6** EOG Science in grade 5
EOC Biology, English II, NC Math 1 and NC Math 3	EOG Reading and Math in grades 3-8*** EOG Science in grades 5 and 8***

***Note: Projections were not made to EOG Math in grades 3 and 4 because the available predictors for the 2020-21 cohort of students were based solely in the Reading content area and were much lower in those subject/grades than they were for other subject/grades. More specifically, the correlation between predictors and actual scores for EOG Math in grades 3 and 4 was about 0.60 compared to 0.80 for most subjects and grades.**
****Note: Due to suspended assessments in the SY19-20, EOG Reading and Math scores were not available from grade 7 to make projections to SY20-21 EOG Reading, Math and Science in grade 8.**
*****Note: Due to suspended assessments in the SY19-20, EOG Reading, Math and Science scores from grade 8 are not available to use as predictors for students who were enrolled in grade 8 in SY19-20 and took an EOC test in SY20-21.**

In this analysis, student scores from the 2018-19 school year were used as the response to create the underlying parameter estimates in the projection equations. These parameter estimates define the relationships between prior tests or predictors and the response subject and grade. In other words, these relationships indicate how one test can provide information about where students are likely to score on another test. The set of predictors that were considered in each of these models are listed above in Table 1. Once these parameter estimates were obtained, these models were used to create projected scores for the 2020-21 school year using predictor test scores up through the 2018-19 school year. This creates a projected score for students who tested during the 2020-21 school year that was based on experiences or relationships defined prior to the pandemic and their own individual set of prior testing history.

Note that, based on empirical data, there are observed differences in the projection model for NC Math 1 depending on whether the student took that assessment in middle school or high school. As a result, there are two separate pools to establish the projections and parameters for NC Math 1: one based on middle school test takers and the other based on high school test takers.

Students' Actual Scores

In this analysis, a student's actual score is the scale score that they obtained on the state summative assessment in the 2020-21 school year.
In EOG Reading, the standards were modified for the 2020-21 school year's assessment. Although that year's scale scores look different compared to prior years', it is our understanding that there were minimal changes to the EOG Reading content standards in the 2020-21 school year compared to previous years. Given this, the projected scores to the 2020-21 school year were modified to be on the same scale as the 2020-21 actual scores by adding 100 to the projected scale score. The hundreds place in the prior version was a 400, while it is a 500 in the new version. This place defines the version of the assessment.

Difference Between Students' Projected and Actual Scores

Because the projected scores and actual scores are in the same scaling units, the difference between them is a simple subtraction problem. *For each student, the difference is calculated as the actual score minus the projected score.*

A difference of zero indicates that a student scored where they were projected to score. A positive difference indicates that a student exceeded their projected score or, in other words, that the student made more progress than the average pre-pandemic schooling experience given their set of prior testing data. A negative difference indicates that a student fell short of their projected score or, in other words, that the student made less progress than the average pre-pandemic schooling experience given their set of prior testing data. The average schooling experience was defined by the most recent cohort of test-takers who took the test prior to the pandemic in the 2018-19 school year.

No conclusions should be drawn for individual students, but an aggregation of student results does provide a more robust indicator of how students' observed performance differed from their pre-pandemic projected scores. Typically, and in non-pandemic years, the average schooling experience does not vary significantly from one year to the next. As a result, in a "normal" school year, the students in a state will, on average, score close to where they were projected to score, although this might not hold true for students in specific schools or student groups.

However, in this analysis the projected scores were based on the pre-pandemic average schooling experience. Thus, it is possible that some students fell short of their projected scores due to lost instructional time and to the pandemic's impact on student learning.
As noted above, some student flags are used to generate school-level variables that indicate the school's concentration of student composition in the form of quartiles. For example, the student-level Economically Disadvantaged flag was used to create quartiles based on the percentage of the school's students who are considered Economically Disadvantaged.

Conversion of Differences to Effect Sizes

In order to standardize the differences across grades and provide a more meaningful interpretation, the residual that is in the scaling units of the test is then divided by the standard deviation of the student-level achievement distribution based on the statewide distribution of student scores in a specific tested content area (like 2018-19 EOG Math in grade 7) to create an effect size. This effect size or "standardized residual" is helpful in interpreting results across grades.

With this standardized residual, it is possible to assess whether certain grades, schools, or student groups were disproportionately impacted. All of the results are expressed in terms of the effect size.

The effect size can be classified as small, medium, or large to assist with interpretation and whether any differences in student performance are meaningful. Various researchers have offered thoughts on what defines a small, medium, and large effect size.

- Cohen describes 0.20 as small, 0.50 as medium, and 0.80 as large (Cohen, Jacob. *Statistical Power Analysis for the Behavioral Sciences.* 2nd ed. Mahwah, NJ: Lawrence Erlbaum, 1988).
- Hattie describes an effect size of 0.40 as the average seen across all interventions, and 0.40 as the "hinge point" (Hattie, John, *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement.* London: Routledge, 2008).
- Kraft suggested < 0.05 as small, 0.05 to 0.20 as medium, and > 0.20 as large based on the distributions of effect sizes and changes in achievement (Kraft MA. "Interpreting Effect Sizes of Education Interventions." *Educational Researcher*. 2020; 49 (4):241-253).

All of the researchers agree that it is important to interpret results within the distribution of

actual results. In other words, what constitutes a small, medium, or large effect size is determined by what is observed in the actual results.

For a comparison, the table below provides school-level effect sizes based on a "typical" pre-pandemic school year for the state assessments (the 2018-19 school year). For example, an effect size of -0.11 in EOC Biology corresponds to the 30th percentile in a "typical" year while an effect size of -.30 corresponds to the 10th percentile in a "typical" year.

Table 2: Pre-Pandemic *School*-Level Effect Size Percentiles

	Percentile										
Assessment	5	10	20	30	40	50	60	70	80	90	95
EOC Biology	-0.40	-0.30	-0.17	-0.11	-0.05	0.00	0.05	0.11	0.17	0.26	0.34
EOC English II	-0.33	-0.18	-0.10	-0.06	-0.02	0.01	0.05	0.07	0.11	0.16	0.24
EOC NC Math 1	-0.36	-0.27	-0.17	-0.11	-0.06	-0.01	0.04	0.10	0.16	0.28	0.38
EOC NC Math 3	-0.33	-0.26	-0.18	-0.13	-0.07	-0.01	0.04	0.11	0.17	0.28	0.40
EOG Math 4	-0.36	-0.28	-0.18	-0.10	-0.04	0.01	0.07	0.12	0.18	0.26	0.32
EOG Math 5	-0.30	-0.24	-0.16	-0.11	-0.05	0.00	0.04	0.09	0.15	0.24	0.32
EOG Math 6	-0.33	-0.25	-0.18	-0.11	-0.06	-0.01	0.04	0.09	0.16	0.26	0.35
EOG Math 7	-0.31	-0.22	-0.15	-0.10	-0.04	0.00	0.04	0.09	0.14	0.21	0.28
EOG Math 8	-0.49	-0.37	-0.24	-0.17	-0.09	0.00	0.07	0.14	0.21	0.35	0.48
EOG Reading 4	-0.22	-0.16	-0.10	-0.06	-0.03	0.00	0.03	0.07	0.11	0.17	0.22
EOG Reading 5	-0.20	-0.15	-0.10	-0.06	-0.03	0.00	0.03	0.07	0.10	0.15	0.19
EOG Reading 6	-0.23	-0.16	-0.10	-0.06	-0.03	0.00	0.03	0.06	0.11	0.17	0.20
EOG Reading 7	-0.22	-0.15	-0.09	-0.05	-0.03	0.00	0.03	0.06	0.10	0.15	0.21
EOG Reading 8	-0.22	-0.16	-0.10	-0.06	-0.02	0.01	0.03	0.06	0.09	0.14	0.19

This information can also be put into context of pre-pandemic student-level effect sizes. Table 3 below provides the average student-level effect size based on the 2018-19 school year. For example, an effect size of -0.23 in EOC Biology corresponds to the 30th percentile in a "typical" year while an effect size of -.60 corresponds to the 10th percentile in a "typical" year. Note that the student-level effect sizes have a broader range of values than the school-level effect sizes since the school effect sizes are averaged values.

Table 3: Pre-Pandemic Student-Level Effect Size Percentiles

	Percentile										
Assessment	5	10	20	30	40	50	60	70	80	90	95
EOC Biology	-0.80	-0.60	-0.38	-0.23	-0.10	0.02	0.15	0.28	0.43	0.66	0.86
EOC English II	-0.83	-0.62	-0.39	-0.23	-0.10	0.02	0.14	0.27	0.41	0.61	0.78
EOC NC Math 1	-0.76	-0.59	-0.38	-0.23	-0.11	0.00	0.12	0.24	0.38	0.57	0.73
EOC NC Math 3	-0.96	-0.75	-0.50	-0.31	-0.16	-0.01	0.13	0.28	0.45	0.68	0.86
EOG Math 4	-0.81	-0.62	-0.40	-0.25	-0.11	0.01	0.13	0.26	0.41	0.62	0.80
EOG Math 5	-0.81	-0.62	-0.40	-0.24	-0.11	0.01	0.13	0.26	0.41	0.61	0.79
EOG Math 6	-0.78	-0.59	-0.38	-0.23	-0.10	0.01	0.13	0.25	0.38	0.58	0.75
EOG Math 7	-1.04	-0.80	-0.53	-0.32	-0.15	0.01	0.17	0.34	0.54	0.81	1.02
EOG Math 8	-0.84	-0.64	-0.42	-0.26	-0.12	0.00	0.13	0.26	0.42	0.65	0.83
EOG Reading 4	-0.80	-0.62	-0.40	-0.25	-0.12	0.00	0.12	0.25	0.40	0.61	0.79
EOG Reading 5	-0.80	-0.60	-0.39	-0.23	-0.11	0.01	0.12	0.24	0.38	0.58	0.75
EOG Reading 6	-0.81	-0.61	-0.39	-0.24	-0.11	0.01	0.12	0.24	0.39	0.59	0.76
EOG Reading 7	-0.81	-0.61	-0.39	-0.23	-0.10	0.01	0.13	0.26	0.40	0.60	0.77
EOG Reading 8	-0.92	-0.71	-0.47	-0.29	-0.14	0.00	0.15	0.30	0.47	0.72	0.93

The analysis does not report statistical significance. This is a common statistical metric used to establish a confidence band around the likely range of values for an effect size. It is related to the number of students included in the analysis as well as other factors. Given the number of students included in the analysis, almost all differences in student performance are classified as statistically significant. Given the purpose of this research, the effect size is a more useful measure for determining the relevance of any differences in student performance.

Historical Comparisons

The analysis compares students' projected performance to their actual performance for three cohorts of students:

- 2020-21 actual performance based on predictors through the 2018-19 school year
- 2018-19 actual performance based on predictors through the 2016-17 school year
- 2017-18 actual performance based on predictors through the 2016-17 school year

The method of analysis for the historical comparisons (2018-19 and 2017-18) is similar to what is described for the 2020-21 comparison above. However, there are some important differences for interpretation.

First, when interpreting the 2018-19 results as historical context, it is important to understand that Math standards changed. When standards change, there is often a one-year dip in state achievement levels as educators and students adjust to the new standards. This is typically true in North Carolina as well as other states. In subsequent years, the achievement stays fairly consistent from year-to-year. In the 2018-19 comparison, students typically perform lower than projected across the EOG Math and Math 1 assessments, and this gap is likely due to the change in standards. These results should be interpreted as gaps in projected achievement for a year when standards changed in Math.

In the 2017-18 school year, standards did not change, and the gap between projected and actual performance is fairly small across the EOG Math and Math 1 assessments. This year

might be more comparable to the typical year of schooling where standard did not change than the more recent 2018-19 school year as standards did not change in the 2020-21 school year either.

Note that, historically, when standards change in Reading, there are fewer differences in student performance compared to Math. Given the smaller shift in content this year in Reading, there are not analytic concerns about the Reading comparison.

As a second difference to note for interpretation, there was a change in the policy for eighth-grade Math students in the 2017-18 school year. Prior to this year, eighth-grade students who were enrolled in NC Math 1 took both the EOG Math 8 test and the NC Math 1 test. Starting in the 2017-18 school year, eighth-grade students who were enrolled in NC Math 1 did not take the EOG Math 8 test, only the NC Math 1 test. For this reason, the 2018-19 comparison analysis removed these students from the projection model for EOG Math 8. In other words, these students' prior test scores were not used to establish parameters and the average schooling experience for the 2018-19 performance because those students did not actually take EOG Math 8 in the 2018-19 school year. These students tend to be relatively high achieving, so including them in the model when none of them took the test introduces a gap when comparing students' projected and actual performance.

Last, it should be noted that EOC NC Math 3 was fully implemented in 2019 (as opposed to NCFE Math 3), so there are no historical comparisons available, only the 2020-21 results.

Results

A brief description of the information provided in the results is below, and results are provided in Appendix B. This description will assist with interpretation. With the exception of correlations, actual results based on effect sizes are provided separately.

Effect Size by Subject Grade

The "Effect Size by Subject Grade" bar charts provide the average state-level effect size by assessed content area.

The Y axis lists the available subjects and grades as well as an overall "All Subjects" category. The X axis shows the average effect size based on all student residuals for that subject/grade. As a reminder, the effect size is the standardized residual between students' actual and projected score for a specific assessment. Each bar chart shows the average standardized residual for all students who took the assessment in the 2020-21 school year. The X axis ranges from -0.8 to +0.4 since more of the data was negative due to the pandemic's impact on student learning.

For context in interpretation, the 2021 results are shown alongside the 2018 results. This enables users to assess whether there were pre-existing gaps prior to the 2020-21 school year.

Similar information is provided in tables, with the addition of student counts. In these tables, the Count column represents the number of student records that were used in the analysis, i.e., the scores met all analytic criteria for inclusion, and there was sufficient data for an individual student to calculate the difference between the student's actual and projected score. In "All Subjects," an individual student can be included more than once if that student has records in multiple assessments, such as EOG Math Grade 5 and EOG Reading Grade 5.

Effect Size by Subject Grade for Specific Groups

The “Effect Size by Subject Grade” bar charts are also provided based on whether a student has a specific student, school, or district flag. The interpretation is similar to what is described above; however, rather than present one bar chart per assessment, these graphics have two or more bar charts per assessment. For example, for a given assessment, there is an effect size based on all students who are considered English Learners next to an effect size based on all students who are not considered English Learners. Similar data is available for other student-level flags.

There are also results available for school- or district-level groupings, such as the percentage of educational delivery days that were remote at the school. For ease of interpretation, these school or district groupings are sometimes placed into quintiles or quartiles based on the percentage, with 0 representing the lowest percentage and 4 representing the highest percentage.

Correlations between Observed and Projected Scores

The correlation table below reports the correlation value between students’ observed and projected scores for a given school year. For example, in the column “Correlation 2018,” the correlation is based on students’ actual scores from the 2017-18 school year and their projected scores to the 2017-18 school year. As a reminder, the projected score is based on the individual student’s previous test scores prior to the 2017-18 school year and assumes the average schooling experience of students who tested in the 2016-17 school year.

The purpose of this information is to provide context about the predictive relationship between students’ projected and observed scores in a given year. Correlations in 2018 were made one year out using the experience of the 2016-17 school year’s test takers. Correlations for 2019 and 2021 are made two years out using the experience of the 2016-17 and 2018-19 school years’ test takers respectively. In some subjects, the correlation is slightly lower in 2021. This is not only due to the projections being two years out but due to the experience during and before the pandemic being different as well as more volatility in individual student scores during the pandemic. Regardless, the correlations tend to be very strong across all years and subjects

Table 4: Correlations between Students' Projected and Actual Scores in 2018, 2019, and 2021

Subject	Correlation 2018	Correlation 2019	Correlation 2021
Biology	0.86142	0.84938	0.85611
English II	0.86813	0.86261	0.86481
NC Math 1	0.86869	0.84415	0.81108
NC Math 3	.	.	0.81555
Math Grade 5	0.86657	0.82138	0.78619
Math Grade 6	0.87336	0.84293	0.80623
Math Grade 7	0.89681	0.85100	0.81629
Math Grade 8	0.80725	0.73636	0.67042
Reading Grade 3	0.73320	0.70012	0.67861
Reading Grade 4	0.85698	0.70820	0.70192
Reading Grade 5	0.86606	0.84119	0.82272
Reading Grade 6	0.87780	0.85330	0.82419
Reading Grade 7	0.87550	0.85170	0.83668
Reading Grade 8	0.87329	0.85105	0.84262
Science Grade 8	0.86010	0.84895	0.84527

Distributions by Subject/Grade

These graphs show the distribution of student-level effect sizes by year and assessment. This is similar information as what was presented in Table 3 except that it highlights shifts in distributions over time. For each graph, there are two distributions: one for 2018 and one for 2021. Each distribution shows the frequency of the student-level effect size for a given subject/grade or course. These graphs provide a visual illustration of the shifts in student performance over time.

The X axis indicates the student-level effect size and ranges from -3 to +3.
The Y axis reports the percentage of students with a specific effect size.

The vertical black line at zero represents a student-level effect size of zero, meaning students' actual scores were the same as their projected scores. When the distribution is to the left of the vertical black line, it means that a student's actual score is lower than their projected scores. When the distribution is to the right of the vertical black line, it means that a student's actual score is higher than their projected scores. In 2018, the distribution tends to be centered around the vertical black line at zero whereas the 2021 distribution tends to be shifted to the left, indicating that more students' actual scores were lower than their projected scores.

Appendix A: Definitions of Student Identifiers and PSU Flags

NCDPI provided the following definitions of student identifiers and district/school flags to SAS for inclusion in the analysis:

Sex
As defined by federal guidance from ED Facts SY 2020-21.

Race/Ethnicity
Categories developed in 1997 by the Office of Management and Budget (OMB) that are used to describe groups to which individuals belong, identify with, or belong in the eyes of the community. The categories do not denote scientific definitions of anthropological origins. Source: ED Facts SY 2020-21

Economically Disadvantaged Students (EDS)

Any student identified by a PSU, meeting the criteria of Directly Certified, Categorically Eligible, or a method consistent with State or Federal guidance for financial assistance regardless of participation or eligibility in the National School Lunch Program." Source: Economically_Disadvantaged-Student_Guidance_20210630 V4.3 Final.pdf (govdelivery.com)

Academically or Intellectually Gifted (AIG)

This flag is defined by state but identified by PSU. The flag is defined as follows: Academically or Intellectually Gifted (AIG) students perform or show the potential to perform at substantially high levels of accomplishment when compared with others of their age, experiences or environment. Academically or Intellectually Gifted students exhibit high-performance capability in intellectual areas, specific academic fields, or in both the intellectual areas and specific academic fields. Academically or Intellectually Gifted students require differentiated educational services beyond those ordinarily provided by the regular educational program. Outstanding abilities are present in students from all cultural groups, across all economic strata, and in all areas of human endeavor. Source: Article 9B (N.C.G.S. § 115C-150.5) Article_9B.pdf (ncleg.net)

Students with Disabilities (SWD)

Those children evaluated as having any of the following impairments and who, by reason thereof, receive special education and related services under the Individuals with Disabilities Education Act (IDEA) according to an Individualized Education Program (IEP), Individualized Family Service Plan (IFSP), or a services plan. There are local variations in the determination of disability conditions, and not all states use all reporting categories. Source: COE - Students With Disabilities (ed.gov)

English Learners (EL)

This definition is given by the U.S. Department of Education, and the flag is defined as follows: The term English Learner (EL), when used with respect to an individual, means an individual — (A) who is aged 3 through 21; (B) who is enrolled or preparing to enroll in an elementary school or secondary school; (C)(i) who was not born in the United States or whose native language is a language other than English; (ii)(I) who is a Native American or Alaska Native, or a native resident of the outlying areas; and (II) who comes from an environment where a language other than English has had a significant impact on the individual's level of English language proficiency; or (iii) who is migratory, whose native language is a language other than English, and who comes from an environment where a language other than English is dominant; and (D)

whose difficulties in speaking, reading, writing, or understanding the English language may be sufficient to deny the individual — (i) the ability to meet the challenging State academic standards; (ii) the ability to successfully achieve in classrooms where the language of instruction is English; or (iii) the opportunity to participate fully in society (ESEA Section 8101(20)) ("Non-Regulatory Guidance" 43). Source: ESL/Title III Program and ELD Standards Glossary - Google Docs

Chronically Absent

Defined by the North Carolina State Board of Education and aligned with federal guidelines, as a student who is enrolled in a North Carolina public school for at least 10 school days at any time during the school year, and whose total number of absences is equal to or greater than 10 percent of the total number of days that such student has been enrolled at such school during such school year. Source: View Policy ATND-004: Definition of Student Chronic Absenteeism Rate (eboardsolutions.com)

Foster Student

This flag is defined by the state as students who are identified as being in the care of the foster system by the Department of Health and Human Services.

Migrant Student

The term ''migratory child'' means a child or youth who made a qualifying move in the preceding 36 months— (A) as a migratory agricultural worker or a migratory fisher; or (B) with, or to join, a parent or spouse who is a migratory agricultural worker or a migratory fisher. Source: Section 1309 of ESEA 1965

Student Experiencing Homelessness

The term 'homeless children and youths'-- means individuals who lack a fixed, regular, and adequate nighttime residence (within the meaning of section 103(a)(1)); and includes—

(i) children and youths who are sharing the housing of other persons due to loss of housing, economic hardship, or a similar reason; are living in motels, hotels, trailer parks, or camping grounds due to the lack of alternative adequate accommodations; are living in emergency or transitional shelters; or are abandoned in hospitals;*
(ii) children and youths who have a primary nighttime residence that is a public or private place not designed for or ordinarily used as a regular sleeping accommodation for human beings (within the meaning of section 103(a)(2)(C));
(iii) children and youths who are living in cars, parks, public spaces, abandoned buildings, substandard housing, bus or train stations, or similar settings; and
(iv) migratory children (as such term is defined in section 1309 of the Elementary and Secondary Education Act of 1965) who qualify as homeless for the purposes of this subtitle because the children are living in circumstances described in clauses (i) through (iii).

*Per Title IX, Part A of the Every Student Succeeds Act, 'awaiting foster care placement' was removed from the definition of homeless on December 10, 2016; the only exception to his removal is that 'covered states' have until December 10, 2017 to remove 'awaiting foster care placement' from their definition of homeless." Source: McKinney-Vento Definition – National Center for Homeless Education

Military Connected

A student who has a parent serving on active duty; parent In the National Guard; parent In the U.S. Reserve; a surviving dependent of a deceased service member

Entering Achievement by Quintile
Students are placed into one of five approximately evenly sized groups defined by students' projected score. Graph displays the average student-level effect size across all students in each quintile.

Public School Designation
Charter schools are public schools of choice that are authorized by the State Board of Education and operated by independent non-profit boards of directors. State and local tax dollars are the primary funding sources for charter schools, which have open enrollment and cannot discriminate in admissions, associate with any religion or religious group, or charge-tuition. Charter schools operate with freedom from many of the regulations that govern district schools, but charter schools are held accountable through the State assessment and accountability system. Source: Info by Role | NC DPI

Urbanicity
As defined by federal guidance:

- City: Territory inside an Urbanized Area and inside a Principal City
- Suburb: Territory outside a Principal City and inside an Urbanized Area
- Town: territory inside an Urban Cluster that is outside of an Urbanized area
- Rural: Census-defined rural territory that is outside of an Urbanized Area, as well as rural territory that is outside of an Urban Cluster.

Source:Local Boundries File Documentation

Percent of Economically Disadvantaged Students by Quintile
Schools are placed into one of five approximately evenly sized groups defined by the proportion of students within each school that is identified as economically disadvantaged. Graph displays the average student-level effect size across students within schools in each quintile.

School Grade

Every district and charter school receives an A-F letter grade based 80 percent on the school's achievement score (calculated using a composite method based on the sum of points earned by a school on all of the indicators measured for that school), and 20 percent on students' academic growth (compares the actual performance of the school's students to their expected performance based on a statewide statistical model). The letter grades are computed on a 15-point scale (85-100=A; 70-84=B; etc.). Source: Frequently Asked Questions | NC DPI

Low Wealth Supplemental Funding

A county that receives supplemental "low wealth" funding; a supplement based on tax revenue, income, student enrollment, county size; those located in counties in which the calculated county wealth (per the legislated formula) is less than 100% of the state average wealth. Source: Calculating Low Wealth Supplemental Funding | NC DPI

Percentage Connectivity
Schools are placed into one of five groups defined by the percent of students within each school that had home internet connectivity in 2019-2020: 0-20%,20-40%, 40-60%, 60-80%, and 80-100%. Graph displays the average student-level effect size across students within schools in each range.

Remote Days by Quintile
Schools are placed into one of five approximately evenly sized groups defined by the number of days spent in remote instruction. Graph displays the average student-level effect size across

students within schools in each quintile.

Low Performing Designation

A unit in which the majority of the schools in that unit that received a school performance grade and school growth score as provided in G.S. 115C-83.15 have been identified as low-performing schools, as provided in G.S. 115C-105.37." (G.S. 115C-105.39A(a)). Source: GS_115C-105.37.pdf (ncleg.gov)

District Tier Designation

The North Carolina Department of Commerce annually ranks the state's 100 counties based on economic well-being and assigns each a tier designation. The 40 most distressed counties are designated as Tier 1, the next 40 as Tier 2 and the 20 least distressed as Tier 3. This tier system is incorporated into various state programs to encourage economic activity in the less prosperous areas of the state. Source: NC Commerce: County Distress Rankings (Tiers)

State Board of Education Region

Geographically defined, set by the General Assembly, to create a unified system of statewide support to North Carolina Local School Administrative Units. For purposes of enhanced collaboration and cooperation between governmental agencies, planning, use of resources, and improved efficiency at a regional level. Source: State Board of Education

Appendix B. Charts and Tables of Results

Results are presented for the following:

By Student Group

1. Statewide Summary of All Tested Subjects
   - Bar chart of 2018 and 2021
   - Effect size tables for subject/grade for 2018 and 2021
2. Sex
   - Bar chart of 2018 and 2021
   - Effect size tables for subject/grade for 2018 and 2021
3. Race/Ethnicity
   - Bar chart of 2018 and 2021 – all and by group
   - Effect size tables for subject/grade for 2018 and 2021
4. Economically Disadvantaged Students
   - Bar chart of 2018 and 2021
   - Effect size tables for subject/grade for 2018 and 2021
5. Academically or Intellectually Gifted
   - Bar chart of 2018 and 2021
   - Effect size tables for subject/grade for 2018 and 2021
6. Students with Disabilities
   - Bar chart of 2018 and 2021
   - Effect size tables for subject/grade for 2018 and 2021
7. English Learners
   - Bar chart of 2018 and 2021
   - Effect size tables for subject/grade for 2018 and 2021
8. Chronically Absent
   - Bar chart of 2018 and 2021
   - Effect size tables for subject/grade for 2018 and 2021
9. Foster Student
   - Bar chart of 2018 and 2021
   - Effect size tables for subject/grade for 2018 and 2021
10. Migrant Student
    - Bar chart of 2018 and 2021
    - Effect size tables for subject/grade for 2018 and 2021
11. Student Experiencing Homelessness
    - Bar chart of 2018 and 2021
    - Effect size tables for subject/grade for 2018 and 2021
12. Military Connected
    - Bar chart of 2018 and 2021
    - Effect size tables for subject/grade for 2018 and 2021
13. Entering Achievement by Quintile
    - Bar chart of 2018 and 2021
    - Effect size tables for subject/grade for 2018 and 2021

By School

14. Public School Designation
    - Bar chart of 2018 and 2021
    - Effect size tables for subject/grade for 2018 and 2021

15. Urbanicity
    - Bar chart of 2018 and 2021
    - Effect size tables for subject/grade for 2018 and 2021
16. Percent of Economically Disadvantaged Students by Quintile
    - Bar chart of 2018 and 2021
    - Effect size tables for subject/grade for 2018 and 2021
17. School Grade
    - Bar chart of 2018 and 2021 by region
    - Effect size tables for subject/grade for 2018 and 2021
18. Percentage Connectivity
    - Bar chart of 2018 and 2021 by region
    - Effect size tables for subject/grade for 2018 and 2021
19. Remote Days by Quintile
    - Bar chart of 2018 and 2021
    - Effect size tables for subject/grade for 2018 and 2021

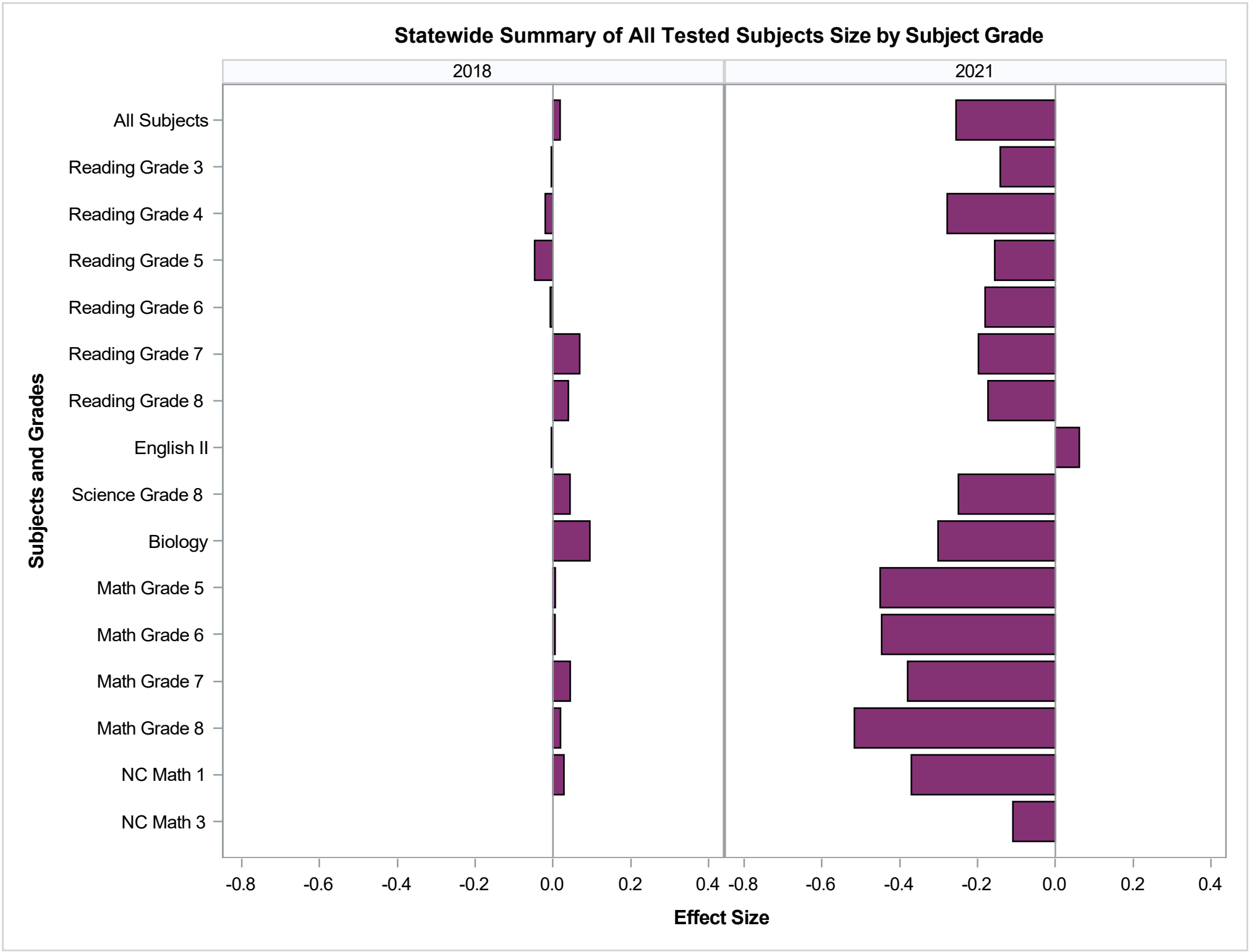
By District

20. Low Wealth Supplemental Funding
    - Bar chart of 2018 and 2021
    - Effect size tables for subject/grade for 2018 and 2021
21. Low Performing Designation
    - Bar chart of 2018 and 2021
    - Effect size tables for subject/grade for 2018 and 2021
22. District Tier Designation
    - Bar chart of 2018 and 2021
    - Effect size tables for subject/grade for 2018 and 2021

By Region

23. State Board of Education Region
    - Bar chart of 2018 and 2021 by region

Effect size tables for subject/grade for 2018 and 202

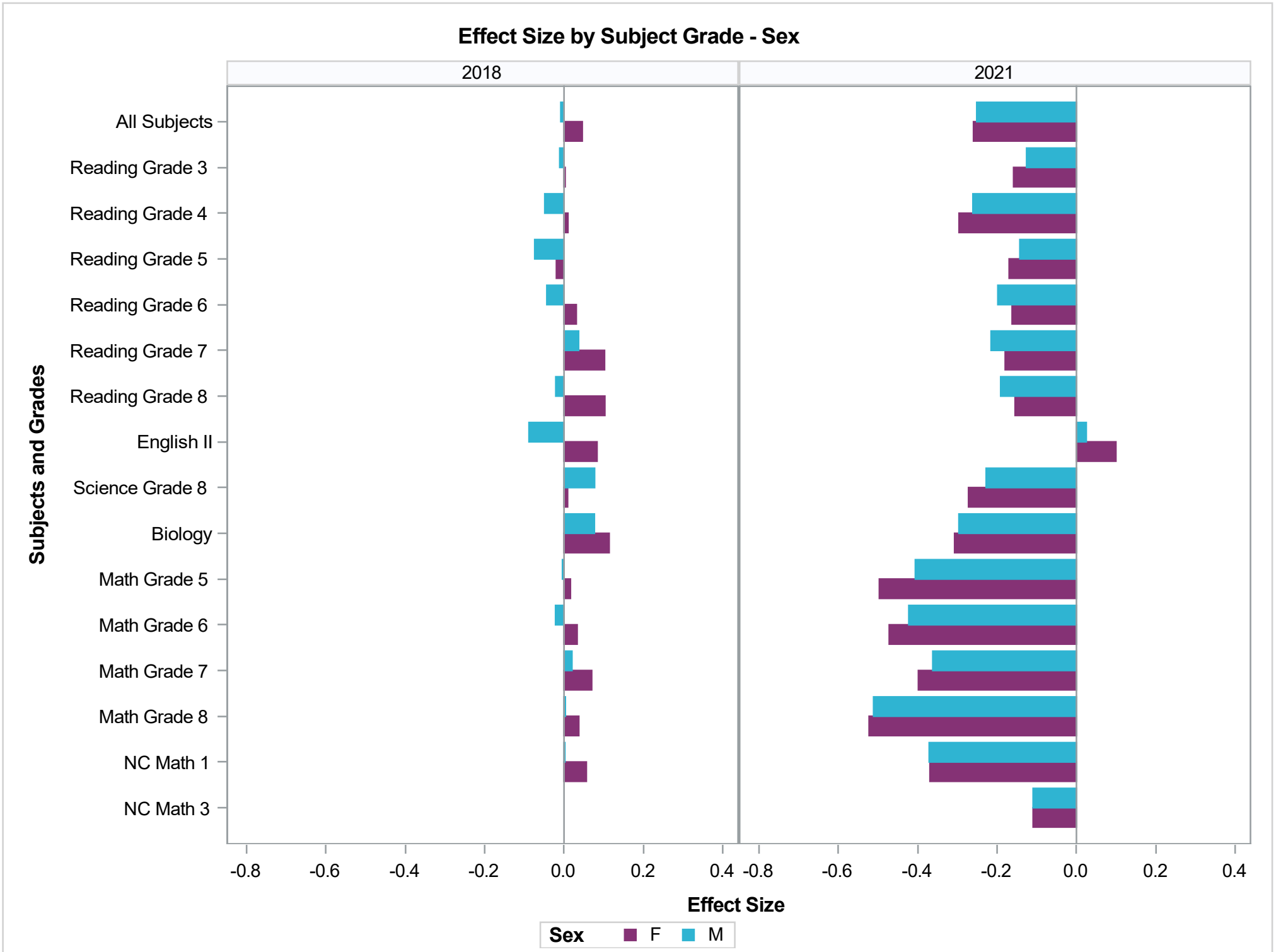

Statewide Summary of All Tested Subjects Size by Subject Grade
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size

Effect Size by Subject Grade – 2018

Assessment	Effect Size	Std Error of Effect Size	N
All Subjects	0.02	0.0004	1473094
Reading Grade 3	-0.00	0.0019	107523
Reading Grade 4	-0.02	0.0015	113488
Reading Grade 5	-0.05	0.0015	110570
Reading Grade 6	-0.01	0.0014	111232
Reading Grade 7	0.07	0.0014	105428
Reading Grade 8	0.04	0.0015	99424
English II	-0.00	0.0014	108298
Science Grade 8	0.04	0.0016	99730
Biology	0.09	0.0016	106824
Math Grade 5	0.01	0.0015	110423
Math Grade 6	0.01	0.0015	111137
Math Grade 7	0.04	0.0014	105281
Math Grade 8	0.02	0.0020	69874
NC Math 1	0.03	0.0015	113862
NC Math 3	.	.	0

Effect Size by Subject Grade – 2021

Assessment	Effect Size	Std Error of Effect Size	N
All Subjects	-0.26	0.0005	1447465
Reading Grade 3	-0.14	0.0023	89239
Reading Grade 4	-0.28	0.0022	91591
Reading Grade 5	-0.16	0.0017	97449
Reading Grade 6	-0.18	0.0016	98651
Reading Grade 7	-0.20	0.0015	103506
Reading Grade 8	-0.17	0.0015	100737
English II	0.06	0.0014	101764
Science Grade 8	-0.25	0.0017	101249
Biology	-0.30	0.0016	97040
Math Grade 5	-0.45	0.0020	97350
Math Grade 6	-0.45	0.0018	98551
Math Grade 7	-0.38	0.0017	103368
Math Grade 8	-0.52	0.0024	69764
NC Math 1	-0.37	0.0017	105622
NC Math 3	-0.11	0.0019	91584

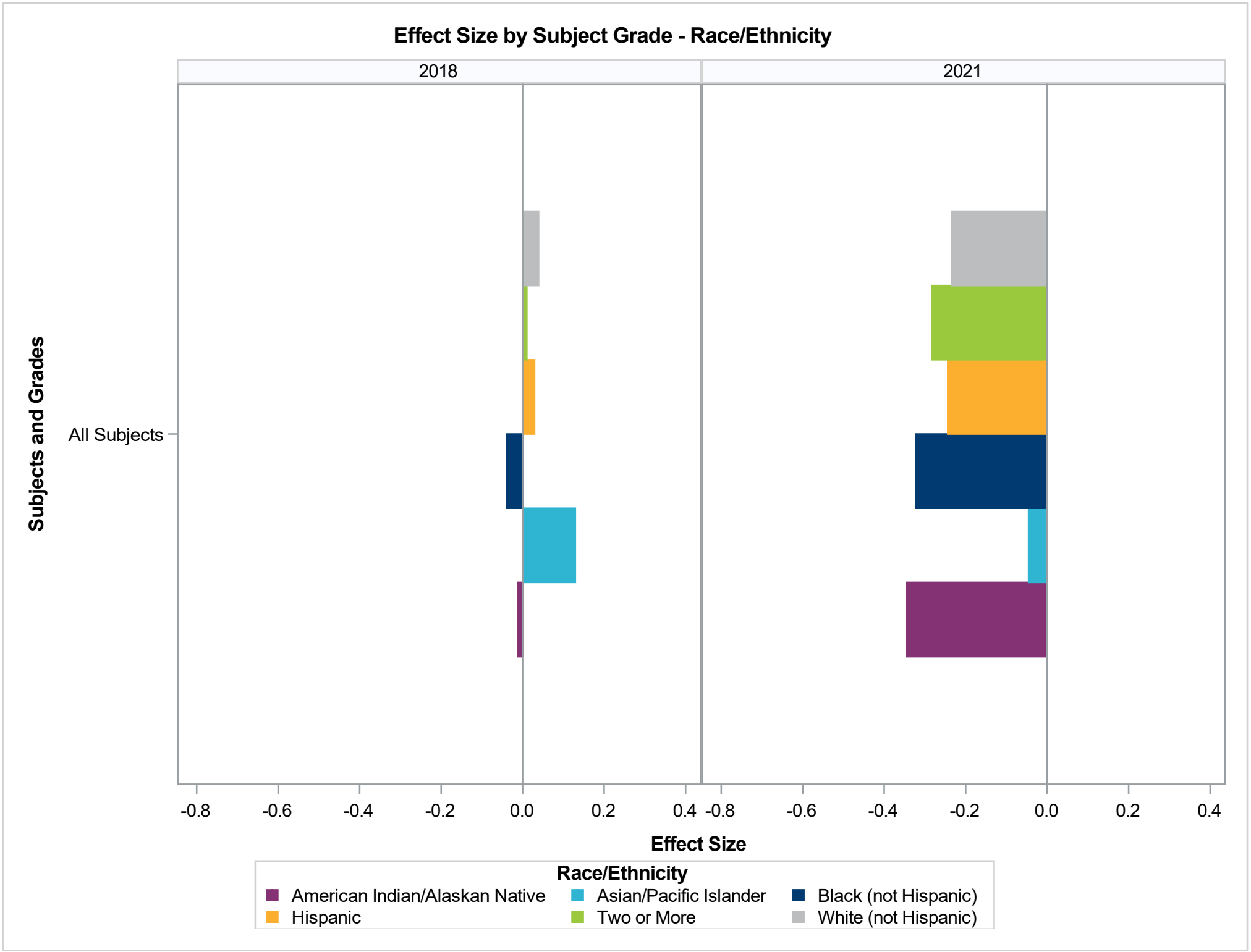

Effect Size by Subject Grade - Sex
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Sex
F
M

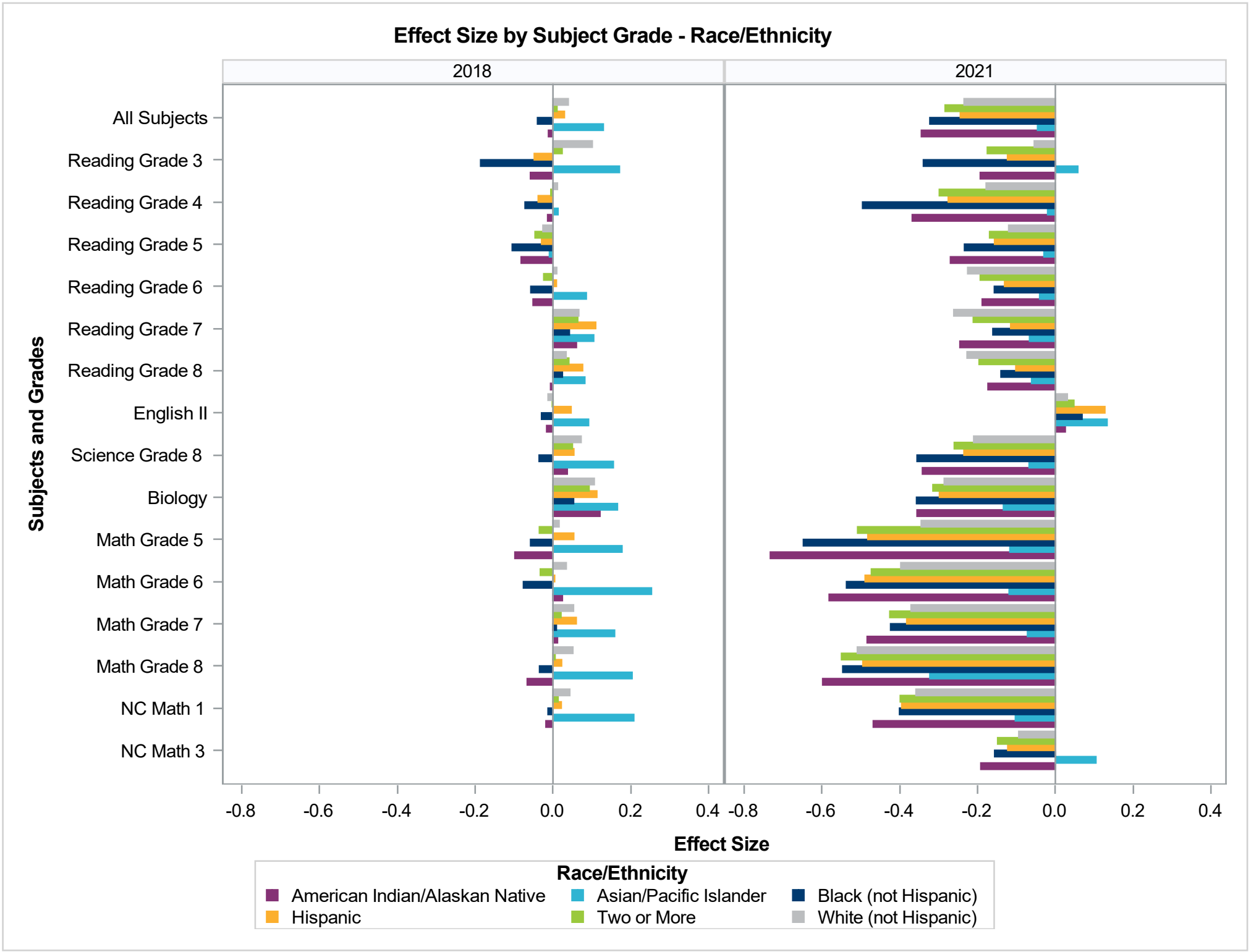
Effect Size by Subject Grade - Sex - 2018

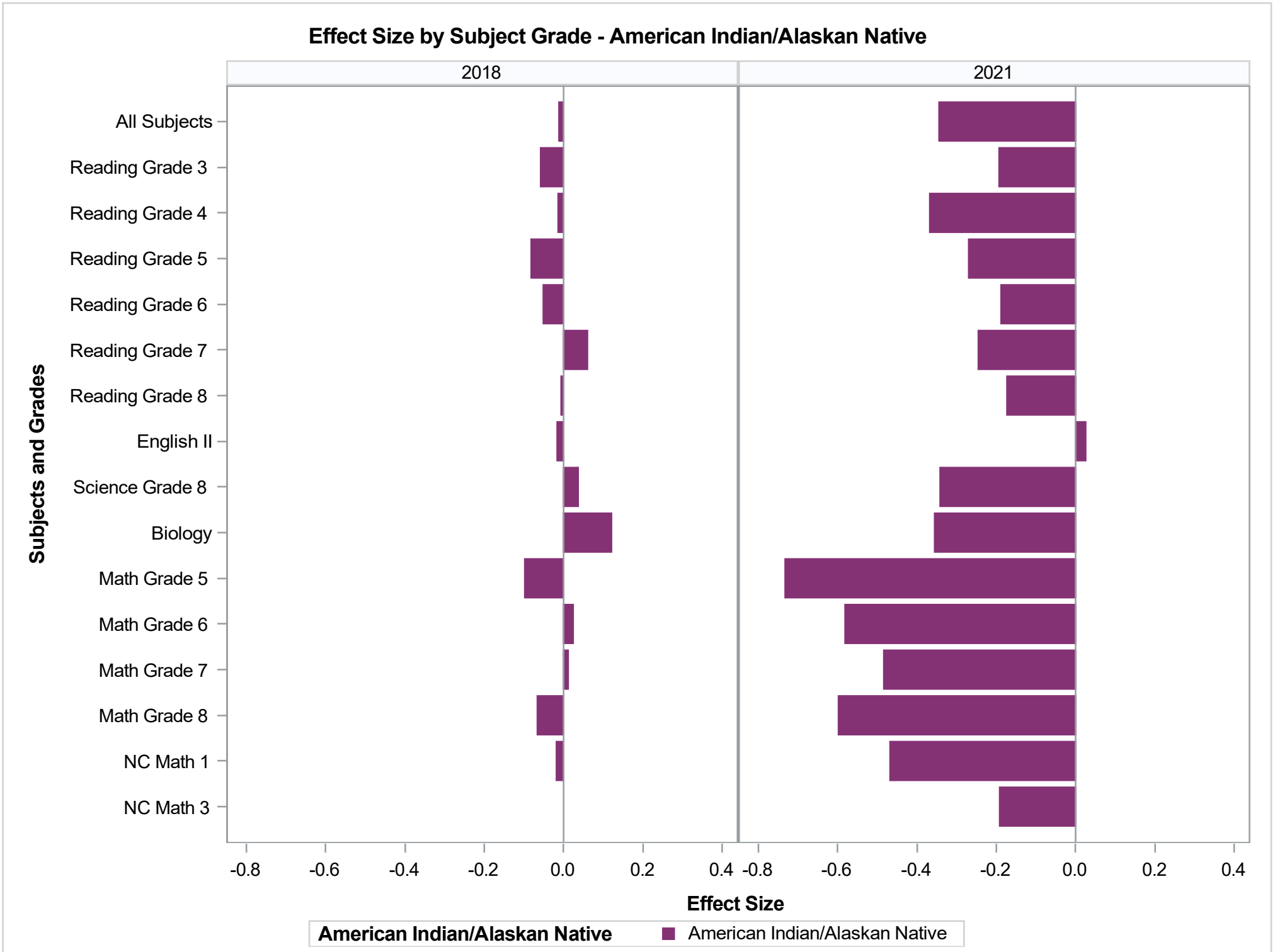
	Sex					
	F			M		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.05	0.0006	720097	-0.01	0.0006	752997
Reading Grade 3	0.00	0.0027	52459	-0.01	0.0028	55064
Reading Grade 4	0.01	0.0021	55590	-0.05	0.0021	57898
Reading Grade 5	-0.02	0.0020	54043	-0.07	0.0021	56527
Reading Grade 6	0.03	0.0019	54572	-0.04	0.0020	56660
Reading Grade 7	0.10	0.0020	51687	0.04	0.0021	53741
Reading Grade 8	0.10	0.0021	48464	-0.02	0.0022	50960
English II	0.08	0.0019	53173	-0.09	0.0021	55125
Science Grade 8	0.01	0.0022	48599	0.08	0.0024	51131
Biology	0.11	0.0022	52740	0.08	0.0023	54084
Math Grade 5	0.02	0.0021	53972	-0.00	0.0022	56451
Math Grade 6	0.03	0.0021	54523	-0.02	0.0021	56614
Math Grade 7	0.07	0.0020	51629	0.02	0.0020	53652
Math Grade 8	0.04	0.0029	33175	0.00	0.0029	36699
NC Math 1	0.06	0.0021	55471	0.00	0.0021	58391

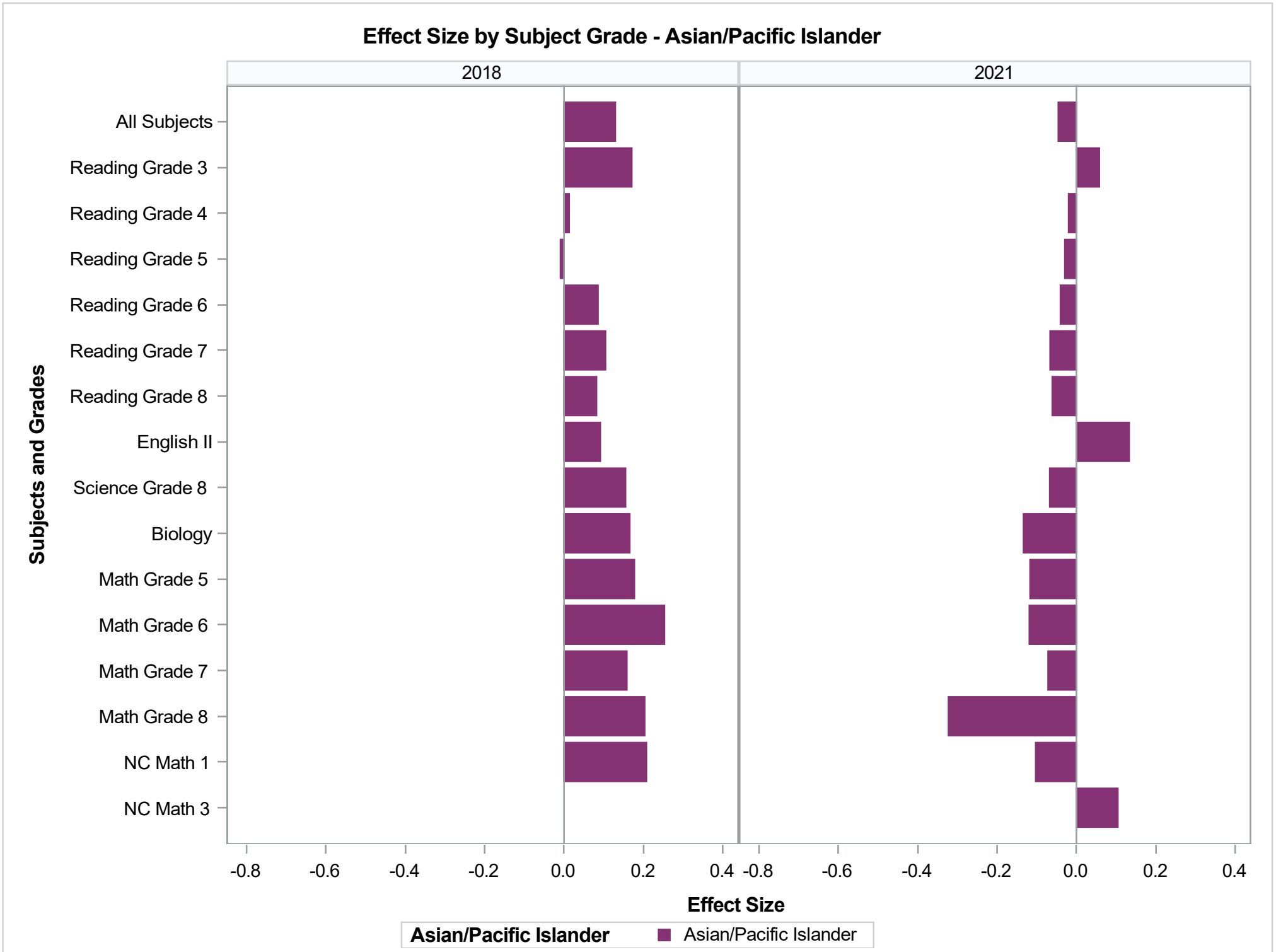
Effect Size by Subject Grade - Sex - 2021

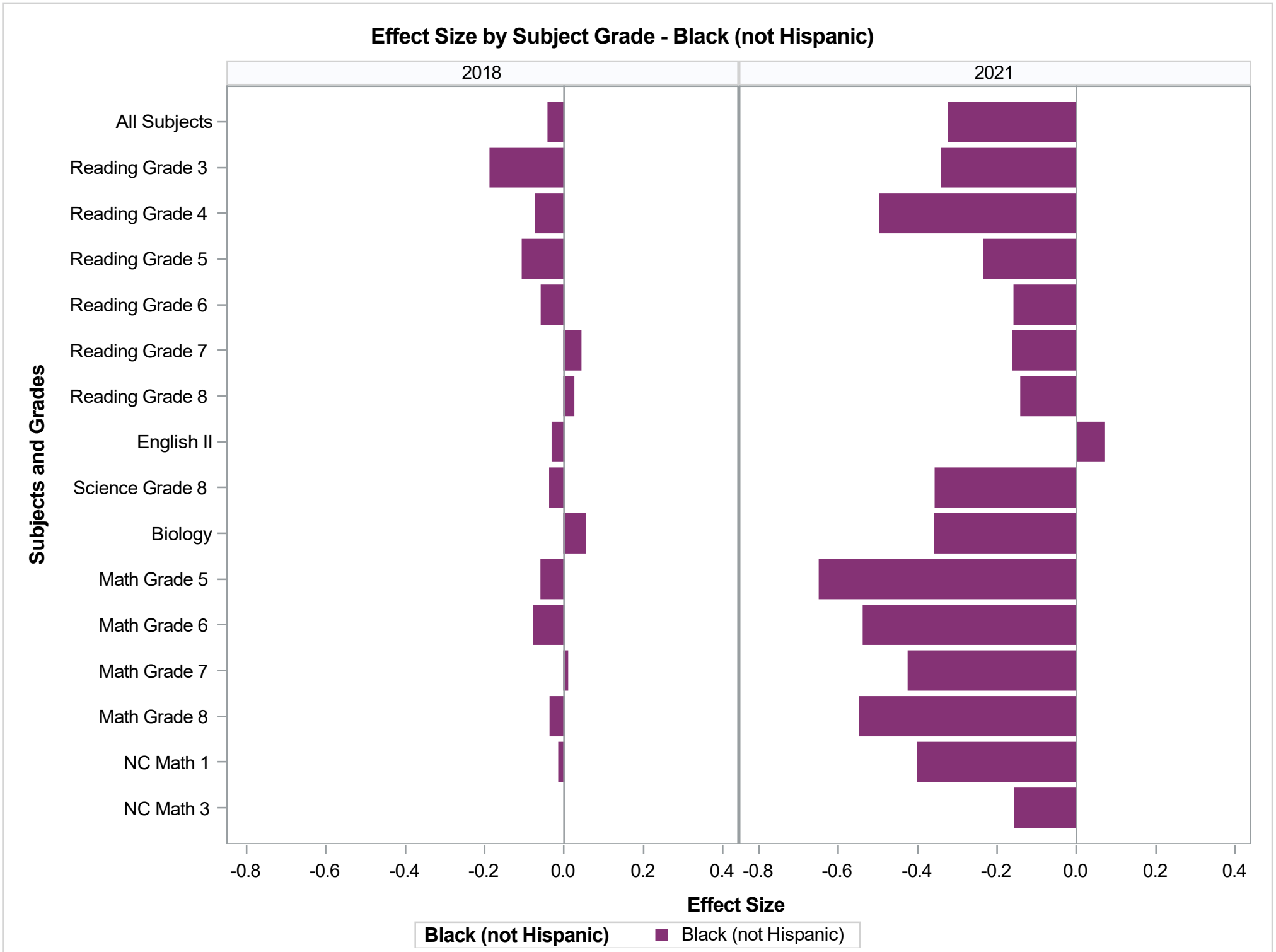
	Sex					
	F			M		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.26	0.0007	709647	-0.25	0.0007	737818
Reading Grade 3	-0.16	0.0033	43761	-0.13	0.0033	45478
Reading Grade 4	-0.30	0.0032	44835	-0.26	0.0032	46756
Reading Grade 5	-0.17	0.0024	47843	-0.14	0.0024	49606
Reading Grade 6	-0.16	0.0022	48032	-0.20	0.0022	50619
Reading Grade 7	-0.18	0.0021	50710	-0.22	0.0022	52796
Reading Grade 8	-0.15	0.0021	49224	-0.19	0.0021	51513
English II	0.10	0.0019	50208	0.02	0.0021	51556
Science Grade 8	-0.27	0.0023	49391	-0.23	0.0024	51858
Biology	-0.31	0.0023	48197	-0.30	0.0023	48843
Math Grade 5	-0.50	0.0028	47792	-0.41	0.0028	49558
Math Grade 6	-0.47	0.0026	47994	-0.42	0.0024	50557
Math Grade 7	-0.40	0.0024	50622	-0.36	0.0023	52746
Math Grade 8	-0.52	0.0034	33666	-0.51	0.0033	36098
NC Math 1	-0.37	0.0024	51185	-0.37	0.0023	54437
NC Math 3	-0.11	0.0027	46187	-0.11	0.0028	45397

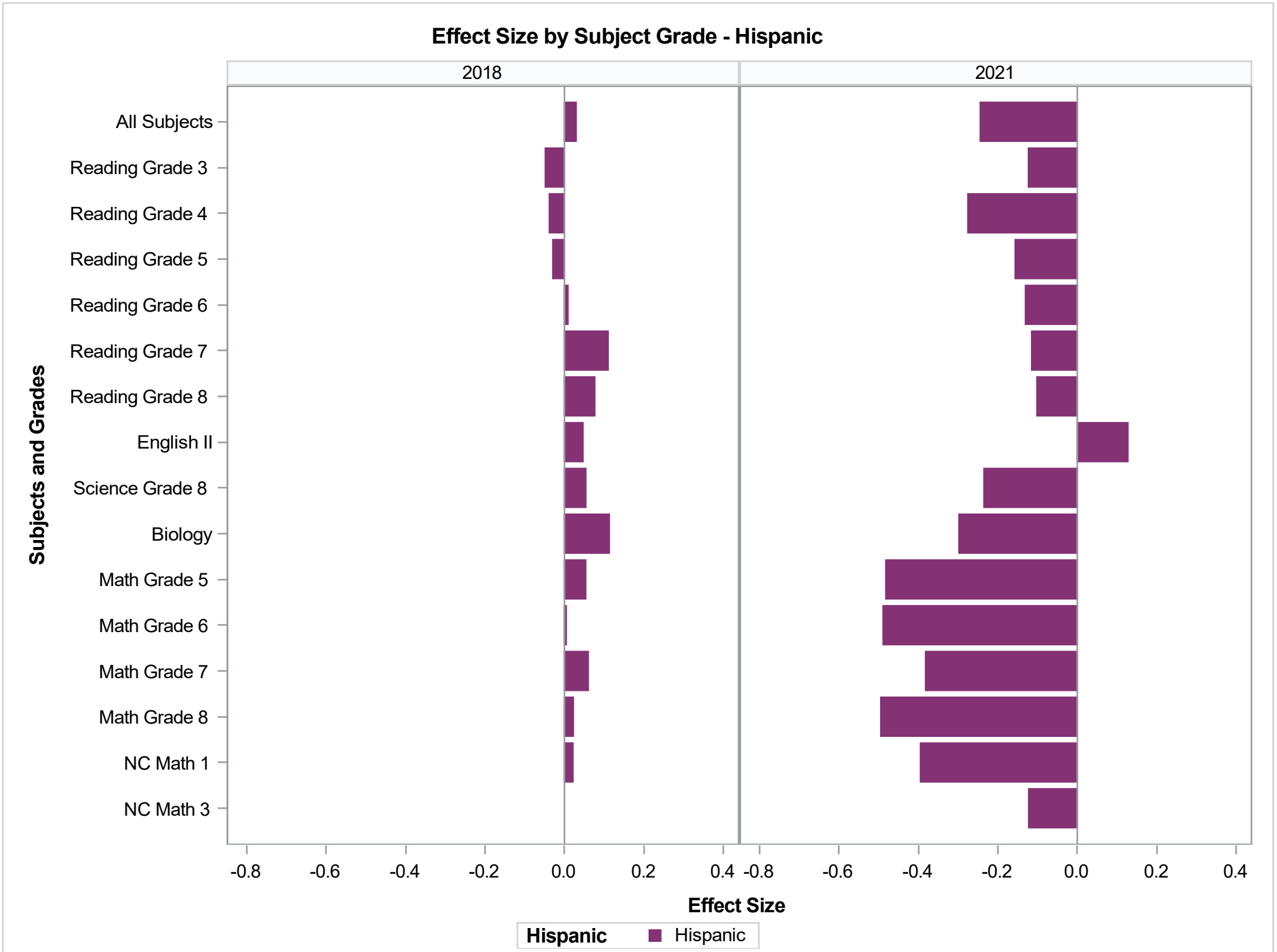

Effect Size by Subject Grade - Race/Ethnicity
2018
2021
Subjects and Grades
All Subjects
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Race/Ethnicity
American Indian/Alaskan Native
Asian/Pacific Islander
Black (not Hispanic)
Hispanic
Two or More
White (not Hispanic)

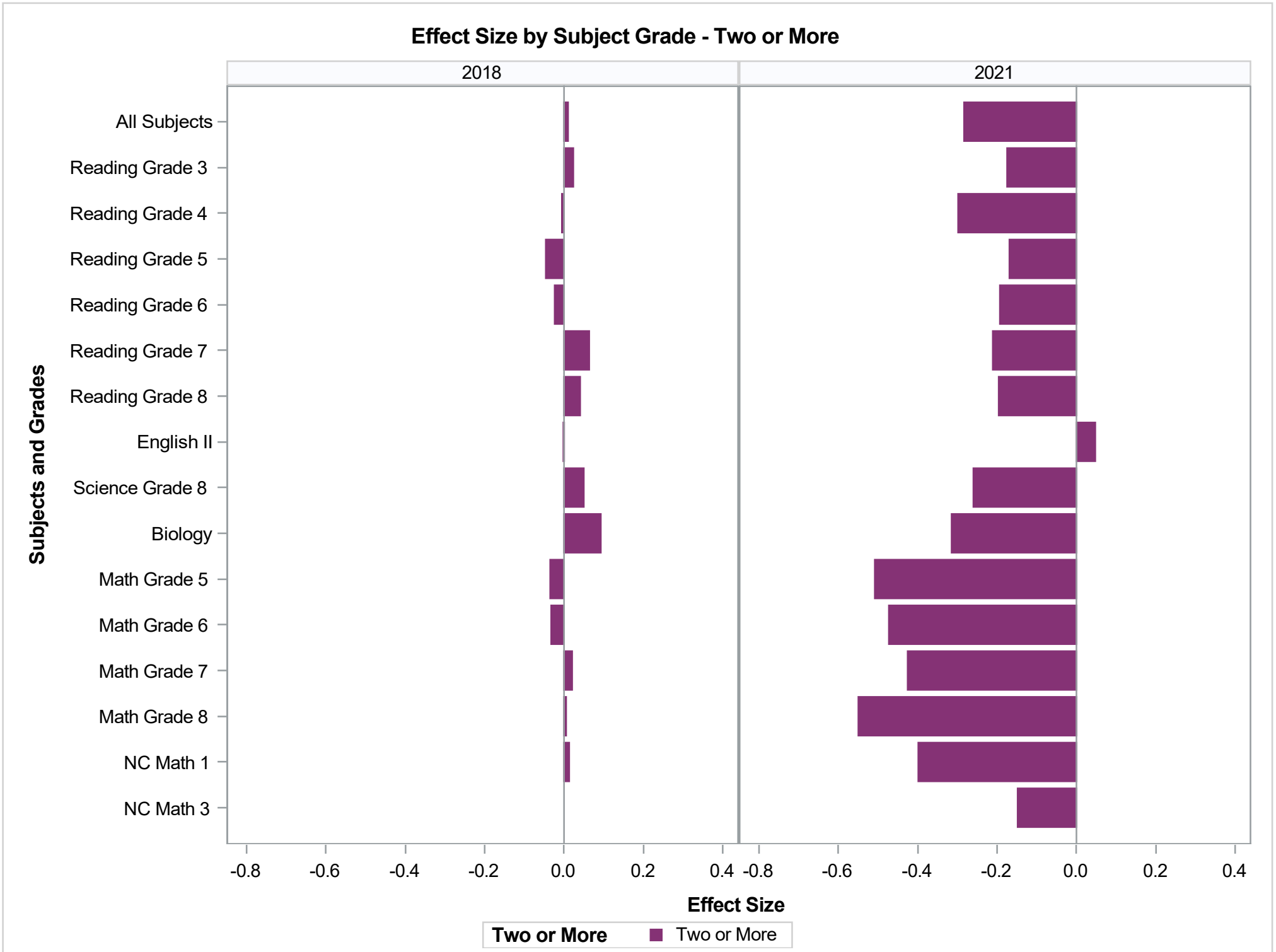

Effect Size by Subject Grade - Race/Ethnicity
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Race/Ethnicity
American Indian/Alaskan Native
Asian/Pacific Islander
Black (not Hispanic)
Hispanic
Two or More
White (not Hispanic)

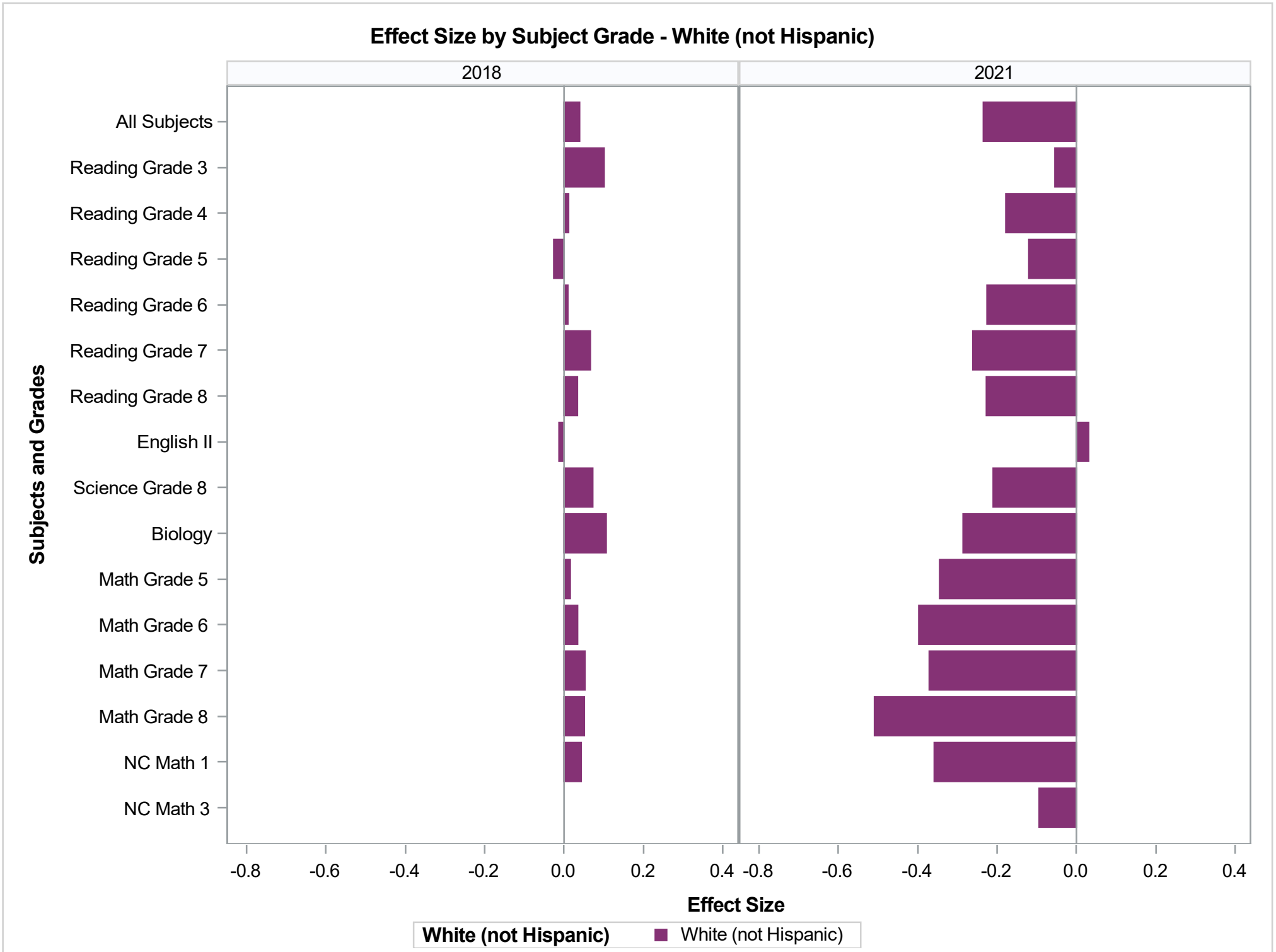

Effect Size by Subject Grade - American Indian/Alaskan Native
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
American Indian/Alaskan Native
American Indian/Alaskan Native


Effect Size by Subject Grade - Asian/Pacific Islander
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Asian/Pacific Islander
Asian/Pacific Islander


Effect Size by Subject Grade - Black (not Hispanic)
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Black (not Hispanic)
Black (not Hispanic)


Effect Size by Subject Grade - Hispanic
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Hispanic
Hispanic


Effect Size by Subject Grade - Two or More
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Two or More
Two or More


Effect Size by Subject Grade - White (not Hispanic)
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
White (not Hispanic)
White (not Hispanic)

Effect Size by Subject Grade - Race/Ethnicity - 2018

	Race/Ethnicity								
	American Indian/Alaskan Native			Asian/Pacific Islander			Black (not Hispanic)		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.01	0.0039	18222	0.13	0.0022	45641	-0.04	0.0008	374099
Reading Grade 3	-0.06	0.0166	1410	0.17	0.0096	3698	-0.19	0.0037	27865
Reading Grade 4	-0.01	0.0144	1331	0.01	0.0078	3706	-0.07	0.0030	28963
Reading Grade 5	-0.08	0.0135	1376	-0.01	0.0076	3572	-0.10	0.0029	27727
Reading Grade 6	-0.05	0.0137	1287	0.09	0.0071	3713	-0.06	0.0029	27980
Reading Grade 7	0.06	0.0142	1290	0.10	0.0078	3206	0.04	0.0029	26227
Reading Grade 8	-0.01	0.0146	1203	0.08	0.0080	3037	0.02	0.0031	24409
English II	-0.02	0.0130	1381	0.09	0.0072	3218	-0.03	0.0028	27600
Science Grade 8	0.04	0.0150	1208	0.16	0.0088	3037	-0.04	0.0034	24484
Biology	0.12	0.0169	1291	0.17	0.0083	3383	0.05	0.0033	27516
Math Grade 5	-0.10	0.0142	1374	0.18	0.0076	3571	-0.06	0.0031	27675
Math Grade 6	0.02	0.0141	1285	0.25	0.0076	3713	-0.08	0.0030	27941
Math Grade 7	0.01	0.0136	1283	0.16	0.0078	3205	0.01	0.0030	26165
Math Grade 8	-0.07	0.0169	961	0.20	0.0163	1089	-0.03	0.0038	20431
NC Math 1	-0.02	0.0141	1542	0.21	0.0084	3493	-0.01	0.0030	29116

Effect Size by Subject Grade - Race/Ethnicity - 2018

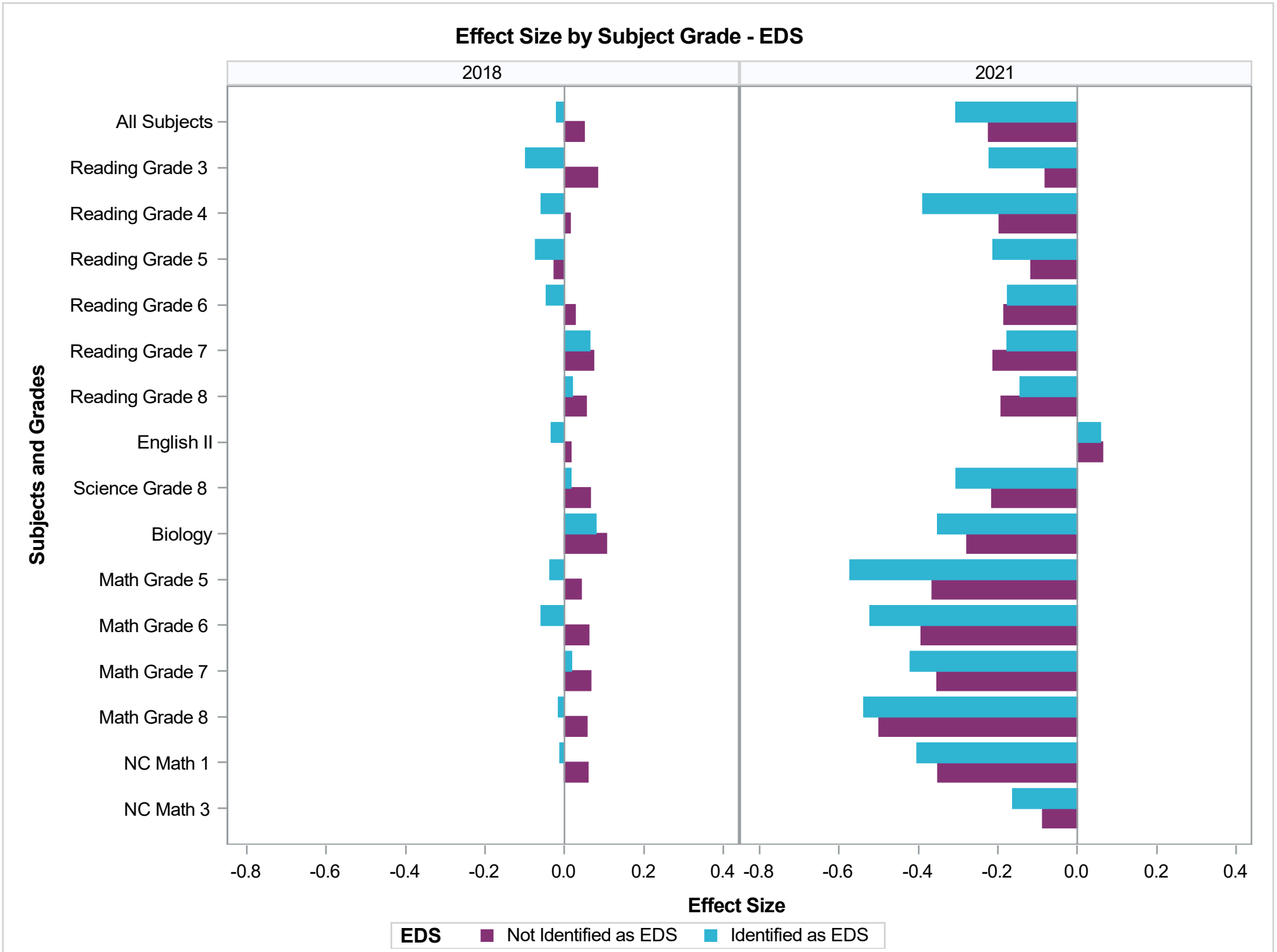
Race/Ethnicity								
Hispanic			Two or More			White (not Hispanic)		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
0.03	0.0010	256883	0.01	0.0020	63357	0.04	0.0006	714892
-0.05	0.0043	20118	0.02	0.0093	4588	0.10	0.0028	49844
-0.04	0.0034	20948	-0.01	0.0072	5148	0.01	0.0022	53392
-0.03	0.0033	20670	-0.05	0.0070	4856	-0.03	0.0021	52369
0.01	0.0032	20215	-0.02	0.0069	4851	0.01	0.0020	53186
0.11	0.0034	18338	0.06	0.0072	4389	0.07	0.0021	51978
0.08	0.0037	16272	0.04	0.0074	4378	0.03	0.0022	50125
0.05	0.0036	16928	-0.00	0.0071	4423	-0.01	0.0020	54748
0.05	0.0041	16306	0.05	0.0079	4392	0.07	0.0023	50303
0.11	0.0042	16357	0.09	0.0082	4235	0.11	0.0022	54042
0.05	0.0036	20637	-0.03	0.0076	4843	0.02	0.0022	52323
0.00	0.0035	20193	-0.03	0.0072	4843	0.03	0.0021	53162
0.06	0.0036	18304	0.02	0.0071	4381	0.05	0.0020	51943
0.02	0.0048	13043	0.01	0.0095	3113	0.05	0.0030	31237
0.02	0.0038	18554	0.01	0.0072	4917	0.04	0.0021	56240

Effect Size by Subject Grade - Race/Ethnicity - 2021

	Race/Ethnicity								
	American Indian/Alaskan Native			Asian/Pacific Islander			Black (not Hispanic)		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.34	0.0044	16931	-0.05	0.0025	50346	-0.32	0.0010	359391
Reading Grade 3	-0.19	0.0200	1042	0.06	0.0113	3429	-0.34	0.0046	21998
Reading Grade 4	-0.37	0.0190	1079	-0.02	0.0113	3469	-0.50	0.0044	22646
Reading Grade 5	-0.27	0.0156	1093	-0.03	0.0082	3660	-0.23	0.0034	24035
Reading Grade 6	-0.19	0.0148	1223	-0.04	0.0079	3526	-0.16	0.0031	24910
Reading Grade 7	-0.25	0.0146	1158	-0.07	0.0076	3557	-0.16	0.0030	25855
Reading Grade 8	-0.17	0.0137	1233	-0.06	0.0074	3457	-0.14	0.0030	24568
English II	0.03	0.0138	1108	0.13	0.0073	3347	0.07	0.0029	24719
Science Grade 8	-0.34	0.0157	1241	-0.07	0.0088	3447	-0.36	0.0033	24619
Biology	-0.36	0.0150	1057	-0.13	0.0091	3478	-0.36	0.0032	23497
Math Grade 5	-0.73	0.0180	1091	-0.12	0.0102	3658	-0.65	0.0037	23987
Math Grade 6	-0.58	0.0157	1222	-0.12	0.0100	3512	-0.54	0.0034	24897
Math Grade 7	-0.48	0.0156	1153	-0.07	0.0097	3555	-0.42	0.0032	25836
Math Grade 8	-0.60	0.0199	1053	-0.32	0.0205	1163	-0.55	0.0042	19909
NC Math 1	-0.47	0.0147	1173	-0.10	0.0104	3613	-0.40	0.0032	26509
NC Math 3	-0.19	0.0176	1005	0.10	0.0100	3475	-0.16	0.0038	21406

Effect Size by Subject Grade - Race/Ethnicity - 2021

Race/Ethnicity								
Hispanic			Two or More			White (not Hispanic)		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
-0.24	0.0011	280530	-0.28	0.0022	69624	-0.23	0.0007	670643
-0.12	0.0050	17478	-0.17	0.0101	4829	-0.05	0.0034	40463
-0.28	0.0049	17872	-0.30	0.0096	4901	-0.18	0.0032	41624
-0.16	0.0038	19296	-0.17	0.0077	4893	-0.12	0.0025	44472
-0.13	0.0035	19472	-0.19	0.0074	4742	-0.23	0.0023	44778
-0.11	0.0033	20409	-0.21	0.0068	5035	-0.26	0.0022	47492
-0.10	0.0033	19779	-0.20	0.0068	4741	-0.23	0.0022	46959
0.13	0.0033	18687	0.05	0.0072	4414	0.03	0.0021	49489
-0.23	0.0037	19859	-0.26	0.0077	4794	-0.21	0.0024	47289
-0.30	0.0039	17299	-0.31	0.0078	4304	-0.29	0.0023	47405
-0.48	0.0043	19288	-0.51	0.0090	4889	-0.34	0.0030	44437
-0.49	0.0039	19454	-0.47	0.0079	4752	-0.40	0.0026	44714
-0.38	0.0037	20419	-0.43	0.0076	5024	-0.37	0.0024	47381
-0.49	0.0051	15378	-0.55	0.0107	3448	-0.51	0.0038	28813
-0.39	0.0038	20179	-0.40	0.0079	4871	-0.36	0.0025	49277
-0.12	0.0046	15661	-0.15	0.0093	3987	-0.09	0.0028	46050

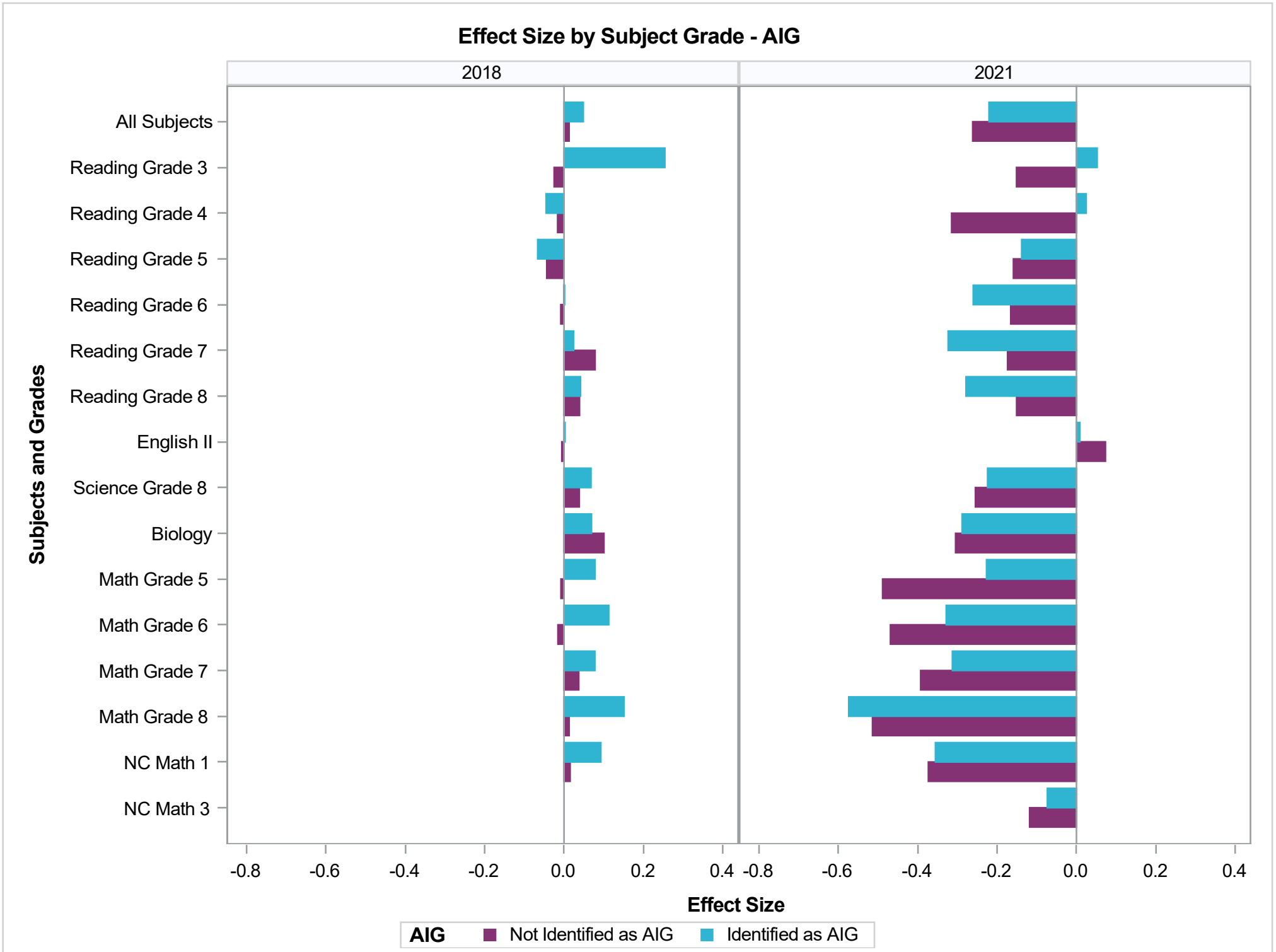

Effect Size by Subject Grade - EDS
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
EDS
Not Identified as EDS
Identified as EDS

Effect Size by Subject Grade - EDS - 2018

	EDS					
	Identified as EDS			Not Identified as EDS		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.02	0.0006	662992	0.05	0.0005	810102
Reading Grade 3	-0.10	0.0028	51959	0.08	0.0026	55564
Reading Grade 4	-0.06	0.0022	53352	0.01	0.0020	60136
Reading Grade 5	-0.07	0.0022	50892	-0.03	0.0019	59678
Reading Grade 6	-0.05	0.0021	51854	0.03	0.0019	59378
Reading Grade 7	0.06	0.0022	47000	0.07	0.0019	58428
Reading Grade 8	0.02	0.0024	42456	0.05	0.0020	56968
English II	-0.03	0.0023	44523	0.02	0.0018	63775
Science Grade 8	0.02	0.0026	42566	0.06	0.0021	57164
Biology	0.08	0.0027	42799	0.11	0.0020	64025
Math Grade 5	-0.04	0.0023	50791	0.04	0.0020	59632
Math Grade 6	-0.06	0.0022	51798	0.06	0.0020	59339
Math Grade 7	0.02	0.0022	46882	0.07	0.0019	58399
Math Grade 8	-0.01	0.0028	36336	0.06	0.0029	33538
NC Math 1	-0.01	0.0023	49784	0.06	0.0020	64078

Effect Size by Subject Grade - EDS - 2021

	EDS					
	Identified as EDS			Not Identified as EDS		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.31	0.0008	563182	-0.22	0.0006	884283
Reading Grade 3	-0.22	0.0035	38748	-0.08	0.0030	50491
Reading Grade 4	-0.39	0.0034	38909	-0.20	0.0029	52682
Reading Grade 5	-0.21	0.0026	40242	-0.12	0.0022	57207
Reading Grade 6	-0.18	0.0025	41070	-0.18	0.0020	57581
Reading Grade 7	-0.18	0.0024	41185	-0.21	0.0019	62321
Reading Grade 8	-0.14	0.0024	38375	-0.19	0.0019	62362
English II	0.06	0.0025	34107	0.06	0.0017	67657
Science Grade 8	-0.30	0.0027	38509	-0.21	0.0021	62740
Biology	-0.35	0.0028	31383	-0.28	0.0020	65657
Math Grade 5	-0.57	0.0030	40166	-0.37	0.0026	57184
Math Grade 6	-0.52	0.0027	41049	-0.39	0.0023	57502
Math Grade 7	-0.42	0.0026	41135	-0.35	0.0021	62233
Math Grade 8	-0.54	0.0034	32369	-0.50	0.0033	37395
NC Math 1	-0.40	0.0027	38859	-0.35	0.0021	66763
NC Math 3	-0.16	0.0035	27076	-0.09	0.0023	64508

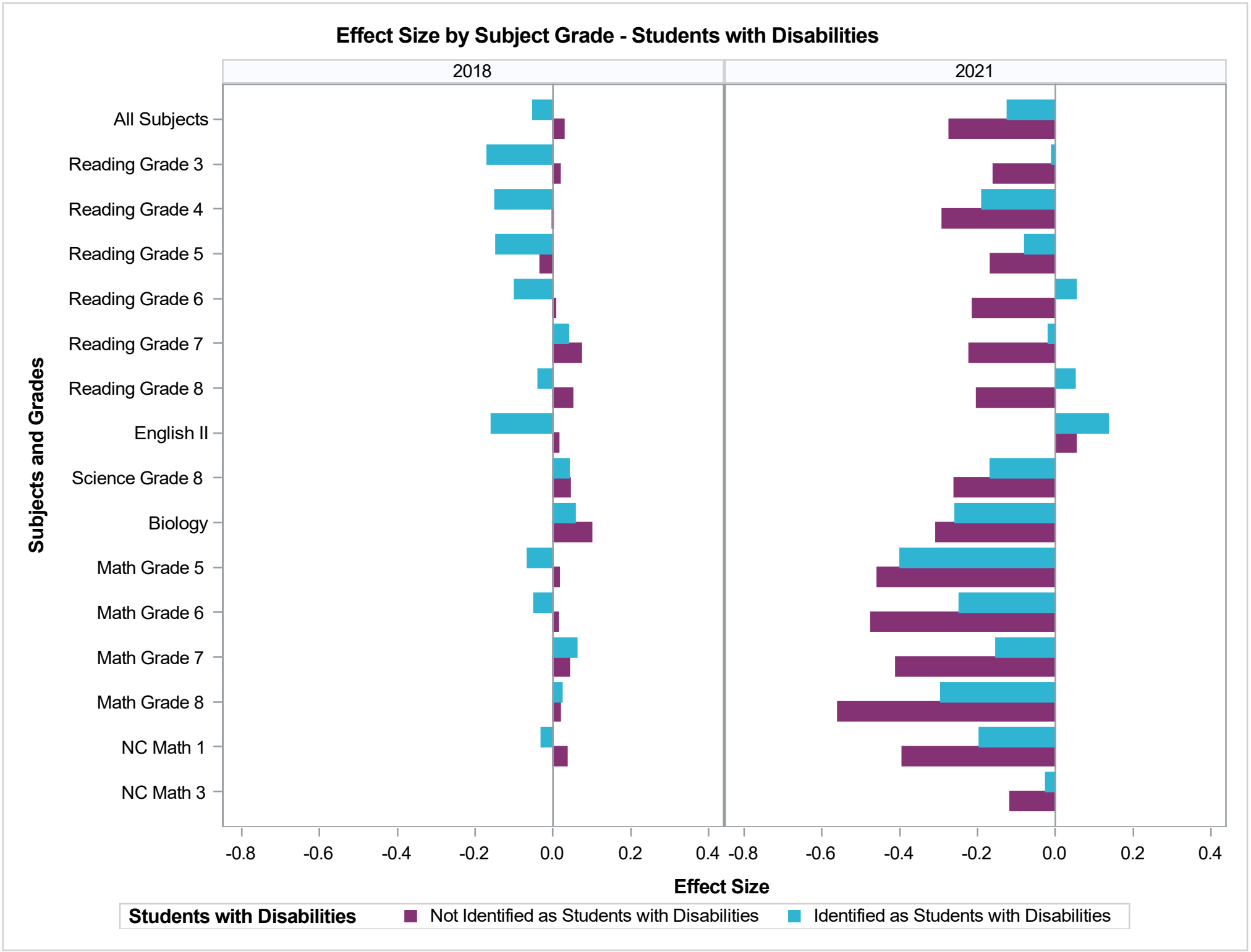

Effect Size by Subject Grade - AIG
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
AIG
Not Identified as AIG
Identified as AIG

Effect Size by Subject Grade - AIG - 2018

	AIG					
	Identified as AIG			Not Identified as AIG		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.05	0.0010	228757	0.01	0.0005	1244337
Reading Grade 3	0.25	0.0065	7950	-0.02	0.0020	99573
Reading Grade 4	-0.05	0.0038	14755	-0.02	0.0016	98733
Reading Grade 5	-0.07	0.0034	17534	-0.04	0.0016	93036
Reading Grade 6	-0.00	0.0032	17931	-0.01	0.0016	93301
Reading Grade 7	0.02	0.0032	18651	0.08	0.0016	86777
Reading Grade 8	0.04	0.0033	18076	0.04	0.0017	81348
English II	0.00	0.0029	19764	-0.01	0.0016	88534
Science Grade 8	0.07	0.0035	18124	0.04	0.0018	81606
Biology	0.07	0.0034	19648	0.10	0.0018	87176
Math Grade 5	0.08	0.0035	17530	-0.01	0.0017	92893
Math Grade 6	0.11	0.0034	17932	-0.02	0.0017	93205
Math Grade 7	0.08	0.0031	18644	0.04	0.0016	86637
Math Grade 8	0.15	0.0091	3256	0.01	0.0021	66618
NC Math 1	0.09	0.0034	18962	0.02	0.0017	94900

Effect Size by Subject Grade - AIG - 2021

	AIG					
	Identified as AIG			Not Identified as AIG		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.22	0.0012	217834	-0.26	0.0005	1229631
Reading Grade 3	0.05	0.0105	4088	-0.15	0.0024	85151
Reading Grade 4	0.02	0.0065	9862	-0.31	0.0023	81729
Reading Grade 5	-0.14	0.0042	14147	-0.16	0.0018	83302
Reading Grade 6	-0.26	0.0037	15634	-0.17	0.0017	83017
Reading Grade 7	-0.32	0.0034	16673	-0.17	0.0016	86833
Reading Grade 8	-0.28	0.0032	17669	-0.15	0.0017	83068
English II	0.01	0.0032	18084	0.07	0.0016	83680
Science Grade 8	-0.22	0.0038	17754	-0.25	0.0018	83495
Biology	-0.29	0.0038	17868	-0.30	0.0018	79172
Math Grade 5	-0.23	0.0053	14132	-0.49	0.0021	83218
Math Grade 6	-0.33	0.0046	15618	-0.47	0.0019	82933
Math Grade 7	-0.31	0.0043	16595	-0.39	0.0018	86773
Math Grade 8	-0.57	0.0130	3113	-0.51	0.0024	66651
NC Math 1	-0.36	0.0044	18364	-0.37	0.0018	87258
NC Math 3	-0.07	0.0045	18233	-0.12	0.0021	73351

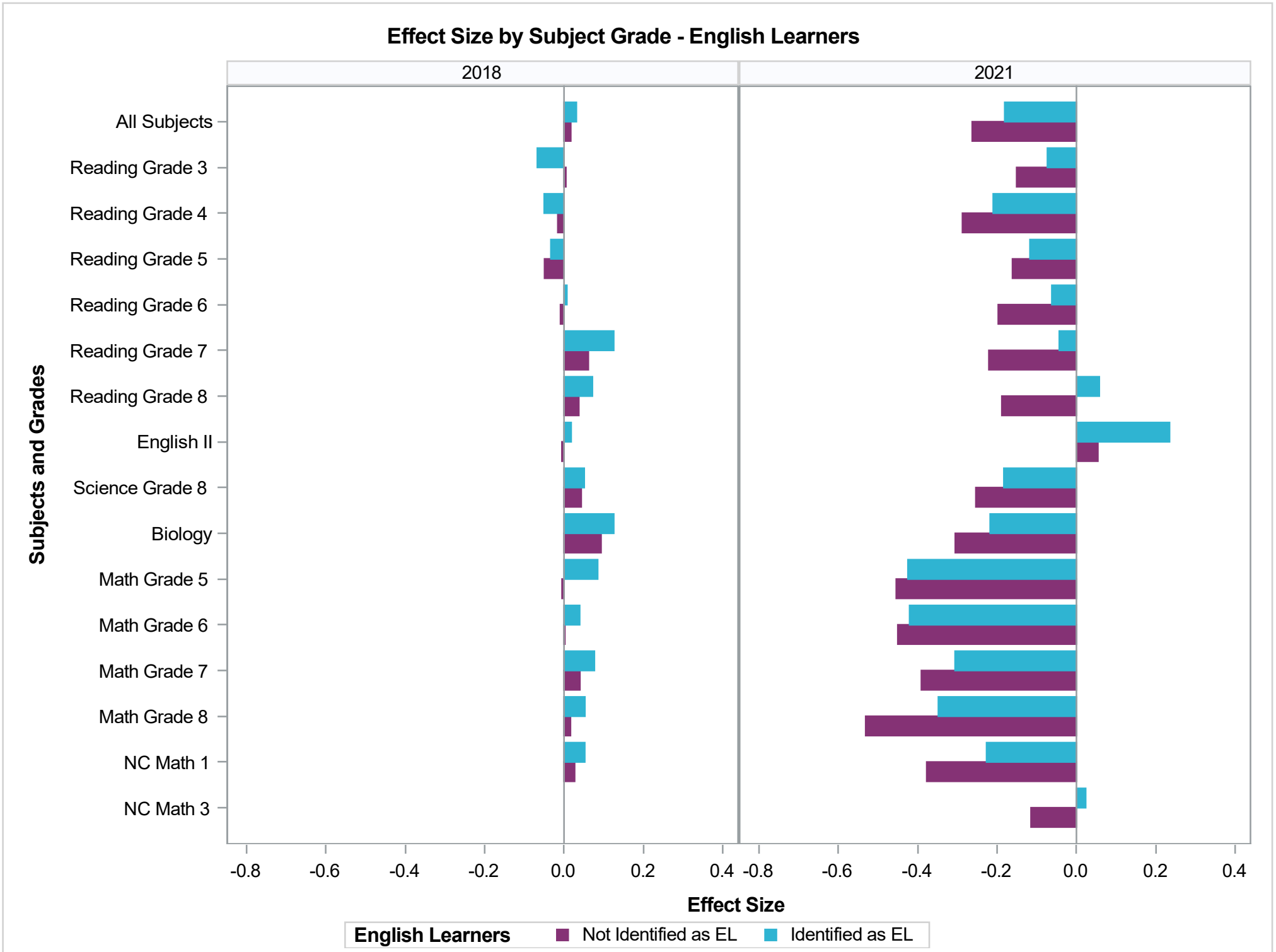

Effect Size by Subject Grade - Students with Disabilities
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Students with Disabilities
Not Identified as Students with Disabilities
Identified as Students with Disabilities

Effect Size by Subject Grade - Students with Disabilities - 2018

	Students with Disabilities					
	Identified as Students with Disabilities			Not Identified as Students with Disabilities		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.05	0.0013	180424	0.03	0.0004	1292670
Reading Grade 3	-0.17	0.0056	12783	0.02	0.0020	94740
Reading Grade 4	-0.15	0.0046	14103	-0.00	0.0016	99385
Reading Grade 5	-0.15	0.0043	13848	-0.03	0.0015	96722
Reading Grade 6	-0.10	0.0043	13962	0.01	0.0015	97270
Reading Grade 7	0.04	0.0044	12739	0.07	0.0015	92689
Reading Grade 8	-0.04	0.0046	12201	0.05	0.0016	87223
English II	-0.16	0.0046	11773	0.01	0.0015	96525
Science Grade 8	0.04	0.0050	12228	0.04	0.0017	87502
Biology	0.06	0.0054	11193	0.10	0.0017	95631
Math Grade 5	-0.07	0.0045	13810	0.02	0.0016	96613
Math Grade 6	-0.05	0.0042	13918	0.01	0.0016	97219
Math Grade 7	0.06	0.0043	12702	0.04	0.0015	92579
Math Grade 8	0.02	0.0047	11834	0.02	0.0023	58040
NC Math 1	-0.03	0.0042	13330	0.04	0.0016	100532

Effect Size by Subject Grade - Students with Disabilities - 2021

	Students with Disabilities					
	Identified as Students with Disabilities			Not Identified as Students with Disabilities		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.12	0.0013	169740	-0.27	0.0005	1277725
Reading Grade 3	-0.01	0.0063	10526	-0.16	0.0025	78713
Reading Grade 4	-0.19	0.0062	11385	-0.29	0.0024	80206
Reading Grade 5	-0.08	0.0047	12038	-0.17	0.0018	85411
Reading Grade 6	0.05	0.0045	12000	-0.21	0.0017	86651
Reading Grade 7	-0.02	0.0043	12140	-0.22	0.0016	91366
Reading Grade 8	0.05	0.0043	11638	-0.20	0.0016	89099
English II	0.14	0.0045	10725	0.05	0.0015	91039
Science Grade 8	-0.17	0.0050	11706	-0.26	0.0018	89543
Biology	-0.26	0.0048	10422	-0.31	0.0017	86618
Math Grade 5	-0.40	0.0049	12057	-0.46	0.0022	85293
Math Grade 6	-0.25	0.0046	11987	-0.47	0.0019	86564
Math Grade 7	-0.15	0.0046	12149	-0.41	0.0018	91219
Math Grade 8	-0.29	0.0053	11219	-0.56	0.0026	58545
NC Math 1	-0.20	0.0043	12461	-0.39	0.0018	93161
NC Math 3	-0.02	0.0061	7287	-0.12	0.0020	84297

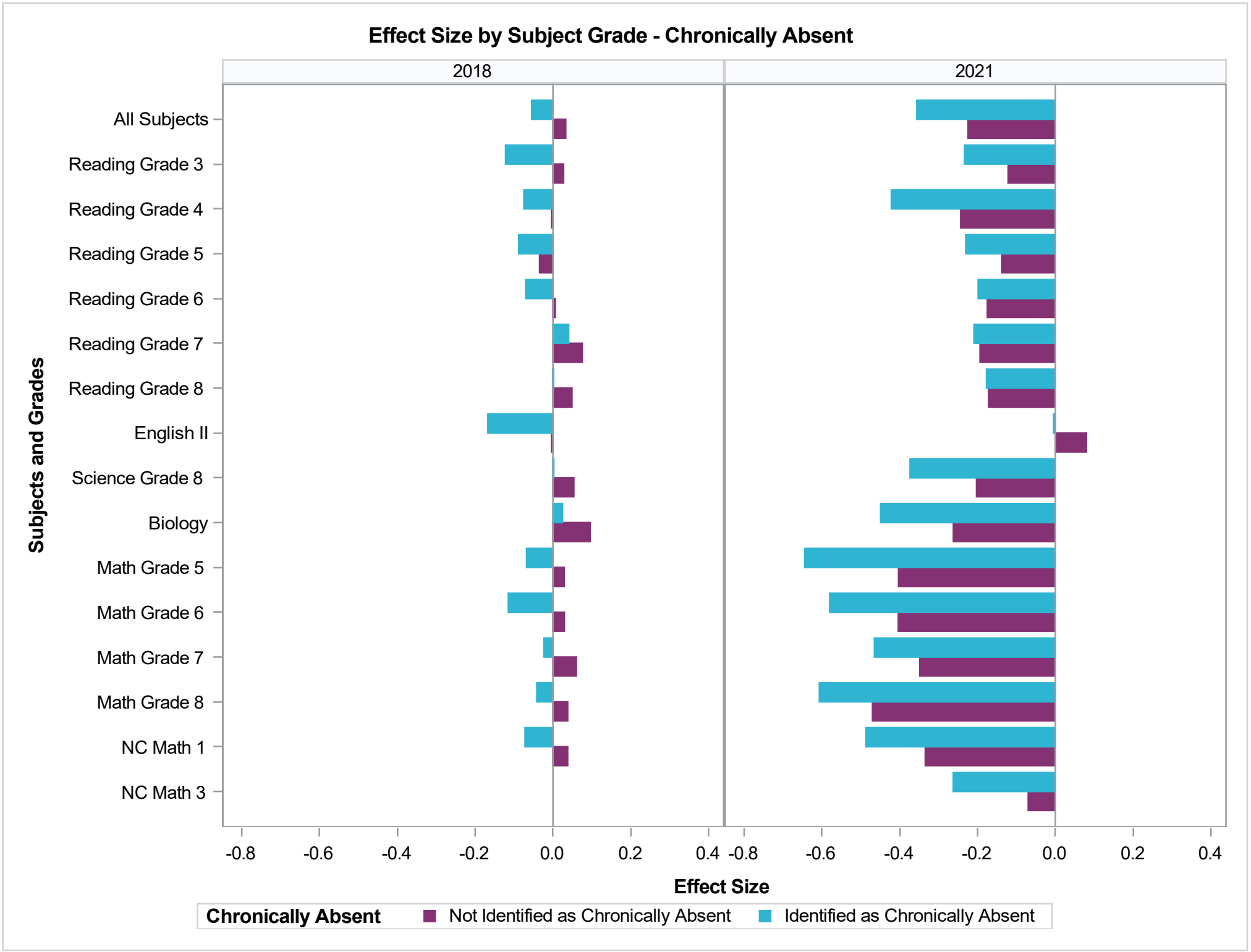

Effect Size by Subject Grade - English Learners
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
English Learners
Not Identified as EL
Identified as EL

Effect Size by Subject Grade - English Learners - 2018

	English Learners					
	Identified as EL			Not Identified as EL		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.03	0.0014	142876	0.02	0.0004	1330218
Reading Grade 3	-0.07	0.0052	13280	0.00	0.0021	94243
Reading Grade 4	-0.05	0.0041	14276	-0.02	0.0016	99212
Reading Grade 5	-0.03	0.0041	13390	-0.05	0.0016	97180
Reading Grade 6	0.01	0.0039	13565	-0.01	0.0015	97667
Reading Grade 7	0.13	0.0041	12361	0.06	0.0015	93067
Reading Grade 8	0.07	0.0059	6673	0.04	0.0016	92751
English II	0.02	0.0067	5394	-0.01	0.0015	102904
Science Grade 8	0.05	0.0067	6687	0.04	0.0017	93043
Biology	0.13	0.0080	5200	0.09	0.0016	101624
Math Grade 5	0.08	0.0045	13367	-0.00	0.0016	97056
Math Grade 6	0.04	0.0044	13555	0.00	0.0016	97582
Math Grade 7	0.08	0.0044	12339	0.04	0.0015	92942
Math Grade 8	0.05	0.0070	6040	0.02	0.0021	63834
NC Math 1	0.05	0.0064	6749	0.03	0.0016	107113

Effect Size by Subject Grade - English Learners - 2021

	English Learners					
	Identified as EL			Not Identified as EL		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.18	0.0016	130522	-0.26	0.0005	1316943
Reading Grade 3	-0.07	0.0065	10372	-0.15	0.0025	78867
Reading Grade 4	-0.21	0.0065	10941	-0.29	0.0024	80650
Reading Grade 5	-0.12	0.0048	11836	-0.16	0.0018	85613
Reading Grade 6	-0.06	0.0045	12032	-0.20	0.0017	86619
Reading Grade 7	-0.04	0.0041	13397	-0.22	0.0016	90109
Reading Grade 8	0.06	0.0060	6080	-0.19	0.0015	94657
English II	0.23	0.0070	4260	0.05	0.0015	97504
Science Grade 8	-0.18	0.0069	6101	-0.25	0.0017	95148
Biology	-0.22	0.0081	4201	-0.31	0.0017	92839
Math Grade 5	-0.42	0.0055	11833	-0.45	0.0021	85517
Math Grade 6	-0.42	0.0050	12026	-0.45	0.0019	86525
Math Grade 7	-0.31	0.0046	13407	-0.39	0.0018	89961
Math Grade 8	-0.35	0.0081	5508	-0.53	0.0025	64256
NC Math 1	-0.23	0.0076	5012	-0.38	0.0017	100610
NC Math 3	0.02	0.0093	3516	-0.11	0.0020	88068

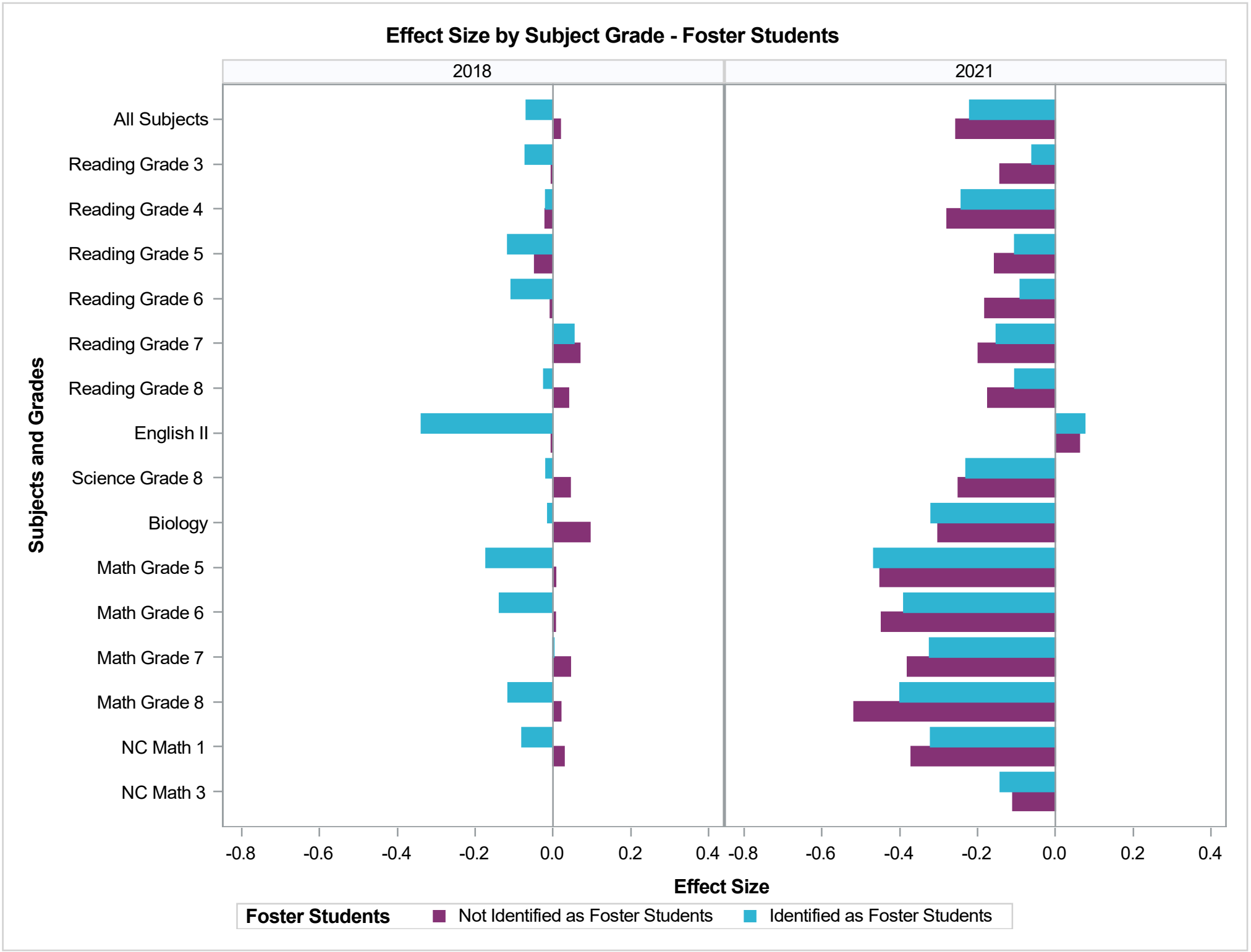

Effect Size by Subject Grade - Chronically Absent
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Chronically Absent
Not Identified as Chronically Absent
Identified as Chronically Absent

Effect Size by Subject Grade - Chronically Absent - 2018

	Chronically Absent					
	Identified as Chronically Absent			Not Identified as Chronically Absent		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.05	0.0011	242676	0.03	0.0005	1230418
Reading Grade 3	-0.12	0.0042	22680	0.03	0.0022	84843
Reading Grade 4	-0.07	0.0032	26019	-0.00	0.0017	87469
Reading Grade 5	-0.09	0.0031	26310	-0.03	0.0016	84260
Reading Grade 6	-0.07	0.0036	18550	0.01	0.0015	92682
Reading Grade 7	0.04	0.0035	19847	0.08	0.0016	85581
Reading Grade 8	-0.00	0.0037	18630	0.05	0.0017	80794
English II	-0.17	0.0268	295	-0.00	0.0014	108003
Science Grade 8	0.00	0.0040	18693	0.05	0.0018	81037
Biology	0.02	0.0174	897	0.10	0.0016	105927
Math Grade 5	-0.07	0.0033	26261	0.03	0.0017	84162
Math Grade 6	-0.11	0.0037	18518	0.03	0.0016	92619
Math Grade 7	-0.02	0.0035	19801	0.06	0.0016	85480
Math Grade 8	-0.04	0.0043	16282	0.04	0.0023	53592
NC Math 1	-0.07	0.0052	9893	0.04	0.0016	103969

Effect Size by Subject Grade - Chronically Absent - 2021

	Chronically Absent					
	Identified as Chronically Absent			Not Identified as Chronically Absent		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.36	0.0010	340919	-0.22	0.0005	1106546
Reading Grade 3	-0.23	0.0054	16252	-0.12	0.0025	72987
Reading Grade 4	-0.42	0.0050	17863	-0.24	0.0025	73728
Reading Grade 5	-0.23	0.0039	19193	-0.14	0.0019	78256
Reading Grade 6	-0.20	0.0033	23931	-0.17	0.0018	74720
Reading Grade 7	-0.21	0.0030	27740	-0.19	0.0017	75766
Reading Grade 8	-0.18	0.0030	27526	-0.17	0.0017	73211
English II	-0.00	0.0033	22074	0.08	0.0016	79690
Science Grade 8	-0.37	0.0032	27633	-0.20	0.0019	73616
Biology	-0.45	0.0035	20458	-0.26	0.0018	76582
Math Grade 5	-0.64	0.0042	19151	-0.40	0.0022	78199
Math Grade 6	-0.58	0.0035	23937	-0.40	0.0020	74614
Math Grade 7	-0.46	0.0032	27793	-0.35	0.0019	75575
Math Grade 8	-0.61	0.0040	23830	-0.47	0.0029	45934
NC Math 1	-0.49	0.0034	24786	-0.33	0.0019	80836
NC Math 3	-0.26	0.0040	18752	-0.07	0.0022	72832

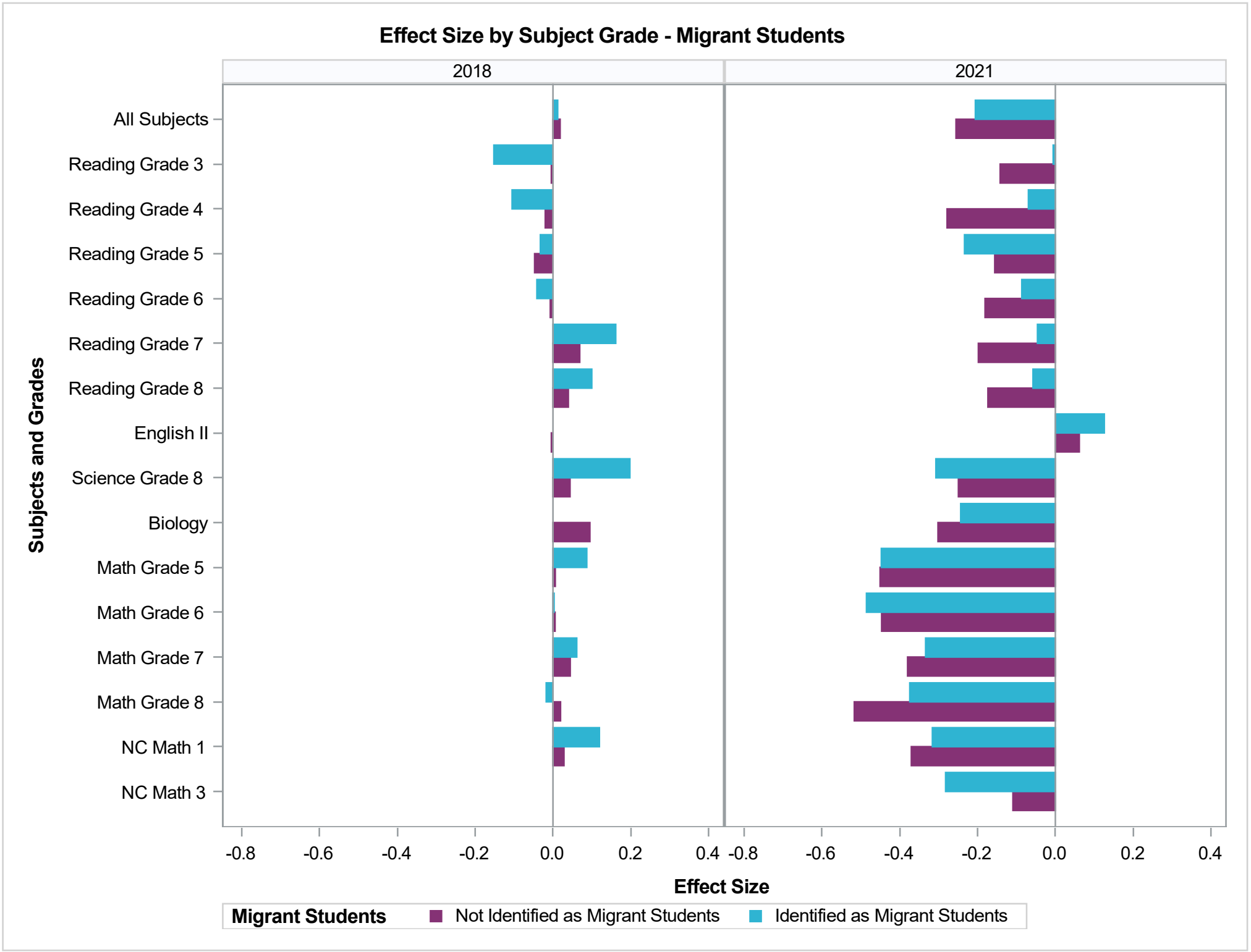

Effect Size by Subject Grade - Foster Students
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Foster Students
Not Identified as Foster Students
Identified as Foster Students

Effect Size by Subject Grade - Foster Students - 2018

	Foster Students					
	Identified as Foster Students			Not Identified as Foster Students		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.07	0.0088	4056	0.02	0.0004	1469038
Reading Grade 3	-0.07	0.0304	435	-0.00	0.0019	107088
Reading Grade 4	-0.02	0.0278	433	-0.02	0.0015	113055
Reading Grade 5	-0.12	0.0273	408	-0.05	0.0015	110162
Reading Grade 6	-0.11	0.0293	356	-0.01	0.0014	110876
Reading Grade 7	0.05	0.0287	343	0.07	0.0015	105085
Reading Grade 8	-0.02	0.0315	294	0.04	0.0015	99130
English II	-0.34	0.2329	3	-0.00	0.0014	108295
Science Grade 8	-0.02	0.0314	295	0.04	0.0016	99435
Biology	-0.01	0.2275	5	0.09	0.0016	106819
Math Grade 5	-0.17	0.0260	407	0.01	0.0015	110016
Math Grade 6	-0.14	0.0280	357	0.01	0.0015	110780
Math Grade 7	0.00	0.0264	343	0.04	0.0015	104938
Math Grade 8	-0.12	0.0382	265	0.02	0.0020	69609
NC Math 1	-0.08	0.0491	112	0.03	0.0015	113750

Effect Size by Subject Grade - Foster Students - 2021

	Foster Students					
	Identified as Foster Students			Not Identified as Foster Students		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.22	0.0075	6555	-0.26	0.0005	1440910
Reading Grade 3	-0.06	0.0336	481	-0.14	0.0023	88758
Reading Grade 4	-0.24	0.0329	471	-0.28	0.0022	91120
Reading Grade 5	-0.10	0.0258	458	-0.16	0.0017	96991
Reading Grade 6	-0.09	0.0275	453	-0.18	0.0016	98198
Reading Grade 7	-0.15	0.0256	467	-0.20	0.0015	103039
Reading Grade 8	-0.10	0.0259	433	-0.17	0.0015	100304
English II	0.08	0.0229	402	0.06	0.0014	101362
Science Grade 8	-0.23	0.0271	445	-0.25	0.0017	100804
Biology	-0.32	0.0289	383	-0.30	0.0016	96657
Math Grade 5	-0.47	0.0276	457	-0.45	0.0020	96893
Math Grade 6	-0.39	0.0286	451	-0.45	0.0018	98100
Math Grade 7	-0.32	0.0253	471	-0.38	0.0017	102897
Math Grade 8	-0.40	0.0322	393	-0.52	0.0024	69371
NC Math 1	-0.32	0.0253	508	-0.37	0.0017	105114
NC Math 3	-0.14	0.0345	282	-0.11	0.0019	91302

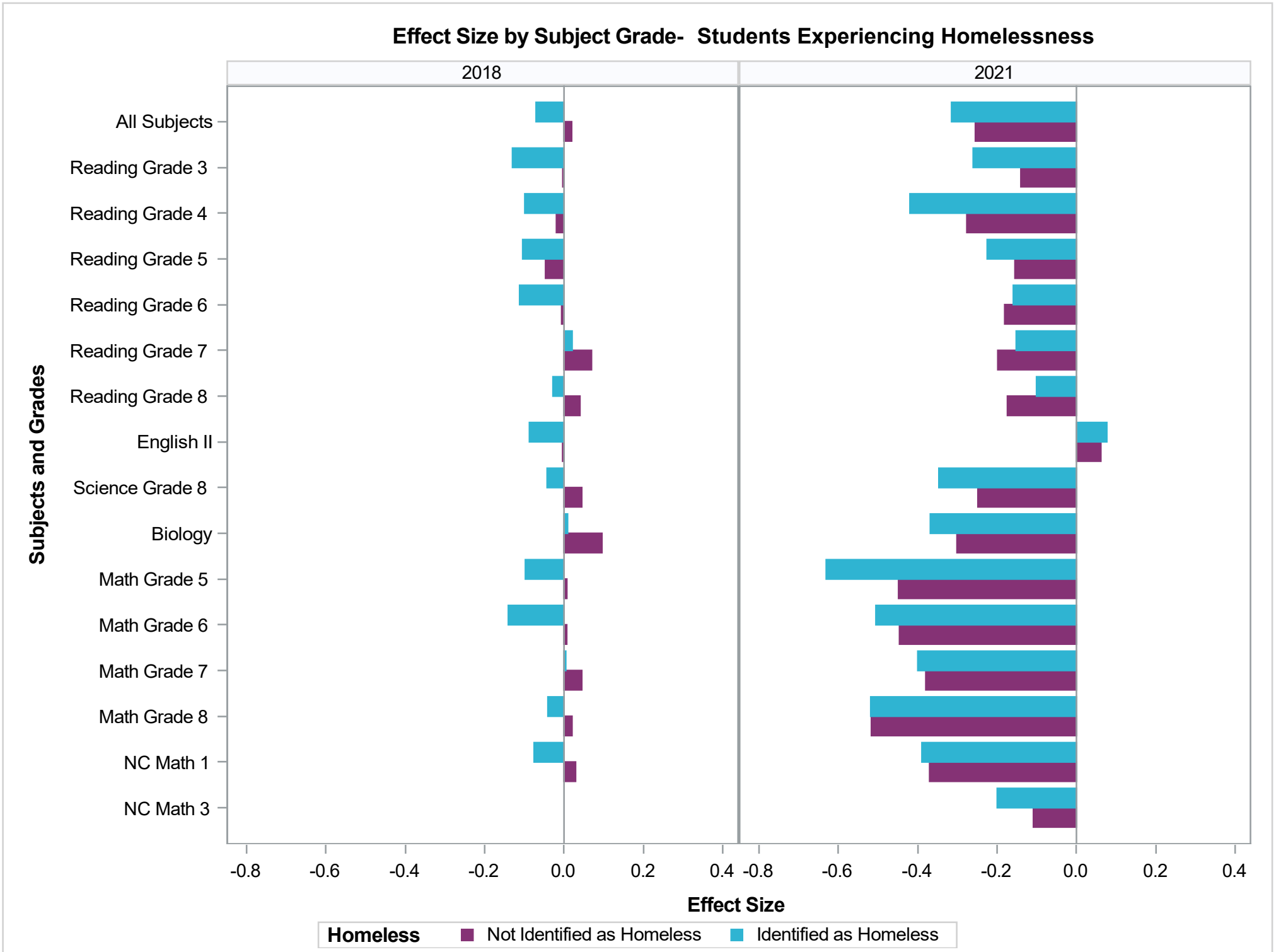

Effect Size by Subject Grade - Migrant Students
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Migrant Students
Not Identified as Migrant Students
Identified as Migrant Students

Effect Size by Subject Grade - Migrant Students - 2018

	Migrant Students					
	Identified as Migrant Students			Not Identified as Migrant Students		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.01	0.0194	691	0.02	0.0004	1472403
Reading Grade 3	-0.15	0.0689	77	-0.00	0.0019	107446
Reading Grade 4	-0.11	0.0439	84	-0.02	0.0015	113404
Reading Grade 5	-0.03	0.0592	78	-0.05	0.0015	110492
Reading Grade 6	-0.04	0.0564	59	-0.01	0.0014	111173
Reading Grade 7	0.16	0.0511	50	0.07	0.0014	105378
Reading Grade 8	0.10	0.0689	45	0.04	0.0015	99379
English II	.	.	0	-0.00	0.0014	108298
Science Grade 8	0.20	0.0803	45	0.04	0.0016	99685
Biology	.	.	0	0.09	0.0016	106824
Math Grade 5	0.09	0.0585	78	0.01	0.0015	110345
Math Grade 6	0.00	0.0595	59	0.01	0.0015	111078
Math Grade 7	0.06	0.0627	50	0.04	0.0014	105231
Math Grade 8	-0.02	0.0855	40	0.02	0.0020	69834
NC Math 1	0.12	0.1615	26	0.03	0.0015	113836

Effect Size by Subject Grade - Migrant Students - 2021

	Migrant Students					
	Identified as Migrant Students			Not Identified as Migrant Students		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.21	0.0157	1464	-0.26	0.0005	1446001
Reading Grade 3	-0.01	0.0648	109	-0.14	0.0023	89130
Reading Grade 4	-0.07	0.0696	131	-0.28	0.0022	91460
Reading Grade 5	-0.23	0.0447	107	-0.16	0.0017	97342
Reading Grade 6	-0.09	0.0499	94	-0.18	0.0016	98557
Reading Grade 7	-0.05	0.0462	118	-0.20	0.0015	103388
Reading Grade 8	-0.06	0.0459	92	-0.17	0.0015	100645
English II	0.13	0.0495	87	0.06	0.0014	101677
Science Grade 8	-0.31	0.0550	99	-0.25	0.0017	101150
Biology	-0.24	0.0626	76	-0.30	0.0016	96964
Math Grade 5	-0.45	0.0634	109	-0.45	0.0020	97241
Math Grade 6	-0.49	0.0542	96	-0.45	0.0018	98455
Math Grade 7	-0.33	0.0570	117	-0.38	0.0017	103251
Math Grade 8	-0.37	0.0713	82	-0.52	0.0024	69682
NC Math 1	-0.32	0.0541	90	-0.37	0.0017	105532
NC Math 3	-0.28	0.0726	57	-0.11	0.0019	91527

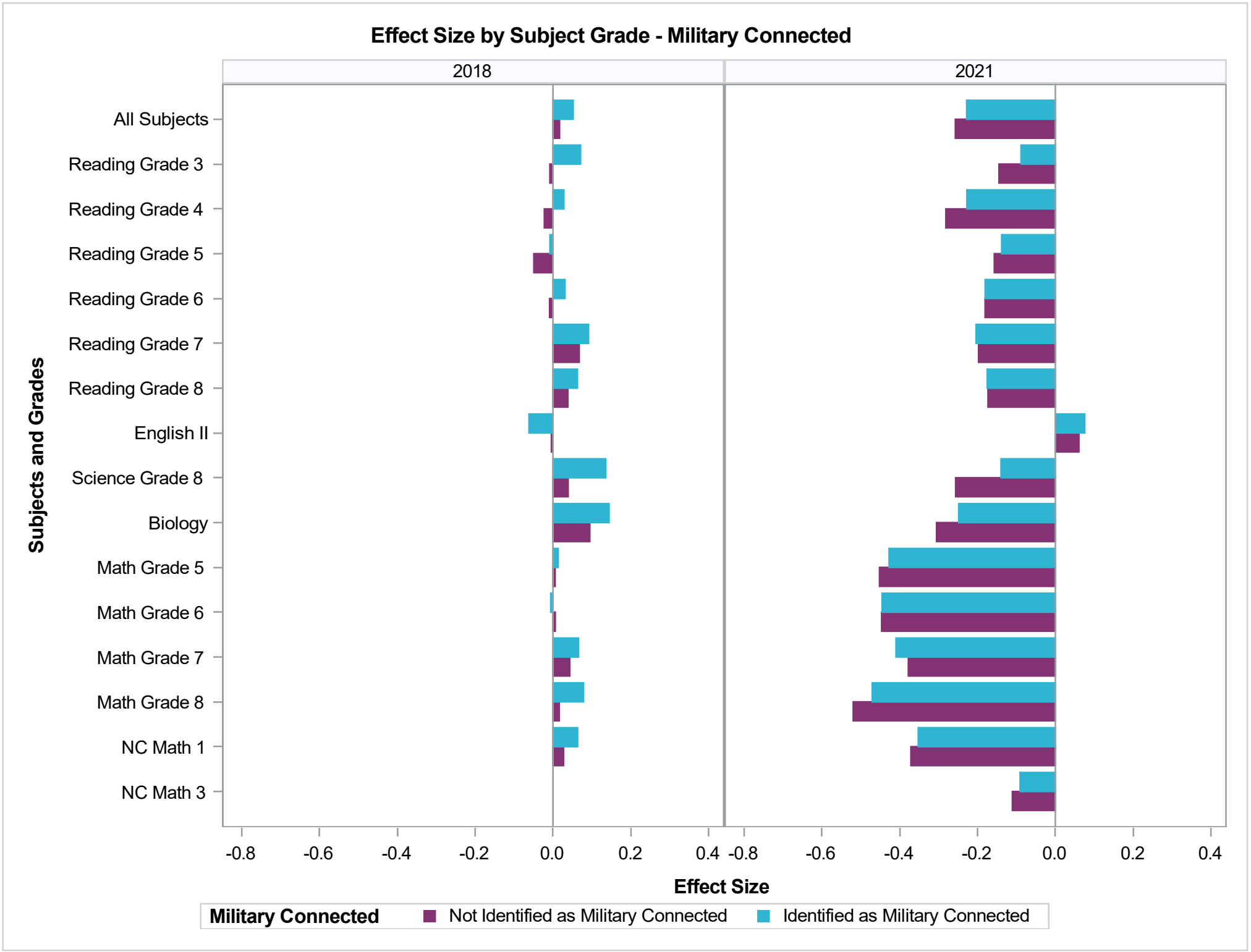

Effect Size by Subject Grade- Students Experiencing Homelessness
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Homeless
Not Identified as Homeless
Identified as Homeless

Effect Size by Subject Grade - Homeless - 2018

	Homeless					
	Identified as Homeless			Not Identified as Homeless		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.07	0.0046	13572	0.02	0.0004	1459522
Reading Grade 3	-0.13	0.0193	1128	-0.00	0.0019	106395
Reading Grade 4	-0.10	0.0159	1143	-0.02	0.0015	112345
Reading Grade 5	-0.10	0.0151	1161	-0.05	0.0015	109409
Reading Grade 6	-0.11	0.0159	1028	-0.01	0.0014	110204
Reading Grade 7	0.02	0.0168	907	0.07	0.0015	104521
Reading Grade 8	-0.03	0.0173	887	0.04	0.0015	98537
English II	-0.09	0.0181	817	-0.00	0.0014	107481
Science Grade 8	-0.04	0.0180	883	0.04	0.0016	98847
Biology	0.01	0.0194	830	0.10	0.0016	105994
Math Grade 5	-0.10	0.0156	1157	0.01	0.0015	109266
Math Grade 6	-0.14	0.0155	1024	0.01	0.0015	110113
Math Grade 7	0.00	0.0160	901	0.04	0.0015	104380
Math Grade 8	-0.04	0.0190	819	0.02	0.0021	69055
NC Math 1	-0.08	0.0178	887	0.03	0.0015	112975

Effect Size by Subject Grade - Homeless - 2021

	Homeless					
	Identified as Homeless			Not Identified as Homeless		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.31	0.0047	15220	-0.25	0.0005	1432245
Reading Grade 3	-0.26	0.0191	1258	-0.14	0.0023	87981
Reading Grade 4	-0.42	0.0187	1192	-0.28	0.0022	90399
Reading Grade 5	-0.22	0.0156	1201	-0.15	0.0017	96248
Reading Grade 6	-0.16	0.0163	1019	-0.18	0.0016	97632
Reading Grade 7	-0.15	0.0149	1075	-0.20	0.0015	102431
Reading Grade 8	-0.10	0.0154	987	-0.17	0.0015	99750
English II	0.08	0.0171	804	0.06	0.0014	100960
Science Grade 8	-0.35	0.0169	997	-0.25	0.0017	100252
Biology	-0.37	0.0175	786	-0.30	0.0016	96254
Math Grade 5	-0.63	0.0167	1202	-0.45	0.0020	96148
Math Grade 6	-0.51	0.0172	1021	-0.45	0.0018	97530
Math Grade 7	-0.40	0.0161	1088	-0.38	0.0017	102280
Math Grade 8	-0.52	0.0200	915	-0.52	0.0024	68849
NC Math 1	-0.39	0.0167	929	-0.37	0.0017	104693
NC Math 3	-0.20	0.0206	746	-0.11	0.0019	90838

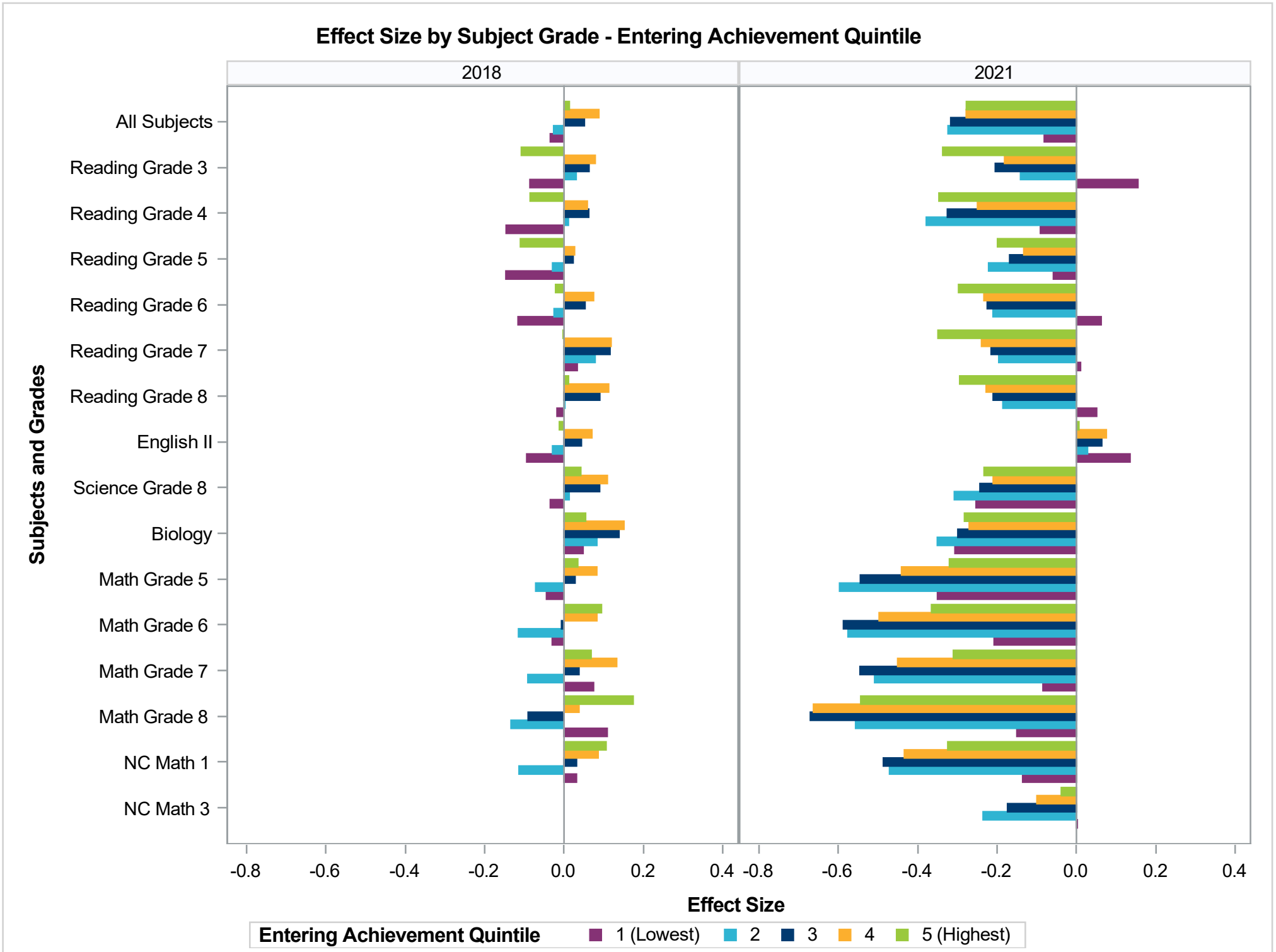

Effect Size by Subject Grade - Military Connected
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Military Connected
Not Identified as Military Connected
Identified as Military Connected

Effect Size by Subject Grade - Military Connected - 2018

	Military Connected					
	Identified as Military Connected			Not Identified as Military Connected		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.05	0.0021	59997	0.02	0.0004	1413097
Reading Grade 3	0.07	0.0089	5095	-0.01	0.0020	102428
Reading Grade 4	0.03	0.0069	5303	-0.02	0.0015	108185
Reading Grade 5	-0.01	0.0067	5307	-0.05	0.0015	105263
Reading Grade 6	0.03	0.0067	5056	-0.01	0.0014	106176
Reading Grade 7	0.09	0.0061	5730	0.07	0.0015	99698
Reading Grade 8	0.06	0.0067	5019	0.04	0.0016	94405
English II	-0.06	0.0433	114	-0.00	0.0014	108184
Science Grade 8	0.14	0.0071	5046	0.04	0.0017	94684
Biology	0.14	0.0196	549	0.09	0.0016	106275
Math Grade 5	0.01	0.0070	5301	0.01	0.0016	105122
Math Grade 6	-0.01	0.0068	5055	0.01	0.0015	106082
Math Grade 7	0.07	0.0061	5723	0.04	0.0015	99558
Math Grade 8	0.08	0.0090	3463	0.02	0.0021	66411
NC Math 1	0.06	0.0087	3236	0.03	0.0015	110626

Effect Size by Subject Grade - Military Connected - 2021

	Military Connected					
	Identified as Military Connected			Not Identified as Military Connected		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.23	0.0019	89198	-0.26	0.0005	1358267
Reading Grade 3	-0.09	0.0095	5227	-0.14	0.0024	84012
Reading Grade 4	-0.23	0.0088	5766	-0.28	0.0023	85825
Reading Grade 5	-0.14	0.0068	5908	-0.16	0.0017	91541
Reading Grade 6	-0.18	0.0065	5748	-0.18	0.0016	92903
Reading Grade 7	-0.20	0.0061	6227	-0.20	0.0015	97279
Reading Grade 8	-0.17	0.0059	6077	-0.17	0.0015	94660
English II	0.08	0.0054	6941	0.06	0.0015	94823
Science Grade 8	-0.14	0.0067	6172	-0.26	0.0017	95077
Biology	-0.25	0.0062	6538	-0.31	0.0017	90502
Math Grade 5	-0.43	0.0082	5896	-0.45	0.0021	91454
Math Grade 6	-0.45	0.0072	5724	-0.45	0.0018	92827
Math Grade 7	-0.41	0.0067	6225	-0.38	0.0017	97143
Math Grade 8	-0.47	0.0097	4201	-0.52	0.0025	65563
NC Math 1	-0.35	0.0068	6420	-0.37	0.0017	99202
NC Math 3	-0.09	0.0079	6128	-0.11	0.0020	85456


Effect Size by Subject Grade - Entering Achievement Quintile
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Entering Achievement Quintile
1 (Lowest)
2
3
4
5 (Highest)

Effect Size by Subject Grade - Entering Achievement Quintile - 2018

	Entering Achievement Quintile								
	1 (Lowest)			2			3		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.03	0.0010	294612	-0.03	0.0010	294623	0.05	0.0010	294621
Reading Grade 3	-0.09	0.0043	21504	0.03	0.0046	21505	0.06	0.0045	21505
Reading Grade 4	-0.15	0.0036	22697	0.01	0.0035	22698	0.06	0.0033	22698
Reading Grade 5	-0.15	0.0034	22114	-0.03	0.0035	22114	0.02	0.0032	22114
Reading Grade 6	-0.12	0.0033	22246	-0.02	0.0034	22247	0.05	0.0031	22246
Reading Grade 7	0.03	0.0034	21085	0.08	0.0034	21086	0.12	0.0032	21086
Reading Grade 8	-0.02	0.0036	19884	0.00	0.0037	19885	0.09	0.0034	19885
English II	-0.09	0.0035	21659	-0.03	0.0035	21660	0.04	0.0032	21660
Science Grade 8	-0.03	0.0038	19946	0.01	0.0040	19946	0.09	0.0037	19946
Biology	0.05	0.0040	21364	0.08	0.0039	21365	0.14	0.0035	21365
Math Grade 5	-0.04	0.0035	22084	-0.07	0.0037	22085	0.03	0.0035	22085
Math Grade 6	-0.03	0.0032	22227	-0.11	0.0036	22228	-0.01	0.0034	22227
Math Grade 7	0.07	0.0032	21056	-0.09	0.0036	21056	0.04	0.0034	21057
Math Grade 8	0.11	0.0040	13974	-0.13	0.0045	13975	-0.09	0.0049	13975
NC Math 1	0.03	0.0032	22772	-0.11	0.0037	22773	0.03	0.0036	22772

Effect Size by Subject Grade - Entering Achievement Quintile - 2018

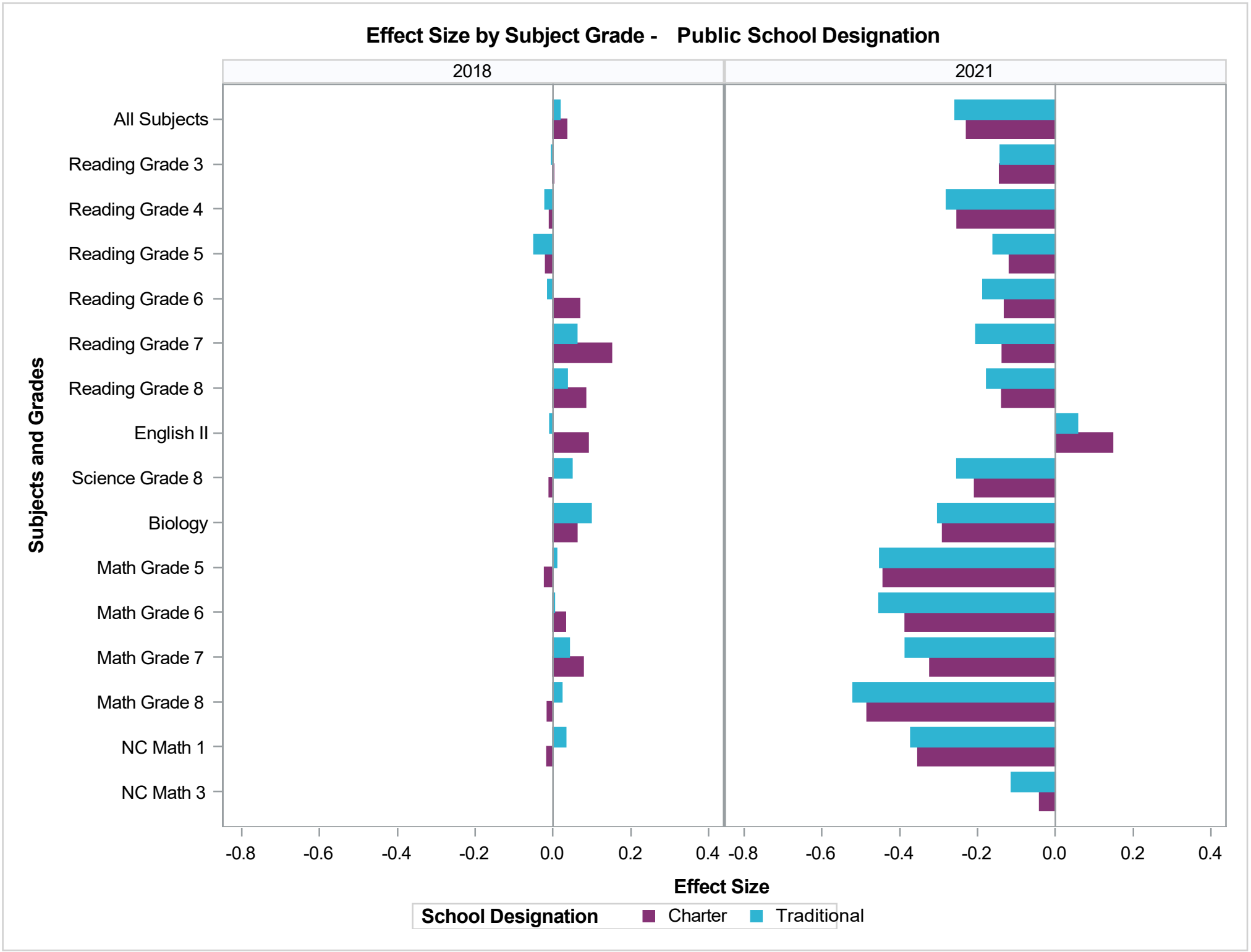
Entering Achievement Quintile					
4			5 (Highest)		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
0.09	0.0009	294623	0.01	0.0008	294615
0.08	0.0042	21505	-0.11	0.0038	21504
0.06	0.0031	22698	-0.09	0.0030	22697
0.03	0.0030	22114	-0.11	0.0030	22114
0.07	0.0030	22247	-0.02	0.0028	22246
0.12	0.0031	21086	-0.00	0.0030	21085
0.11	0.0032	19885	0.01	0.0031	19885
0.07	0.0029	21660	-0.01	0.0027	21659
0.11	0.0034	19946	0.04	0.0033	19946
0.15	0.0032	21365	0.05	0.0032	21365
0.08	0.0032	22085	0.03	0.0031	22084
0.08	0.0032	22228	0.09	0.0030	22227
0.13	0.0029	21056	0.07	0.0028	21056
0.04	0.0047	13975	0.17	0.0042	13975
0.09	0.0032	22773	0.11	0.0031	22772

Effect Size by Subject Grade - Entering Achievement Quintile - 2021

	Entering Achievement Quintile								
	1 (Lowest)			2			3		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.08	0.0009	289483	-0.32	0.0010	289503	-0.32	0.0011	289503
Reading Grade 3	0.15	0.0043	17847	-0.14	0.0051	17848	-0.20	0.0053	17846
Reading Grade 4	-0.09	0.0046	18317	-0.38	0.0050	18319	-0.33	0.0051	18319
Reading Grade 5	-0.06	0.0035	19488	-0.22	0.0040	19495	-0.17	0.0040	19480
Reading Grade 6	0.06	0.0032	19730	-0.21	0.0035	19730	-0.22	0.0037	19731
Reading Grade 7	0.01	0.0031	20701	-0.20	0.0034	20701	-0.21	0.0034	20702
Reading Grade 8	0.05	0.0031	20147	-0.19	0.0034	20148	-0.21	0.0033	20147
English II	0.14	0.0032	20352	0.03	0.0035	20353	0.06	0.0033	20353
Science Grade 8	-0.25	0.0036	20249	-0.31	0.0040	20250	-0.24	0.0037	20250
Biology	-0.31	0.0035	19408	-0.35	0.0037	19408	-0.30	0.0036	19408
Math Grade 5	-0.35	0.0034	19469	-0.60	0.0041	19472	-0.54	0.0048	19488
Math Grade 6	-0.21	0.0031	19710	-0.58	0.0035	19710	-0.59	0.0040	19711
Math Grade 7	-0.08	0.0029	20673	-0.51	0.0031	20674	-0.55	0.0037	20674
Math Grade 8	-0.15	0.0039	13952	-0.56	0.0042	13953	-0.67	0.0049	13953
NC Math 1	-0.14	0.0029	21124	-0.47	0.0033	21125	-0.49	0.0038	21124
NC Math 3	0.00	0.0034	18316	-0.24	0.0040	18317	-0.17	0.0047	18317

Effect Size by Subject Grade - Entering Achievement Quintile - 2021

Entering Achievement Quintile					
4			5 (Highest)		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
-0.28	0.0011	289476	-0.28	0.0011	289500
-0.18	0.0052	17850	-0.34	0.0050	17848
-0.25	0.0050	18318	-0.35	0.0049	18318
-0.13	0.0038	19489	-0.20	0.0036	19497
-0.23	0.0034	19730	-0.30	0.0033	19730
-0.24	0.0033	20701	-0.35	0.0030	20701
-0.23	0.0032	20148	-0.29	0.0030	20147
0.08	0.0031	20353	0.01	0.0029	20353
-0.21	0.0036	20250	-0.23	0.0036	20250
-0.27	0.0036	19408	-0.28	0.0037	19408
-0.44	0.0049	19450	-0.32	0.0046	19471
-0.50	0.0042	19710	-0.37	0.0042	19710
-0.45	0.0039	20674	-0.31	0.0039	20673
-0.66	0.0056	13953	-0.54	0.0062	13953
-0.43	0.0040	21125	-0.32	0.0042	21124
-0.10	0.0049	18317	-0.04	0.0043	18317

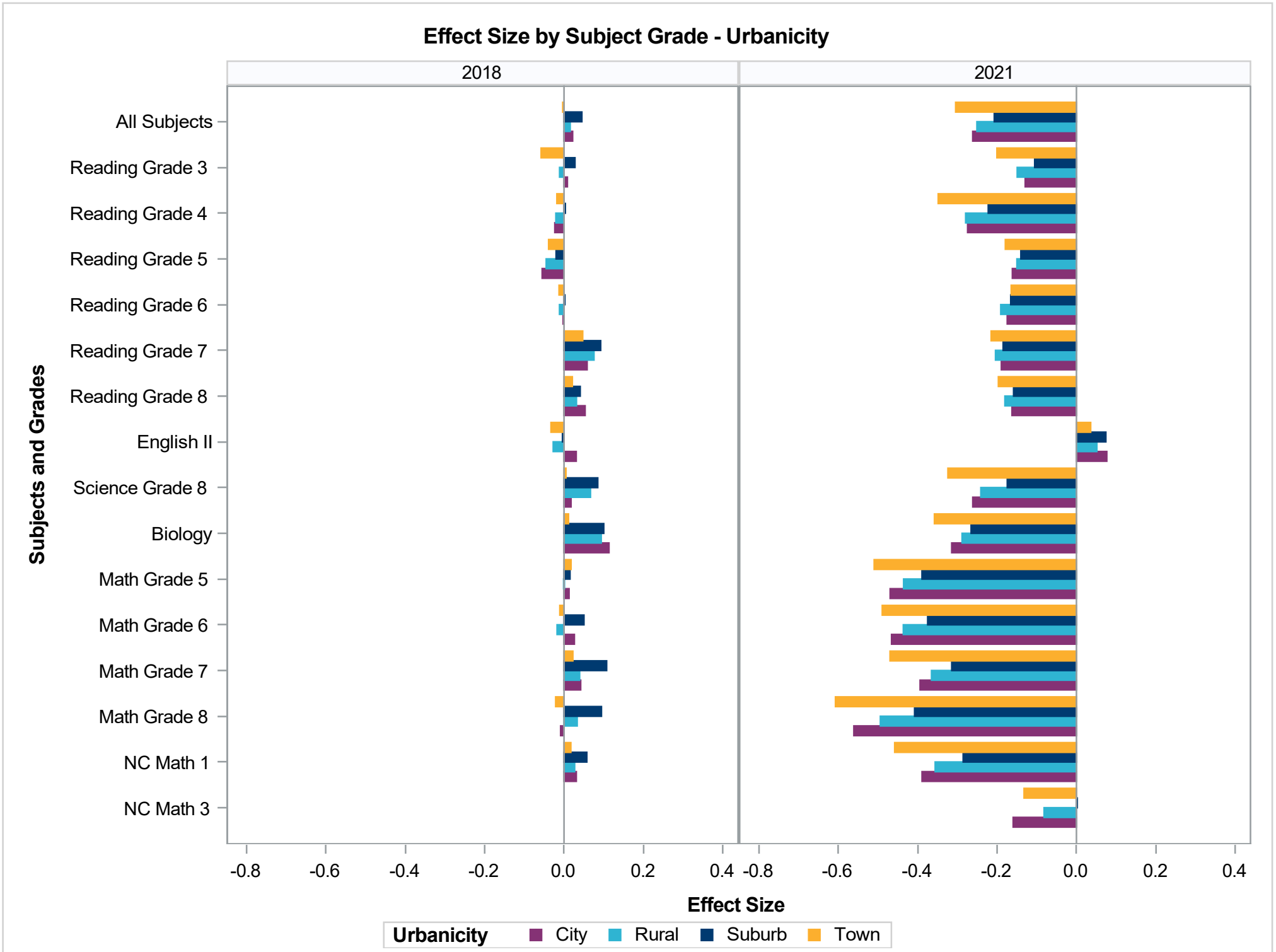

Effect Size by Subject Grade - Public School Designation
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
School Designation
Charter
Traditional

Effect Size by Subject Grade - School Designation - 2018

	School Designation					
	Charter			Traditional		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.04	0.0016	96373	0.02	0.0004	1363321
Reading Grade 3	-0.00	0.0090	5514	-0.00	0.0020	100947
Reading Grade 4	-0.01	0.0058	7808	-0.02	0.0016	104527
Reading Grade 5	-0.02	0.0055	7858	-0.05	0.0015	101603
Reading Grade 6	0.07	0.0049	8785	-0.01	0.0015	101785
Reading Grade 7	0.15	0.0051	7984	0.06	0.0015	96730
Reading Grade 8	0.08	0.0056	7044	0.04	0.0016	91653
English II	0.09	0.0067	4471	-0.01	0.0015	102424
Science Grade 8	-0.01	0.0060	7069	0.05	0.0017	91933
Biology	0.06	0.0071	4826	0.10	0.0016	100579
Math Grade 5	-0.02	0.0059	7845	0.01	0.0016	101471
Math Grade 6	0.03	0.0053	8772	0.00	0.0016	101706
Math Grade 7	0.08	0.0052	7977	0.04	0.0015	96595
Math Grade 8	-0.01	0.0083	4322	0.02	0.0021	64926
NC Math 1	-0.02	0.0064	6098	0.03	0.0016	106442

Effect Size by Subject Grade - School Designation - 2021

	School Designation					
	Charter			Traditional		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.23	0.0017	115102	-0.26	0.0005	1331561
Reading Grade 3	-0.14	0.0091	6244	-0.14	0.0024	82956
Reading Grade 4	-0.25	0.0090	6123	-0.28	0.0023	85436
Reading Grade 5	-0.12	0.0056	9302	-0.16	0.0018	88034
Reading Grade 6	-0.13	0.0050	9901	-0.19	0.0017	88711
Reading Grade 7	-0.14	0.0049	9735	-0.20	0.0016	93716
Reading Grade 8	-0.14	0.0051	8547	-0.18	0.0016	92131
English II	0.15	0.0061	5337	0.06	0.0015	96386
Science Grade 8	-0.21	0.0056	8626	-0.25	0.0017	92563
Biology	-0.29	0.0066	5224	-0.30	0.0017	91775
Math Grade 5	-0.44	0.0065	9303	-0.45	0.0021	87933
Math Grade 6	-0.39	0.0056	9872	-0.45	0.0019	88640
Math Grade 7	-0.32	0.0053	9716	-0.39	0.0018	93597
Math Grade 8	-0.48	0.0086	5698	-0.52	0.0025	64010
NC Math 1	-0.35	0.0064	6821	-0.37	0.0017	98764
NC Math 3	-0.04	0.0085	4653	-0.11	0.0020	86909

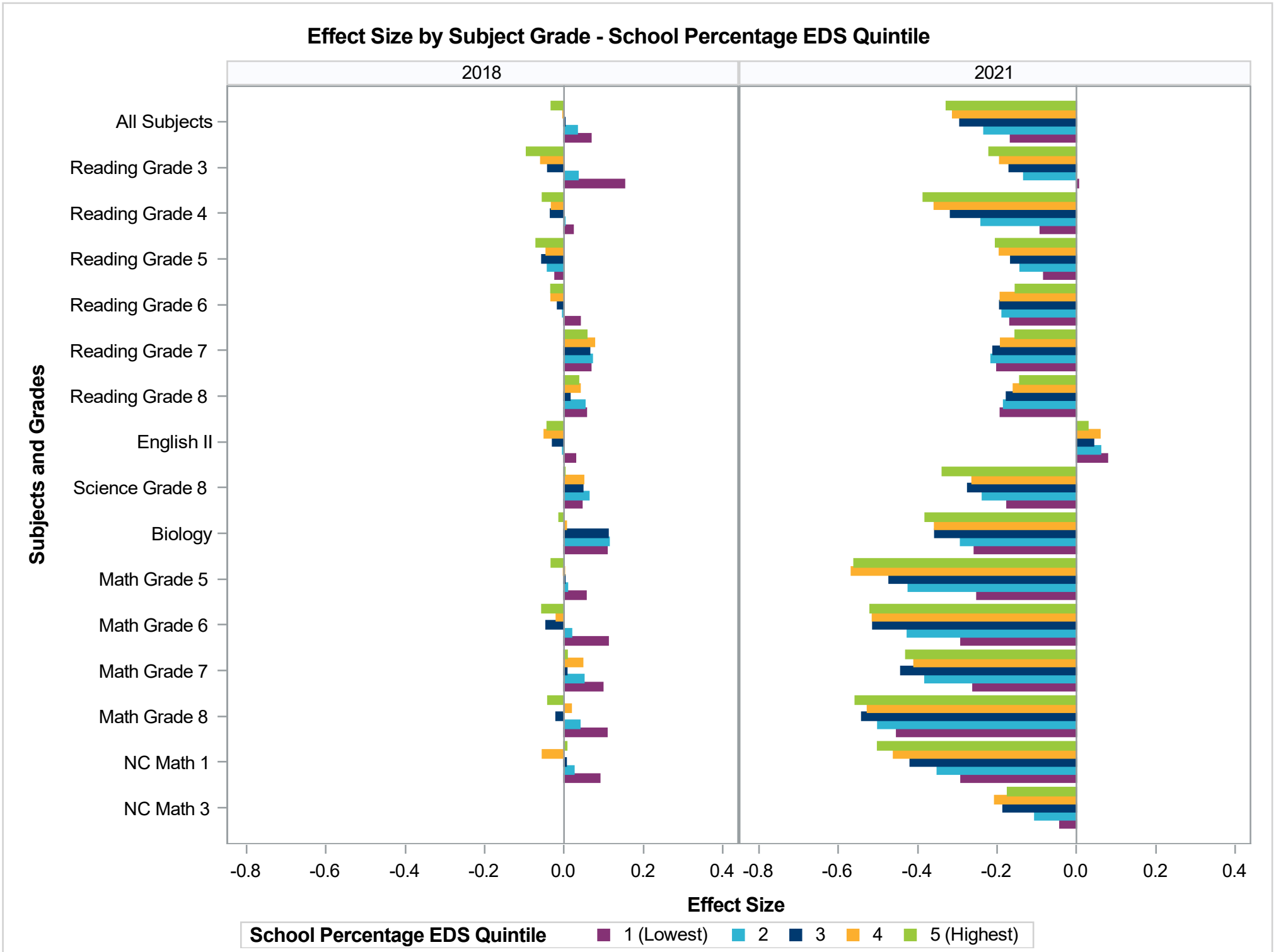

Effect Size by Subject Grade - Urbanicity
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Urbanicity
City
Rural
Suburb
Town

Effect Size by Subject Grade - Urbanicity - 2018

	Urbanicity											
	City			Rural			Suburb			Town		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.02	0.0007	574728	0.02	0.0006	664897	0.04	0.0015	115365	-0.00	0.0016	104964
Reading Grade 3	0.01	0.0030	44196	-0.01	0.0029	47436	0.03	0.0071	7635	-0.06	0.0074	7208
Reading Grade 4	-0.02	0.0024	45841	-0.02	0.0023	50004	0.00	0.0055	8699	-0.02	0.0057	7806
Reading Grade 5	-0.06	0.0023	43832	-0.04	0.0022	49258	-0.02	0.0054	8536	-0.04	0.0055	7835
Reading Grade 6	-0.00	0.0022	44123	-0.01	0.0021	49701	0.00	0.0050	8683	-0.01	0.0052	8078
Reading Grade 7	0.06	0.0023	40978	0.08	0.0022	47911	0.09	0.0052	8244	0.05	0.0054	7597
Reading Grade 8	0.05	0.0024	38487	0.03	0.0023	45058	0.04	0.0054	8008	0.02	0.0057	7152
English II	0.03	0.0023	40580	-0.03	0.0021	49642	-0.00	0.0050	8751	-0.03	0.0052	7979
Science Grade 8	0.02	0.0026	38607	0.07	0.0025	45211	0.08	0.0055	8025	0.00	0.0062	7167
Biology	0.11	0.0025	41581	0.09	0.0024	47890	0.10	0.0055	8573	0.01	0.0060	7414
Math Grade 5	0.01	0.0024	43781	-0.00	0.0023	49181	0.01	0.0055	8532	0.02	0.0057	7822
Math Grade 6	0.03	0.0024	44077	-0.02	0.0022	49661	0.05	0.0053	8680	-0.01	0.0055	8075
Math Grade 7	0.04	0.0023	40936	0.04	0.0021	47843	0.11	0.0053	8225	0.02	0.0057	7584
Math Grade 8	-0.01	0.0035	24015	0.03	0.0029	34586	0.09	0.0070	6009	-0.02	0.0078	4641
NC Math 1	0.03	0.0024	43694	0.03	0.0022	51515	0.06	0.0055	8765	0.02	0.0059	8606

Effect Size by Subject Grade - Urbanicity - 2021

	Urbanicity											
	City			Rural			Suburb			Town		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.26	0.0008	547212	-0.25	0.0007	679264	-0.21	0.0017	114147	-0.30	0.0018	106740
Reading Grade 3	-0.13	0.0037	34979	-0.15	0.0034	41111	-0.11	0.0082	6783	-0.20	0.0086	6363
Reading Grade 4	-0.27	0.0036	35972	-0.28	0.0033	42052	-0.22	0.0081	6860	-0.35	0.0083	6707
Reading Grade 5	-0.16	0.0027	37937	-0.15	0.0025	44739	-0.14	0.0061	7625	-0.18	0.0063	7144
Reading Grade 6	-0.17	0.0025	37285	-0.19	0.0023	46344	-0.17	0.0056	7751	-0.16	0.0059	7267
Reading Grade 7	-0.19	0.0025	38635	-0.20	0.0022	48711	-0.18	0.0053	8311	-0.21	0.0054	7843
Reading Grade 8	-0.16	0.0025	36702	-0.18	0.0022	48063	-0.16	0.0051	8203	-0.20	0.0054	7756
English II	0.08	0.0024	38984	0.05	0.0021	47872	0.07	0.0052	7667	0.04	0.0054	7229
Science Grade 8	-0.26	0.0027	36758	-0.24	0.0024	48400	-0.17	0.0056	8271	-0.32	0.0060	7807
Biology	-0.31	0.0027	38393	-0.29	0.0024	44401	-0.27	0.0057	7435	-0.36	0.0059	6801
Math Grade 5	-0.47	0.0032	37865	-0.44	0.0030	44715	-0.39	0.0070	7638	-0.51	0.0074	7128
Math Grade 6	-0.47	0.0029	37231	-0.44	0.0026	46311	-0.37	0.0062	7740	-0.49	0.0064	7265
Math Grade 7	-0.39	0.0027	38557	-0.37	0.0024	48662	-0.31	0.0059	8292	-0.47	0.0058	7851
Math Grade 8	-0.56	0.0041	22399	-0.49	0.0033	35896	-0.41	0.0082	6088	-0.61	0.0085	5368
NC Math 1	-0.39	0.0028	39812	-0.36	0.0024	49775	-0.29	0.0058	8422	-0.46	0.0061	7607
NC Math 3	-0.16	0.0031	35703	-0.08	0.0028	42212	0.00	0.0069	7061	-0.13	0.0073	6604


Effect Size by Subject Grade - School Percentage EDS Quintile
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
School Percentage EDS Quintile
1 (Lowest)
2
3
4
5 (Highest)

Effect Size by Subject Grade - School Percentage EDS Quintile - 2018

	School Percentage EDS Quintile								
	1 (Lowest)			2			3		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.07	0.0008	349972	0.03	0.0009	323000	0.00	0.0009	316333
Reading Grade 3	0.15	0.0041	22257	0.04	0.0048	17293	-0.04	0.0044	20835
Reading Grade 4	0.02	0.0031	24489	-0.00	0.0037	18433	-0.03	0.0034	21783
Reading Grade 5	-0.02	0.0031	23742	-0.04	0.0036	18369	-0.06	0.0033	21434
Reading Grade 6	0.04	0.0029	24073	-0.00	0.0031	22406	-0.02	0.0029	26400
Reading Grade 7	0.07	0.0030	23137	0.07	0.0032	21666	0.06	0.0030	24527
Reading Grade 8	0.06	0.0031	22588	0.05	0.0034	20173	0.01	0.0032	23077
English II	0.03	0.0024	34831	-0.00	0.0025	36838	-0.03	0.0033	21242
Science Grade 8	0.04	0.0033	22644	0.06	0.0035	20247	0.05	0.0035	23147
Biology	0.11	0.0026	35102	0.11	0.0027	36210	0.11	0.0039	20244
Math Grade 5	0.06	0.0032	23724	0.01	0.0038	18343	0.00	0.0035	21408
Math Grade 6	0.11	0.0032	24064	0.02	0.0033	22387	-0.05	0.0030	26384
Math Grade 7	0.10	0.0029	23127	0.05	0.0031	21648	0.01	0.0030	24488
Math Grade 8	0.11	0.0047	12650	0.04	0.0048	12906	-0.02	0.0041	17439
NC Math 1	0.09	0.0027	33544	0.02	0.0026	36081	0.01	0.0033	23925

Effect Size by Subject Grade - School Percentage EDS Quintile - 2018

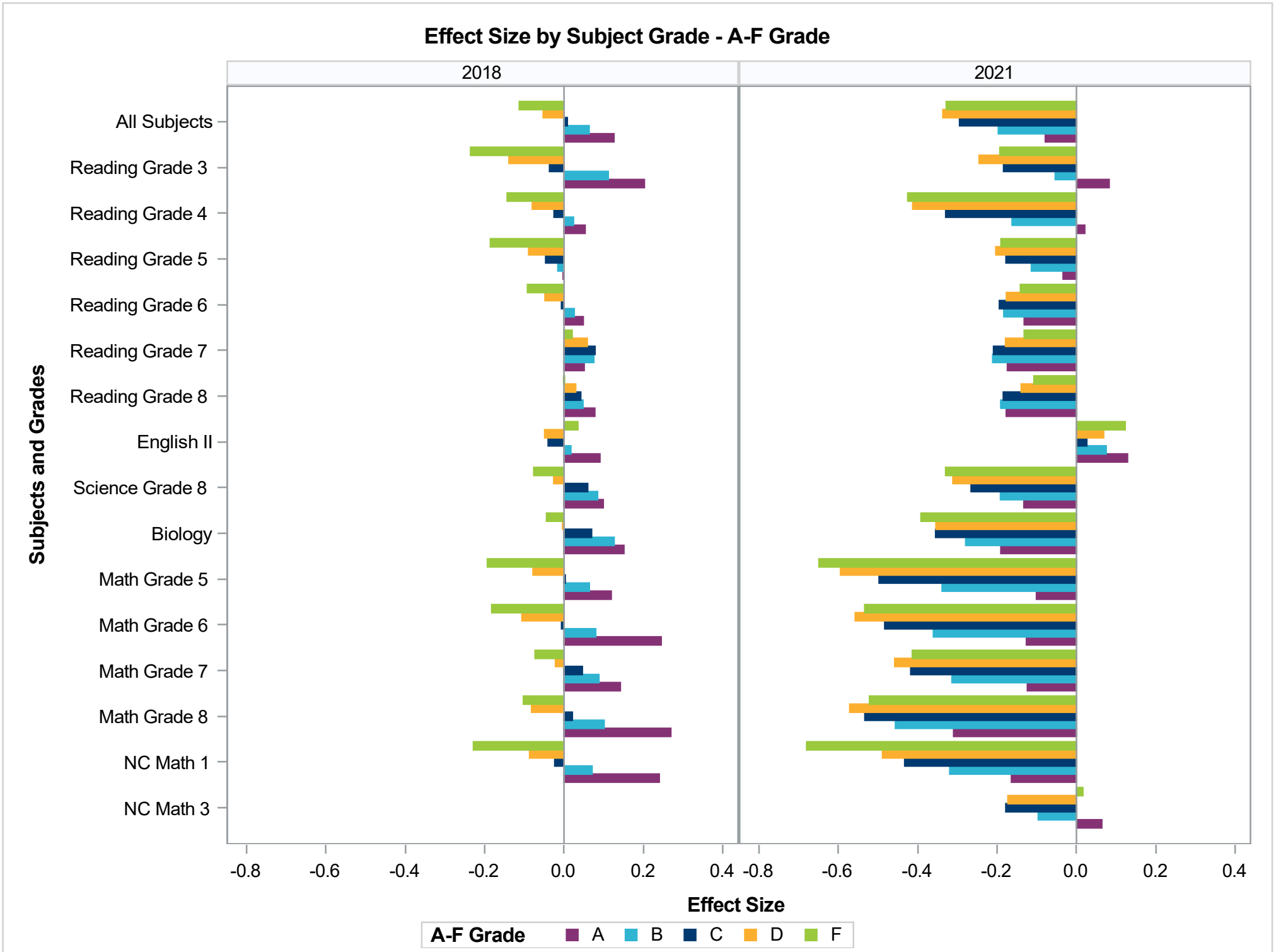
School Percentage EDS Quintile					
4			5 (Highest)		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
-0.00	0.0010	275877	-0.03	0.0012	194440
-0.06	0.0041	23352	-0.09	0.0042	22738
-0.03	0.0032	24812	-0.05	0.0034	22833
-0.04	0.0032	24018	-0.07	0.0033	21898
-0.03	0.0032	22731	-0.03	0.0039	14958
0.08	0.0032	22273	0.06	0.0042	13108
0.04	0.0034	20680	0.04	0.0044	12149
-0.05	0.0048	9959	-0.04	0.0079	4032
0.05	0.0037	20731	0.00	0.0048	12203
0.01	0.0054	9569	-0.01	0.0087	4292
-0.00	0.0033	23984	-0.03	0.0035	21857
-0.02	0.0033	22715	-0.06	0.0042	14927
0.05	0.0032	22232	0.01	0.0042	13075
0.02	0.0042	16232	-0.04	0.0055	9995
-0.05	0.0045	12589	0.01	0.0072	6375

Effect Size by Subject Grade - School Percentage EDS Quintile - 2021

	School Percentage EDS Quintile								
	1 (Lowest)			2			3		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.17	0.0009	364548	-0.23	0.0010	327797	-0.29	0.0010	307079
Reading Grade 3	0.00	0.0049	19226	-0.13	0.0057	14400	-0.17	0.0052	17354
Reading Grade 4	-0.09	0.0047	20049	-0.24	0.0055	14950	-0.32	0.0050	17781
Reading Grade 5	-0.08	0.0034	22586	-0.14	0.0042	16214	-0.17	0.0039	18561
Reading Grade 6	-0.17	0.0032	22338	-0.19	0.0035	19667	-0.19	0.0033	22629
Reading Grade 7	-0.20	0.0031	23786	-0.21	0.0034	20657	-0.21	0.0031	23744
Reading Grade 8	-0.19	0.0030	22759	-0.18	0.0033	20552	-0.18	0.0031	23059
English II	0.08	0.0024	34025	0.06	0.0025	34716	0.04	0.0033	19921
Science Grade 8	-0.17	0.0035	22872	-0.24	0.0037	20662	-0.27	0.0034	23178
Biology	-0.26	0.0028	33266	-0.29	0.0028	32761	-0.36	0.0037	18688
Math Grade 5	-0.25	0.0041	22556	-0.42	0.0048	16203	-0.47	0.0045	18541
Math Grade 6	-0.29	0.0038	22308	-0.43	0.0039	19634	-0.51	0.0036	22637
Math Grade 7	-0.26	0.0035	23719	-0.38	0.0037	20644	-0.44	0.0034	23739
Math Grade 8	-0.45	0.0059	12163	-0.50	0.0056	13080	-0.54	0.0047	17040
NC Math 1	-0.29	0.0032	30977	-0.35	0.0029	32578	-0.42	0.0035	23018
NC Math 3	-0.04	0.0033	31918	-0.10	0.0033	31079	-0.18	0.0043	17189

Effect Size by Subject Grade - School Percentage EDS Quintile - 2021

School Percentage EDS Quintile					
4			5 (Highest)		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
-0.31	0.0011	270846	-0.33	0.0014	177093
-0.19	0.0049	19777	-0.22	0.0050	18479
-0.36	0.0046	20370	-0.39	0.0049	18441
-0.19	0.0036	21397	-0.20	0.0039	18687
-0.19	0.0035	21012	-0.15	0.0044	13001
-0.19	0.0032	22496	-0.15	0.0042	12817
-0.16	0.0032	22207	-0.14	0.0043	12147
0.06	0.0048	9222	0.03	0.0075	3868
-0.26	0.0035	22328	-0.34	0.0048	12196
-0.36	0.0052	8935	-0.38	0.0087	3380
-0.57	0.0042	21375	-0.56	0.0044	18671
-0.51	0.0038	20995	-0.52	0.0048	12973
-0.41	0.0036	22466	-0.43	0.0046	12794
-0.53	0.0047	17453	-0.56	0.0061	10015
-0.46	0.0049	12694	-0.50	0.0068	6349
-0.21	0.0063	8119	-0.17	0.0101	3275


Effect Size by Subject Grade - A-F Grade
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
A-F Grade
A
B
C
D
F

Effect Size by Subject Grade - A-F Grade - 2018

	A-F Grade								
	A			B			C		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.13	0.0015	107350	0.06	0.0007	450610	0.01	0.0007	608398
Reading Grade 3	0.20	0.0075	6327	0.11	0.0035	31721	-0.04	0.0030	44851
Reading Grade 4	0.05	0.0061	6416	0.02	0.0027	34175	-0.02	0.0023	47072
Reading Grade 5	-0.00	0.0056	6719	-0.02	0.0027	32256	-0.05	0.0022	46985
Reading Grade 6	0.05	0.0051	7571	0.03	0.0028	28209	-0.01	0.0021	48031
Reading Grade 7	0.05	0.0053	7164	0.07	0.0028	27446	0.08	0.0022	44322
Reading Grade 8	0.08	0.0054	7092	0.05	0.0029	25975	0.04	0.0024	41761
English II	0.09	0.0038	11906	0.02	0.0021	47583	-0.04	0.0024	40138
Science Grade 8	0.10	0.0058	7113	0.08	0.0031	26036	0.06	0.0025	41906
Biology	0.15	0.0044	12014	0.13	0.0023	47700	0.07	0.0028	38240
Math Grade 5	0.12	0.0058	6710	0.06	0.0027	32241	0.00	0.0023	46929
Math Grade 6	0.24	0.0055	7570	0.08	0.0029	28197	-0.01	0.0022	48010
Math Grade 7	0.14	0.0050	7162	0.09	0.0027	27434	0.05	0.0022	44254
Math Grade 8	0.27	0.0091	3220	0.10	0.0040	16466	0.02	0.0031	30305
NC Math 1	0.24	0.0048	10366	0.07	0.0023	45171	-0.02	0.0024	45594

Effect Size by Subject Grade - A-F Grade - 2018

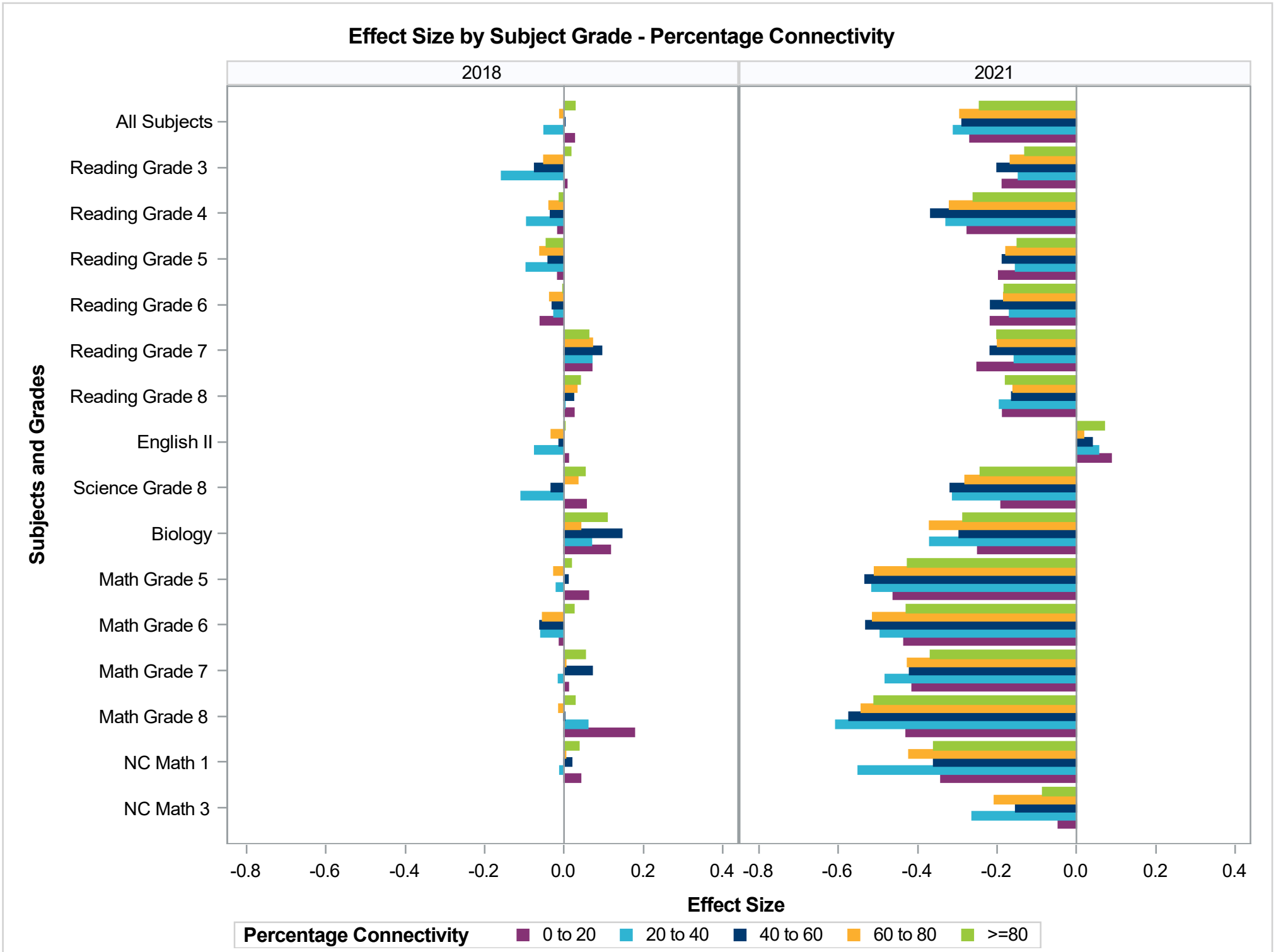
A-F Grade					
D			F		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
-0.05	0.0010	249707	-0.11	0.0027	36798
-0.14	0.0044	20898	-0.24	0.0122	2653
-0.08	0.0035	21653	-0.14	0.0096	2996
-0.09	0.0035	20164	-0.19	0.0088	3304
-0.05	0.0032	22844	-0.09	0.0081	3622
0.06	0.0032	21648	0.02	0.0081	3644
0.03	0.0035	19900	-0.00	0.0086	3271
-0.05	0.0062	6175	0.03	0.0641	72
-0.03	0.0038	19972	-0.08	0.0095	3283
-0.00	0.0069	6305	-0.04	0.0632	82
-0.08	0.0037	20116	-0.19	0.0091	3287
-0.11	0.0033	22798	-0.18	0.0084	3610
-0.02	0.0033	21605	-0.07	0.0081	3631
-0.08	0.0043	15785	-0.10	0.0105	2794
-0.09	0.0050	9844	-0.23	0.0215	549

Effect Size by Subject Grade - A-F Grade - 2021

A-F Grade					
D			F		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
-0.34	0.0012	234144	-0.33	0.0030	36277
-0.25	0.0052	16984	-0.19	0.0151	1978
-0.41	0.0051	17405	-0.42	0.0141	2223
-0.20	0.0040	17979	-0.19	0.0104	2535
-0.18	0.0036	19740	-0.14	0.0081	3838
-0.18	0.0034	20799	-0.13	0.0077	3971
-0.14	0.0034	19951	-0.11	0.0079	3668
0.07	0.0059	6128	0.12	0.0430	96
-0.31	0.0038	20076	-0.33	0.0087	3679
-0.35	0.0065	5708	-0.39	0.0426	104
-0.59	0.0045	17979	-0.65	0.0110	2530
-0.56	0.0038	19712	-0.53	0.0088	3830
-0.46	0.0037	20756	-0.41	0.0084	3968
-0.57	0.0048	15647	-0.52	0.0105	3160
-0.49	0.0055	10158	-0.68	0.0224	621
-0.17	0.0078	5122	0.02	0.0684	76

Effect Size by Subject Grade - A-F Grade - 2021

	A-F Grade								
	A			B			C		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.08	0.0016	112188	-0.20	0.0008	452618	-0.29	0.0007	580239
Reading Grade 3	0.08	0.0091	5383	-0.05	0.0042	26293	-0.18	0.0036	36338
Reading Grade 4	0.02	0.0088	5309	-0.16	0.0040	27188	-0.33	0.0034	37161
Reading Grade 5	-0.03	0.0065	6018	-0.11	0.0031	28698	-0.18	0.0026	40026
Reading Grade 6	-0.13	0.0057	6602	-0.18	0.0031	24753	-0.19	0.0024	41504
Reading Grade 7	-0.17	0.0054	7230	-0.21	0.0029	26633	-0.21	0.0023	42680
Reading Grade 8	-0.18	0.0053	7188	-0.19	0.0029	25820	-0.18	0.0023	42128
English II	0.13	0.0039	11508	0.07	0.0021	45818	0.03	0.0024	35934
Science Grade 8	-0.13	0.0062	7187	-0.19	0.0032	25910	-0.27	0.0025	42365
Biology	-0.19	0.0048	11490	-0.28	0.0024	43644	-0.35	0.0027	33940
Math Grade 5	-0.10	0.0077	6013	-0.34	0.0037	28682	-0.50	0.0030	39969
Math Grade 6	-0.13	0.0068	6589	-0.36	0.0035	24709	-0.48	0.0026	41508
Math Grade 7	-0.12	0.0066	7193	-0.31	0.0032	26587	-0.42	0.0025	42686
Math Grade 8	-0.31	0.0129	2851	-0.46	0.0050	15969	-0.53	0.0036	30621
NC Math 1	-0.16	0.0057	9953	-0.32	0.0027	40883	-0.43	0.0026	41766
NC Math 3	0.06	0.0055	11674	-0.10	0.0029	41031	-0.18	0.0032	31613


Effect Size by Subject Grade - Percentage Connectivity
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Percentage Connectivity
0 to 20
20 to 40
40 to 60
60 to 80
>=80

Effect Size by Subject Grade - Percentage Connectivity - 2018

Percentage Connectivity					
60 to 80			>=80		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
-0.01	0.0010	266558	0.03	0.0005	1068493
-0.05	0.0046	19674	0.02	0.0023	75907
-0.04	0.0035	21074	-0.01	0.0018	79033
-0.06	0.0034	21261	-0.04	0.0017	77037
-0.04	0.0034	19566	-0.00	0.0016	81684
0.07	0.0035	18087	0.06	0.0017	77842
0.03	0.0037	17137	0.04	0.0018	73563
-0.03	0.0033	20178	0.00	0.0017	79908
0.03	0.0040	17184	0.05	0.0019	73786
0.04	0.0037	19717	0.11	0.0019	79039
-0.03	0.0035	21221	0.02	0.0018	76945
-0.05	0.0036	19545	0.02	0.0017	81629
0.00	0.0036	18053	0.05	0.0017	77746
-0.01	0.0046	13499	0.03	0.0024	50377
0.00	0.0037	20362	0.04	0.0017	83997

Effect Size by Subject Grade - Percentage Connectivity - 2021

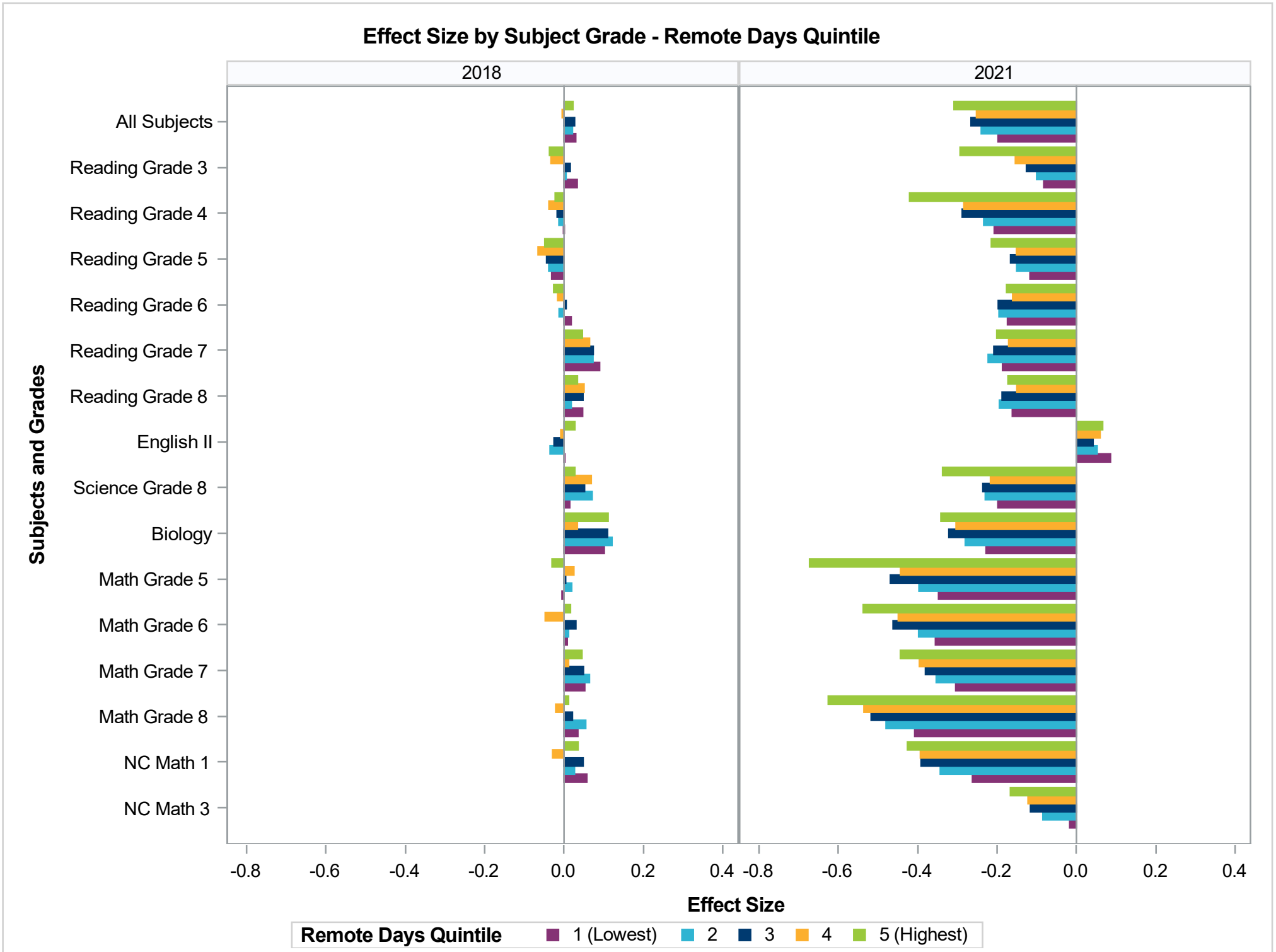
	Percentage Connectivity								
	0 to 20			20 to 40			40 to 60		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.27	0.0043	18100	-0.31	0.0051	13774	-0.29	0.0028	44145
Reading Grade 3	-0.19	0.0209	1264	-0.15	0.0175	1584	-0.20	0.0110	3795
Reading Grade 4	-0.27	0.0189	1345	-0.33	0.0169	1540	-0.37	0.0109	3780
Reading Grade 5	-0.20	0.0149	1340	-0.15	0.0135	1600	-0.19	0.0091	3311
Reading Grade 6	-0.22	0.0130	1507	-0.17	0.0184	799	-0.22	0.0106	2351
Reading Grade 7	-0.25	0.0126	1487	-0.16	0.0162	915	-0.22	0.0094	2672
Reading Grade 8	-0.19	0.0123	1381	-0.19	0.0174	872	-0.16	0.0096	2430
English II	0.09	0.0162	723	0.06	0.0222	366	0.04	0.0077	3472
Science Grade 8	-0.19	0.0138	1393	-0.31	0.0174	879	-0.32	0.0105	2422
Biology	-0.25	0.0195	688	-0.37	0.0236	403	-0.30	0.0085	3477
Math Grade 5	-0.46	0.0170	1335	-0.52	0.0149	1597	-0.53	0.0105	3299
Math Grade 6	-0.43	0.0144	1502	-0.49	0.0191	802	-0.53	0.0116	2345
Math Grade 7	-0.41	0.0138	1493	-0.48	0.0166	923	-0.42	0.0106	2672
Math Grade 8	-0.43	0.0220	803	-0.61	0.0238	679	-0.57	0.0145	1854
NC Math 1	-0.34	0.0155	1164	-0.55	0.0237	504	-0.36	0.0095	3213
NC Math 3	-0.05	0.0218	675	-0.26	0.0305	311	-0.15	0.0100	3052

Effect Size by Subject Grade - Percentage Connectivity - 2021

Percentage Connectivity					
60 to 80			>=80		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
-0.29	0.0011	257653	-0.24	0.0006	1058217
-0.17	0.0053	16486	-0.13	0.0027	63234
-0.32	0.0051	17039	-0.26	0.0026	64999
-0.18	0.0039	18158	-0.15	0.0020	68336
-0.18	0.0038	16700	-0.18	0.0018	72538
-0.20	0.0036	17562	-0.20	0.0017	76077
-0.16	0.0037	17189	-0.18	0.0017	74725
0.02	0.0035	18536	0.07	0.0016	76212
-0.28	0.0040	17318	-0.24	0.0019	75060
-0.37	0.0038	17723	-0.29	0.0019	72278
-0.51	0.0044	18155	-0.43	0.0024	68271
-0.51	0.0042	16709	-0.43	0.0021	72459
-0.43	0.0040	17511	-0.37	0.0019	75977
-0.54	0.0053	13489	-0.51	0.0028	50134
-0.42	0.0038	18752	-0.36	0.0020	78789
-0.21	0.0045	16326	-0.09	0.0022	69128

Effect Size by Subject Grade - Percentage Connectivity - 2018

	Percentage Connectivity								
	0 to 20			20 to 40			40 to 60		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.03	0.0037	18677	-0.05	0.0040	16866	0.00	0.0025	45633
Reading Grade 3	0.01	0.0161	1592	-0.16	0.0142	2045	-0.07	0.0093	4838
Reading Grade 4	-0.02	0.0125	1634	-0.09	0.0113	2096	-0.03	0.0074	4670
Reading Grade 5	-0.02	0.0123	1497	-0.10	0.0107	1952	-0.04	0.0078	3901
Reading Grade 6	-0.06	0.0119	1496	-0.03	0.0132	1230	-0.03	0.0091	2777
Reading Grade 7	0.07	0.0124	1426	0.07	0.0145	1146	0.09	0.0092	2614
Reading Grade 8	0.02	0.0125	1372	0.00	0.0155	973	0.02	0.0096	2491
English II	0.01	0.0154	857	-0.07	0.0247	385	-0.01	0.0079	3747
Science Grade 8	0.06	0.0135	1378	-0.11	0.0172	977	-0.03	0.0099	2509
Biology	0.12	0.0170	856	0.07	0.0280	408	0.15	0.0094	3339
Math Grade 5	0.06	0.0124	1496	-0.02	0.0112	1953	0.01	0.0087	3897
Math Grade 6	-0.01	0.0127	1495	-0.06	0.0132	1221	-0.06	0.0094	2773
Math Grade 7	0.01	0.0115	1422	-0.01	0.0133	1146	0.07	0.0094	2613
Math Grade 8	0.18	0.0193	811	0.06	0.0193	752	-0.00	0.0124	1867
NC Math 1	0.04	0.0138	1345	-0.01	0.0212	582	0.02	0.0091	3597


Effect Size by Subject Grade - Remote Days Quintile
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Remote Days Quintile
1 (Lowest)
2
3
4
5 (Highest)

Effect Size by Subject Grade Remote Days Quintile - 2018

	Percentage Remote Quintile								
	1 (Lowest)			2			3		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.03	0.0010	272805	0.02	0.0010	251748	0.03	0.0009	311603
Reading Grade 3	0.03	0.0046	18888	0.01	0.0042	22639	0.02	0.0043	22085
Reading Grade 4	-0.00	0.0035	20982	-0.01	0.0033	23824	-0.02	0.0033	22703
Reading Grade 5	-0.03	0.0034	20320	-0.04	0.0032	23792	-0.04	0.0032	22150
Reading Grade 6	0.02	0.0032	20781	-0.01	0.0035	17864	0.01	0.0030	24288
Reading Grade 7	0.09	0.0033	20066	0.07	0.0037	16391	0.07	0.0031	22981
Reading Grade 8	0.05	0.0035	18624	0.02	0.0039	15726	0.05	0.0032	21585
English II	0.00	0.0033	19617	-0.04	0.0039	14855	-0.03	0.0031	22996
Science Grade 8	0.01	0.0038	18690	0.07	0.0041	15782	0.05	0.0034	21653
Biology	0.10	0.0037	19181	0.12	0.0042	14605	0.11	0.0036	22414
Math Grade 5	-0.01	0.0035	20289	0.02	0.0033	23769	0.00	0.0034	22130
Math Grade 6	0.01	0.0034	20767	0.01	0.0037	17859	0.03	0.0032	24267
Math Grade 7	0.05	0.0033	20041	0.06	0.0037	16366	0.05	0.0031	22950
Math Grade 8	0.03	0.0045	13829	0.05	0.0048	12240	0.02	0.0045	14354
NC Math 1	0.06	0.0035	20730	0.03	0.0039	16036	0.05	0.0032	25047

Effect Size by Subject Grade Remote Days Quintile - 2018

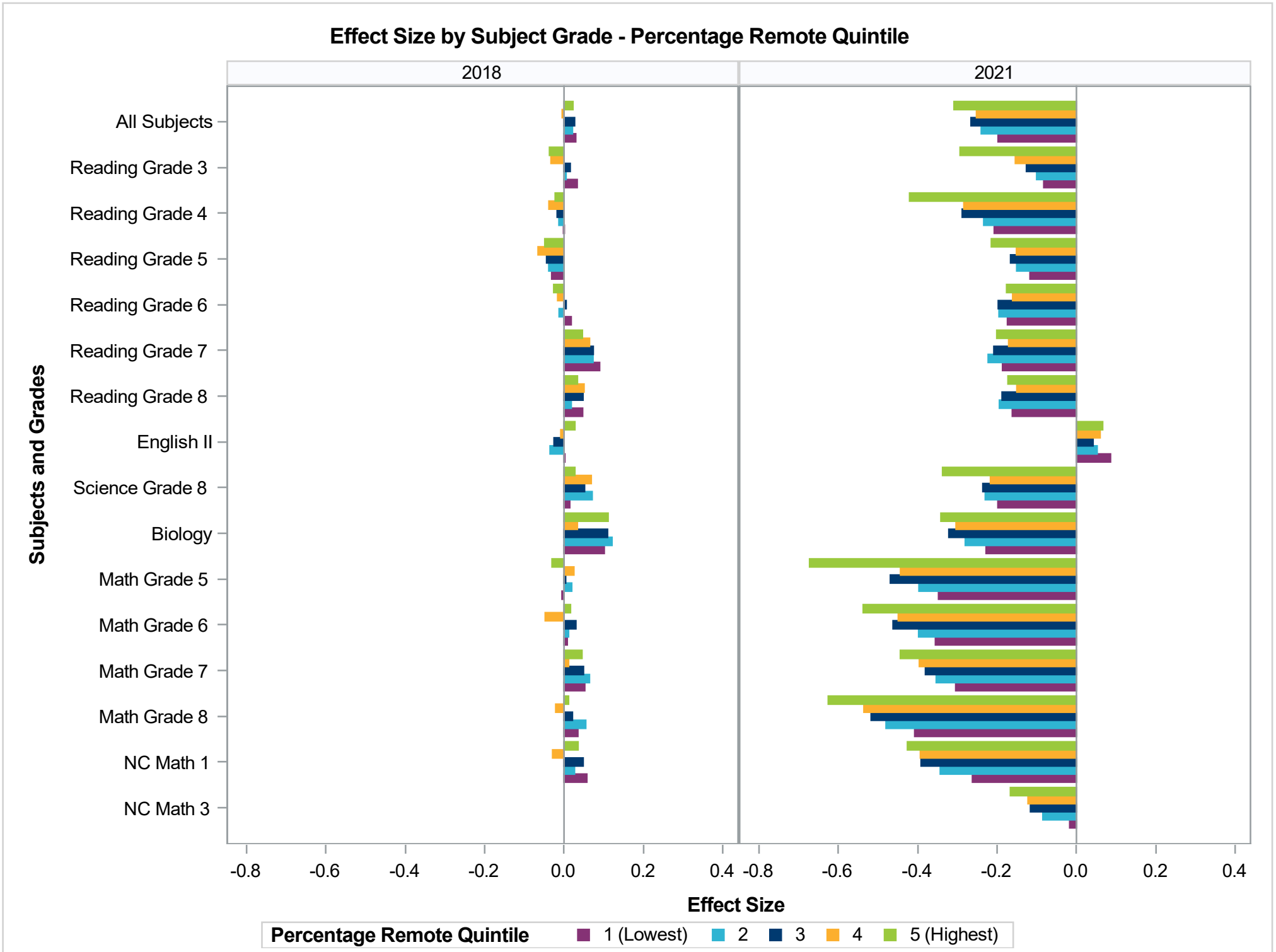
Percentage Remote Quintile					
4			5 (Highest)		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
-0.00	0.0009	299748	0.02	0.0009	323836
-0.03	0.0036	29443	-0.04	0.0056	13400
-0.04	0.0029	30641	-0.02	0.0044	14176
-0.07	0.0028	29501	-0.05	0.0042	13676
-0.02	0.0034	19447	-0.03	0.0028	28181
0.06	0.0034	18427	0.05	0.0029	26844
0.05	0.0036	17644	0.03	0.0031	25114
-0.01	0.0033	19394	0.03	0.0027	30090
0.07	0.0039	17687	0.03	0.0034	25186
0.03	0.0036	19347	0.11	0.0031	29911
0.02	0.0030	29464	-0.03	0.0045	13642
-0.05	0.0035	19424	0.02	0.0030	28152
0.01	0.0034	18412	0.05	0.0029	26798
-0.02	0.0050	11588	0.01	0.0042	17231
-0.03	0.0036	19329	0.04	0.0029	31435

Effect Size by Subject Grade - Remote Days Quintile - 2021

	Remote Days Quintile								
	1 (Lowest)			2			3		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.20	0.0011	277006	-0.24	0.0012	248110	-0.27	0.0010	306516
Reading Grade 3	-0.08	0.0054	16068	-0.10	0.0049	19466	-0.13	0.0050	18500
Reading Grade 4	-0.21	0.0052	16455	-0.23	0.0047	20000	-0.29	0.0049	18755
Reading Grade 5	-0.12	0.0039	18861	-0.15	0.0036	21138	-0.17	0.0038	19172
Reading Grade 6	-0.17	0.0035	19649	-0.20	0.0039	16204	-0.20	0.0034	21454
Reading Grade 7	-0.19	0.0033	20548	-0.22	0.0038	16132	-0.21	0.0032	22779
Reading Grade 8	-0.16	0.0033	19867	-0.19	0.0037	16315	-0.19	0.0032	22166
English II	0.09	0.0033	18752	0.05	0.0038	14519	0.04	0.0032	20716
Science Grade 8	-0.20	0.0038	20013	-0.23	0.0041	16430	-0.24	0.0035	22208
Biology	-0.23	0.0038	16942	-0.28	0.0042	13846	-0.32	0.0036	20182
Math Grade 5	-0.35	0.0045	18852	-0.40	0.0043	21148	-0.47	0.0044	19162
Math Grade 6	-0.36	0.0040	19639	-0.40	0.0043	16179	-0.46	0.0037	21461
Math Grade 7	-0.30	0.0037	20546	-0.35	0.0042	16092	-0.38	0.0035	22764
Math Grade 8	-0.41	0.0054	14554	-0.48	0.0057	12363	-0.52	0.0051	14767
NC Math 1	-0.26	0.0039	19478	-0.34	0.0043	15732	-0.39	0.0035	23321
NC Math 3	-0.02	0.0045	16782	-0.08	0.0051	12546	-0.12	0.0042	19109

Effect Size by Subject Grade - Remote Days Quintile - 2021

Remote Days Quintile					
4			5 (Highest)		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
-0.25	0.0011	284137	-0.31	0.0010	331411
-0.15	0.0044	23568	-0.29	0.0066	11632
-0.28	0.0043	24194	-0.42	0.0062	12185
-0.15	0.0033	25145	-0.21	0.0046	13106
-0.16	0.0037	16955	-0.18	0.0032	24365
-0.17	0.0036	17623	-0.20	0.0030	26400
-0.15	0.0035	17240	-0.17	0.0030	25117
0.06	0.0034	18528	0.07	0.0027	29237
-0.22	0.0039	17369	-0.34	0.0033	25197
-0.30	0.0037	18000	-0.34	0.0031	28060
-0.44	0.0039	25091	-0.67	0.0053	13070
-0.45	0.0042	16941	-0.54	0.0036	24307
-0.40	0.0040	17615	-0.44	0.0033	26327
-0.54	0.0057	11263	-0.63	0.0047	16787
-0.39	0.0040	18011	-0.43	0.0032	29072
-0.12	0.0045	16594	-0.17	0.0036	26549

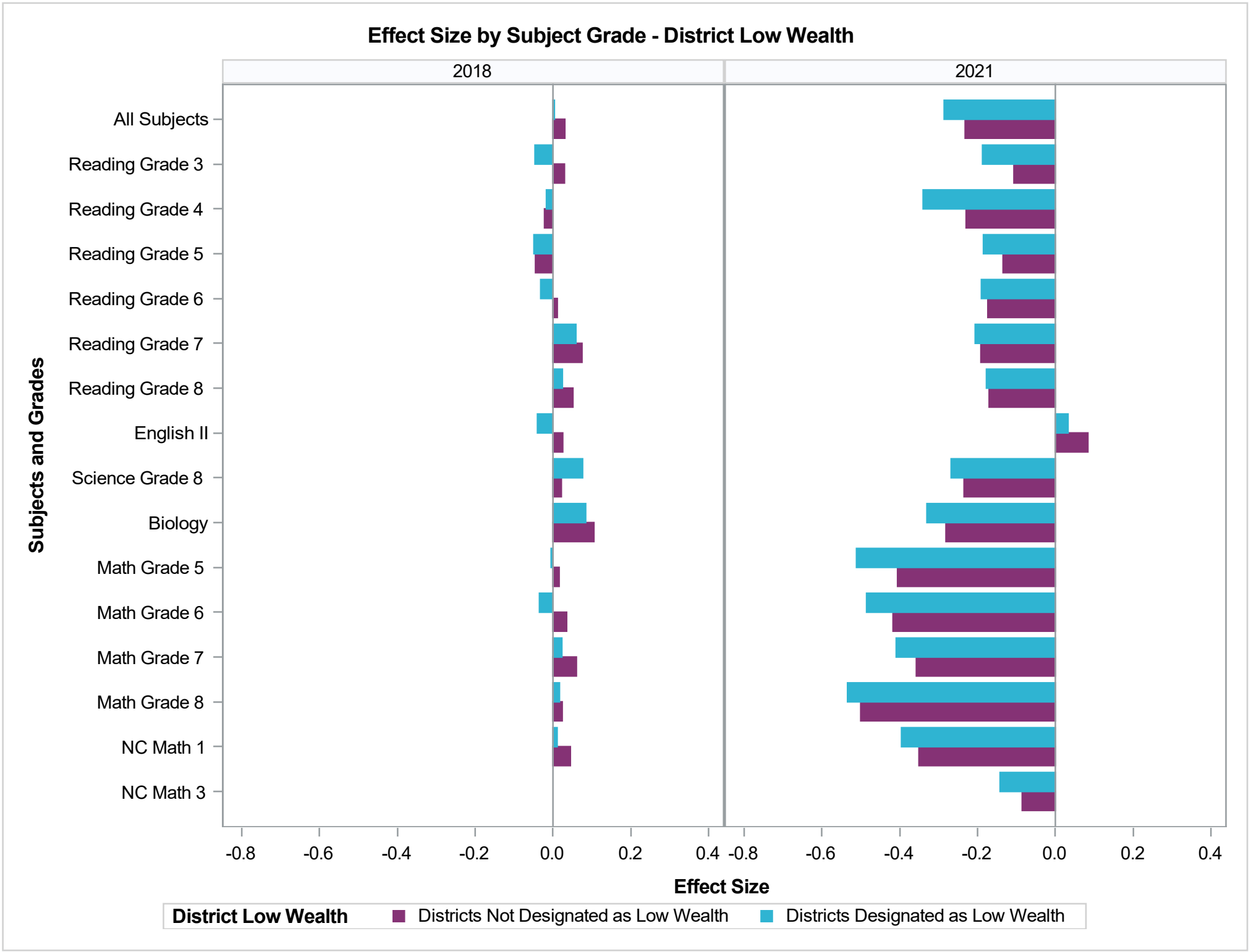

Effect Size by Subject Grade - Percentage Remote Quintile
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Percentage Remote Quintile
1 (Lowest)
2
3
4
5 (Highest)

Effect Size by Subject Grade - Percentage Remote Quintile - 2021

	Percentage Remote Quintile								
	1 (Lowest)			2			3		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.20	0.0011	277006	-0.24	0.0012	248110	-0.27	0.0010	306516
Reading Grade 3	-0.08	0.0054	16068	-0.10	0.0049	19466	-0.13	0.0050	18500
Reading Grade 4	-0.21	0.0052	16455	-0.23	0.0047	20000	-0.29	0.0049	18755
Reading Grade 5	-0.12	0.0039	18861	-0.15	0.0036	21138	-0.17	0.0038	19172
Reading Grade 6	-0.17	0.0035	19649	-0.20	0.0039	16204	-0.20	0.0034	21454
Reading Grade 7	-0.19	0.0033	20548	-0.22	0.0038	16132	-0.21	0.0032	22779
Reading Grade 8	-0.16	0.0033	19867	-0.19	0.0037	16315	-0.19	0.0032	22166
English II	0.09	0.0033	18752	0.05	0.0038	14519	0.04	0.0032	20716
Science Grade 8	-0.20	0.0038	20013	-0.23	0.0041	16430	-0.24	0.0035	22208
Biology	-0.23	0.0038	16942	-0.28	0.0042	13846	-0.32	0.0036	20182
Math Grade 5	-0.35	0.0045	18852	-0.40	0.0043	21148	-0.47	0.0044	19162
Math Grade 6	-0.36	0.0040	19639	-0.40	0.0043	16179	-0.46	0.0037	21461
Math Grade 7	-0.30	0.0037	20546	-0.35	0.0042	16092	-0.38	0.0035	22764
Math Grade 8	-0.41	0.0054	14554	-0.48	0.0057	12363	-0.52	0.0051	14767
NC Math 1	-0.26	0.0039	19478	-0.34	0.0043	15732	-0.39	0.0035	23321
NC Math 3	-0.02	0.0045	16782	-0.08	0.0051	12546	-0.12	0.0042	19109

Effect Size by Subject Grade - Percentage Remote Quintile - 2021

Percentage Remote Quintile					
4			5 (Highest)		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
-0.25	0.0011	284137	-0.31	0.0010	331411
-0.15	0.0044	23568	-0.29	0.0066	11632
-0.28	0.0043	24194	-0.42	0.0062	12185
-0.15	0.0033	25145	-0.21	0.0046	13106
-0.16	0.0037	16955	-0.18	0.0032	24365
-0.17	0.0036	17623	-0.20	0.0030	26400
-0.15	0.0035	17240	-0.17	0.0030	25117
0.06	0.0034	18528	0.07	0.0027	29237
-0.22	0.0039	17369	-0.34	0.0033	25197
-0.30	0.0037	18000	-0.34	0.0031	28060
-0.44	0.0039	25091	-0.67	0.0053	13070
-0.45	0.0042	16941	-0.54	0.0036	24307
-0.40	0.0040	17615	-0.44	0.0033	26327
-0.54	0.0057	11263	-0.63	0.0047	16787
-0.39	0.0040	18011	-0.43	0.0032	29072
-0.12	0.0045	16594	-0.17	0.0036	26549

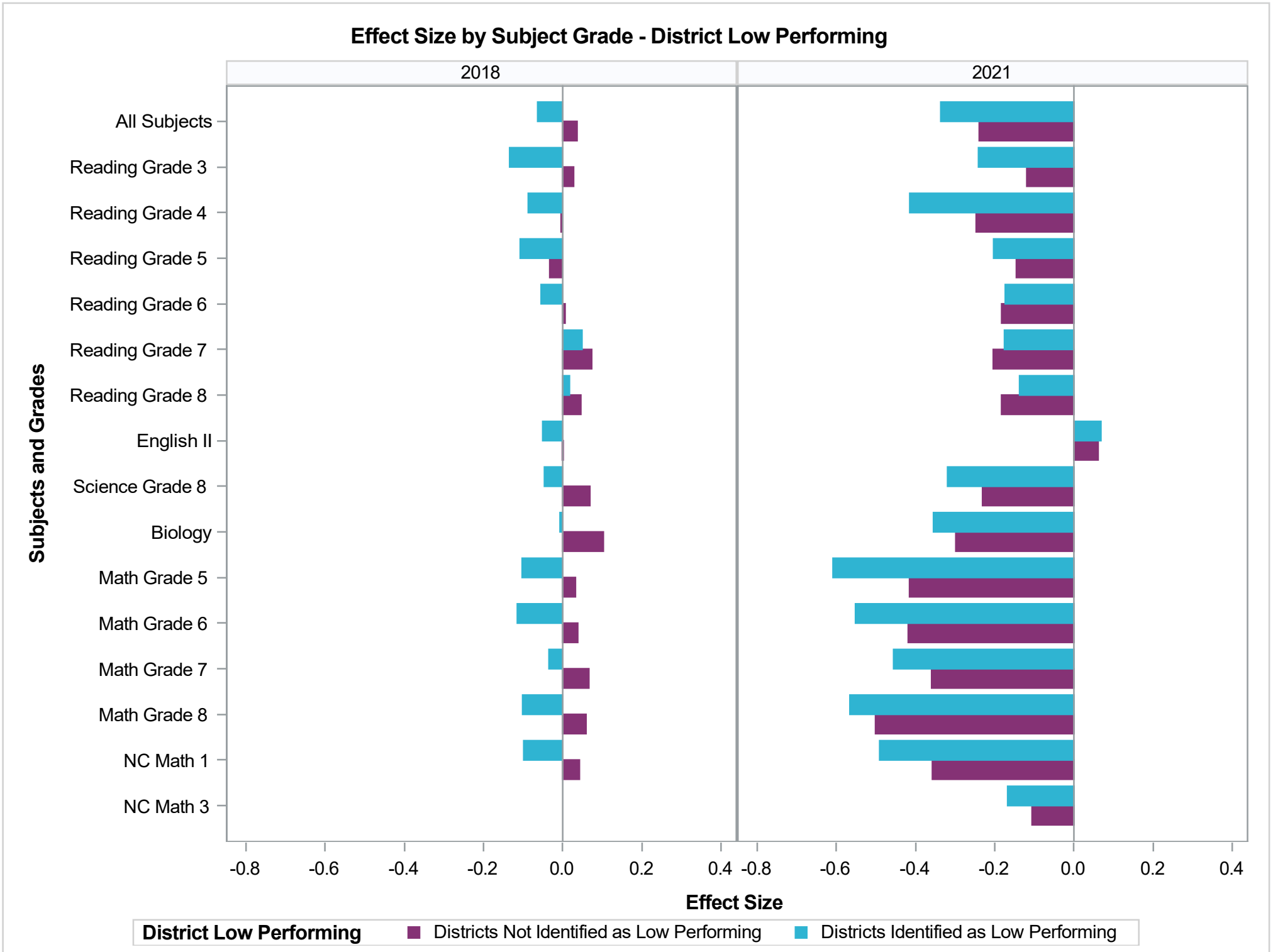

Effect Size by Subject Grade - District Low Wealth
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
District Low Wealth
Districts Not Designated as Low Wealth
Districts Designated as Low Wealth

Effect Size by Subject Grade - District Low Wealth - 2018

	District Low Wealth					
	Districts Designated as Low Wealth			Districts Not Designated as Low Wealth		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.00	0.0007	625254	0.03	0.0006	834700
Reading Grade 3	-0.05	0.0029	46308	0.03	0.0026	60167
Reading Grade 4	-0.02	0.0023	47944	-0.02	0.0020	64406
Reading Grade 5	-0.05	0.0023	46877	-0.04	0.0019	62584
Reading Grade 6	-0.03	0.0022	46458	0.01	0.0018	64127
Reading Grade 7	0.06	0.0023	44030	0.07	0.0019	60700
Reading Grade 8	0.02	0.0024	41597	0.05	0.0020	57108
English II	-0.04	0.0022	47447	0.03	0.0019	59505
Science Grade 8	0.08	0.0026	41760	0.02	0.0021	57250
Biology	0.08	0.0025	45050	0.11	0.0021	60408
Math Grade 5	-0.00	0.0024	46797	0.02	0.0020	62519
Math Grade 6	-0.03	0.0023	46431	0.03	0.0020	64062
Math Grade 7	0.02	0.0023	43954	0.06	0.0019	60634
Math Grade 8	0.02	0.0030	32160	0.02	0.0028	37091
NC Math 1	0.01	0.0023	48441	0.04	0.0020	64139

Effect Size by Subject Grade - District Low Wealth - 2021

	District Low Wealth					
	Districts Designated as Low Wealth			Districts Not Designated as Low Wealth		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.29	0.0007	629569	-0.23	0.0006	817794
Reading Grade 3	-0.19	0.0034	38979	-0.11	0.0031	50257
Reading Grade 4	-0.34	0.0033	40352	-0.23	0.0030	51239
Reading Grade 5	-0.18	0.0026	41433	-0.13	0.0022	56012
Reading Grade 6	-0.19	0.0024	42531	-0.17	0.0021	56116
Reading Grade 7	-0.21	0.0023	44969	-0.19	0.0020	58531
Reading Grade 8	-0.18	0.0022	44294	-0.17	0.0020	56430
English II	0.03	0.0022	43880	0.08	0.0019	57872
Science Grade 8	-0.27	0.0025	44662	-0.23	0.0022	56574
Biology	-0.33	0.0025	40659	-0.28	0.0021	56371
Math Grade 5	-0.51	0.0030	41411	-0.41	0.0026	55935
Math Grade 6	-0.49	0.0026	42529	-0.42	0.0024	56018
Math Grade 7	-0.41	0.0025	44969	-0.36	0.0022	58393
Math Grade 8	-0.53	0.0034	33949	-0.50	0.0033	35802
NC Math 1	-0.40	0.0024	46228	-0.35	0.0023	59388
NC Math 3	-0.14	0.0029	38724	-0.09	0.0026	52856

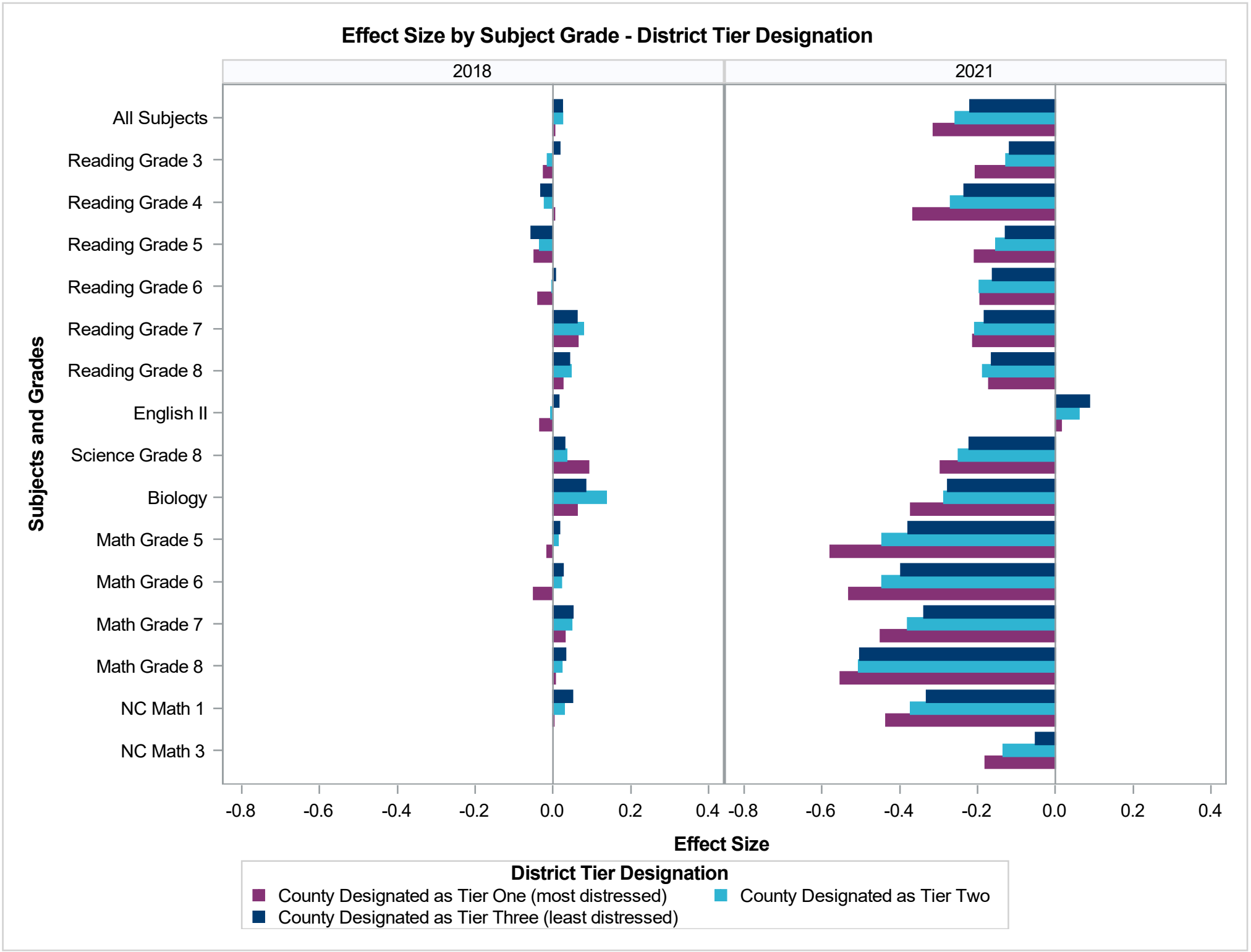

Effect Size by Subject Grade - District Low Performing
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
District Low Performing
Districts Not Identified as Low Performing
Districts Identified as Low Performing

Effect Size by Subject Grade - District Low Performing - 2018

	District Low Performing					
	Districts Identified as Low Performing			Districts Not Identified as Low Performing		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.06	0.0010	254540	0.04	0.0005	1205414
Reading Grade 3	-0.13	0.0044	20393	0.03	0.0021	86082
Reading Grade 4	-0.09	0.0035	21185	-0.00	0.0017	91165
Reading Grade 5	-0.11	0.0035	20430	-0.03	0.0016	89031
Reading Grade 6	-0.05	0.0032	23410	0.01	0.0016	87175
Reading Grade 7	0.05	0.0032	22515	0.07	0.0016	82215
Reading Grade 8	0.02	0.0034	20730	0.05	0.0017	77975
English II	-0.05	0.0062	6160	-0.00	0.0015	100792
Science Grade 8	-0.05	0.0037	20816	0.07	0.0018	78194
Biology	-0.01	0.0070	6287	0.10	0.0016	99171
Math Grade 5	-0.10	0.0037	20374	0.03	0.0017	88942
Math Grade 6	-0.11	0.0033	23361	0.04	0.0017	87132
Math Grade 7	-0.03	0.0032	22465	0.07	0.0016	82123
Math Grade 8	-0.10	0.0041	16664	0.06	0.0023	52587
NC Math 1	-0.10	0.0050	9750	0.04	0.0016	102830

Effect Size by Subject Grade - District Low Performing - 2021

	District Low Performing					
	Districts Identified as Low Performing			Districts Not Identified as Low Performing		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.34	0.0012	240593	-0.24	0.0005	1206770
Reading Grade 3	-0.24	0.0053	16581	-0.12	0.0025	72655
Reading Grade 4	-0.41	0.0052	17016	-0.25	0.0025	74575
Reading Grade 5	-0.20	0.0040	17760	-0.15	0.0019	79685
Reading Grade 6	-0.17	0.0035	20793	-0.18	0.0018	77854
Reading Grade 7	-0.18	0.0033	21932	-0.20	0.0017	81568
Reading Grade 8	-0.14	0.0033	21018	-0.18	0.0017	79706
English II	0.07	0.0059	6160	0.06	0.0015	95592
Science Grade 8	-0.32	0.0037	21148	-0.23	0.0019	80088
Biology	-0.35	0.0064	5731	-0.30	0.0017	91299
Math Grade 5	-0.61	0.0044	17758	-0.42	0.0022	79588
Math Grade 6	-0.55	0.0037	20767	-0.42	0.0020	77780
Math Grade 7	-0.46	0.0036	21895	-0.36	0.0019	81467
Math Grade 8	-0.57	0.0046	16810	-0.50	0.0028	52941
NC Math 1	-0.49	0.0055	10084	-0.36	0.0018	95532
NC Math 3	-0.17	0.0078	5140	-0.11	0.0020	86440

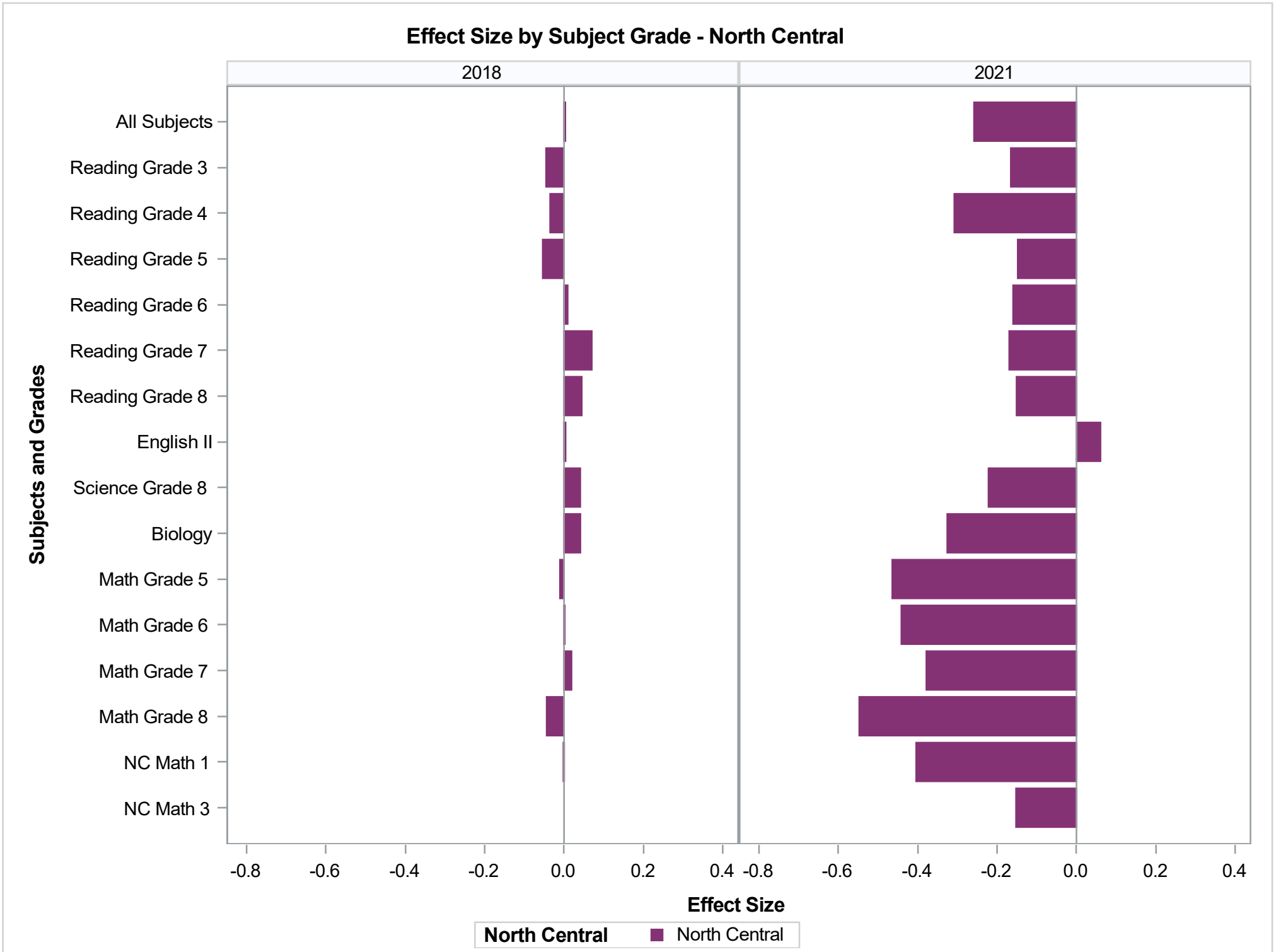

Effect Size by Subject Grade - District Tier Designation
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
District Tier Designation
County Designated as Tier One (most distressed)
County Designated as Tier Two
County Designated as Tier Three (least distressed)

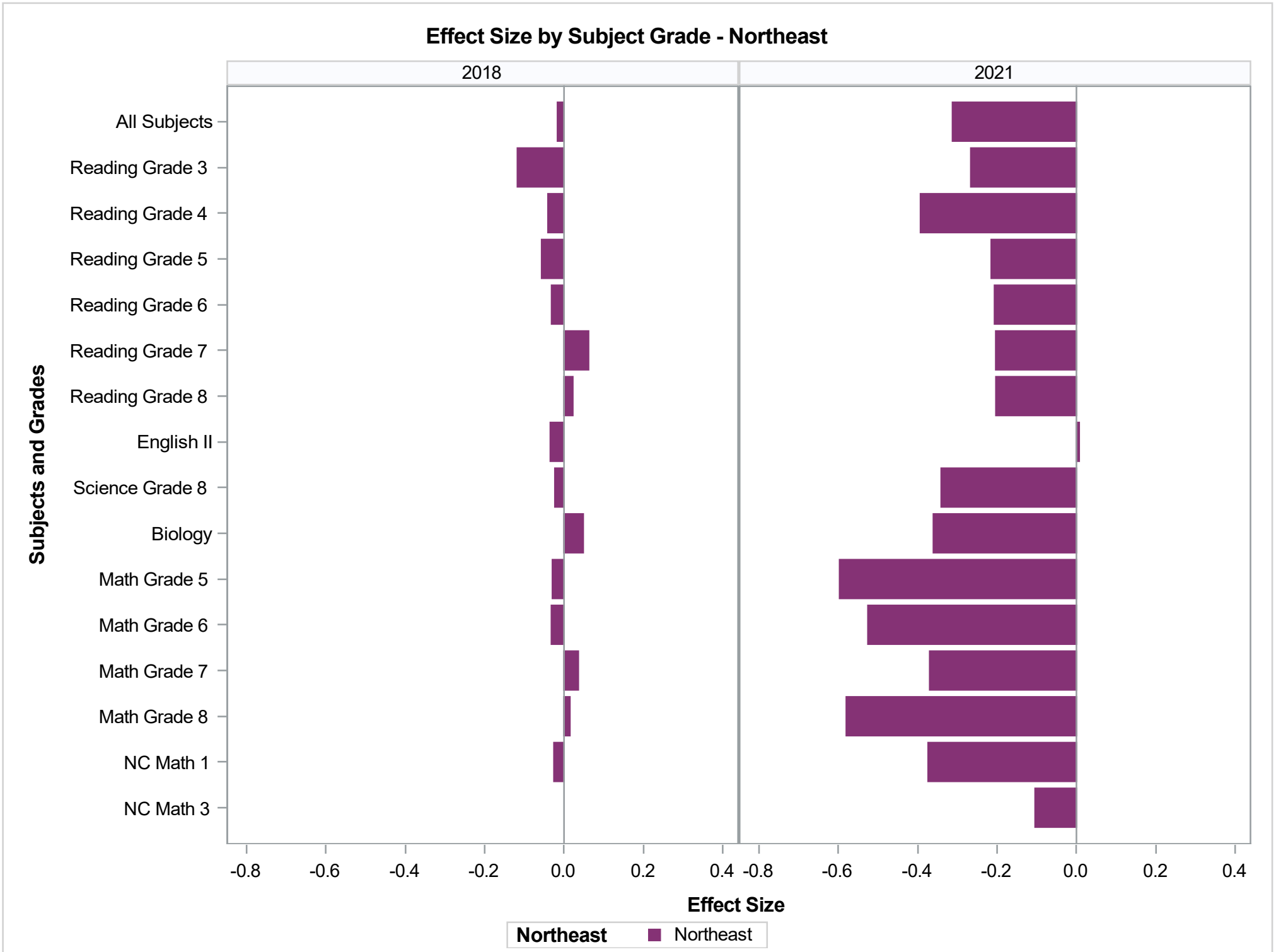
Effect Size by Subject Grade - District Tier Designation - 2018

	District Tier Designation								
	County Designated as Tier One (most distressed)			County Designated as Tier Three (least distressed)			County Designated as Tier Two		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.00	0.0009	346295	0.02	0.0006	607345	0.02	0.0007	502121
Reading Grade 3	-0.02	0.0040	24890	0.02	0.0030	44540	-0.01	0.0033	36907
Reading Grade 4	0.00	0.0031	26434	-0.03	0.0023	46808	-0.02	0.0026	38879
Reading Grade 5	-0.05	0.0031	25953	-0.06	0.0022	45411	-0.03	0.0025	37854
Reading Grade 6	-0.04	0.0030	25811	0.01	0.0022	46620	-0.00	0.0024	37867
Reading Grade 7	0.06	0.0030	24559	0.06	0.0022	43918	0.08	0.0025	35926
Reading Grade 8	0.03	0.0032	23119	0.04	0.0023	41540	0.05	0.0027	33695
English II	-0.03	0.0029	26186	0.01	0.0022	43656	-0.01	0.0025	36771
Science Grade 8	0.09	0.0035	23219	0.03	0.0025	41636	0.04	0.0028	33803
Biology	0.06	0.0034	25295	0.08	0.0024	43766	0.14	0.0028	36002
Math Grade 5	-0.02	0.0032	25900	0.02	0.0024	45362	0.01	0.0026	37813
Math Grade 6	-0.05	0.0031	25788	0.03	0.0023	46564	0.02	0.0026	37857
Math Grade 7	0.03	0.0031	24503	0.05	0.0022	43875	0.05	0.0025	35887
Math Grade 8	0.01	0.0041	17507	0.03	0.0033	26766	0.02	0.0034	24670
NC Math 1	0.00	0.0031	27131	0.05	0.0023	46883	0.03	0.0026	38190

Effect Size by Subject Grade - District Tier Designation - 2021

	District Tier Designation								
	County Designated as Tier One (most distressed)			County Designated as Tier Three (least distressed)			County Designated as Tier Two		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.31	0.0010	348217	-0.22	0.0007	586939	-0.26	0.0008	507109
Reading Grade 3	-0.21	0.0047	21129	-0.12	0.0036	36493	-0.13	0.0039	31514
Reading Grade 4	-0.37	0.0045	21729	-0.23	0.0035	37404	-0.27	0.0037	32308
Reading Grade 5	-0.21	0.0035	23137	-0.13	0.0026	39870	-0.15	0.0029	34144
Reading Grade 6	-0.19	0.0033	23804	-0.16	0.0025	39715	-0.20	0.0027	34746
Reading Grade 7	-0.21	0.0030	25298	-0.18	0.0023	41435	-0.21	0.0026	36359
Reading Grade 8	-0.17	0.0030	24497	-0.16	0.0023	40037	-0.19	0.0025	35803
English II	0.01	0.0030	23794	0.09	0.0022	42497	0.06	0.0024	35052
Science Grade 8	-0.30	0.0034	24749	-0.22	0.0026	40081	-0.25	0.0028	36013
Biology	-0.37	0.0033	22421	-0.28	0.0025	41252	-0.29	0.0028	32937
Math Grade 5	-0.58	0.0040	23112	-0.38	0.0031	39800	-0.45	0.0033	34141
Math Grade 6	-0.53	0.0035	23758	-0.40	0.0028	39657	-0.45	0.0029	34752
Math Grade 7	-0.45	0.0033	25260	-0.34	0.0027	41332	-0.38	0.0028	36362
Math Grade 8	-0.55	0.0046	18324	-0.50	0.0040	24714	-0.51	0.0039	26385
NC Math 1	-0.44	0.0032	25984	-0.33	0.0027	43381	-0.37	0.0029	35865
NC Math 3	-0.18	0.0039	21221	-0.05	0.0030	39271	-0.13	0.0033	30728


Effect Size by Subject Grade - North Central
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
North Central
North Central


Effect Size by Subject Grade - Northeast
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
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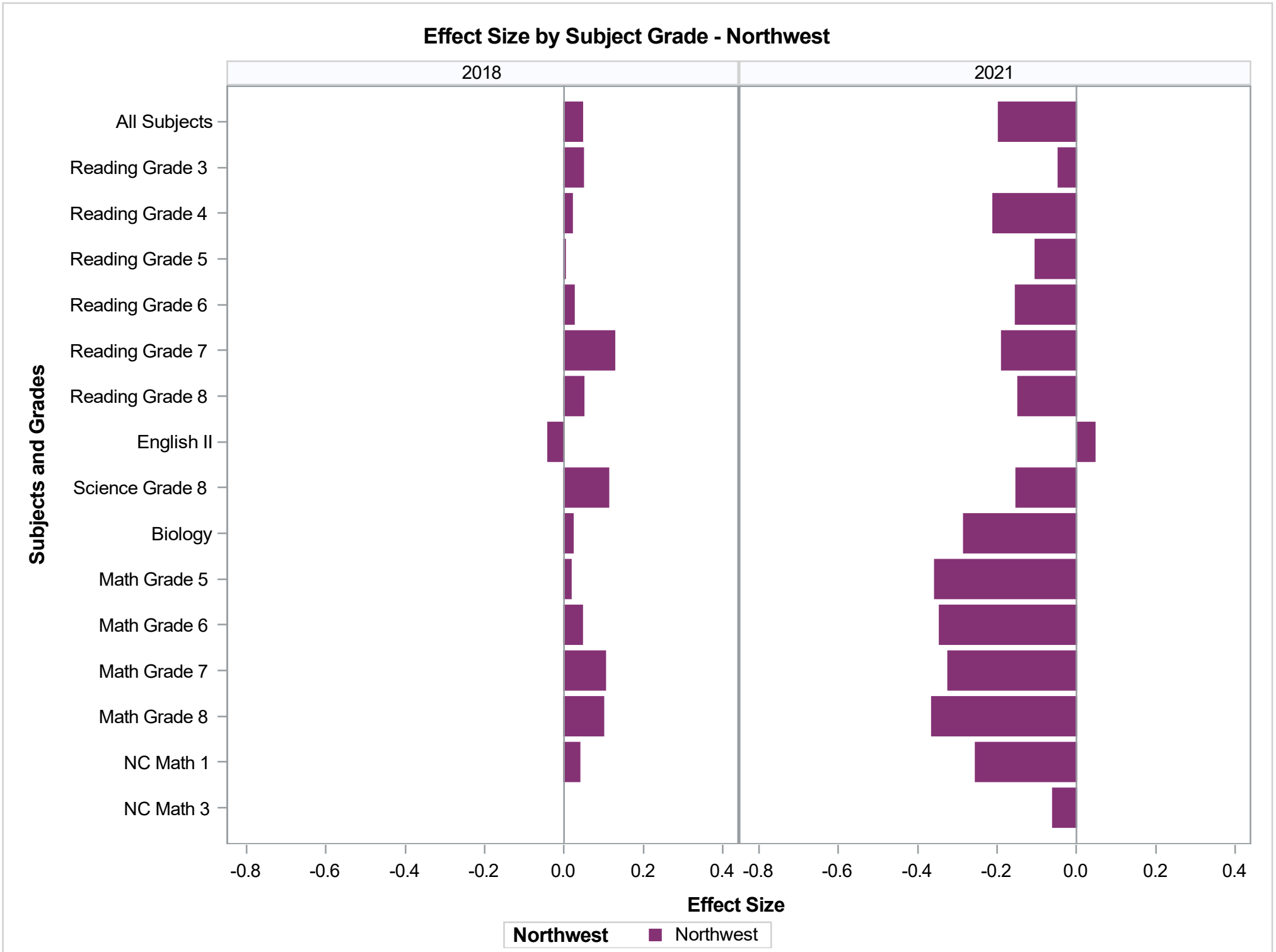
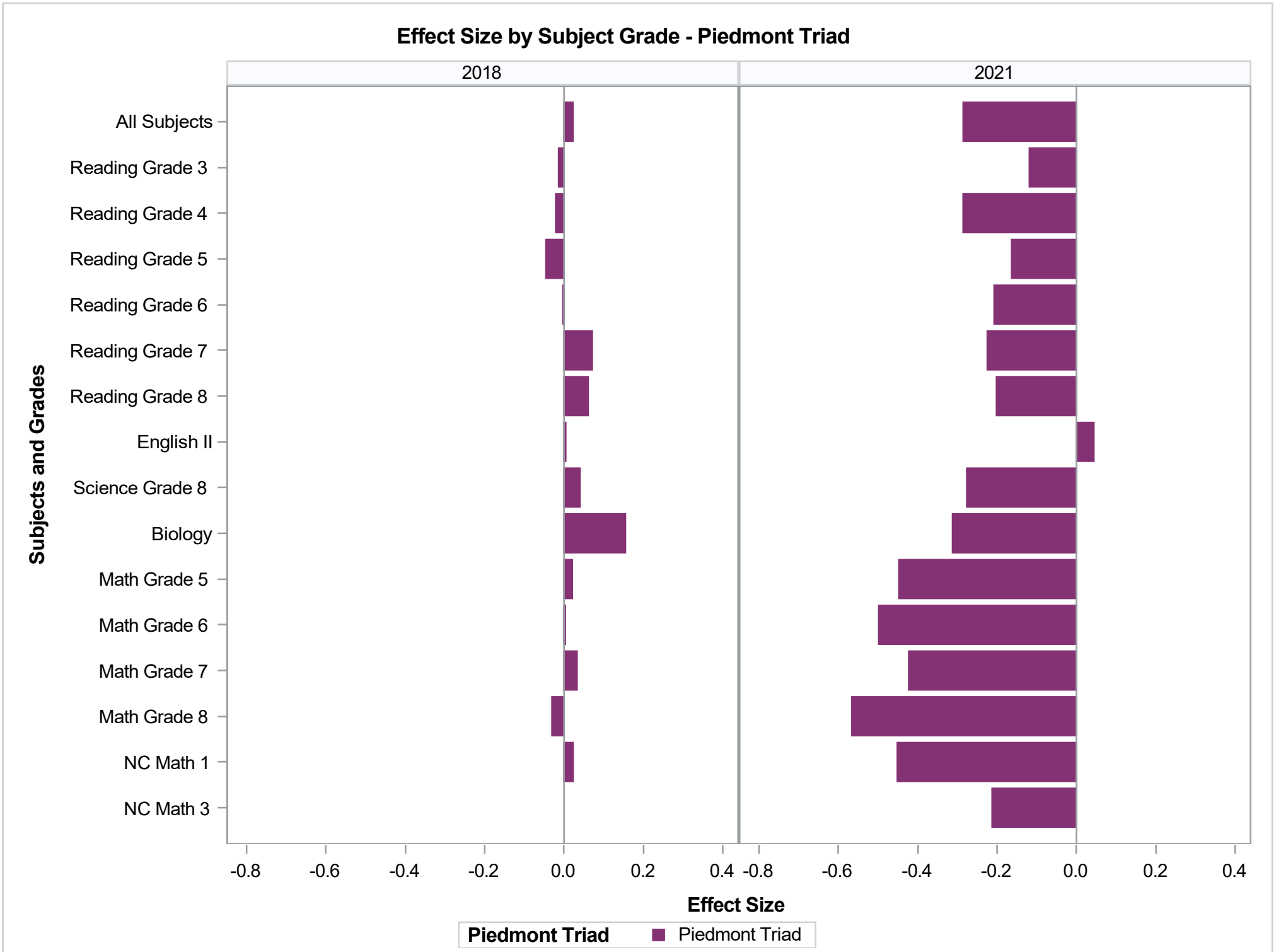
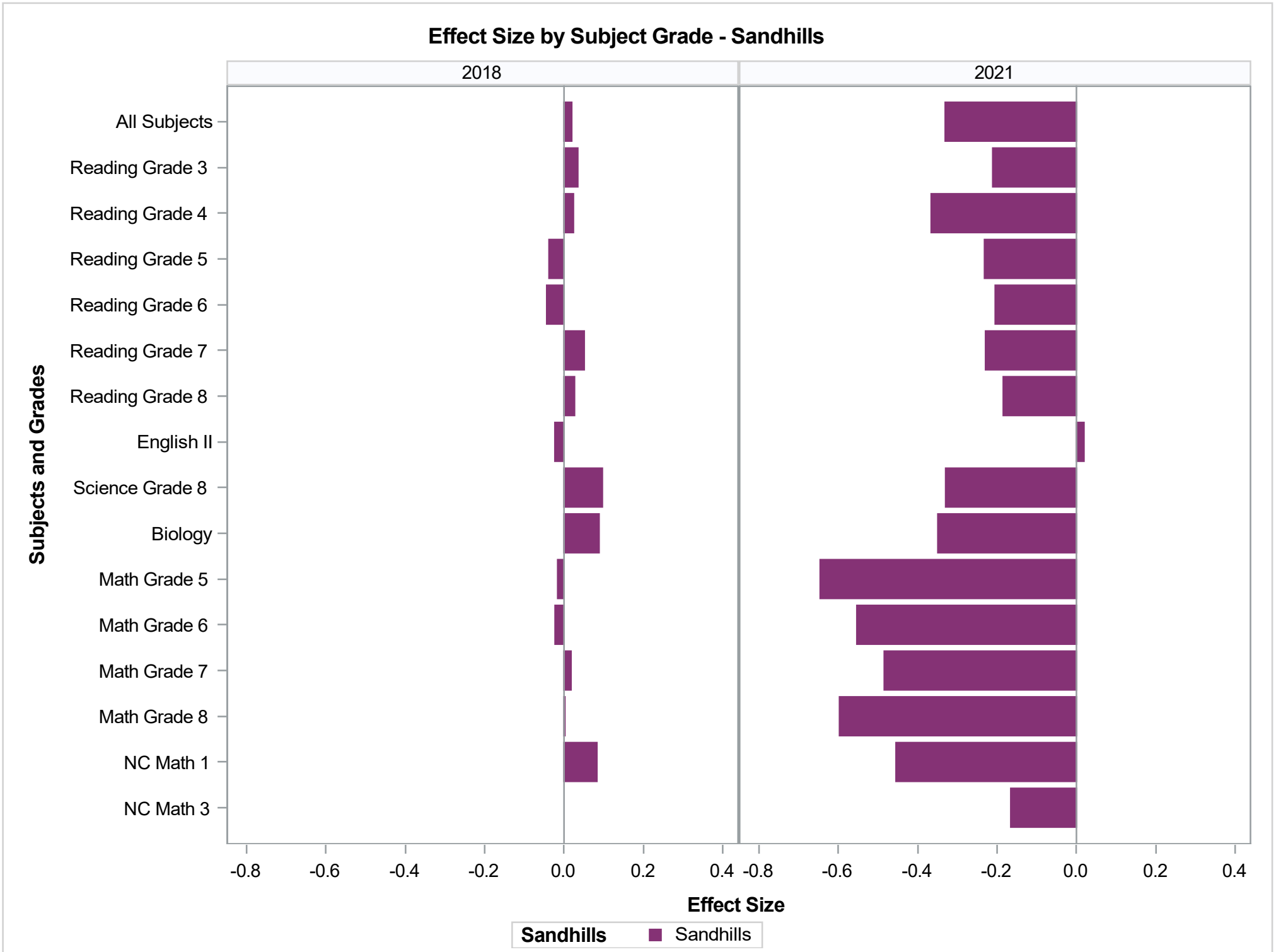
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Northeast
Northeast


Effect Size by Subject Grade - Northwest
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Northwest
Northwest


Effect Size by Subject Grade - Piedmont Triad
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Piedmont Triad
Piedmont Triad


Effect Size by Subject Grade - Sandhills
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
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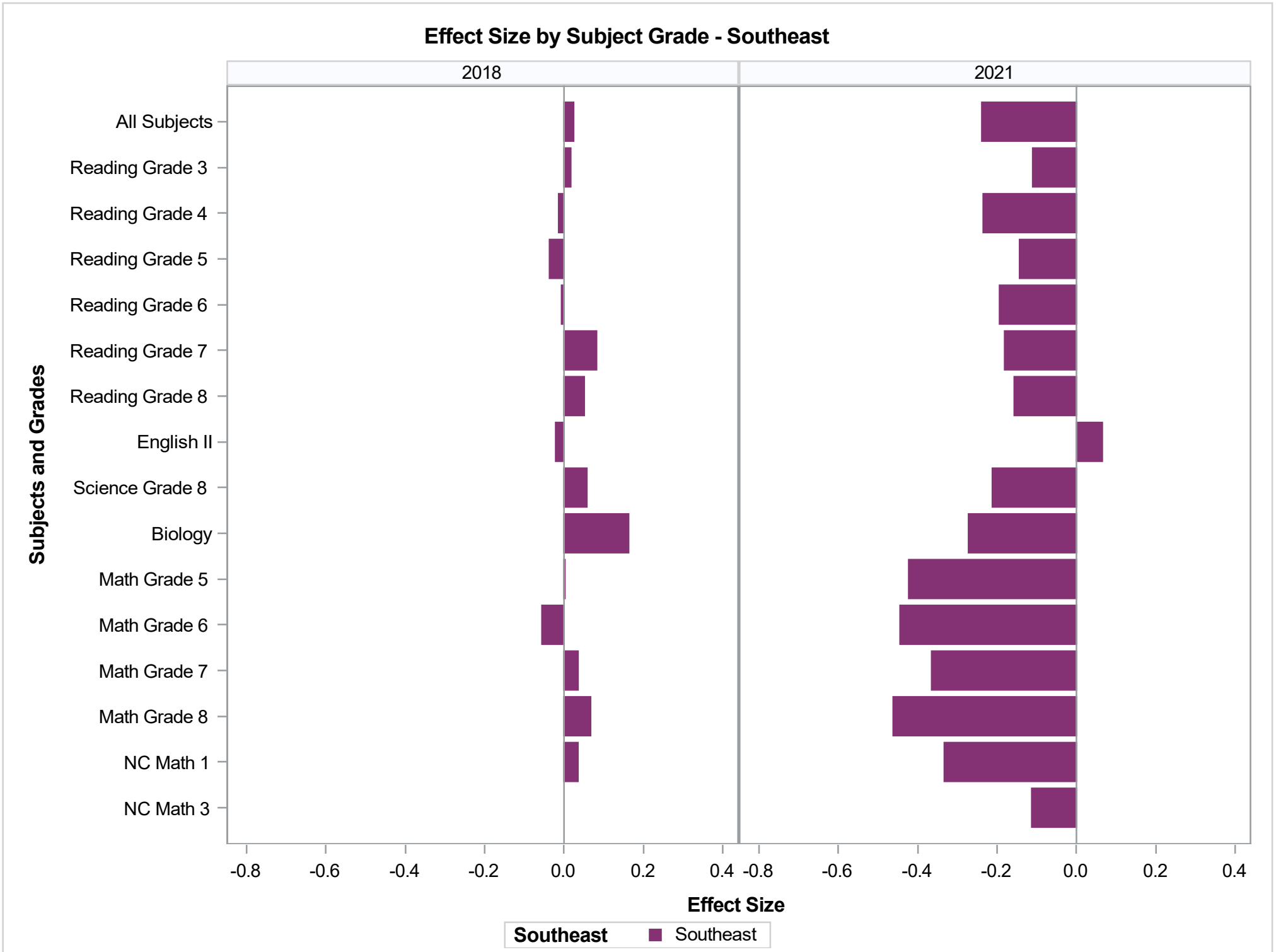
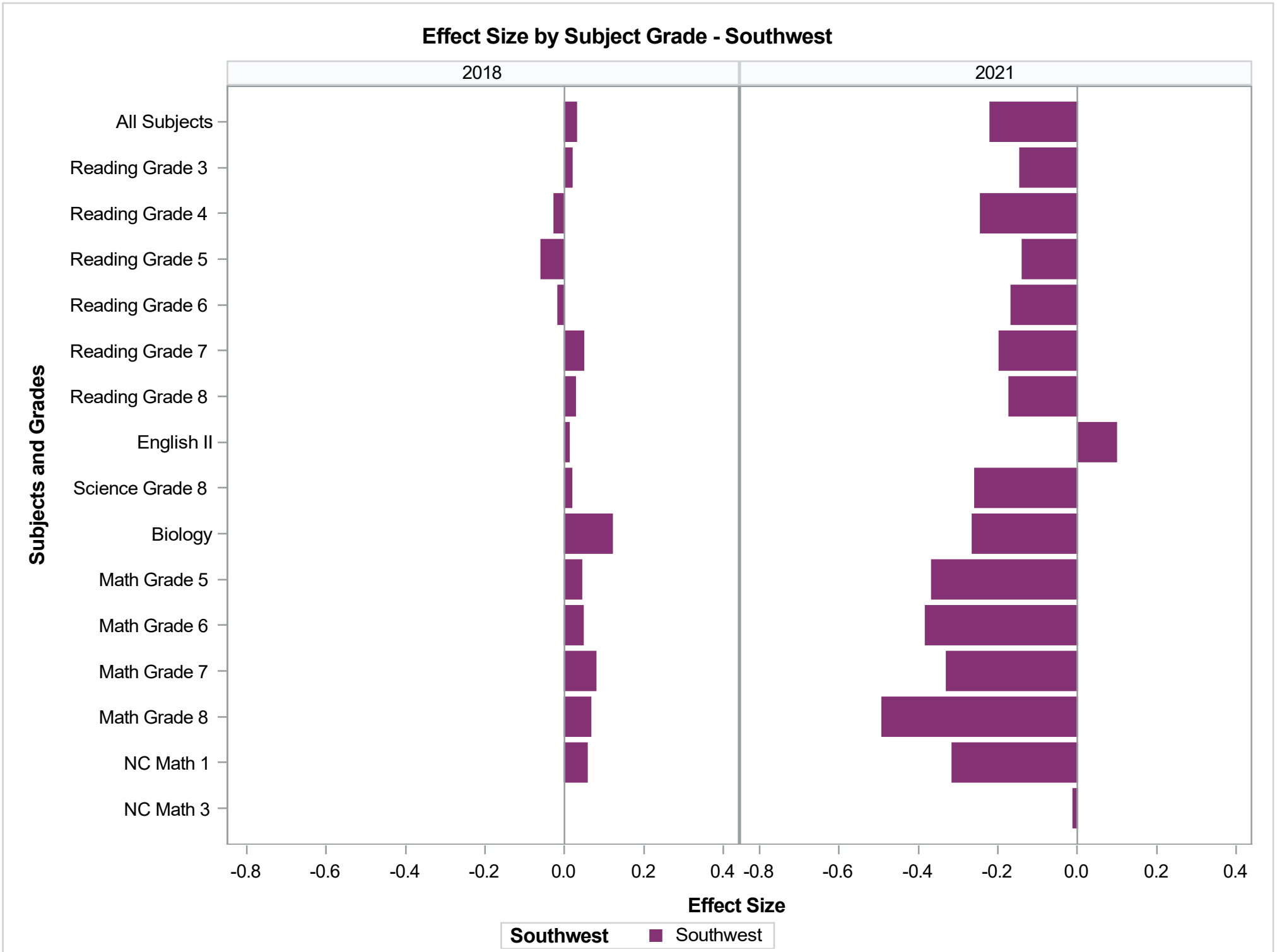
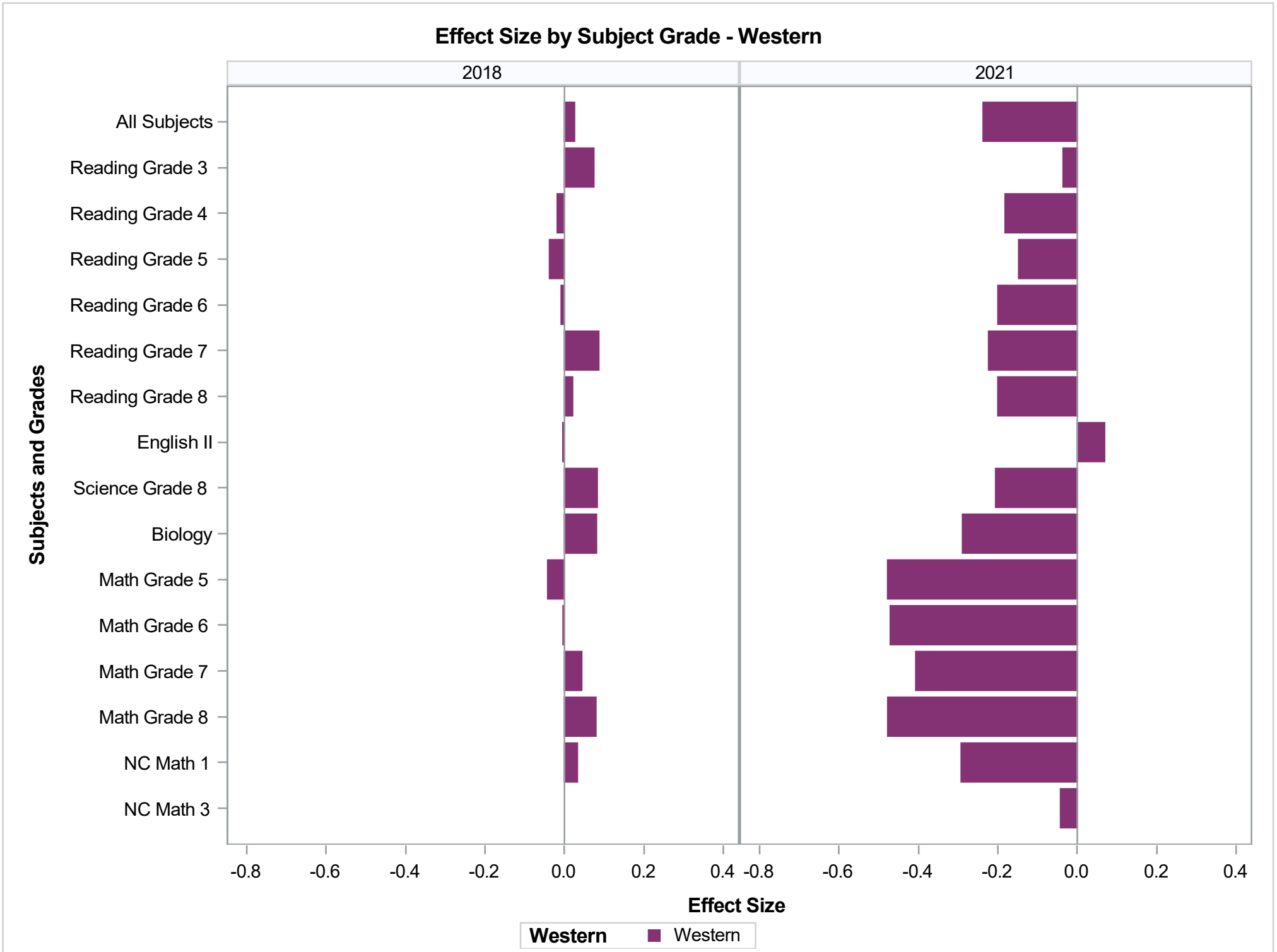
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Sandhills
Sandhills


Effect Size by Subject Grade - Southeast
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Southeast
Southeast


Effect Size by Subject Grade - Southwest
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Southwest
Southwest


Effect Size by Subject Grade - Western
2018
2021
All Subjects
Reading Grade 3
Reading Grade 4
Reading Grade 5
Reading Grade 6
Reading Grade 7
Reading Grade 8
English II
Science Grade 8
Biology
Math Grade 5
Math Grade 6
Math Grade 7
Math Grade 8
NC Math 1
NC Math 3
Subjects and Grades
-0.8
-0.6
-0.4
-0.2
0.0
0.2
0.4
Effect Size
Western
Western

Effect Size by Subject Grade - SBE Region - 2018

	SBE Region											
	North Central			Northeast			Northwest			Piedmont Triad		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	0.00	0.0008	364270	-0.02	0.0019	70890	0.05	0.0017	82763	0.02	0.0010	244200
Reading Grade 3	-0.05	0.0039	26702	-0.12	0.0091	5065	0.05	0.0080	5784	-0.01	0.0048	17643
Reading Grade 4	-0.04	0.0030	28155	-0.04	0.0069	5444	0.02	0.0063	6204	-0.02	0.0037	18669
Reading Grade 5	-0.05	0.0029	27619	-0.06	0.0067	5358	0.00	0.0062	6131	-0.05	0.0036	18012
Reading Grade 6	0.01	0.0028	27926	-0.03	0.0065	5265	0.03	0.0058	6233	-0.00	0.0035	18300
Reading Grade 7	0.07	0.0029	25990	0.06	0.0068	4987	0.13	0.0060	5965	0.07	0.0036	17597
Reading Grade 8	0.04	0.0030	24864	0.02	0.0070	4785	0.05	0.0065	5464	0.06	0.0038	16623
English II	0.00	0.0029	26586	-0.03	0.0062	5425	-0.04	0.0059	6226	0.00	0.0035	18164
Science Grade 8	0.04	0.0032	24936	-0.02	0.0076	4793	0.11	0.0066	5483	0.04	0.0041	16656
Biology	0.04	0.0032	26339	0.05	0.0073	5054	0.02	0.0063	6142	0.15	0.0039	18403
Math Grade 5	-0.01	0.0031	27584	-0.03	0.0070	5350	0.02	0.0064	6123	0.02	0.0037	17987
Math Grade 6	-0.00	0.0030	27888	-0.03	0.0069	5262	0.05	0.0060	6228	0.00	0.0037	18290
Math Grade 7	0.02	0.0029	25953	0.04	0.0068	4976	0.10	0.0060	5953	0.03	0.0036	17580
Math Grade 8	-0.04	0.0043	15470	0.01	0.0094	3354	0.10	0.0075	4562	-0.03	0.0050	11206
NC Math 1	-0.00	0.0029	28258	-0.03	0.0066	5772	0.04	0.0062	6265	0.02	0.0037	19070

Effect Size by Subject Grade - SBE Region - 2018

SBE Region											
Sandhills			Southeast			Southwest			Western		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
0.02	0.0015	124999	0.02	0.0014	133708	0.03	0.0009	356336	0.03	0.0018	82788
0.03	0.0066	9357	0.02	0.0064	10105	0.02	0.0039	26148	0.07	0.0084	5671
0.02	0.0052	9624	-0.01	0.0049	10584	-0.03	0.0031	27220	-0.02	0.0064	6450
-0.04	0.0051	9386	-0.04	0.0048	10300	-0.06	0.0030	26421	-0.04	0.0063	6234
-0.04	0.0050	9490	-0.01	0.0047	10166	-0.02	0.0029	27077	-0.01	0.0059	6128
0.05	0.0051	8815	0.08	0.0048	9516	0.05	0.0029	25964	0.09	0.0060	5896
0.03	0.0053	8310	0.05	0.0052	8590	0.03	0.0031	24347	0.02	0.0066	5722
-0.02	0.0048	9214	-0.02	0.0047	9529	0.01	0.0029	25610	-0.00	0.0060	6198
0.10	0.0059	8364	0.06	0.0055	8628	0.02	0.0033	24408	0.08	0.0067	5742
0.09	0.0058	8850	0.16	0.0055	9316	0.12	0.0032	25393	0.08	0.0064	5961
-0.02	0.0054	9366	0.00	0.0051	10294	0.04	0.0031	26382	-0.04	0.0063	6230
-0.02	0.0051	9484	-0.06	0.0049	10165	0.05	0.0031	27044	-0.00	0.0061	6132
0.02	0.0051	8796	0.04	0.0049	9505	0.08	0.0029	25938	0.04	0.0061	5887
0.00	0.0067	6530	0.07	0.0064	6816	0.07	0.0042	17077	0.08	0.0081	4236
0.08	0.0058	9413	0.04	0.0051	10194	0.06	0.0031	27307	0.03	0.0064	6301

Effect Size by Subject Grade - SBE Region - 2021

	SBE Region											
	North Central			Northeast			Northwest			Piedmont Triad		
Assessment	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
All Subjects	-0.26	0.0010	343780	-0.31	0.0022	69391	-0.20	0.0019	83209	-0.29	0.0012	242135
Reading Grade 3	-0.17	0.0047	21079	-0.27	0.0103	4241	-0.05	0.0093	5176	-0.12	0.0056	15229
Reading Grade 4	-0.31	0.0046	21868	-0.39	0.0102	4323	-0.21	0.0090	5099	-0.29	0.0054	15506
Reading Grade 5	-0.15	0.0034	23723	-0.21	0.0079	4600	-0.10	0.0072	5275	-0.16	0.0041	16504
Reading Grade 6	-0.16	0.0032	23761	-0.21	0.0071	4754	-0.15	0.0066	5538	-0.21	0.0039	16719
Reading Grade 7	-0.17	0.0031	24071	-0.20	0.0066	5111	-0.19	0.0062	5988	-0.22	0.0037	17465
Reading Grade 8	-0.15	0.0031	23254	-0.20	0.0067	4917	-0.15	0.0060	5962	-0.20	0.0037	17009
English II	0.06	0.0030	24853	0.01	0.0065	4740	0.05	0.0060	5832	0.04	0.0036	16548
Science Grade 8	-0.22	0.0034	23301	-0.34	0.0076	4951	-0.15	0.0066	6001	-0.28	0.0040	17033
Biology	-0.33	0.0033	23962	-0.36	0.0072	4420	-0.28	0.0066	5430	-0.31	0.0040	16122
Math Grade 5	-0.46	0.0040	23692	-0.60	0.0090	4588	-0.36	0.0083	5275	-0.45	0.0048	16499
Math Grade 6	-0.44	0.0035	23749	-0.53	0.0081	4735	-0.34	0.0072	5541	-0.50	0.0043	16698
Math Grade 7	-0.38	0.0035	23992	-0.37	0.0075	5109	-0.32	0.0066	5984	-0.42	0.0040	17449
Math Grade 8	-0.55	0.0051	14074	-0.58	0.0101	3818	-0.36	0.0089	5034	-0.57	0.0057	11323
NC Math 1	-0.40	0.0033	25959	-0.37	0.0077	4882	-0.25	0.0066	6208	-0.45	0.0042	16933
NC Math 3	-0.15	0.0039	22442	-0.10	0.0087	4202	-0.06	0.0081	4866	-0.21	0.0046	15098

Effect Size by Subject Grade - SBE Region - 2021

SBE Region											
Sandhills			Southeast			Southwest			Western		
Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N	Effect Size	Std Error of Effect Size	N
-0.33	0.0016	127399	-0.24	0.0015	136379	-0.22	0.0010	362451	-0.24	0.0020	82619
-0.21	0.0076	7993	-0.11	0.0074	8327	-0.14	0.0046	22226	-0.04	0.0096	4965
-0.37	0.0075	8324	-0.23	0.0071	8748	-0.24	0.0045	22700	-0.18	0.0093	5023
-0.23	0.0058	8613	-0.14	0.0054	9247	-0.14	0.0034	23993	-0.15	0.0070	5490
-0.20	0.0054	8644	-0.19	0.0053	9144	-0.17	0.0031	24604	-0.20	0.0068	5483
-0.23	0.0050	9241	-0.18	0.0049	9826	-0.20	0.0030	25724	-0.22	0.0061	6074
-0.18	0.0051	8930	-0.16	0.0049	9805	-0.17	0.0030	25075	-0.20	0.0062	5772
0.02	0.0051	8486	0.07	0.0047	9294	0.10	0.0028	26146	0.07	0.0061	5853
-0.33	0.0058	9027	-0.21	0.0053	9923	-0.26	0.0033	25158	-0.21	0.0066	5842
-0.35	0.0058	7722	-0.27	0.0056	8574	-0.26	0.0032	25203	-0.29	0.0067	5597
-0.65	0.0066	8599	-0.42	0.0063	9215	-0.37	0.0041	23992	-0.48	0.0080	5486
-0.55	0.0059	8650	-0.44	0.0056	9139	-0.38	0.0037	24553	-0.47	0.0073	5482
-0.48	0.0054	9237	-0.36	0.0053	9818	-0.33	0.0034	25690	-0.41	0.0066	6083
-0.60	0.0075	6879	-0.46	0.0074	7772	-0.49	0.0050	16622	-0.48	0.0095	4229
-0.45	0.0055	9064	-0.33	0.0054	9943	-0.31	0.0034	26661	-0.29	0.0069	5966
-0.17	0.0067	7990	-0.11	0.0067	7604	-0.01	0.0038	24104	-0.04	0.0084	5274