Final Report

Study of the Alignment of Student Assignments to the Academic Standards in the State of Nevada (Senate Bill 184, Chapter 420, Statutes of Nevada 2007)

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December 19, 2008

Abstract

As part of a 100-school, statewide curriculum analysis project contracted by the Legislative Counsel Bureau, this report is a statistical study of student assignments collected from Nevada public school teachers. Funding for this project was provided through Senate Bill 184, Chapter 420, Statutes of Nevada 2007.

Using its Ruby™ curriculum analysis service, The Standards Company LLC collected and analyzed student assignments in English language arts and mathematics from grades 3-8 during the period of March 10 to May 2, 2008. The data displayed in the tables and figures in this final report are complete and indicate (1) the enacted curricula in both English language arts and mathematics miss the targeted grade level by wide margins, most notably in mathematics, (2) the depth-of-knowledge levels of low-performing schools in mathematics was significantly lower than high-performing schools, (3) letter grades received from students attending schools of low socioeconomic status were significantly higher than those attending schools of high socioeconomic status, and (4) a preponderance of collected assignments correlated to workbook samples completed independently.

The scope of this project was vast, generating hundreds of figures and tables that would be difficult to encompass in a single document of manageable size. For brevity, we have therefore included only those figures that (1) correspond to requirements stated in the original Request for Proposals or (2) illustrate what we think are exceptionally interesting results. This report and its executive summary are available at the Nevada Legislature website at http://www.leg.state.nv.us/lcb/fiscal

Contents

1 Introduction

1.1 The need to measure the enacted curriculum

The content taught to students on a daily basis (the enacted curriculum) significantly influences how much they learn. The enacted curriculum is an especially important indicator for analyzing the achievement gap between students. Even in cases where the adopted curriculum is fully aligned with state and national standards, there can be a sharp distinction between the enacted and adopted curriculum. The reasons for such a disparity are fourfold:

1. Teachers sometimes supplement state-adopted content when they feel it falls short of their own expectations of what constitutes rigorous content, or they weaken state-adopted content when they feel it is too difficult for their students.
2. Teachers often find curriculum that they feel compelled to deliver out of their own personal interests or the personal interests of their students.
3. Teachers' perceptions of what the standards expect them to teach may not match the intent of the standards writers.
4. Teachers may assign questions and problems that do not match the levels of rigor expected by the writers of the standards.

1.2 The scope of this *Ruby*™ report

In January 2008, the Legislative Counsel Bureau of the Nevada State Legislature, in response to enacted state legislation,[1] contracted with The Standards Company LLC to collect student work for grades 3–8 in the areas of mathematics and English language arts from 100 public schools throughout the state of Nevada. The service provided by The Standards Company LLC, titled *Ruby*™, analyzed the student assignments for the following issues:

1. Alignment—the percentage of student assignments that correspond to academic content standards is one of the most important factors in student success.
2. Extent of coverage (standard sampling)—one means of increasing student success is ensuring that they are taught content spanning a wide range of standards.
3. Cognitive rigor—higher-order thinking skills and sophisticated projects are essential elements of academic rigor.
4. Letter-grade analysis—measuring the enacted curriculum is one of the best ways to understand the sources of frustration when state test scores do not meet the achievement recorded in students' semester grades.

Statewide collection began in March 2008 and ended in May 2008. Each participating school collected student work for five consecutive days during this period.

As part of the project scope, each school participating in the study received an individual school report reflecting the student work collected from its own teaching staff, thus providing school staff with information covering a broad range of issues affecting student achievement.

[1] Senate Bill 184, Chapter 420, Statutes of Nevada 2007.

2 Discussion of Results

The research scope of The Standards Company LLC is centered on the belief that test scores are driven largely by two factors: curriculum and instruction. The most telling point in the delivery of both occurs at the point of contact between student and teacher, which is denoted with the term "enacted." The purpose of this study was to examine thoroughly the state of the enacted curriculum.

It is important to note that teachers, using data labels provided by The Standards Company LLC, provided much of the data tabulated in this analysis. As one example, teachers explicitly noted whether an assignment corresponded to a textbook, workbook, or quiz. Naturally, some of this (self-declared) data was more open to interpretation by the teacher than others.

Many of the results of this study provide significant insight into teaching practices in the state of Nevada. The following lists what the curriculum analysts at The Standards Company LLC consider to be the most telling results of the study. The final section of this report provides suggestions that the analysts think will help the state of Nevada improve the state of the enacted curriculum.

1. Alignment to standards was poor in English language arts and especially poor in mathematics. Although a majority of student work fell within one grade level above or below grade level standards, a large percentage was off grade level by at least two grade levels. For example, 18% of eighth-grade mathematics aligned to sixth-grade standards or lower.
2. The most marked drop in alignment for English language arts occurred in sixth grade. This was primarily due to a large percentage of fifth-grade content; in fact, fifth-grade content readily appeared throughout the higher grade levels, possibly indicating that a certain set of fifth-grade standards were repeatedly retaught. This trend appeared in all categories of schools.
3. Mathematics featured a consistent and marked decrease in alignment as the grade level increased, resulting in only 40% of assignments meeting grade level standards by eighth grade. The widest gap between the enacted curriculum and state content standards appeared in eighth-grade classes taught in high-performing schools (34% alignment to standards).
4. As stated above, low- and high-performing schools differed little with respect to the concepts and skills addressed in student work; that is, the alignment to standards of low- and high-performing schools looked similar. However, the most marked difference between low- and high-performing schools appeared when examining cognitive rigor. The Standards Company LLC measures cognitive rigor by superimposing Bloom's Taxonomy and the depth-of-knowledge levels of Norman Webb onto a two-dimensional density plot. The colored grids displayed in the results do not provide a recognizable pattern by themselves when comparing schools listed in the three major categories. However, the depth-of-knowledge levels in mathematics are much more telling with respect to high- and low-performing schools: With the exception of third grade, depth-of-knowledge levels in mathematics were significantly lower for low-performing schools than high-performing schools. (This trend did not appear in English language arts.)
5. Letter grades received from students residing in areas of low socioeconomic status were significantly higher than their more affluent counterparts. This result held regardless of whether the work was collected from a (teacher-designated) low-, medium-, or high-performing student.
6. The source of assignments was also included as part of this study. There were no consistent differences in the source of assignments among the three categories of schools defined in this study. However, the use of teacher-created materials increased significantly as the grade level increased.
7. The preponderance of assignments for all categories of schools was labeled "independent work." However, grade levels 3-5 featured more tests and quizzes than grade levels 6-8.

8. The use of student groups to complete assignments was scant through all categories of schools, with independently-completed assignments forming roughly 80% of the collection. Interestingly, the use of group-based activities was more prevalent in low-performing schools in comparison to high-performing schools. Results disaggregated according to socioeconomic status and rurality showed no discernible pattern. Whether the state of Nevada desires more group-based activities on the part of the students is perhaps worthy of future discussion.

We now present the numerical data generated in this study, beginning with the sample size data for the collection. As stated previously, the number of tables and figures generated from a study of this scale is vast, so we have included in this report only those that we think are especially illuminating.

3 Reports

We now describe the reports related to curriculum analysis, beginning in this section with a general discussion of the reports. We present the actual results for the participating schools in Sec. 3. Throughout this report, the reader should keep in mind the following:

1. As with any statistical study, instances of very small sample sizes reduces the significance of results, especially once the number of assignments reflected in a particular result drops below 10. We urge the reader to refer to the sample size data in Sec. 3.1.1 before generalizing any results.
2. Percentages that should in theory sum to 100 might not due to rounding.

3.1 Sample size

An examination of the sample size is critical in any statistical study. Table 2 and Fig. 5 illustrate the sample size of student assignments conducted by The Standards Company LLC for the participating schools.

3.2 Alignment to standards

Grade-level instruction provides an equal opportunity for all students to succeed. Curricular materials that are aligned to grade-level standards ensure that students are sufficiently challenged and provide a common baseline for judging student achievement. Therefore, one of the most important curricular measurements is the percentage of assignments aligned to state content standards.

Student assignments often address more than one state standard, so a clear understanding of what constitutes the enacted grade level of an assignment must be established at the outset of any study. The definition of the enacted grade level used in our reports rests on a fundamental premise:

> *If a student would be able to complete an assignment to proficiency (70%) by possessing content knowledge aligning to a particular grade level (as defined by the Nevada state content standards), then that grade level is deemed the enacted grade level of the assignment.*

Two hypothetical examples will clarify this issue:

1. An assignment collected from a fifth-grade class contains ten questions, with the first question aligned to a first-grade standard, the second question aligning to a second-grade standard, and the remaining eight questions aligning to fifth-grade standards. In this case, students need a fifth-grade level of knowledge to score proficiently on the assignment—the enacted grade level for this assignment is therefore fifth grade (that is, the assignment is "on grade level").
2. The assignment instead comprises eight questions that align to second-grade standards, with the remaining two questions aligning to fifth-grade standards. In this case, a student would only need to possess a second-grade understanding of content to score proficiently on the assignment, so the assignment aligns to second-grade standards (that is, the enacted grade level is second grade).

3.2.1 Reading the alignment-to-standards chart

Using fictitious data, Fig. 1 describes how one interprets the alignment-to-standards figures in this report. Actual results for participating schools are presented in Sec. 3.

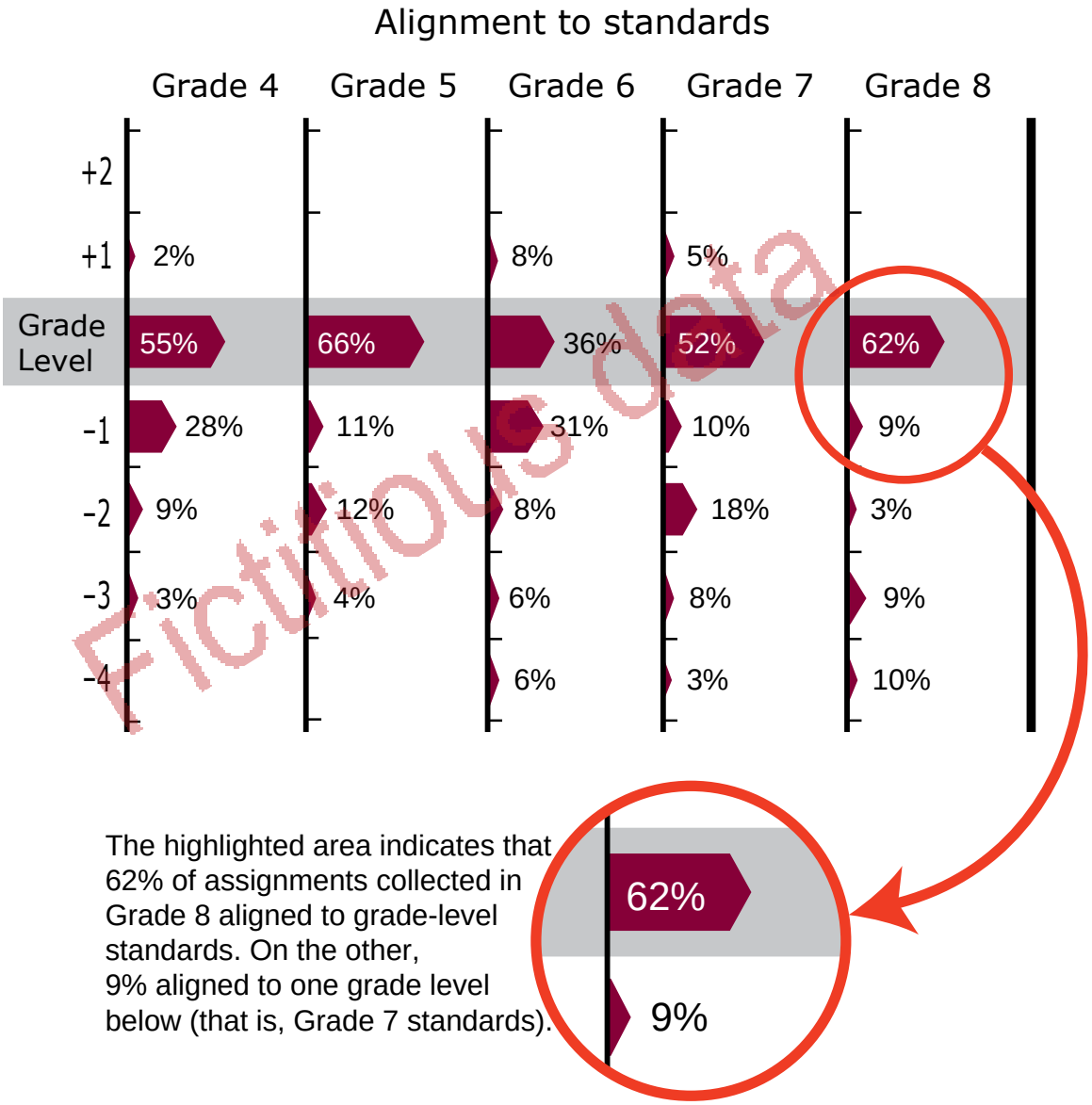

Figure 1: A visual representation of fictitious alignment-to-standards data to demonstrate how one interprets the figures in this report. Percentages reflect the number of grade levels the assignments aligned above or below the class grade level.

3.3 Cognitive rigor

Although coverage of the standards in the classroom is an important indicator of student learning, the enacted curriculum should also display myriad levels of cognitive skill required by the students to complete independent work to proficiency. Therefore, The Standards Company LLC measured the rigor associated with each assignment using two common indicators—Bloom's Taxonomy and depth of knowledge (DOK) — then combined the results into a section of the report called *cognitive rigor*. The Bloom's Taxonomy level associated with a particular student assignment corresponds to the question appearing on the assignment that possesses the highest Bloom's Taxonomy level. The depth-of-knowledge level, on the other hand, corresponds to the assignment *as a whole*.

3.3.1 Bloom's Taxonomy

Higher-order questions form an integral part of quality instruction. Not only do student responses to higher-order questions illustrate their true understanding of academic content, answering higher-order questions can enhance a student's ability to communicate knowledge centered on sophisticated issues. Bloom's Taxonomy[1] is a useful categorization scheme for assessing the cognitive level of questions. Originally published in 1956, the taxonomy was revised in 2001.[2] The Standards Company LLC uses the revised Bloom's Taxonomy. For example, according to the revised Bloom's Taxonomy:

1. asking students to recall who made a specific statement in *Romeo and Juliet* lies at Level 1, the lowest level ("remember").
2. asking students to recast the statement in their own words raises the Bloom's Taxonomy level to at least Level 2 ("understand").
3. asking students to deconstruct the statement to determine the speaker's motive or intentions would constitute Level 4 ("analyze").

As the Bloom's Taxonomy level of questions increases, student engagement, especially among gifted students, also increases. Higher-order questions can therefore invigorate a classroom by increasing interest in subject material.

3.3.2 Depth of knowledge

The depth-of-knowledge levels developed by Norman Webb are often used to correlate the complexity of problems students are expected to be taught and how this complexity coincides with questions found on state tests.[3–13] There are four levels of depth-of-knowledge, with Level 1 signifying problems of the least complexity. For example:

1. reading a dictionary to find the meanings of an unknown word is a Level 1 depth-of-knowledge activity.
2. analyzing and describing the characteristics of various types of literature corresponds to a Level 3 depth-of-knowledge activity.

3.3.3 Reading the cognitive rigor density plot

As stated previously, The Standards Company LLC measures cognitive rigor using Bloom's Taxonomy and depth of knowledge. Figures 2 and 3 in this section illustrate how one interprets the resulting density plots. Actual results for participating schools are presented in Sec. 3.

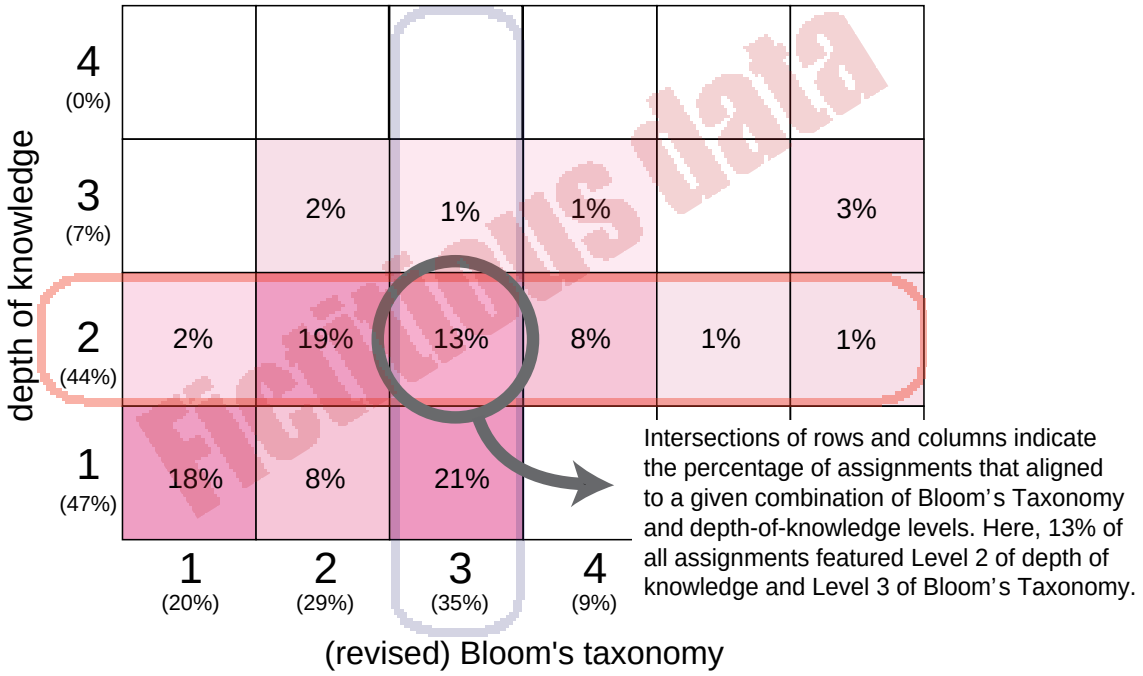

Figure 2: Each cell in the density plot corresponds to a particular combination of Bloom's Taxonomy and depth of knowledge, expressed as a percentage of overall assignments. Each cell is shaded according to this percentage. (The percentages illustrated here are fictitious.)

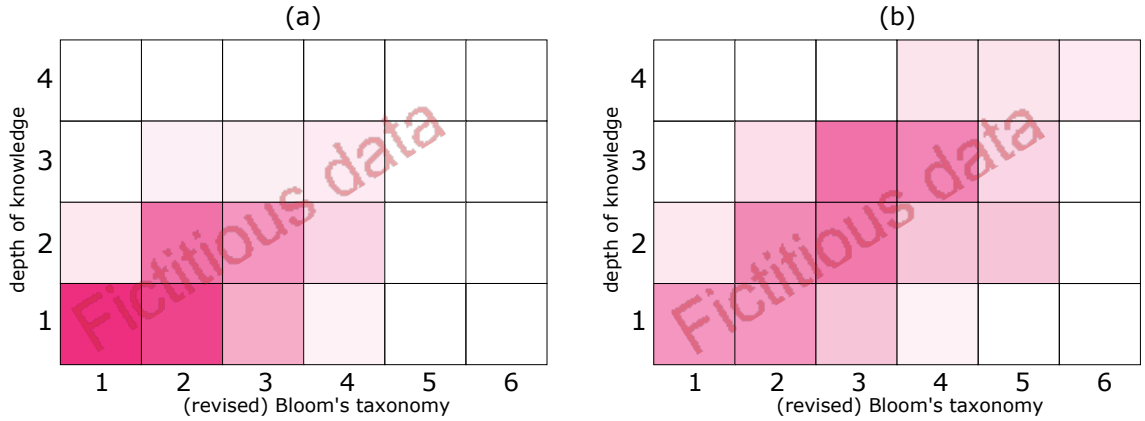

Figure 3: Comparing two density plots can illustrate the significance of the information they convey. (a) A hypothetical density plot demonstrating a low cognitive rigor of collected student assignments. (b) In comparison to the figure on the left, the darkening of regions in the upper right indicate that the collected student assignments exhibited higher levels of Bloom's Taxonomy and depth of knowledge, thus representing more rigorous assignments.

3.4 Letter-grade analysis

Students can receive artificially high scores for numerous reasons. Since not all causes of artificially high scores can be directly studied by examining student assignments, we instead focus on two:

1. Students receive grades higher than their performance warrants (*grade inflation*).
2. Students earn appropriate grades for the performance they display, but on content that is easier than appropriate (*content deflation*).

If the letter grades students receive appear to be artificially high, one of the two possibilities usually becomes apparent when the data illustrated in the following figures is examined in light of the data in Secs. 3.2.2 and 3.2.3. A high instance of low-performing students receiving high grades, coupled with a low alignment to standards or low cognitive rigor, would indicate that content deflation—rather than grade inflation—is the more serious problem.

For comparison purposes, Table 1 below provides statewide results of the Criterion Referenced Test for reading and mathematics. These percentages are reflected in the actual results shown in Sec. 3.2.4.

> *Note: Ideally, grade-level analyses for English language arts are compared with the proficiency of students on state tests for English language arts. However, the state of Nevada does not provide proficiency results that span all English language arts standards. Although not a direct comparison, we provide statewide proficiency results for reading as a baseline comparison for the grades students received on the English language arts assignments collected for analysis.*

Table 1: Criterion Referenced Test (CRT) statewide results, as reported by the Nevada Department of Education for 2007.[14]

	State-level proficiency			
	1	2	3	4
Grade 3				
Reading	7.0%	33.7%	43.1%	16.2%
Mathematics	8.8%	35.5%	33.7%	22.1%
Grade 4				
Reading	13.0%	29.2%	41.5%	16.3%
Mathematics	9.9%	25.8%	35.6%	28.7%
Grade 5				
Reading	9.5%	39.0%	44.7%	6.8%
Mathematics	6.7%	34.8%	46.9%	11.6%
Grade 6				
Reading	11.9%	31.2%	44.0%	12.9%
Mathematics	14.4%	25.7%	40.7%	19.2%
Grade 7				
Reading	8.5%	27.0%	50.5%	14.0%
Mathematics	15.2%	26.7%	39.2%	18.9%
Grade 8				
Reading	7.3%	35.9%	44.3%	12.5%
Mathematics	19.0%	28.2%	43.1%	9.7%

Key[14]

1. Emergent/Developing
2. Approaches Standard
3. Meets Standard
4. Exceeds Standard

3.4.1 Reading the letter-grade-analysis chart

Using fictitious data, Fig. 4 describes how one interprets the letter-grade-analysis figures in this report. Actual results for participating schools are presented in Sec. 3.

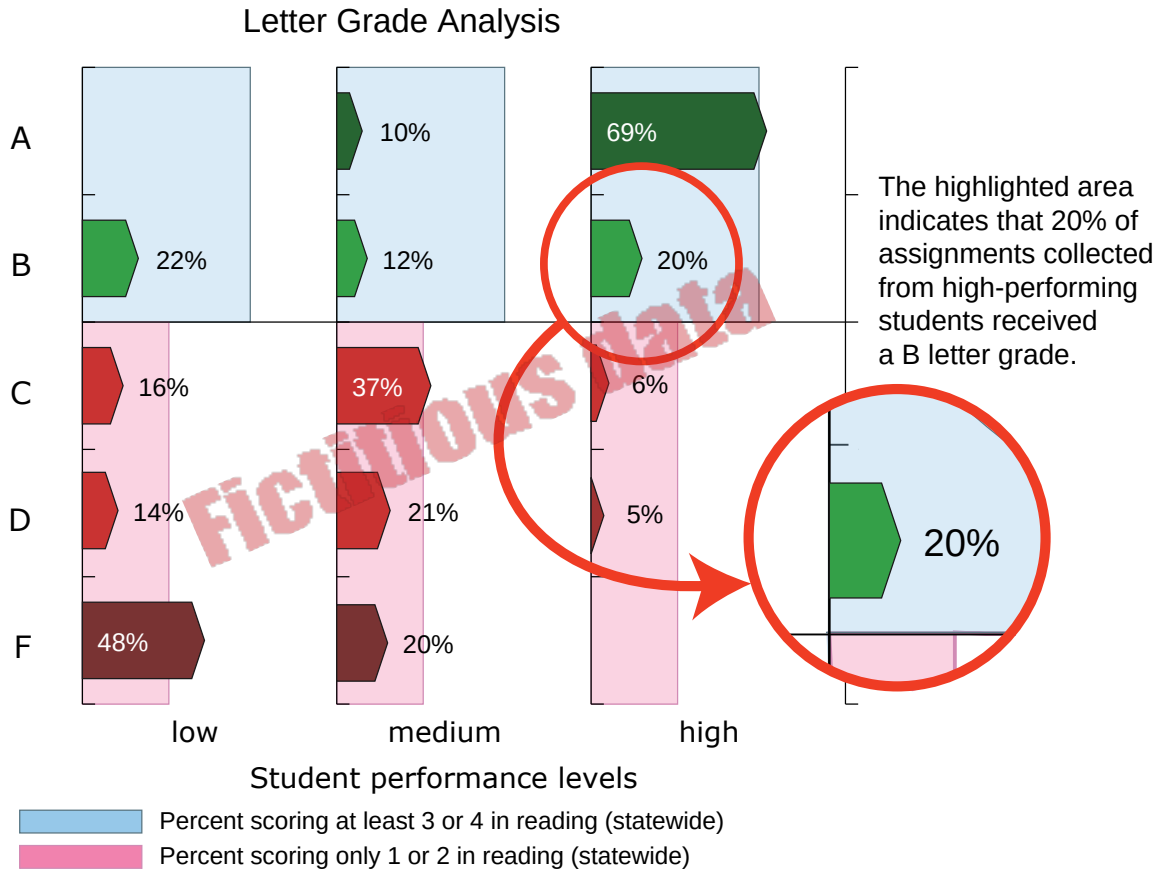

Figure 4: A visual representation of fictitious letter-grade-analysis data to demonstrate how one interprets the figures in this report. A set of values are highlighted for explanation purposes.

3.5 Extent of coverage

The Nevada State Content Standards comprise 11 standards in English language arts and five standards in mathematics. They are categorized among three levels. In English language arts, the hierarchy comprises (from the most general to the most specific):

1. standard — for example, "Standard 1.0 – Word Analysis"
2. indicator — for example, "phonics"
3. learning objective — for example, "identify letter-sound relationships"

Mathematics possesses the same structure, although indicators are instead called *themes*.

Even when taught content perfectly aligned to standards, students can still perform poorly on assessments if they are taught an insufficient number of subcategories within the state content standards. Students taught content predominantly from the vocabulary standards will struggle on sections of the state assessment that address reading comprehension of information text. Students who have overly concentrated on the basic number facts at the expense of algebra will similarly struggle on the mathematics portion of the Criterion Referenced Test. Therefore, it is important that the enacted curriculum adequately sample every standard at some point during the school year, especially those that are closely tied to questions appearing on state assessments.

3.5.1 Sampling frequency of the standards

Teachers should be aware to the extent each standard is sampled on state assessments and adjust their pacing calendars accordingly. The Standards Company LLC examined the sampling of standards found in the enacted curriculum of the schools participating in this study. Fortunately, the Nevada Department of Education releases blueprints describing the frequency in which standards are assessed on the Criterion Referenced Test. Using these values, we compared the standard sampling with that found in state assessments.

3.5.2 Reading the extent-of-coverage plot

Tables and figures in the Results section contains the extent-of-coverage results for the 100-school study. For English language arts, the population of collected assignments was filtered to include only those assignments that addressed Standards 1.0, 3.0, and 4.0 since these correlate most closely with the content clusters C1, C2, and C3 used by the Nevada Department of Education to categorize the questions on the Criterion Referenced Test. In general, the following mapping describes the relationship between state content standards and content clusters:

1. C1 = Standard 1.0
2. C2 = Standard 3.0
3. C3 = Standard 4.0

Note: mathematics has a different correspondence between content clusters and standards.

In this sense, we measured the extent to which the assignments corresponding to questions tested on the Criterion Referenced Test are distributed and how closely this distribution aligns with the Criterion Referenced Test. Including student assignments that represent standards other than Standards 1.0, 3.0, and 4.0 would lower the percentage of alignment for every measured value, thus unfairly "penalizing" the curriculum for the

appearance of standards other than Standards 1.0, 3.0, and 4.0 and leaving the impression these standards are somehow less worthy of being taught.

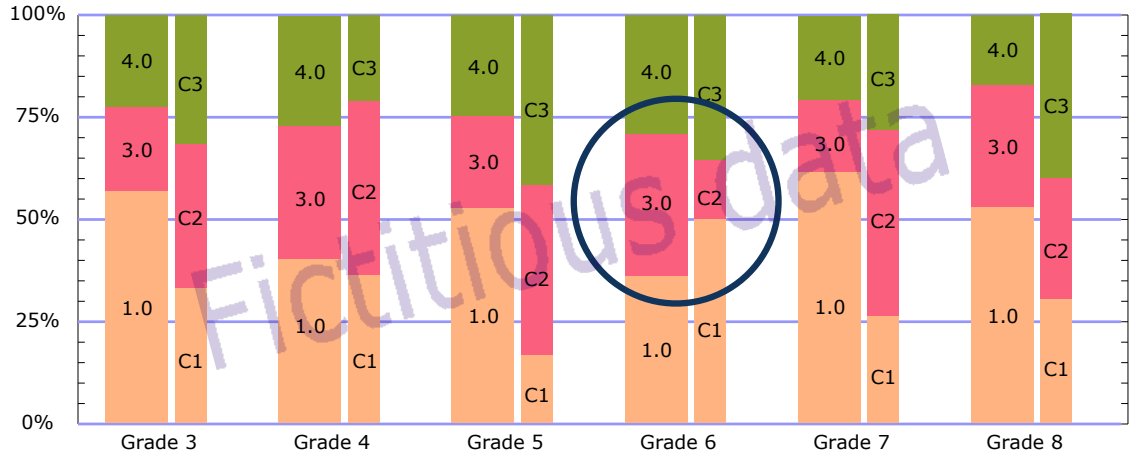

Figure 5: A visual display of the extent-of-coverage displaying hypothetical data. Each grade level is represented by two columns, with the left-side column pertaining to enacted curriculum and the right-side column pertaining to the state assessment. For the circled portion, the heights of the middle sections indicate that 35% (70%-35%) of the enacted curriculum featured content addressing State Content Standard 3.0; whereas, 15% (65%-50%) of the state test addresses the equivalent content cluster C2. Ideally, the heights of each section of the two columns should roughly match. With just a quick glance, we can see that in this hypothetical collection Grade 7 exhibits the greatest disconnect between the enacted curriculum and the state assessment, whereas Grade 4 exhibits the tightest correspondence. Actual results for the 100-school study are shown in the Results section.

4 Results

4.1 All schools disaggregation

4.1.1 Sample sizes

4.1.1.1 all subjects (all grade levels)

Table 2: Sample sizes of student assignments collected from teachers. Only samples for which a clear learning objective could be discerned are included. Percentages in which each individual sample size contributed to the total sample size are shown in parentheses. These results are displayed in Fig. 6.

	Collected subject areas		
Grade level	ELA	MATH	Combined
3	9434 (8%)	6332 (5%)	15,766 (14%)
4	6315 (5%)	4319 (3%)	10,634 (9%)
5	5426 (4%)	3767 (3%)	9,193 (8%)
6	15470 (14%)	9876 (9%)	25,346 (23%)
7	15137 (13%)	11239 (10%)	26,376 (24%)
8	10304 (9%)	11353 (10%)	21,657 (19%)
Total	**62,086 (56%)**	**46,886 (43%)**	**108,972 (100%)**

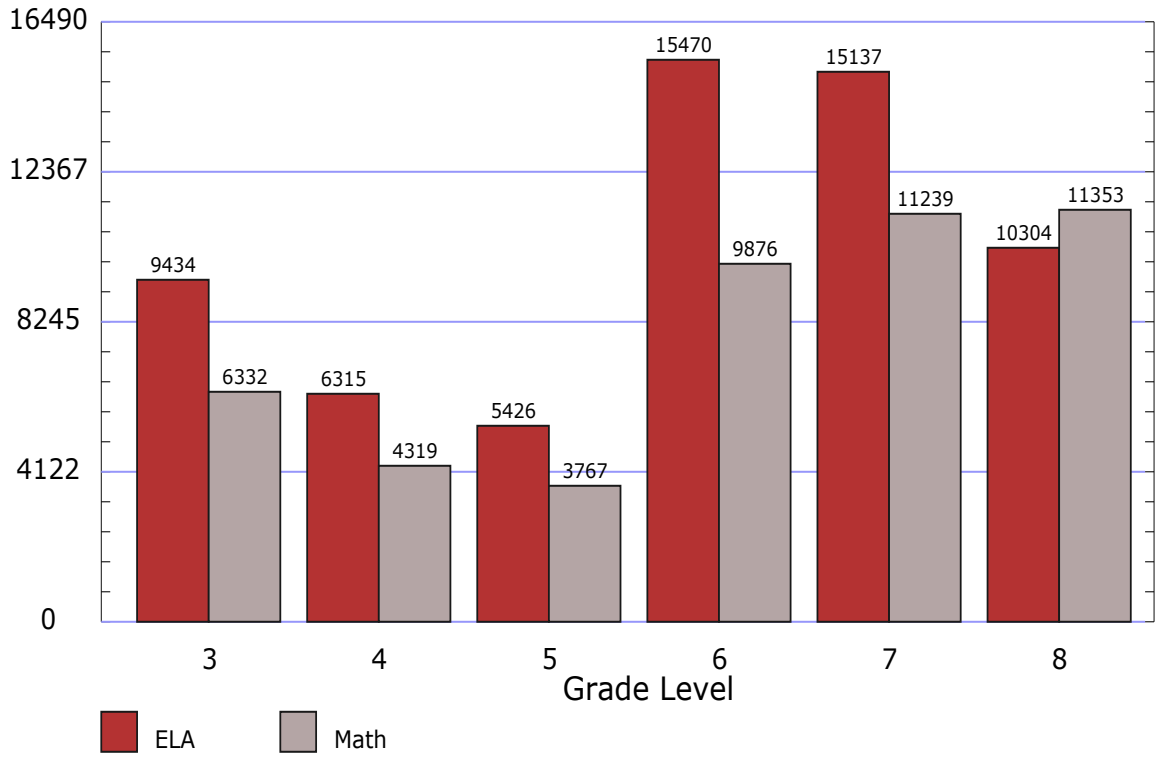

Figure 6: Sample sizes of student assignments collected from Nevada enacted curriculum study teachers that were analyzed as part of the study.

4.1.2 Alignment to standards

4.1.2.1 English language arts (all grade levels)

Table 3: Alignment to state content standards for student assignments in English language arts (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 7.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
8	0%	0%	0%	4%	6%	**64%**
7	0%	0%	0%	3%	**55%**	5%
6	0%	0%	2%	**48%**	7%	3%
5	0%	3%	**71%**	24%	18%	10%
4	11%	**60%**	9%	6%	4%	3%
3	**66%**	23%	8%	5%	4%	6%
2	14%	7%	3%	4%	2%	2%
1	5%	3%	0%	0%	0%	0%

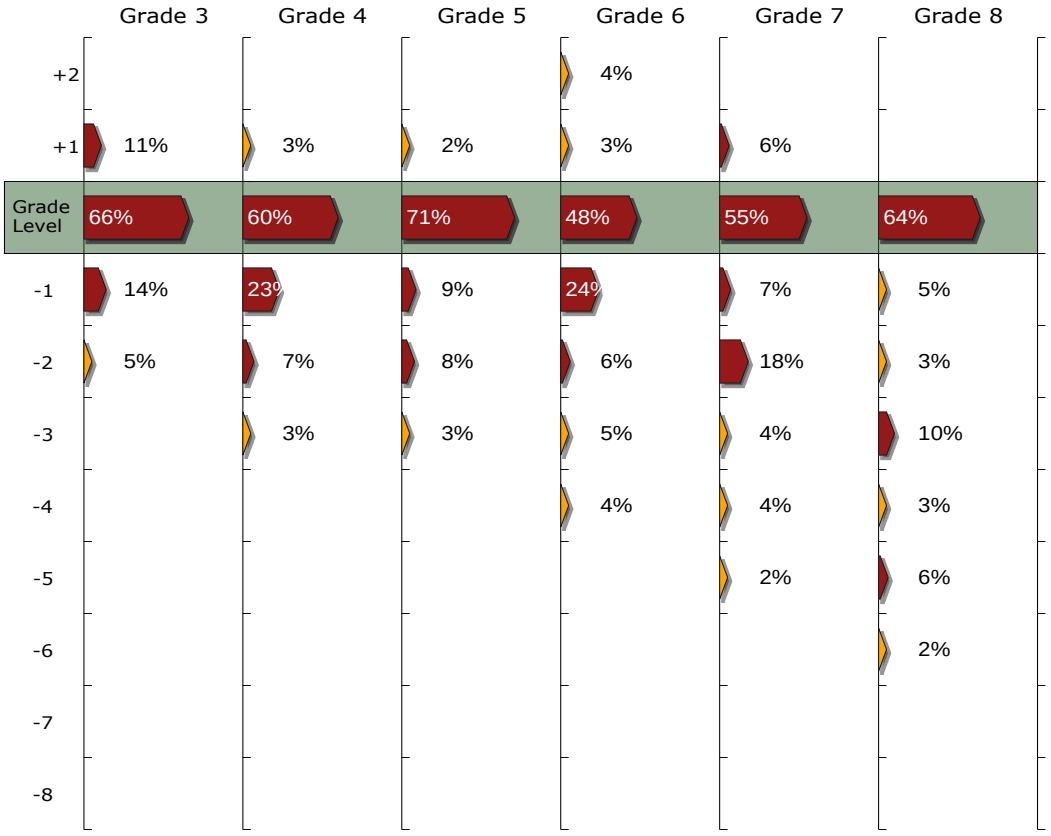

Figure 7: A visual representation of Table 3. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.1.2.2 mathematics (all grade levels)

Table 4: Alignment to state content standards for student assignments in mathematics (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 8.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
9	0%	0%	0%	0%	2%	9%
8	0%	0%	0%	2%	6%	**54%**
7	0%	3%	2%	8%	**55%**	21%
6	3%	11%	27%	**55%**	12%	5%
5	2%	6%	**55%**	22%	16%	6%
4	9%	**67%**	8%	5%	3%	0%
3	**76%**	5%	2%	0%	0%	0%
2	6%	4%	2%	2%	2%	0%
1	0%	0%	0%	0%	0%	0%
K	0%	0%	0%	0%	0%	0%

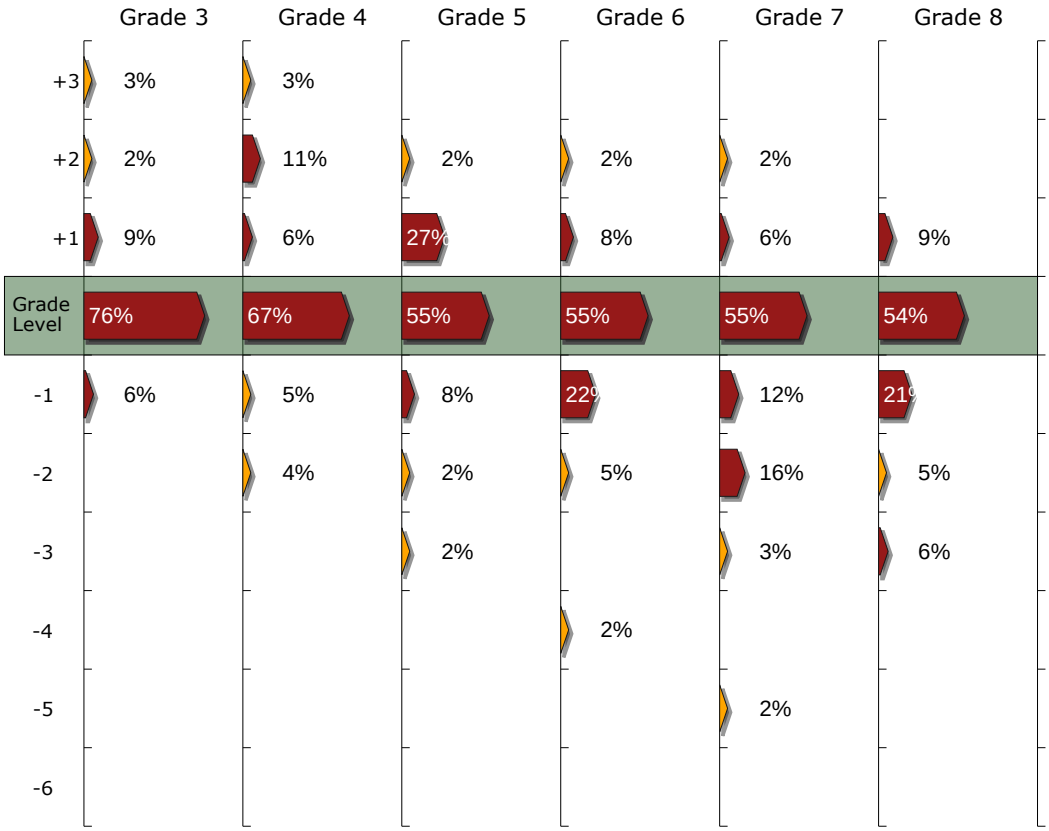

Figure 8: A visual representation of Table 4. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.1.3 Cognitive rigor

4.1.3.1 English language arts (third grade)

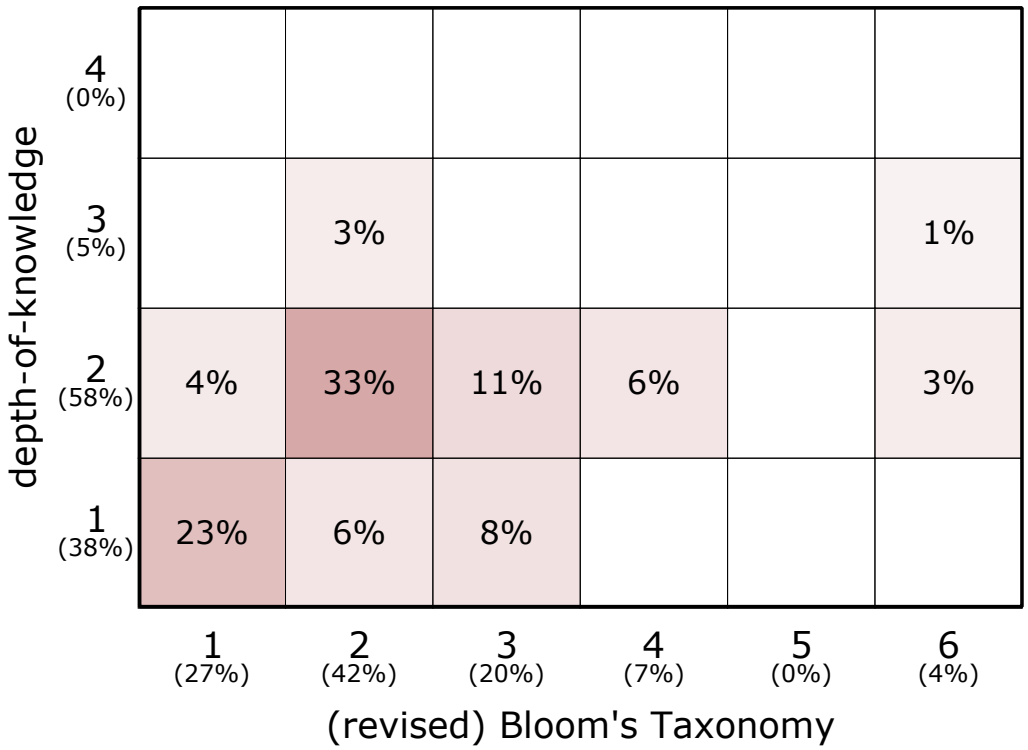

Figure 9: The cognitive rigor found in English language arts (third grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.1.3.2 English language arts (fourth grade)

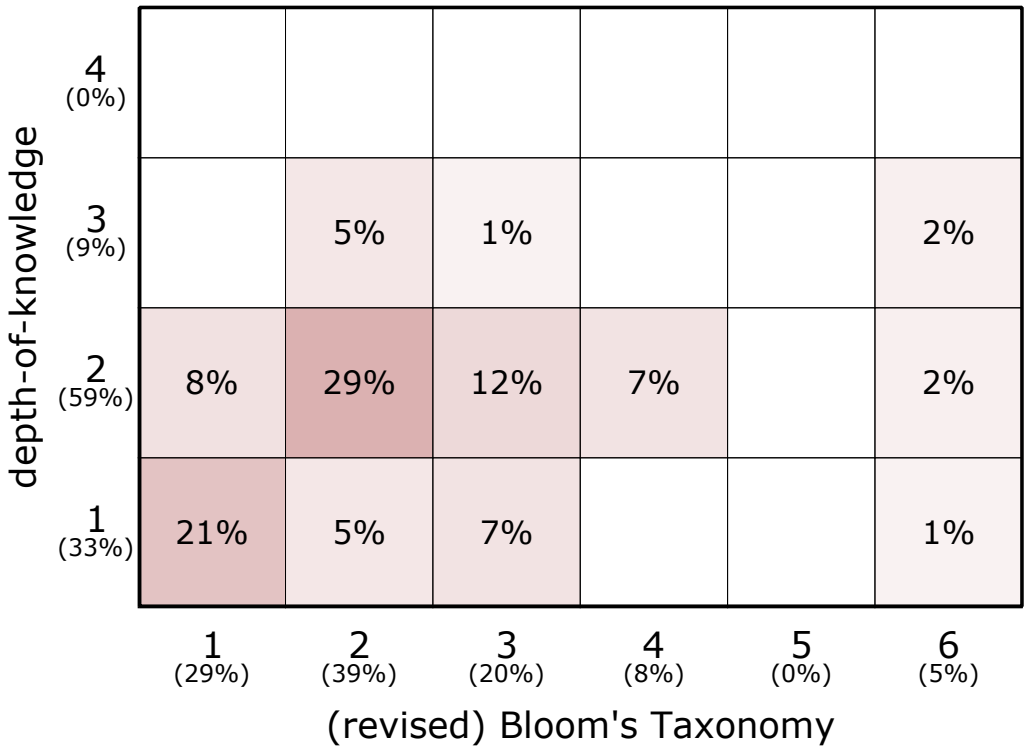

Figure 10: The cognitive rigor found in English language arts (fourth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.1.3.3 English language arts (fifth grade)

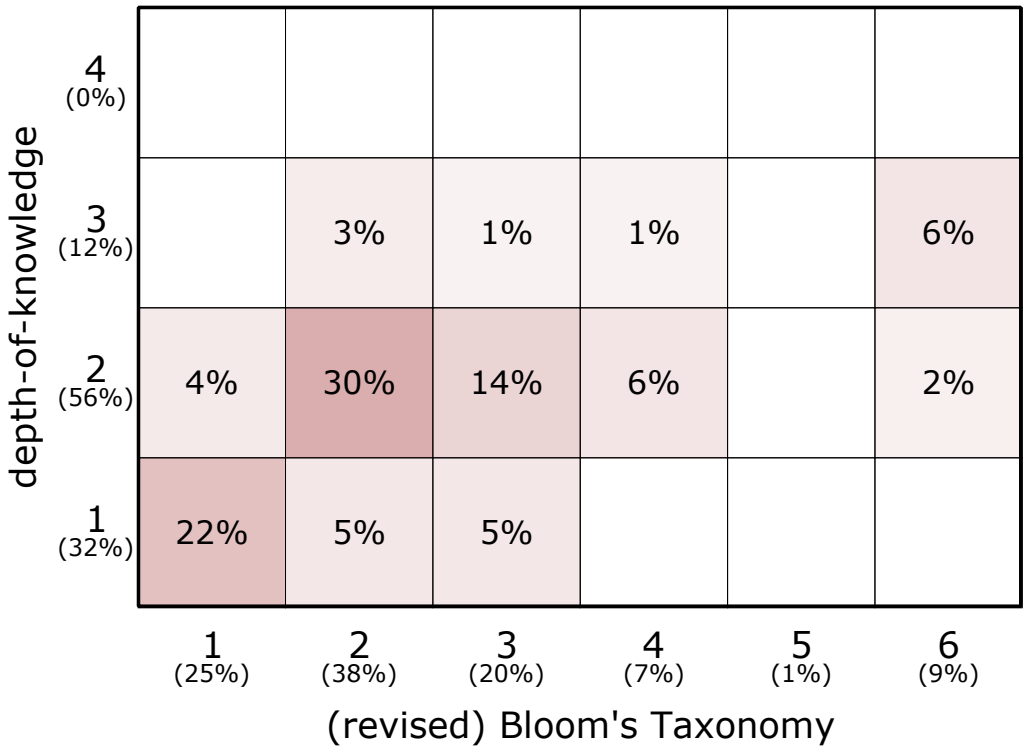

Figure 11: The cognitive rigor found in English language arts (fifth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.1.3.4 English language arts (sixth grade)

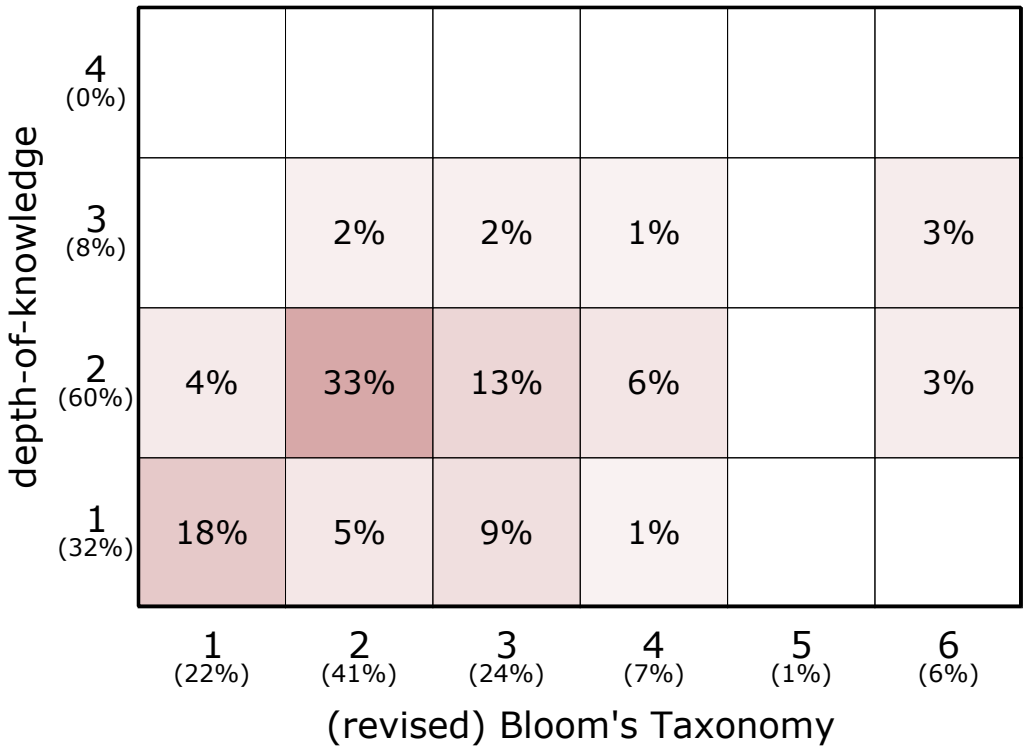

Figure 12: The cognitive rigor found in English language arts (sixth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.1.3.5 English language arts (seventh grade)

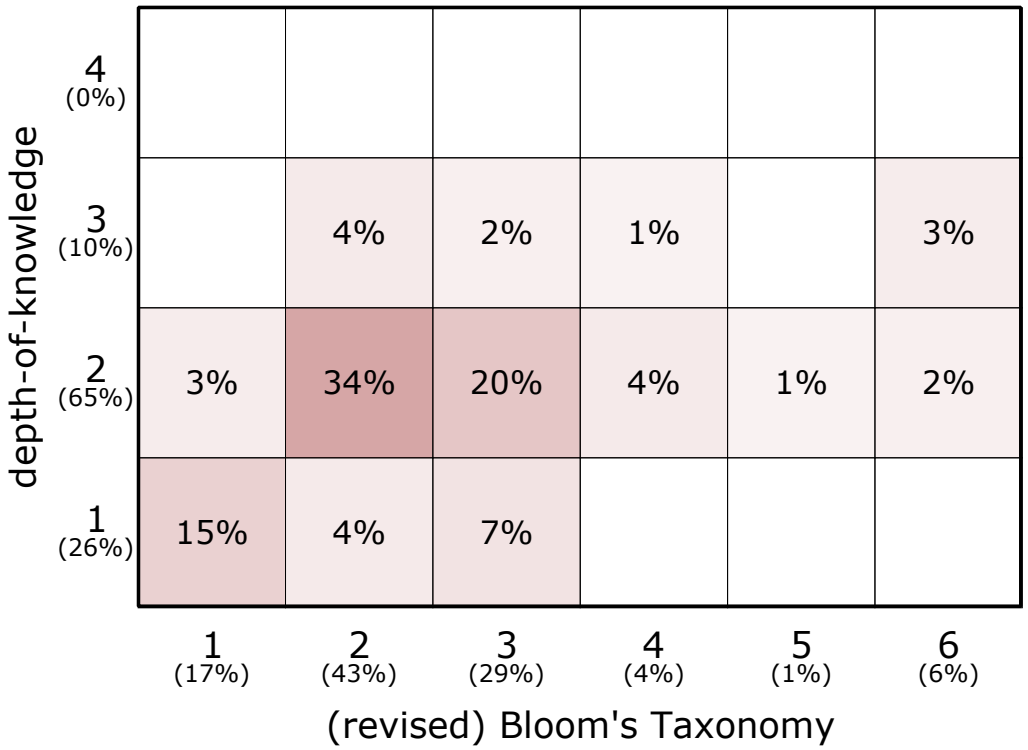

Figure 13: The cognitive rigor found in English language arts (seventh grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.1.3.6 English language arts (eighth grade)

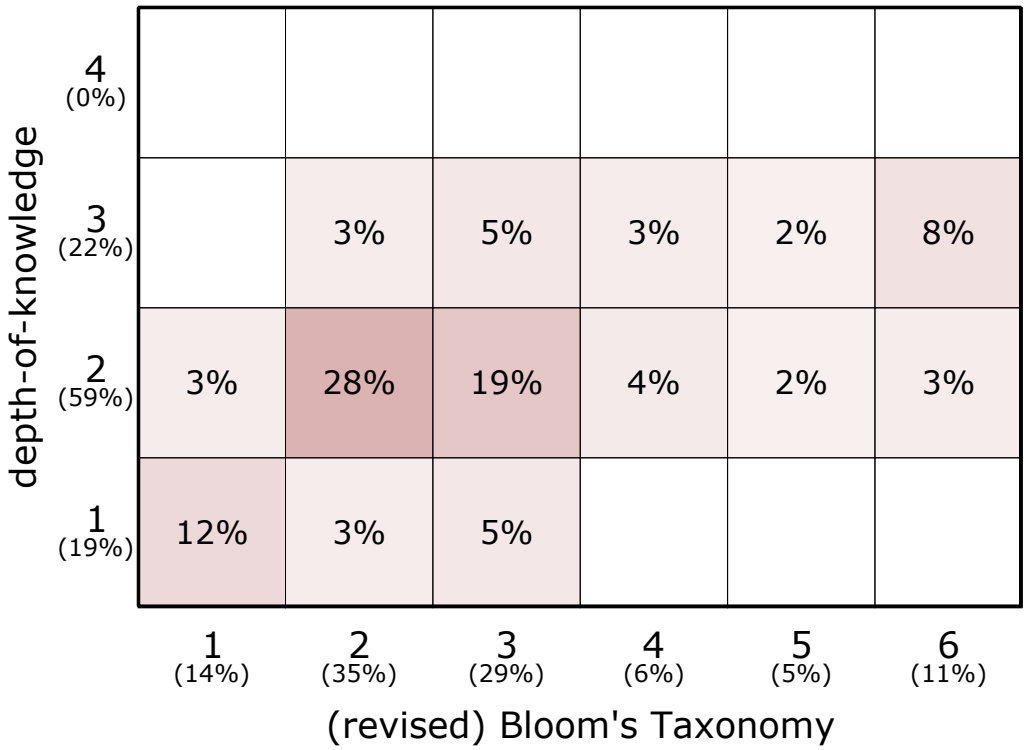

Figure 14: The cognitive rigor found in English language arts (eighth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.1.3.7 mathematics (third grade)

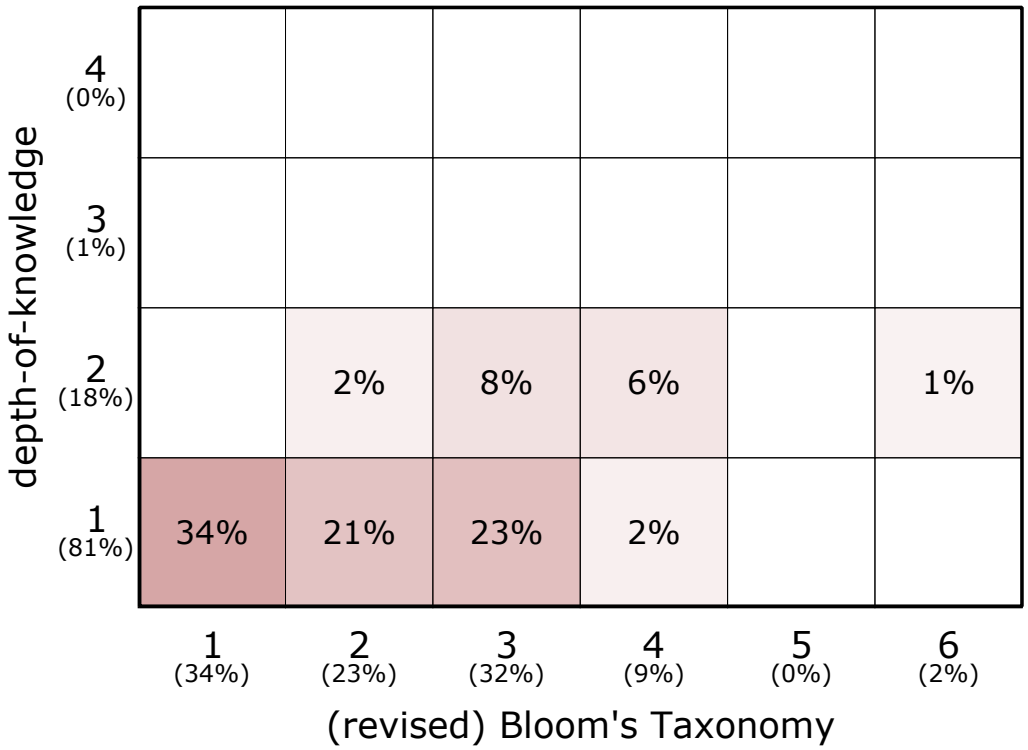

Figure 15: The cognitive rigor found in mathematics (third grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.1.3.8 mathematics (fourth grade)

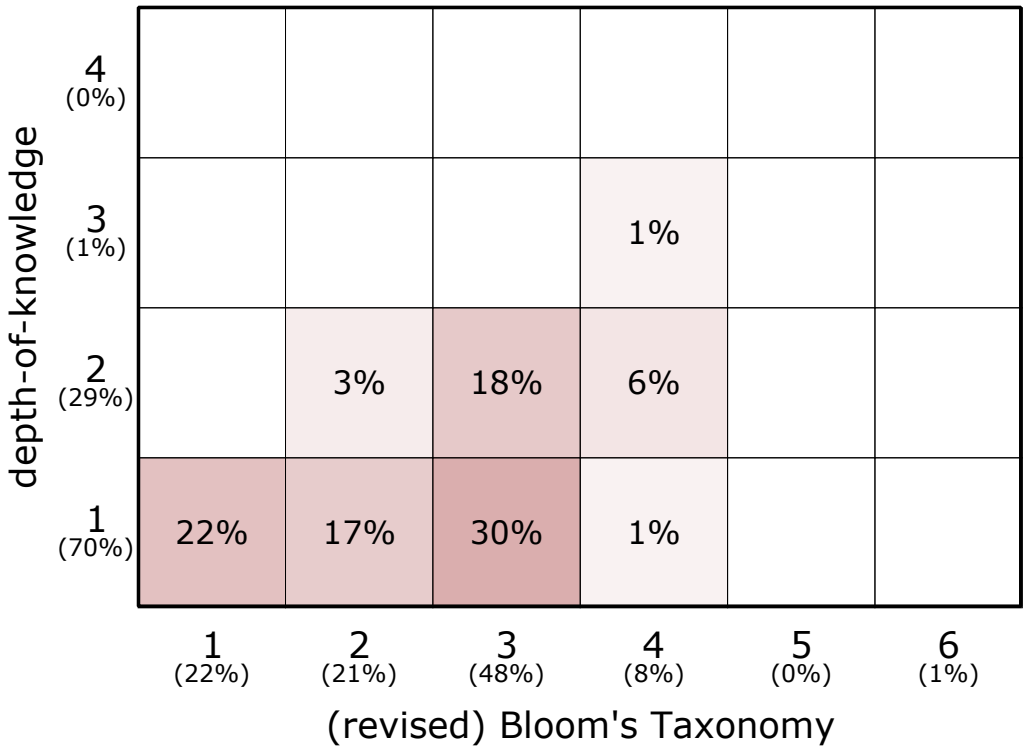

Figure 16: The cognitive rigor found in mathematics (fourth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.1.3.9 mathematics (fifth grade)

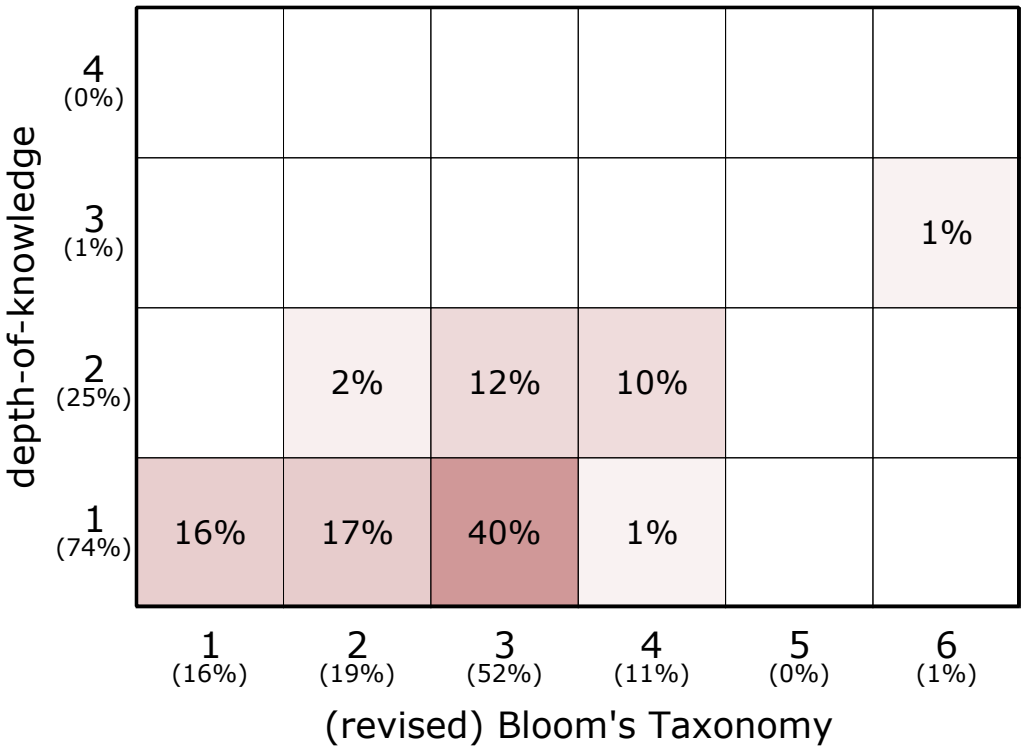

Figure 17: The cognitive rigor found in mathematics (fifth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.1.3.10 mathematics (sixth grade)

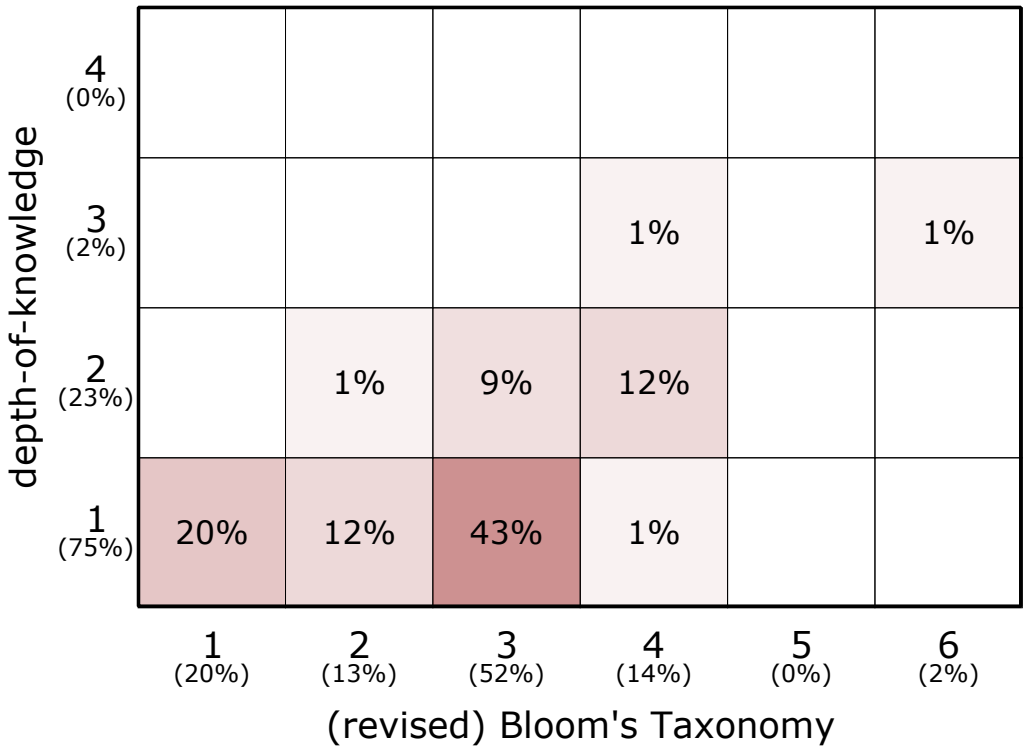

Figure 18: The cognitive rigor found in mathematics (sixth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.1.3.11 mathematics (seventh grade)

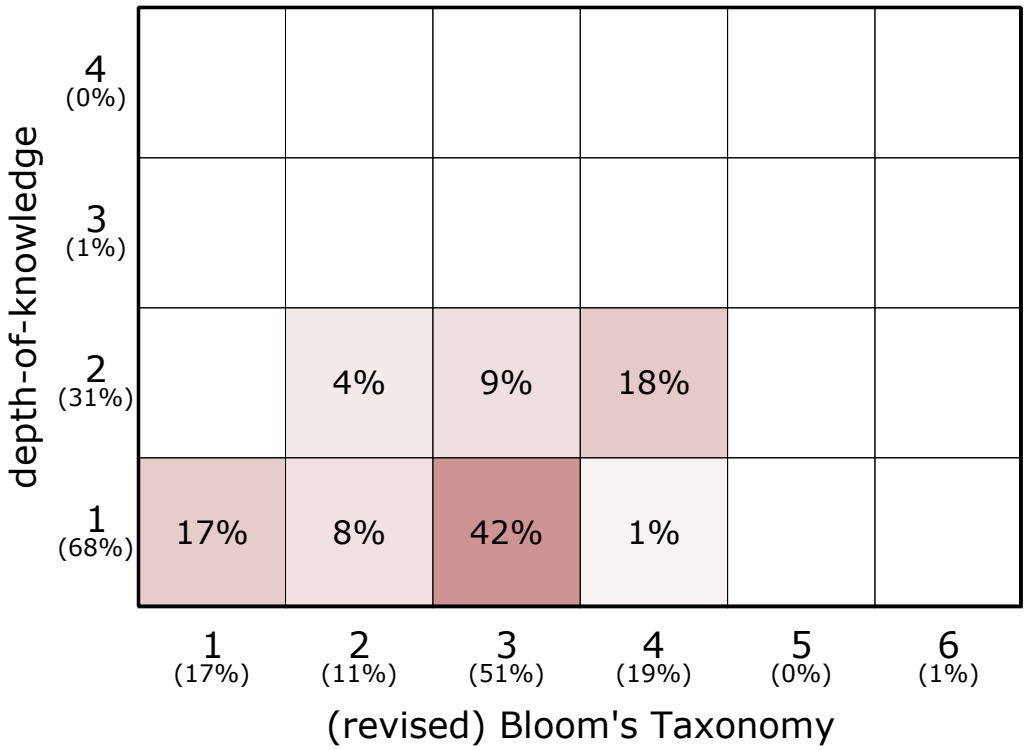

Figure 19: The cognitive rigor found in mathematics (seventh grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.1.3.12 mathematics (eighth grade)

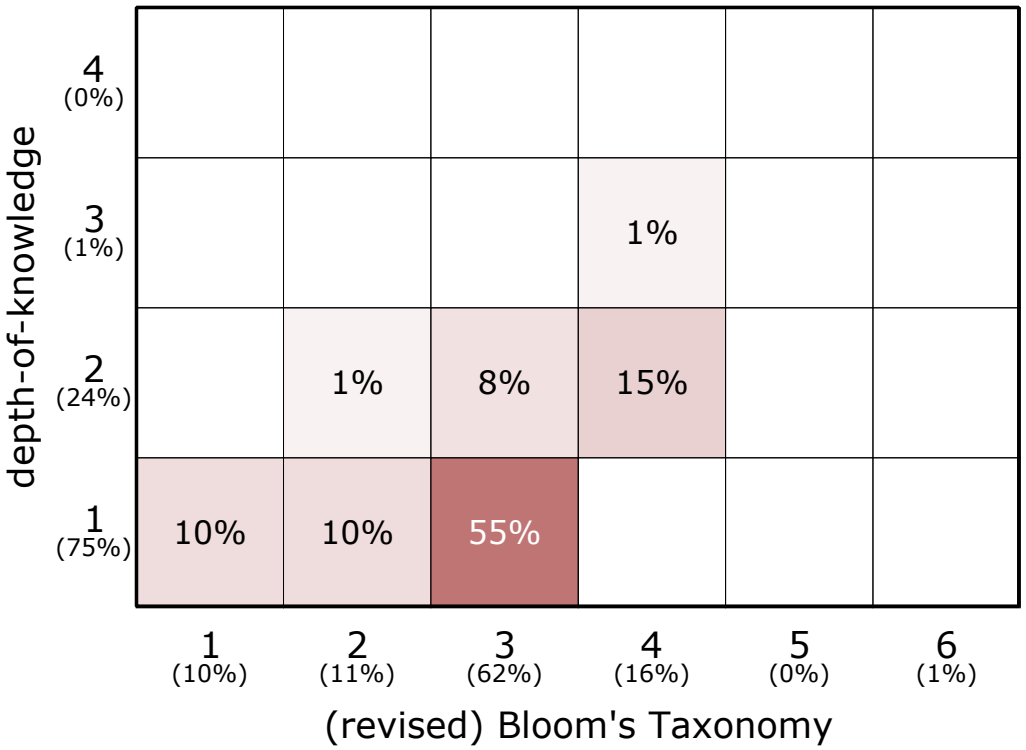

Figure 20: The cognitive rigor found in mathematics (eighth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.1.4 Letter grade analysis

4.1.4.1 English language arts (third grade)

Table 5: An analysis of the grades students received on English language arts (third grade) assignments. These results are displayed visually in Fig. 21.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	3	78%	14%	4%	1%	1%
Medium		45%	25%	14%	8%	5%
Low		24%	16%	15%	16%	25%

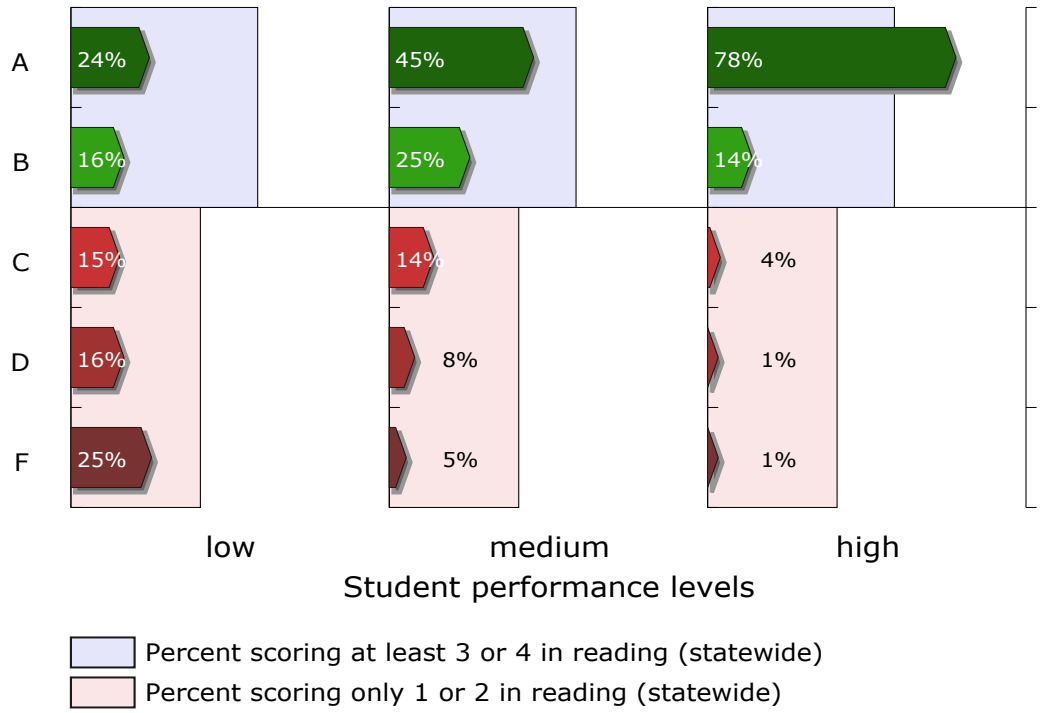

Figure 21: The letter grade analysis found in English language arts (third grade) assignments.

4.1.4.2 English language arts (fourth grade)

Table 6: An analysis of the grades students received on English language arts (fourth grade) assignments. These results are displayed visually in Fig. 22.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	4	80%	12%	4%	0%	1%
Medium		44%	23%	20%	6%	4%
Low		25%	18%	17%	18%	20%

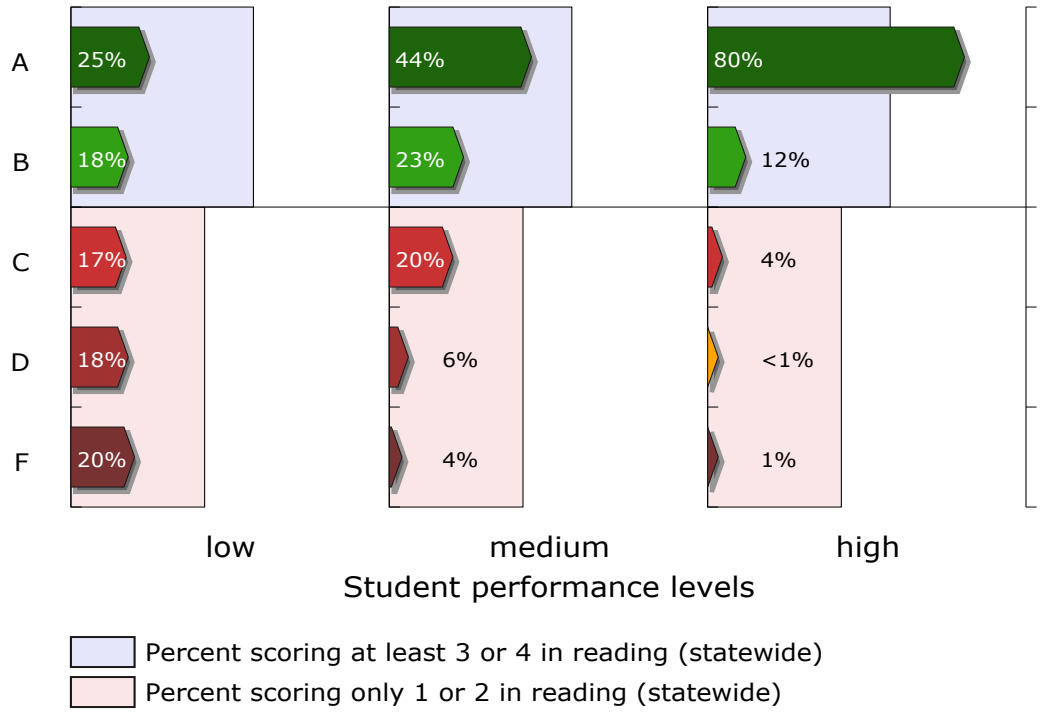

Figure 22: The letter grade analysis found in English language arts (fourth grade) assignments.

4.1.4.3 English language arts (fifth grade)

Table 7: An analysis of the grades students received on English language arts (fifth grade) assignments. These results are displayed visually in Fig. 23.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	5	79%	15%	3%	1%	0%
Medium		45%	24%	18%	5%	6%
Low		22%	17%	20%	14%	24%

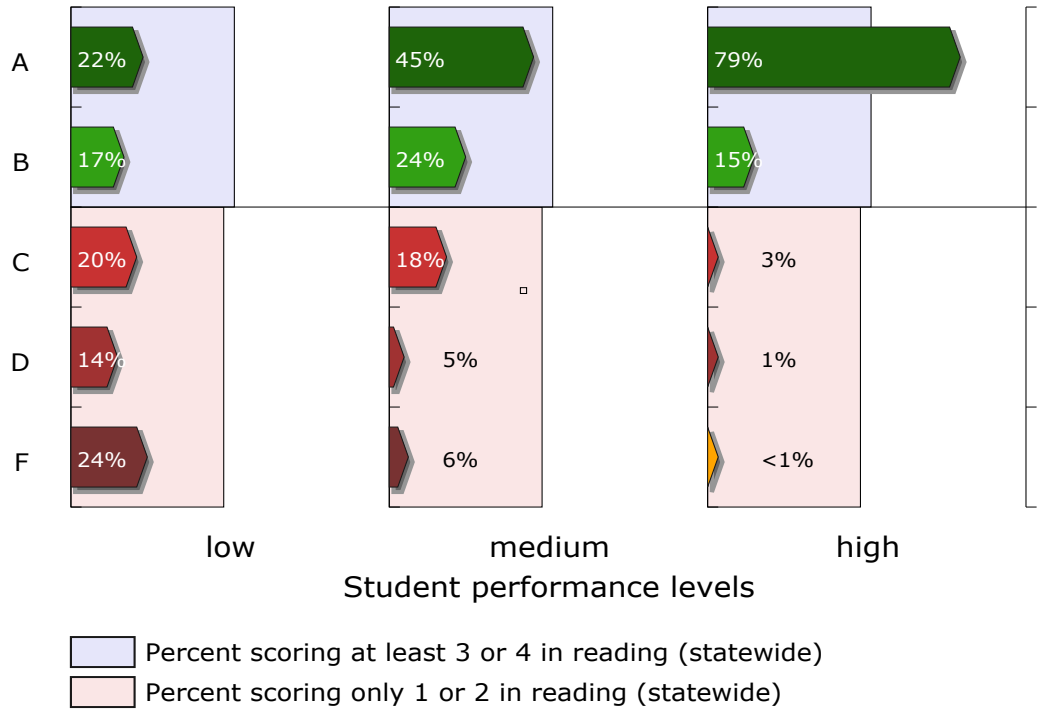

Figure 23: The letter grade analysis found in English language arts (fifth grade) assignments.

4.1.4.4 English language arts (sixth grade)

Table 8: An analysis of the grades students received on English language arts (sixth grade) assignments. These results are displayed visually in Fig. 24.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	6	77%	14%	4%	1%	1%
Medium		34%	32%	19%	7%	5%
Low		18%	14%	21%	21%	23%

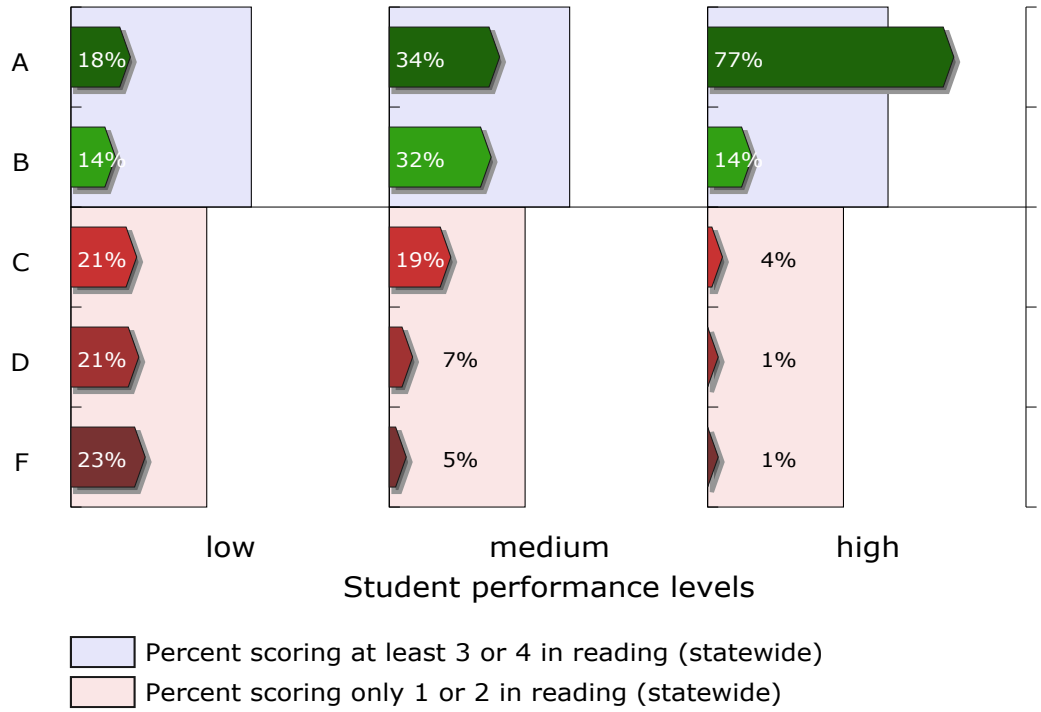

Figure 24: The letter grade analysis found in English language arts (sixth grade) assignments.

4.1.4.5 English language arts (seventh grade)

Table 9: An analysis of the grades students received on English language arts (seventh grade) assignments. These results are displayed visually in Fig. 25.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	7	76%	14%	5%	1%	1%
Medium		37%	26%	24%	6%	5%
Low		23%	13%	19%	17%	25%

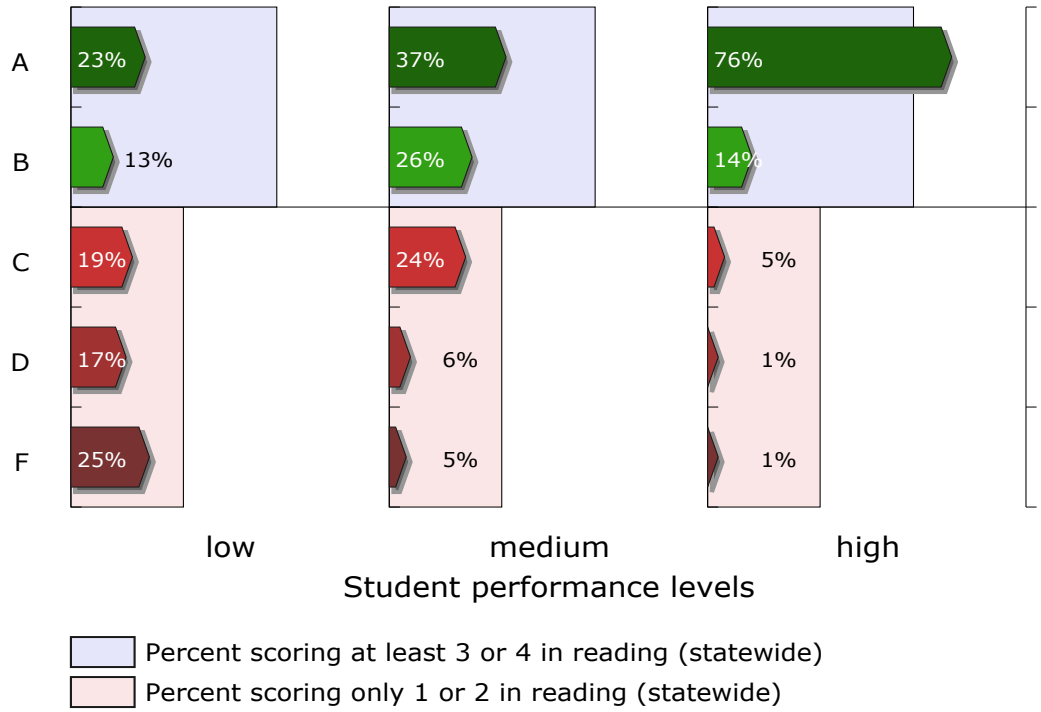

Figure 25: The letter grade analysis found in English language arts (seventh grade) assignments.

4.1.4.6 English language arts (eighth grade)

Table 10: An analysis of the grades students received on English language arts (eighth grade) assignments. These results are displayed visually in Fig. 26.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	8	77%	13%	4%	2%	1%
Medium		38%	26%	21%	7%	6%
Low		22%	12%	18%	24%	21%

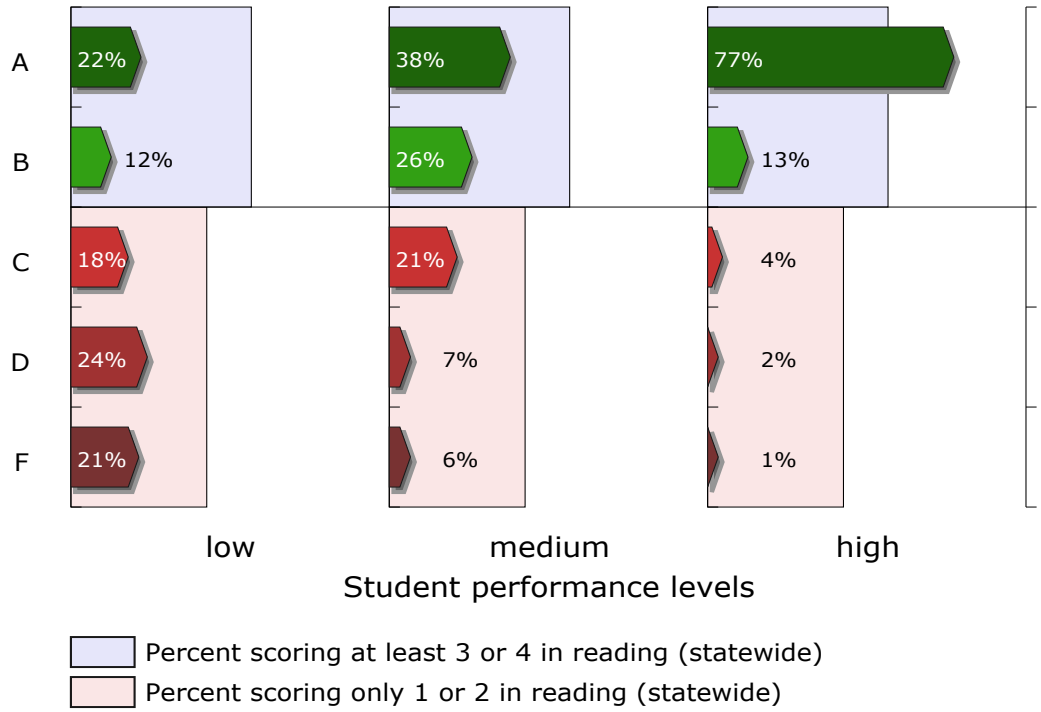

Figure 26: The letter grade analysis found in English language arts (eighth grade) assignments.

4.1.4.7 mathematics (third grade)

Table 11: An analysis of the grades students received on mathematics (third grade) assignments. These results are displayed visually in Fig. 27.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	3	78%	11%	5%	2%	1%
Medium		50%	21%	14%	8%	5%
Low		30%	14%	14%	12%	28%

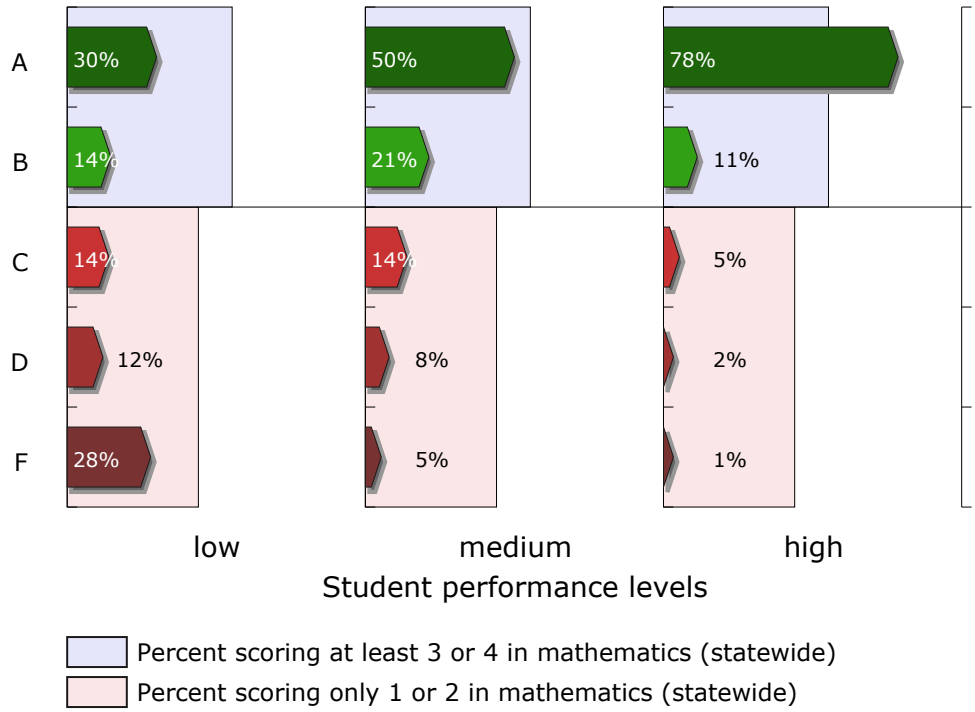

Figure 27: The letter grade analysis found in mathematics (third grade) assignments.

4.1.4.8 mathematics (fourth grade)

Table 12: An analysis of the grades students received on mathematics (fourth grade) assignments. These results are displayed visually in Fig. 28.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	4	75%	12%	6%	3%	2%
Medium		42%	23%	15%	10%	7%
Low		20%	15%	23%	12%	27%

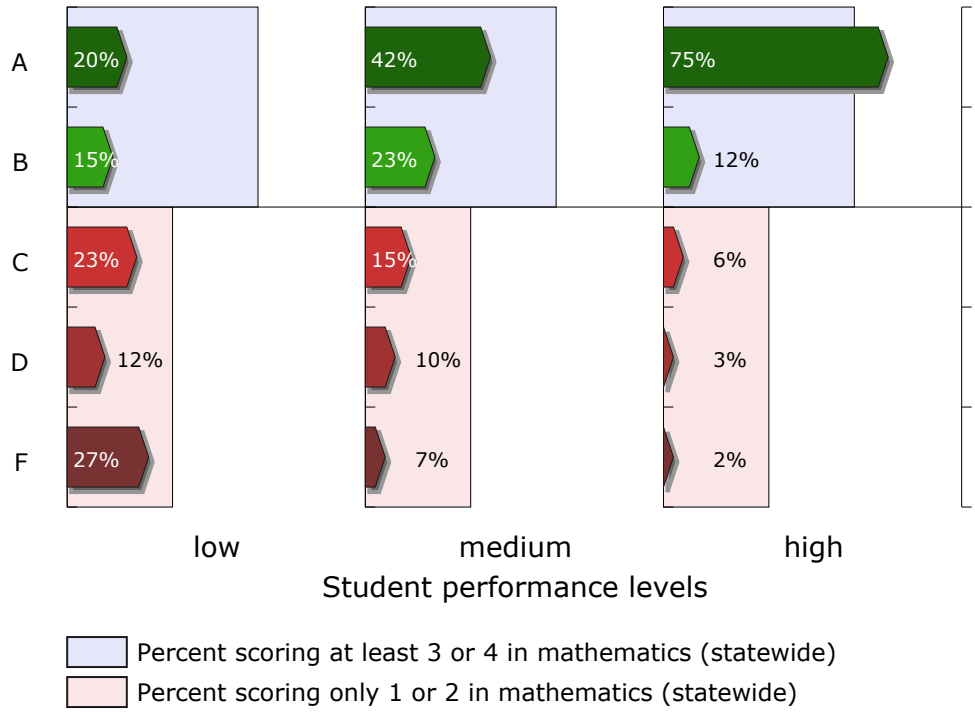

Figure 28: The letter grade analysis found in mathematics (fourth grade) assignments.

4.1.4.9 mathematics (fifth grade)

Table 13: An analysis of the grades students received on mathematics (fifth grade) assignments. These results are displayed visually in Fig. 29.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	5	73%	19%	4%	0%	0%
Medium		37%	22%	20%	9%	10%
Low		18%	12%	15%	18%	35%

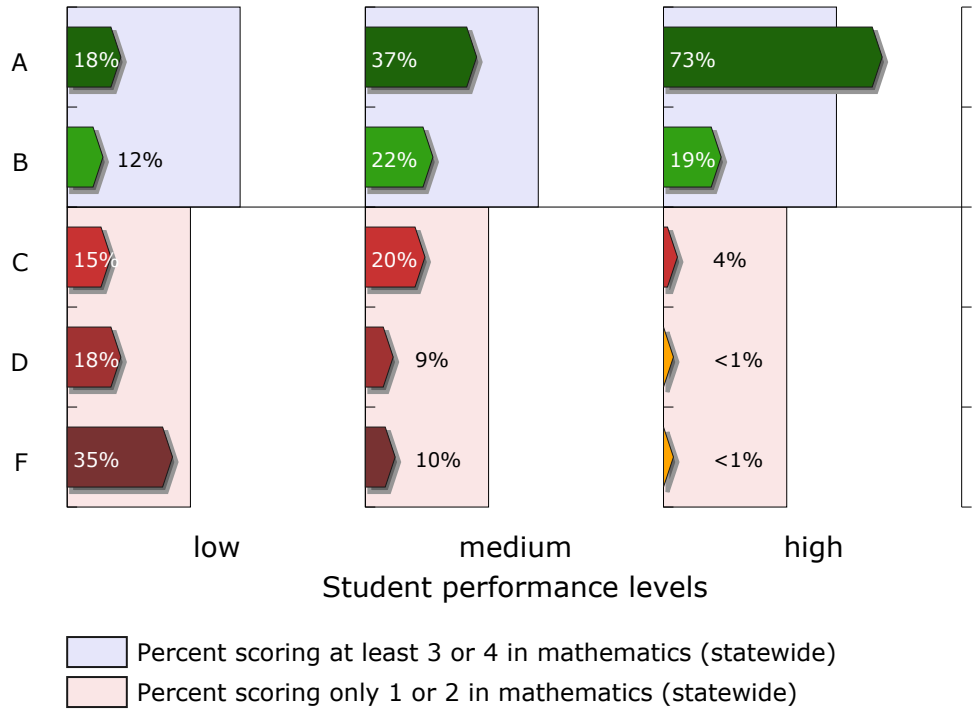

Figure 29: The letter grade analysis found in mathematics (fifth grade) assignments.

4.1.4.10 mathematics (sixth grade)

Table 14: An analysis of the grades students received on mathematics (sixth grade) assignments. These results are displayed visually in Fig. 30.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	6	71%	15%	6%	4%	3%
Medium		37%	21%	19%	9%	12%
Low		21%	12%	14%	13%	38%

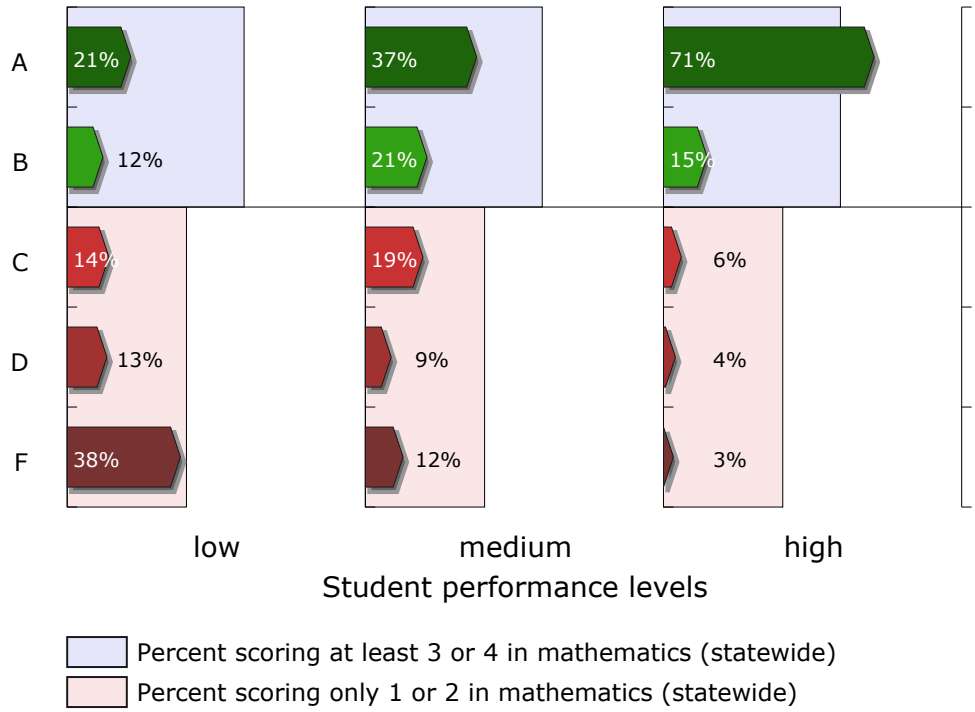

Figure 30: The letter grade analysis found in mathematics (sixth grade) assignments.

4.1.4.11 mathematics (seventh grade)

Table 15: An analysis of the grades students received on mathematics (seventh grade) assignments. These results are displayed visually in Fig. 31.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	7	68%	16%	6%	4%	4%
Medium		36%	20%	19%	7%	15%
Low		21%	13%	12%	15%	36%

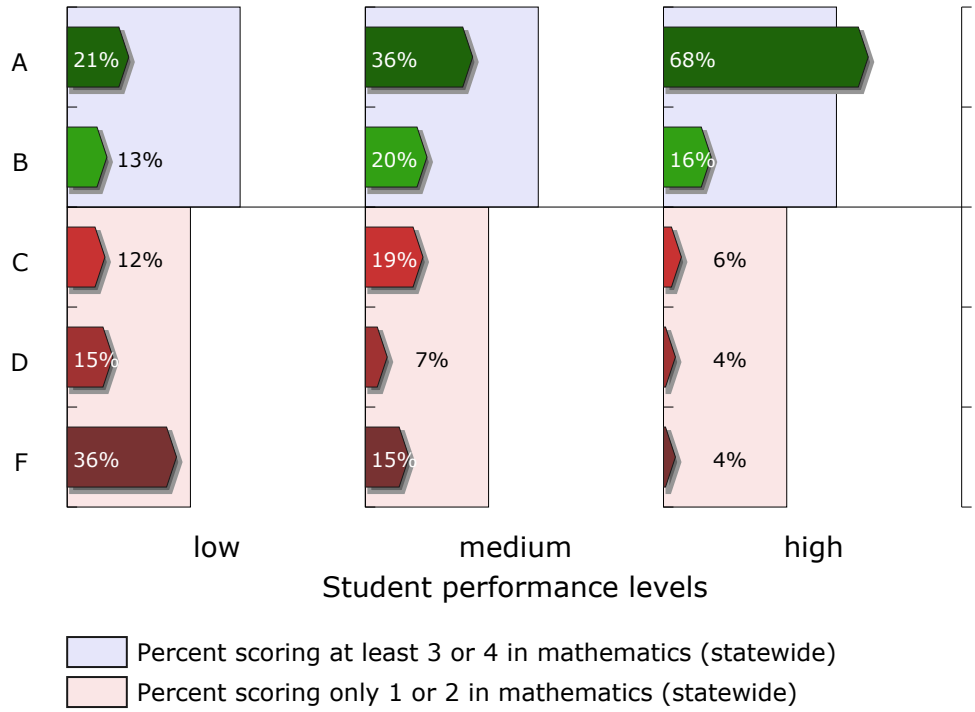

Figure 31: The letter grade analysis found in mathematics (seventh grade) assignments.

4.1.4.12 mathematics (eighth grade)

Table 16: An analysis of the grades students received on mathematics (eighth grade) assignments. These results are displayed visually in Fig. 32.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	8	68%	16%	7%	4%	2%
Medium		40%	21%	17%	9%	11%
Low		25%	11%	12%	15%	34%

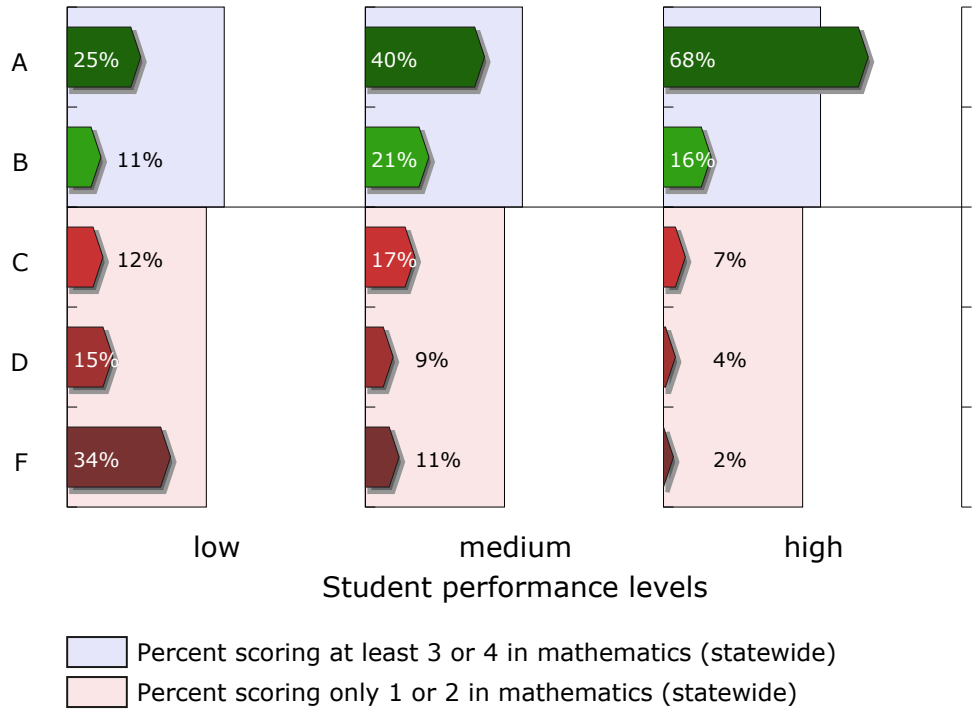

Figure 32: The letter grade analysis found in mathematics (eighth grade) assignments.

4.1.5 Sources of assignments

4.1.5.1 English language arts (all grade levels)

Table 17: An analysis of the sources of assignments found in English language arts (all grade levels). These results are displayed visually in Fig. 33.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	5%	6%	23%	6%	58%
4	8%	2%	25%	7%	56%
5	4%	6%	31%	8%	49%
6	1%	3%	42%	5%	46%
7	1%	6%	45%	6%	38%
8	0%	9%	54%	6%	29%

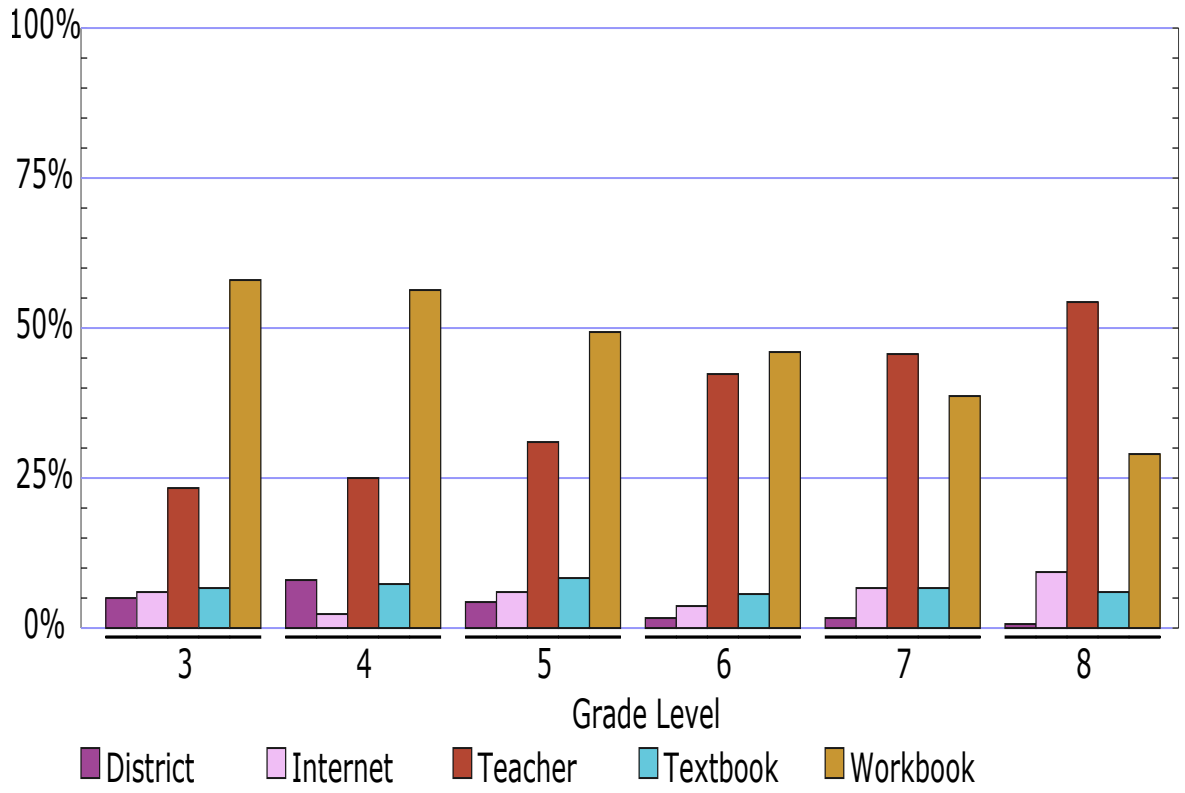

Figure 33: Sources of assignments found in English language arts (all grade levels).

4.1.5.2 mathematics (all grade levels)

Table 18: An analysis of the sources of assignments found in mathematics (all grade levels). These results are displayed visually in Fig. 34.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	0%	4%	7%	8%	79%
4	7%	2%	8%	12%	68%
5	2%	9%	8%	12%	66%
6	0%	1%	19%	8%	69%
7	1%	2%	19%	15%	61%
8	1%	0%	23%	15%	59%

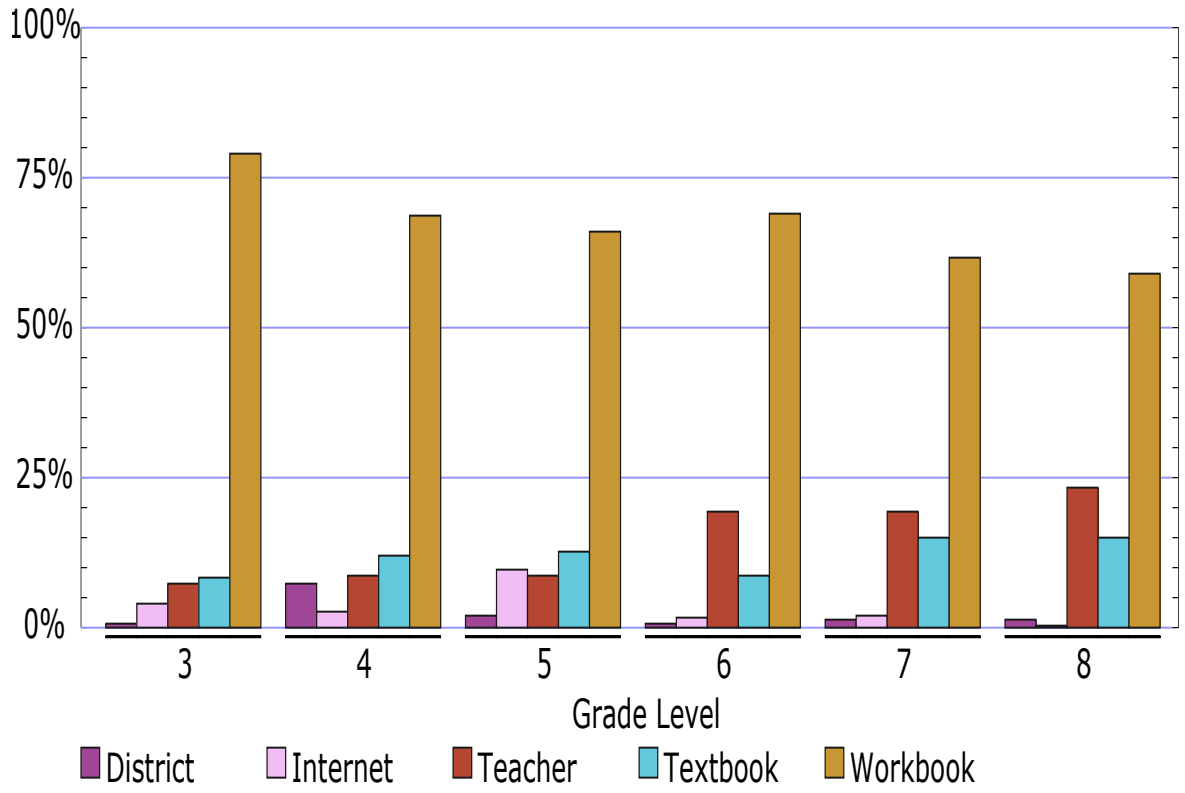

Figure 34: Sources of assignments found in mathematics (all grade levels).

4.1.6 Types of assignments

4.1.6.1 English language arts (all grade levels)

Table 19: An analysis of the types of assignments found in English language arts (all grade levels). These results are displayed visually in Fig. 35.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	11%	52%	4%	5%	26%
4	10%	53%	5%	7%	22%
5	13%	56%	3%	6%	20%
6	13%	59%	7%	8%	11%
7	17%	55%	11%	8%	7%
8	13%	63%	7%	5%	9%

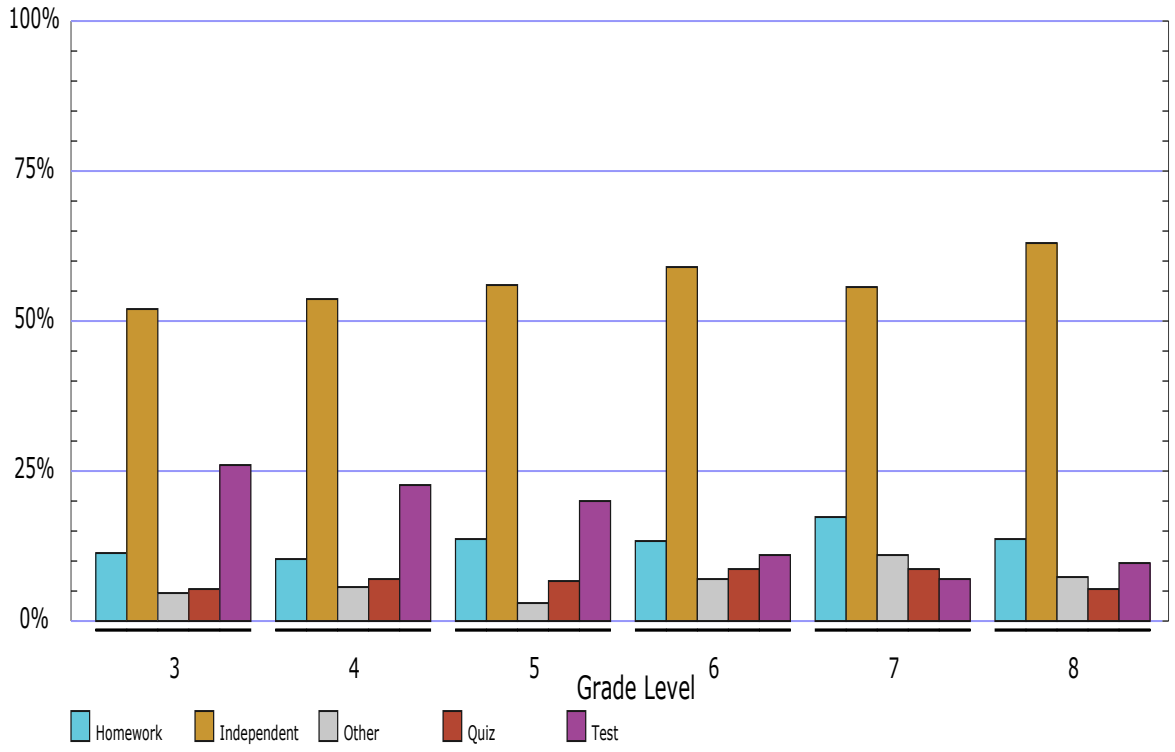

Figure 35: Types of assignments found in English language arts (all grade levels).

4.1.6.2 mathematics (all grade levels)

Table 20: An analysis of the types of assignments found in mathematics (all grade levels). These results are displayed visually in Fig. 36.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	21%	44%	4%	9%	19%
4	18%	42%	5%	10%	22%
5	23%	47%	5%	8%	14%
6	32%	39%	8%	10%	8%
7	35%	34%	7%	12%	8%
8	30%	30%	19%	11%	7%

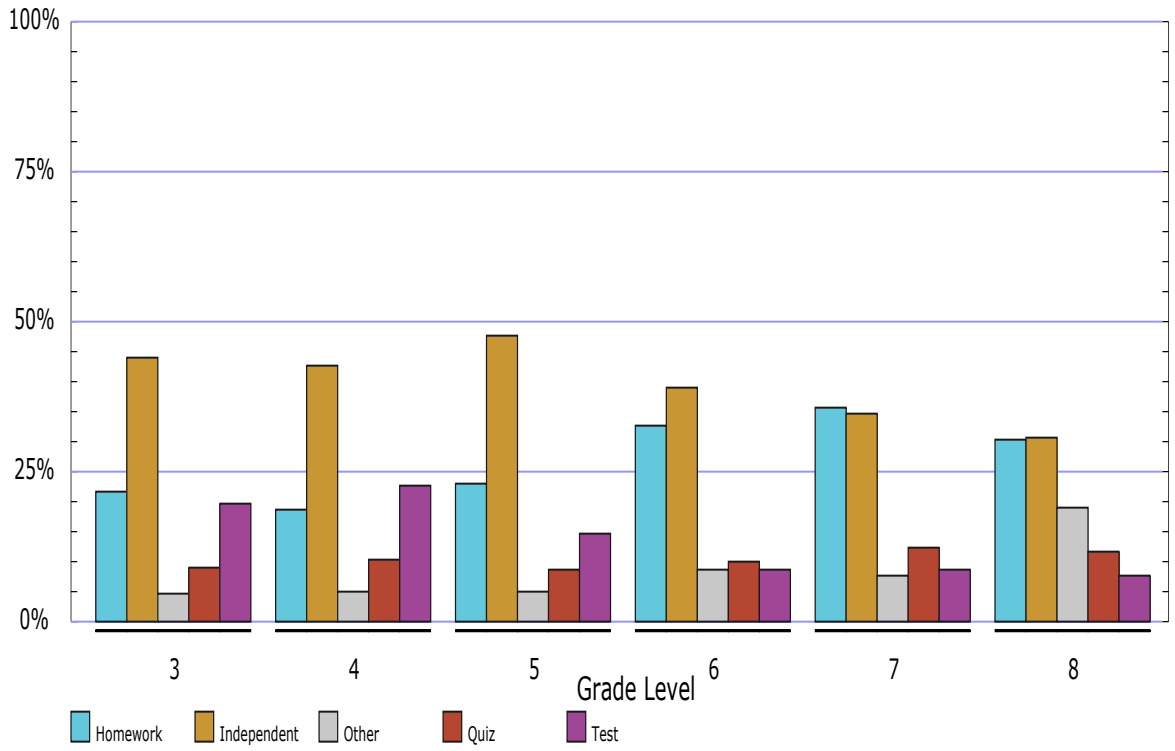

Figure 36: Types of assignments found in mathematics (all grade levels).

4.1.7 Types of activities

4.1.7.1 English language arts (all grade levels)

Table 21: An analysis of the types of activities found in English language arts (all grade levels). These results are displayed visually in Fig. 37.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	8%	83%	7%
4	12%	82%	5%
5	8%	85%	5%
6	11%	80%	7%
7	10%	80%	9%
8	10%	84%	4%

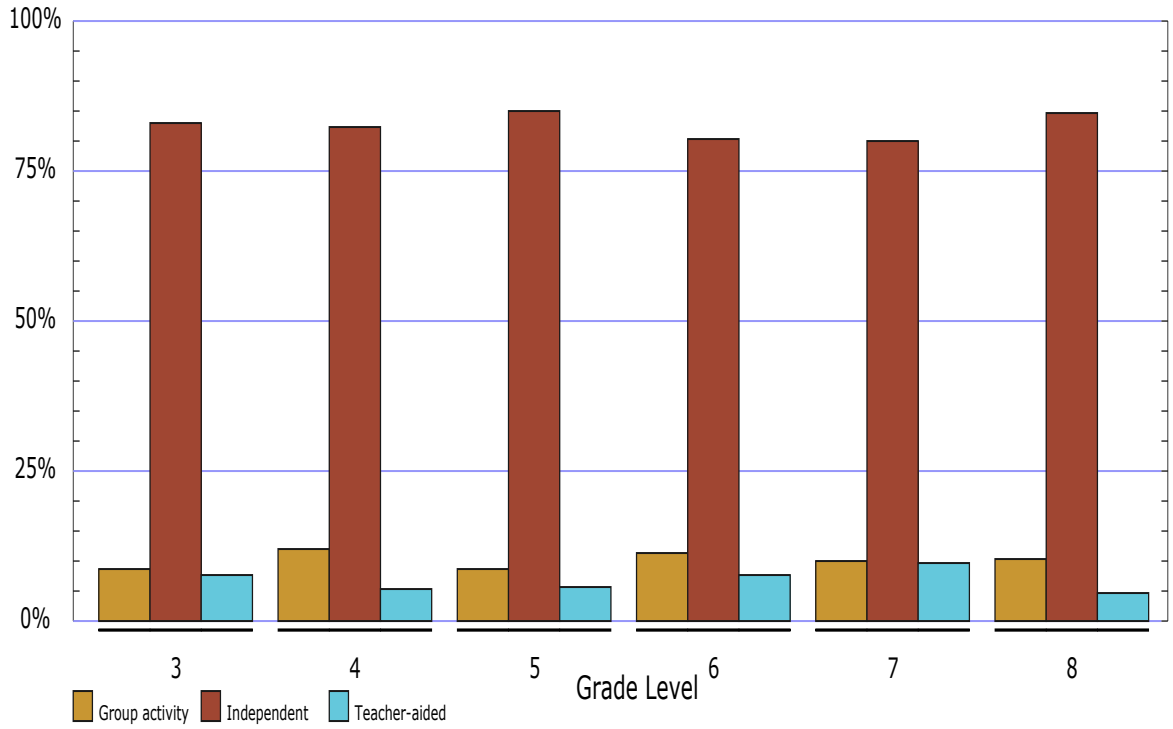

Figure 37: Types of activities found in English language arts (all grade levels).

4.1.7.2 mathematics (all grade levels)

Table 22: An analysis of the types of activities found in mathematics (all grade levels). These results are displayed visually in Fig. 38.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	9%	86%	4%
4	8%	88%	2%
5	6%	87%	5%
6	9%	80%	9%
7	8%	84%	6%
8	7%	84%	8%

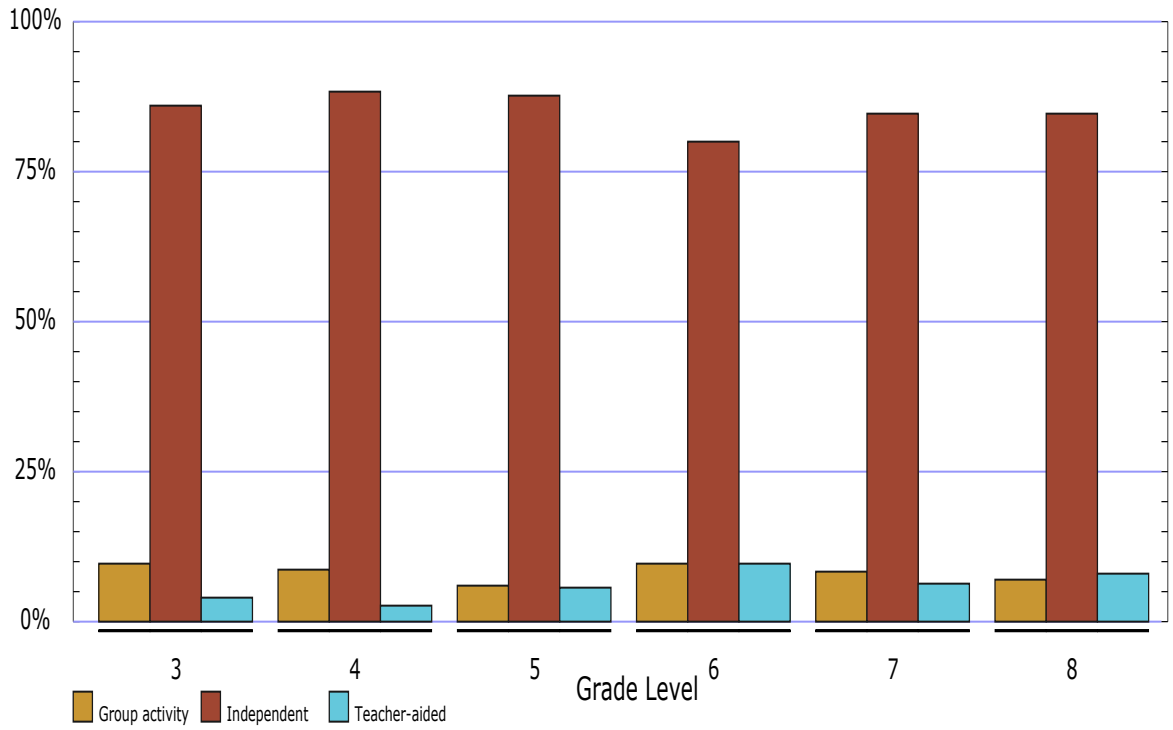

Figure 38: Types of activities found in mathematics (all grade levels).

4.2 School performance disaggregation

4.2.1 Sample sizes

4.2.1.1 all subjects, low-performing (all grade levels)

Table 23: Sample sizes of student assignments collected from teachers. Only samples for which a clear learning objective could be discerned are included. Percentages in which each individual sample size contributed to the total sample size are shown in parentheses. These results are displayed in Fig. 39.

	Collected subject areas		
Grade level	ELA	MATH	Combined
3	2592 (6%)	1783 (4%)	4,375 (10%)
4	1798 (4%)	1212 (2%)	3,010 (7%)
5	1320 (3%)	1029 (2%)	2,349 (5%)
6	7773 (18%)	4275 (10%)	12,048 (28%)
7	7430 (17%)	4929 (11%)	12,359 (28%)
8	4312 (10%)	4207 (9%)	8,519 (19%)
Total	**25,225 (59%)**	**17,435 (40%)**	**42,660 (100%)**

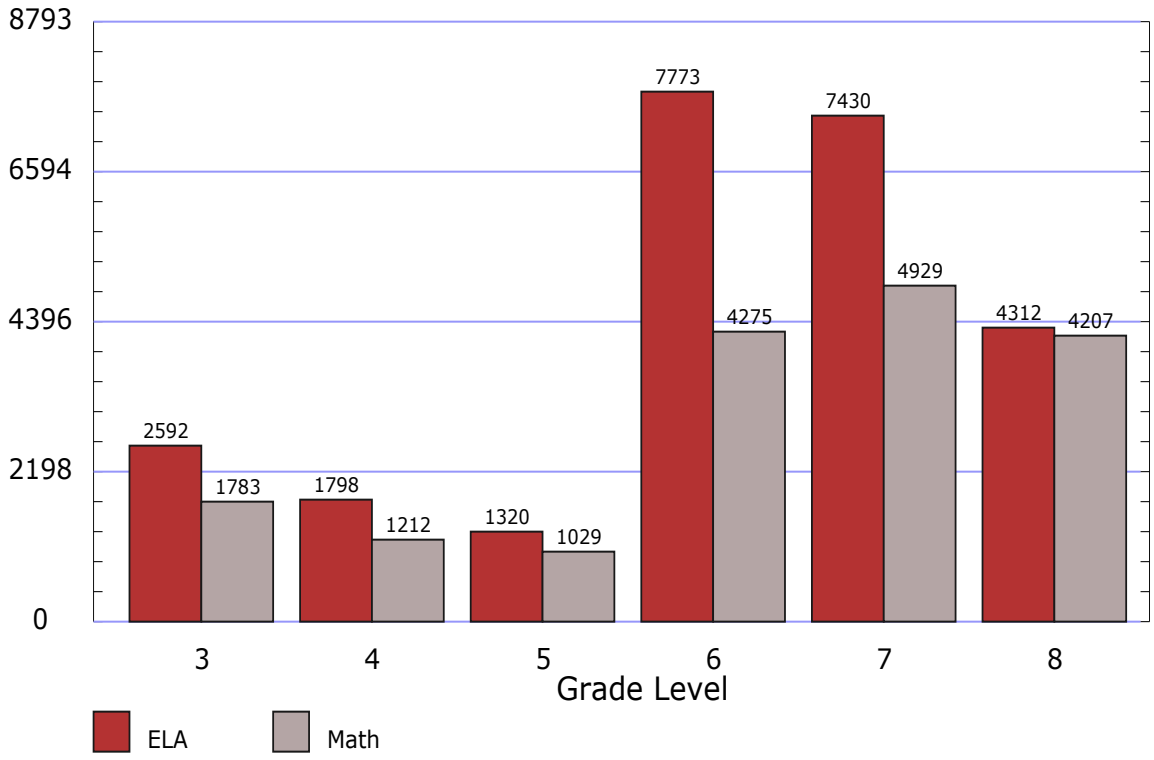

Figure 39: Sample sizes of student assignments collected from Nevada enacted curriculum study teachers that were analyzed as part of the study.

4.2.1.2 all subjects, high-performing (all grade levels)

Table 24: Sample sizes of student assignments collected from teachers. Only samples for which a clear learning objective could be discerned are included. Percentages in which each individual sample size contributed to the total sample size are shown in parentheses. These results are displayed in Fig. 40.

	Collected subject areas		
Grade level	ELA	MATH	Combined
3	4269 (11%)	2960 (8%)	7,229 (20%)
4	2781 (7%)	2038 (5%)	4,819 (13%)
5	2377 (6%)	1589 (4%)	3,966 (11%)
6	3384 (9%)	2443 (6%)	5,827 (16%)
7	3989 (11%)	3373 (9%)	7,362 (20%)
8	3071 (8%)	3674 (10%)	6,745 (18%)
Total	**19,871 (55%)**	**16,077 (44%)**	**35,948 (100%)**

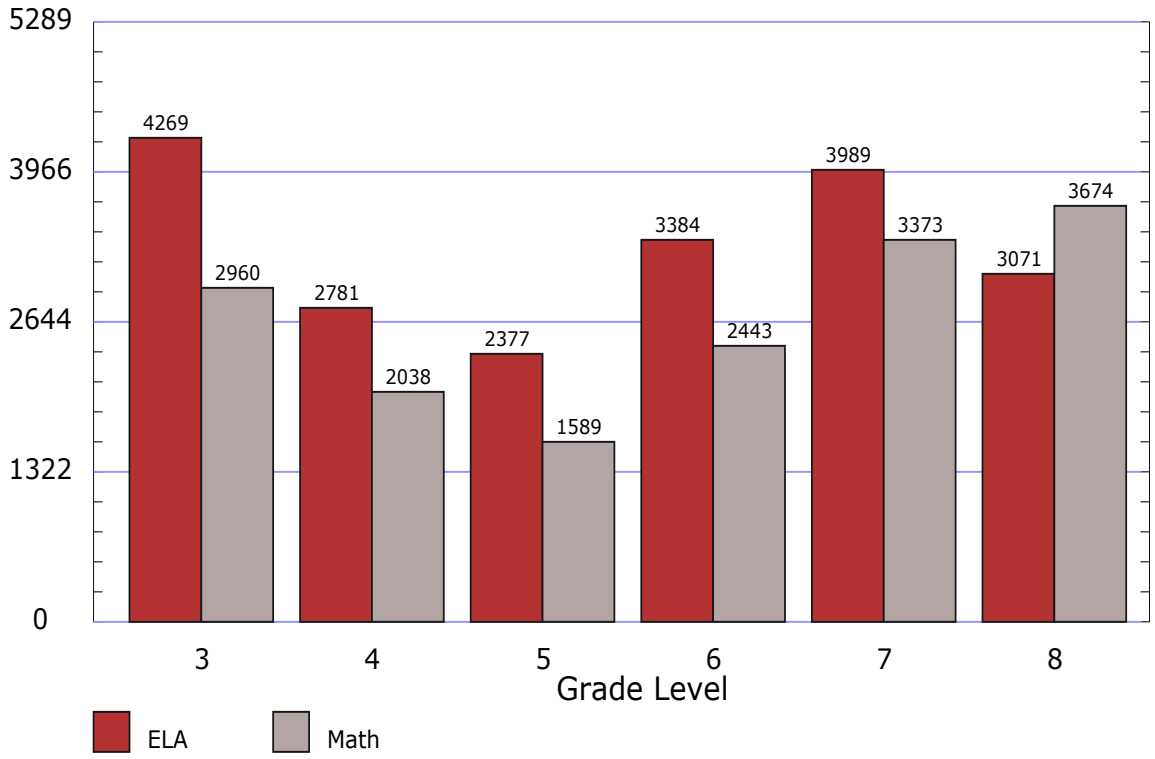

Figure 40: Sample sizes of student assignments collected from Nevada enacted curriculum study teachers that were analyzed as part of the study.

4.2.2 Alignment to standards

4.2.2.1 English language arts, low-performing (all grade levels)

Table 25: Alignment to state content standards for student assignments in English language arts (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 41.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
9	0%	0%	0%	0%	0%	2%
8	0%	0%	3%	3%	6%	**59%**
7	0%	0%	0%	3%	**59%**	4%
6	0%	0%	0%	**50%**	9%	0%
5	2%	3%	**65%**	27%	14%	13%
4	13%	**58%**	14%	6%	3%	2%
3	**60%**	25%	10%	4%	3%	10%
2	17%	7%	3%	3%	3%	3%
1	5%	3%	0%	0%	0%	0%

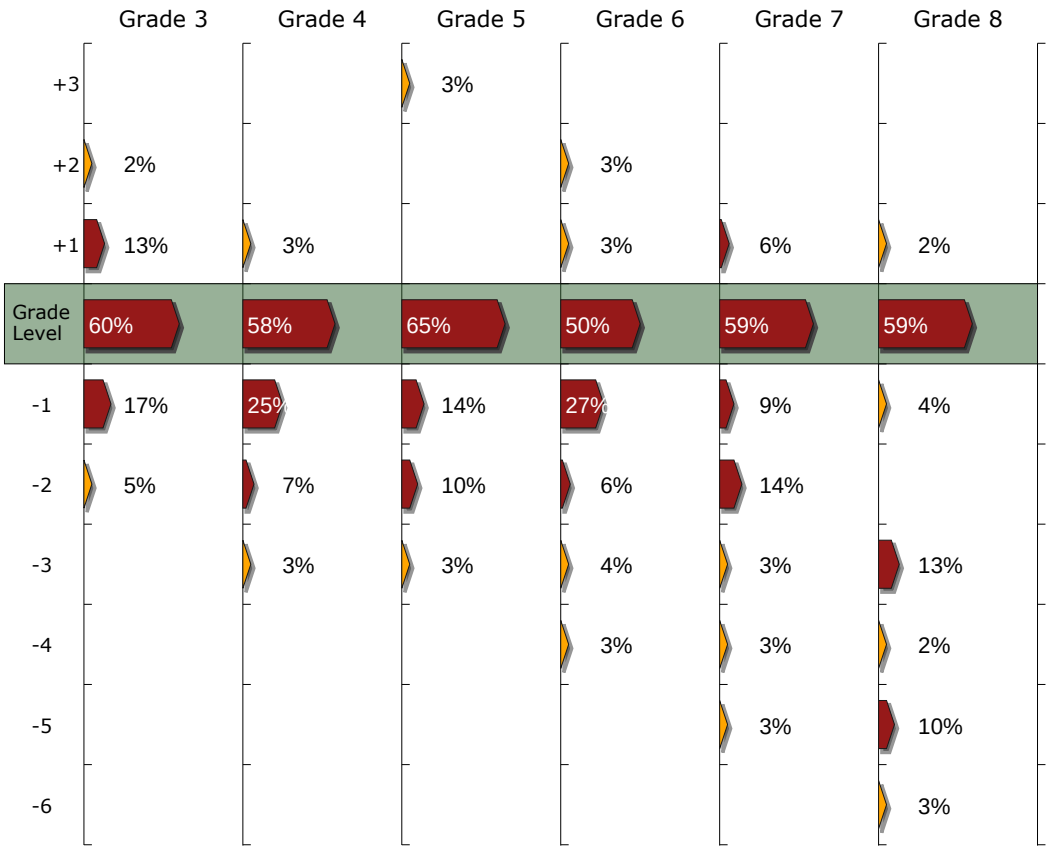

Figure 41: A visual representation of Table 25. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.2.2.2 mathematics, low-performing (all grade levels)

Table 26: Alignment to state content standards for student assignments in mathematics (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 42.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
9	0%	0%	0%	0%	0%	7%
8	0%	0%	0%	0%	5%	**54%**
7	0%	4%	3%	5%	**52%**	22%
6	0%	10%	22%	**59%**	14%	4%
5	0%	5%	**58%**	21%	17%	8%
4	6%	**66%**	11%	5%	3%	2%
3	**84%**	7%	0%	0%	0%	0%
2	5%	3%	2%	3%	3%	0%

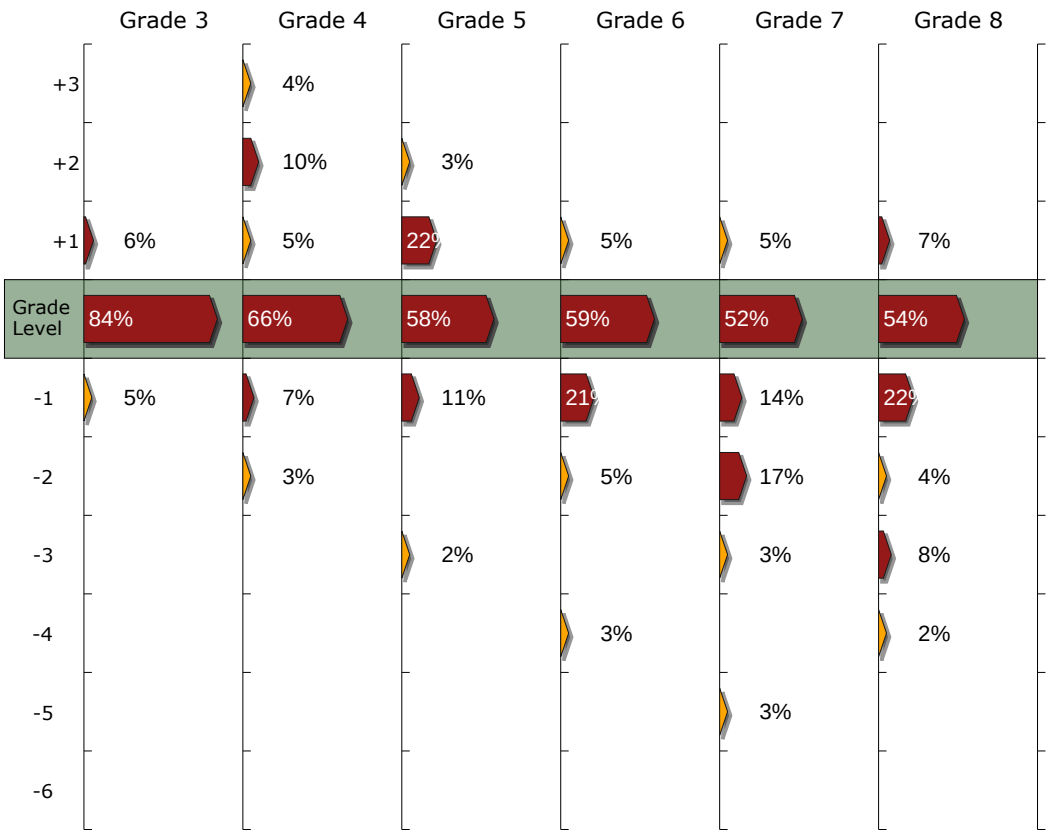

Figure 42: A visual representation of Table 26. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.2.2.3 English language arts, high-performing (all grade levels)

Table 27: Alignment to state content standards for student assignments in English language arts (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 43.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
8	0%	0%	0%	6%	6%	**66%**
7	0%	0%	0%	4%	**53%**	6%
6	0%	0%	3%	**56%**	6%	5%
5	2%	4%	**70%**	16%	20%	10%
4	11%	**55%**	8%	5%	6%	3%
3	**63%**	27%	11%	6%	5%	5%
2	16%	7%	4%	0%	0%	0%
1	4%	3%	0%	0%	0%	0%
K	0%	0%	0%	0%	0%	0%

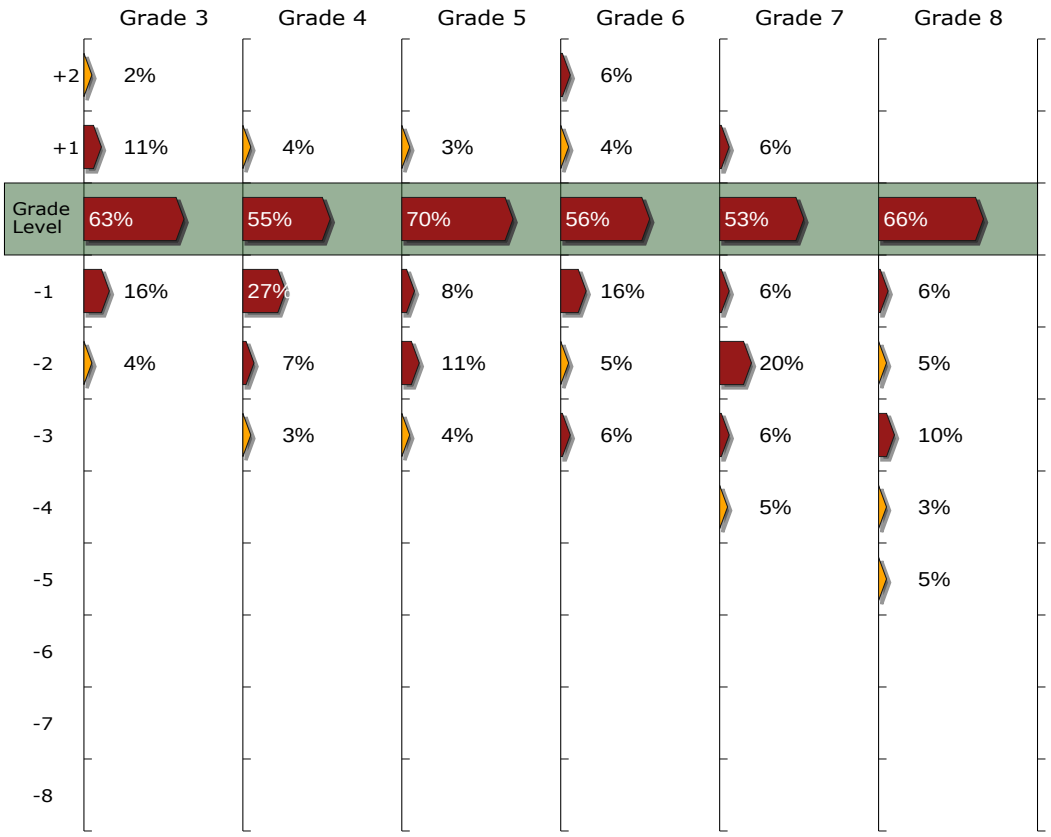

Figure 43: A visual representation of Table 27. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.2.2.4 mathematics, high-performing (all grade levels)

Table 28: Alignment to state content standards for student assignments in mathematics (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 44.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
9	0%	0%	0%	0%	2%	9%
8	0%	0%	0%	2%	6%	**54%**
7	0%	3%	2%	9%	**54%**	21%
6	2%	11%	30%	**49%**	13%	8%
5	0%	6%	**50%**	26%	17%	4%
4	10%	**69%**	9%	5%	2%	0%
3	**77%**	4%	3%	2%	0%	0%
2	6%	3%	2%	2%	0%	0%
1	0%	0%	0%	0%	0%	0%

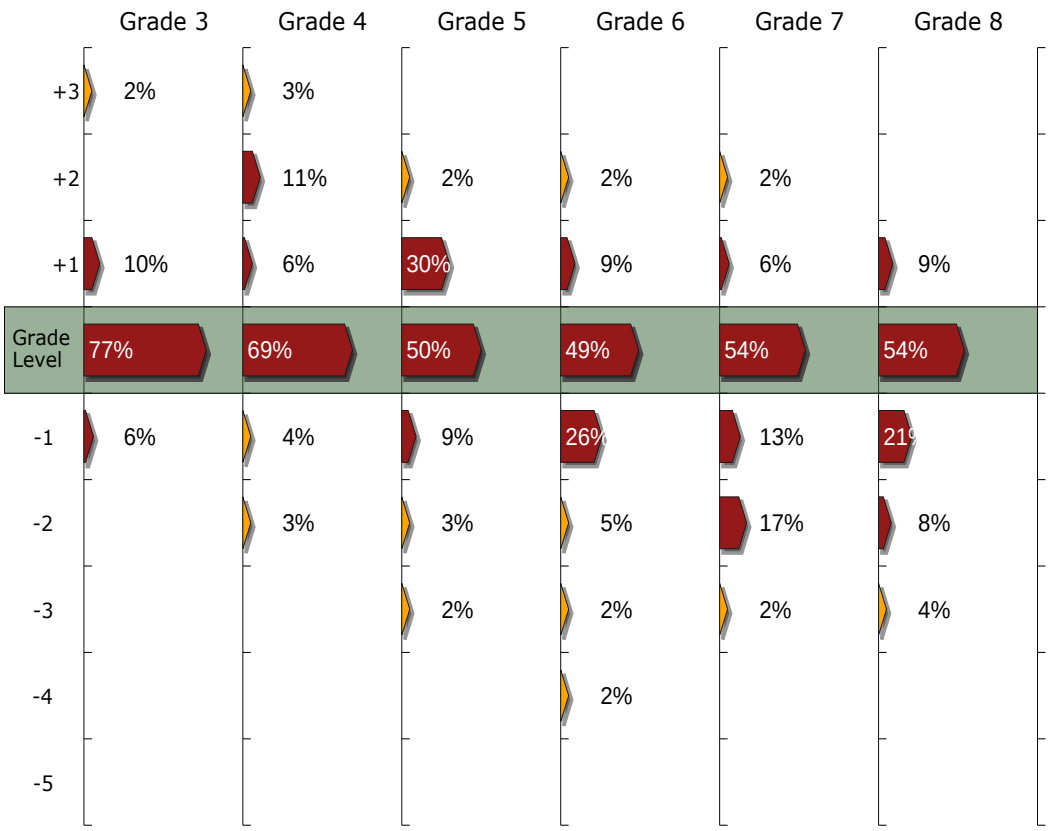

Figure 44: A visual representation of Table 28. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.2.3 Cognitive rigor

4.2.3.1 English language arts, low-performing (third grade)

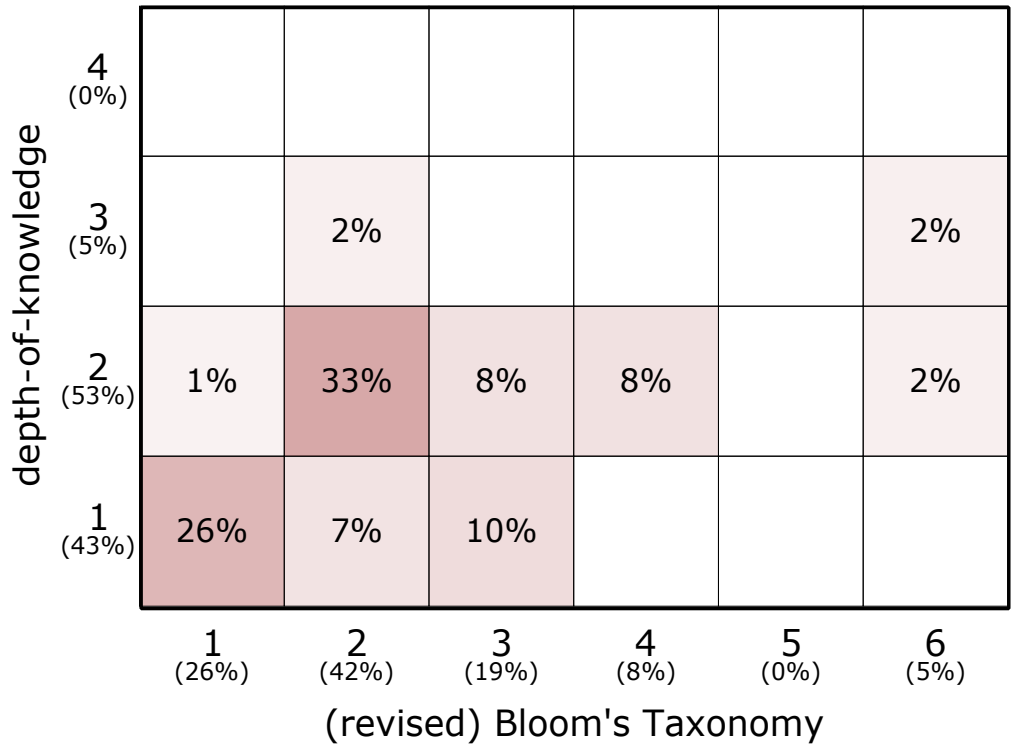

Figure 45: The cognitive rigor found in English language arts, low-performing (third grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.2 English language arts, low-performing (fourth grade)

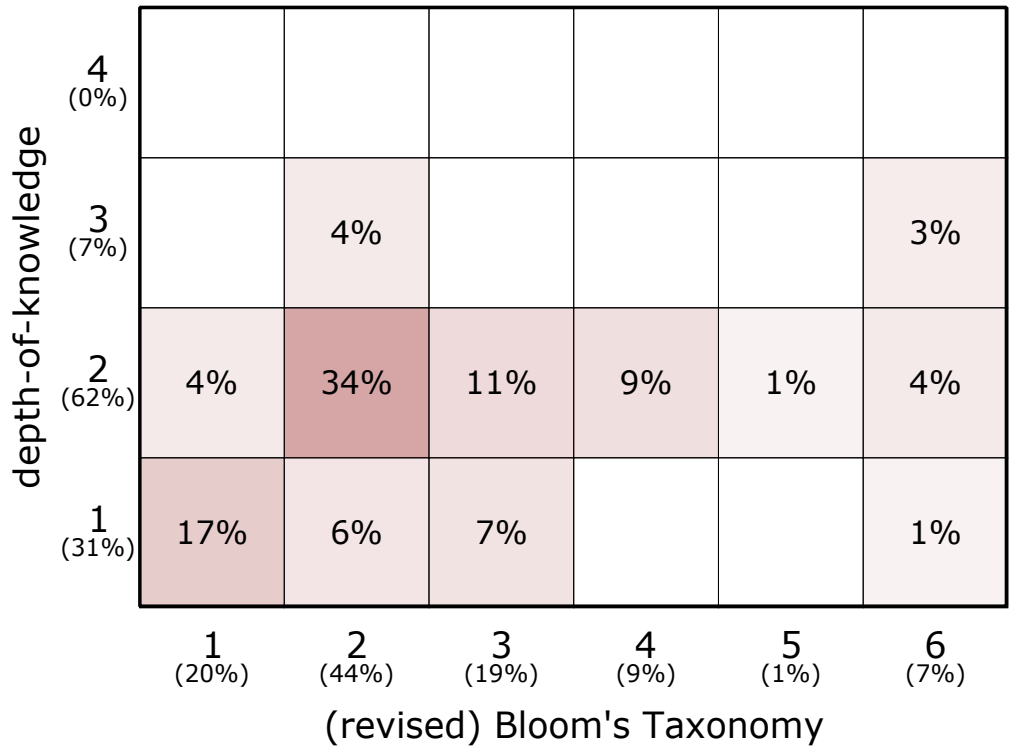

Figure 46: The cognitive rigor found in English language arts, low-performing (fourth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.3 English language arts, low-performing (fifth grade)

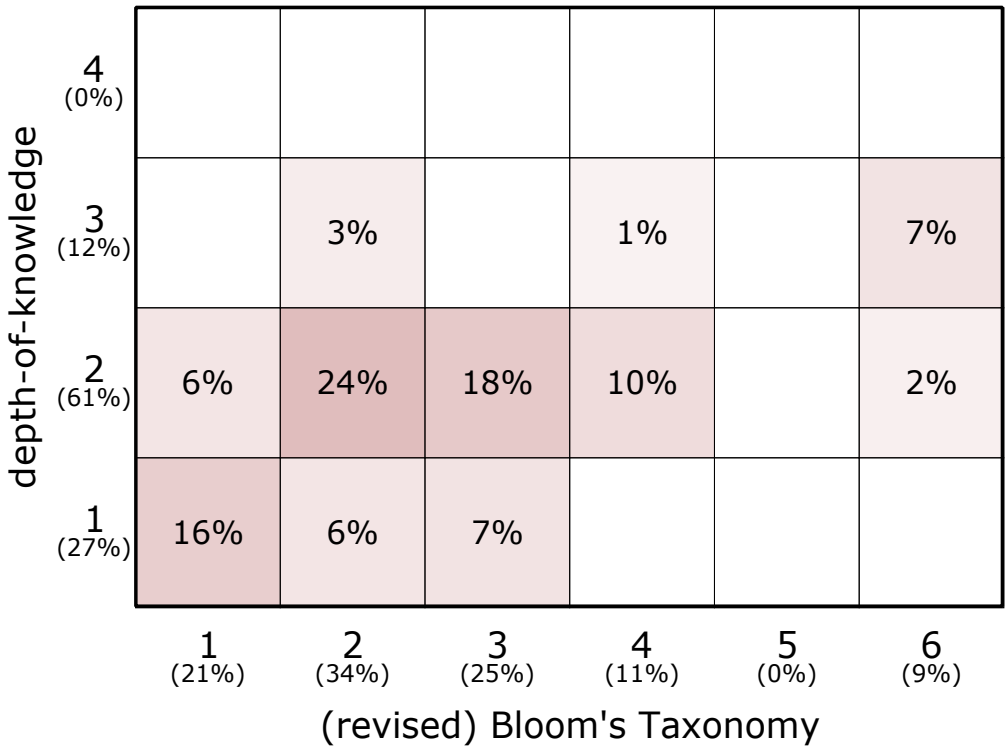

Figure 47: The cognitive rigor found in English language arts, low-performing (fifth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.4 English language arts, low-performing (sixth grade)

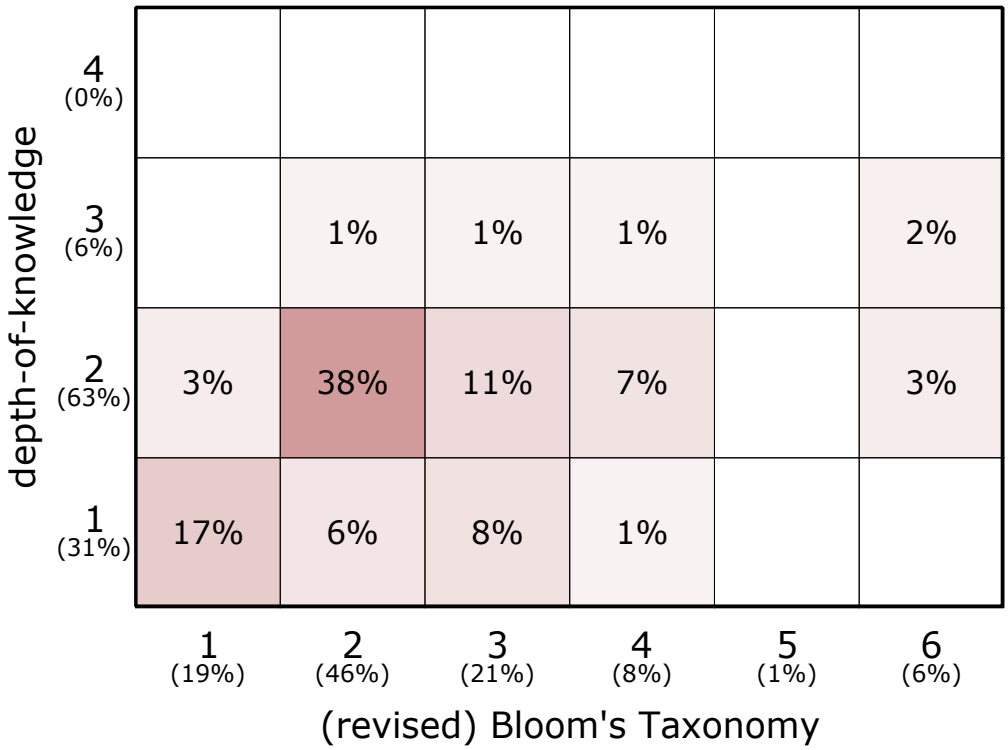

Figure 48: The cognitive rigor found in English language arts, low-performing (sixth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.5 English language arts, low-performing (seventh grade)

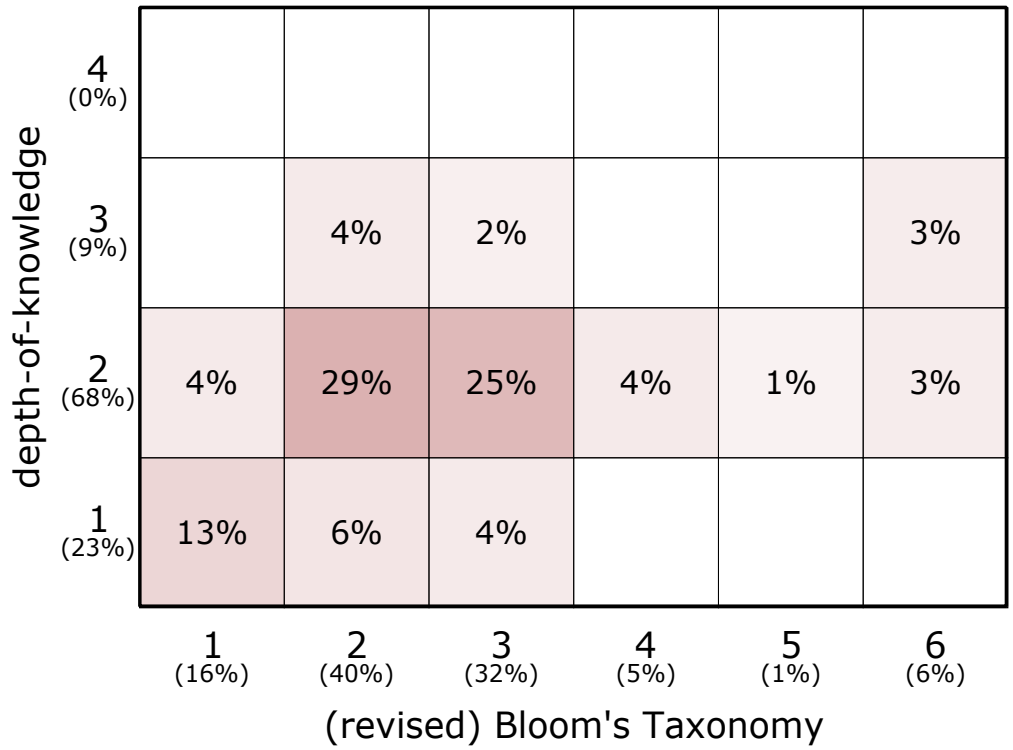

Figure 49: The cognitive rigor found in English language arts, low-performing (seventh grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.6 English language arts, low-performing (eighth grade)

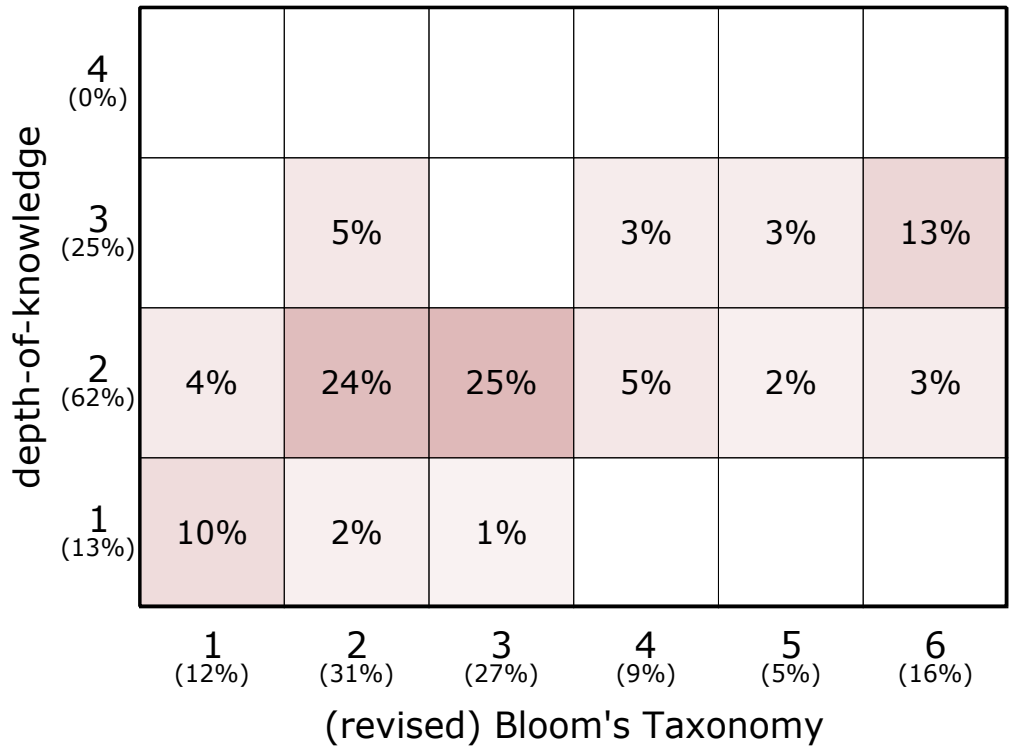

Figure 50: The cognitive rigor found in English language arts, low-performing (eighth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.7 English language arts, high-performing (third grade)

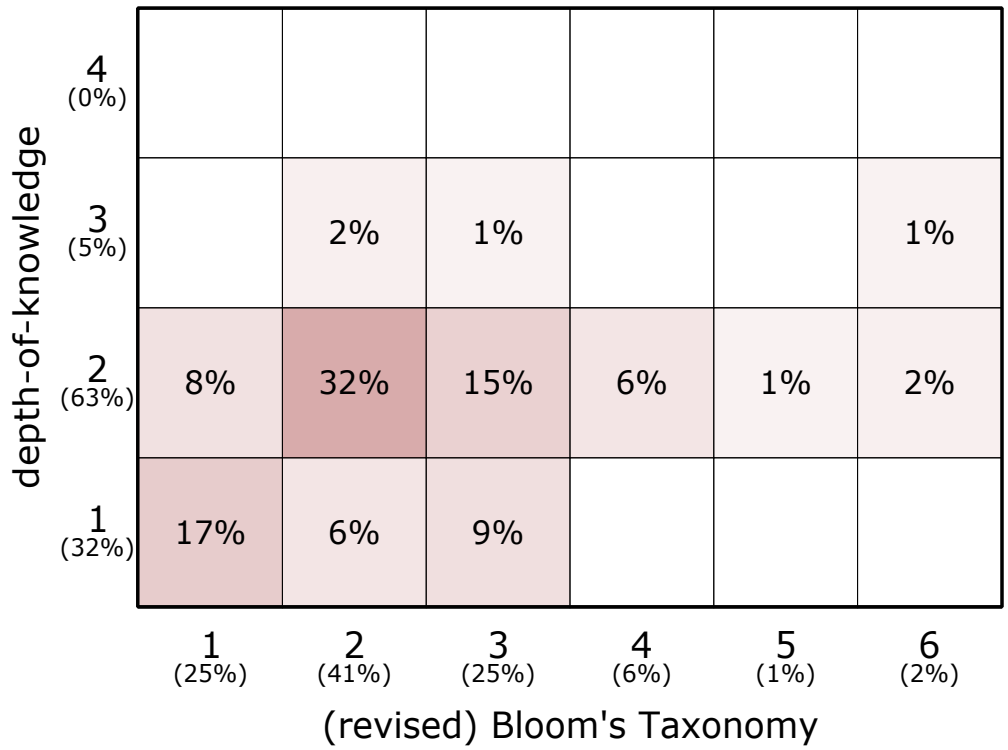

Figure 51: The cognitive rigor found in English language arts, high-performing (third grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.8 English language arts, high-performing (fourth grade)

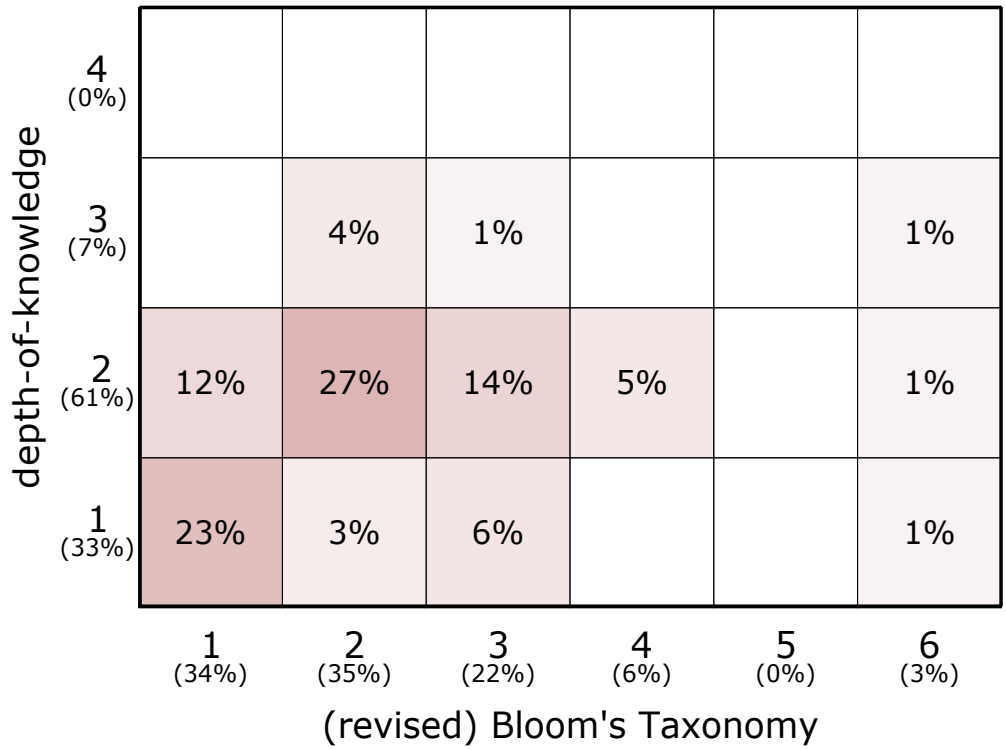

Figure 52: The cognitive rigor found in English language arts, high-performing (fourth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.9 English language arts, high-performing (fifth grade)

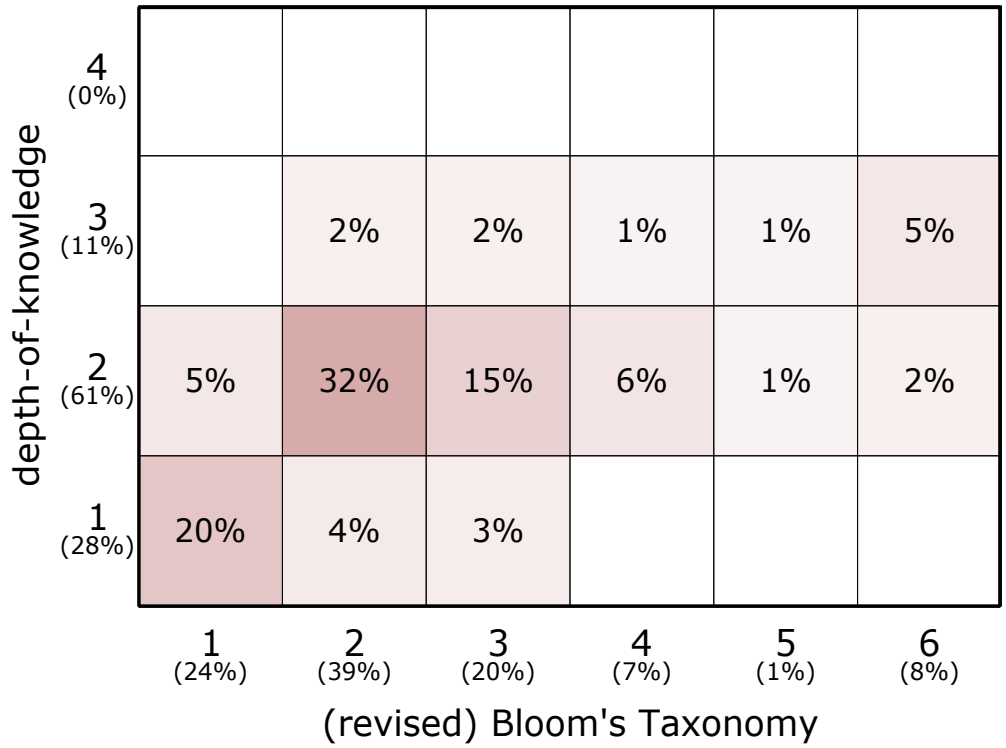

Figure 53: The cognitive rigor found in English language arts, high-performing (fifth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.10 English language arts, high-performing (sixth grade)

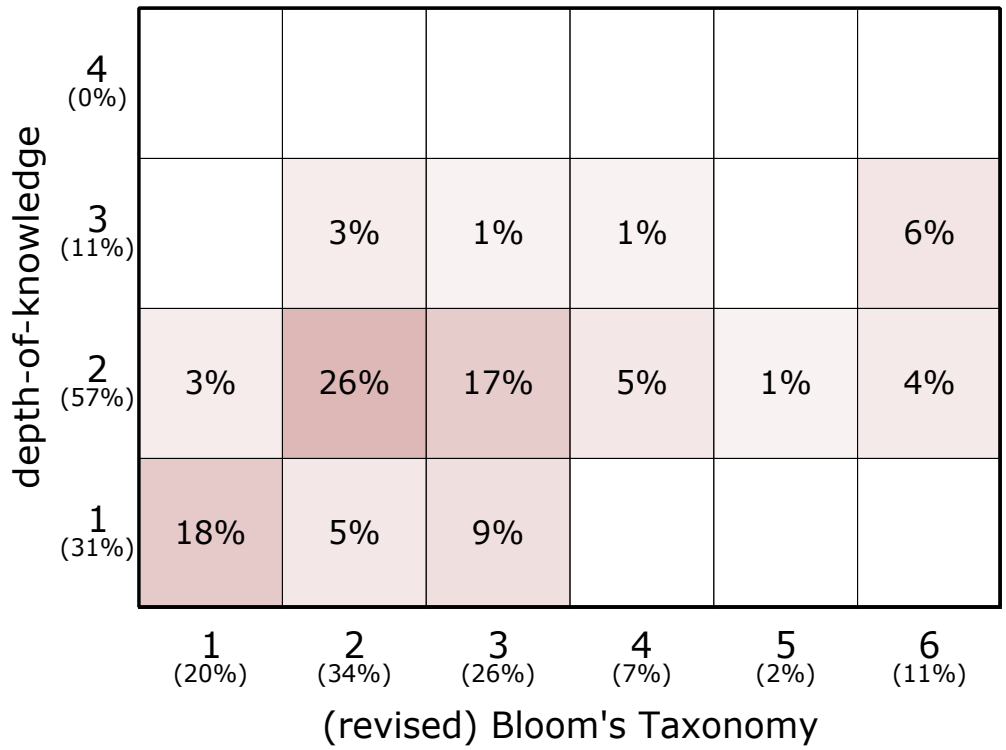

Figure 54: The cognitive rigor found in English language arts, high-performing (sixth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.11 English language arts, high-performing (seventh grade)

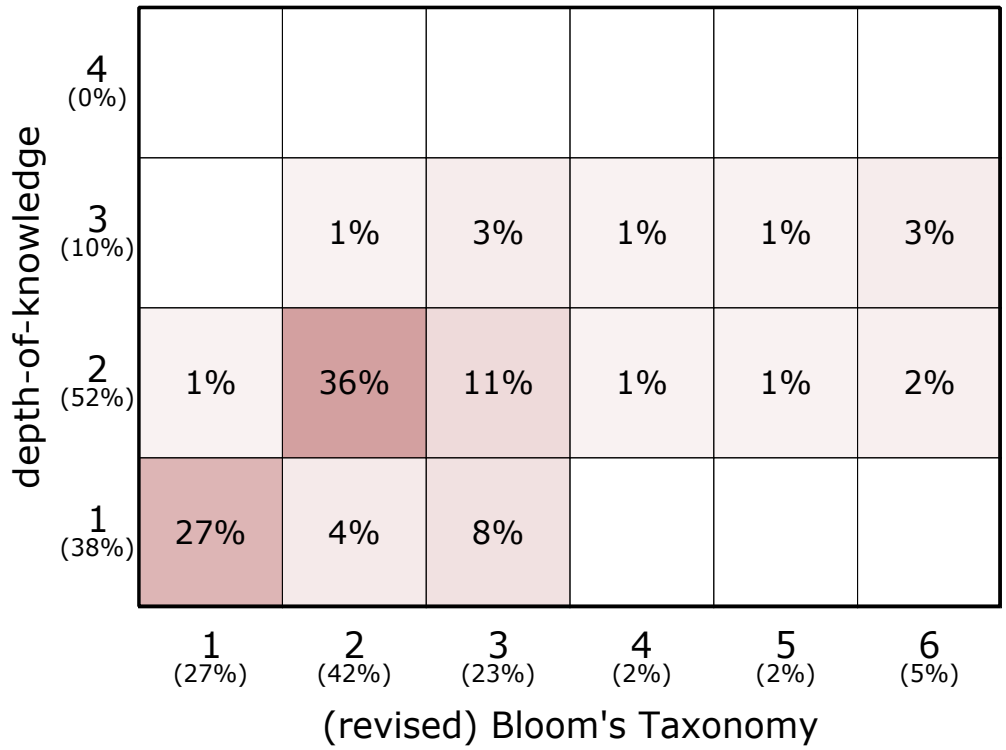

Figure 55: The cognitive rigor found in English language arts, high-performing (seventh grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.12 English language arts, high-performing (eighth grade)

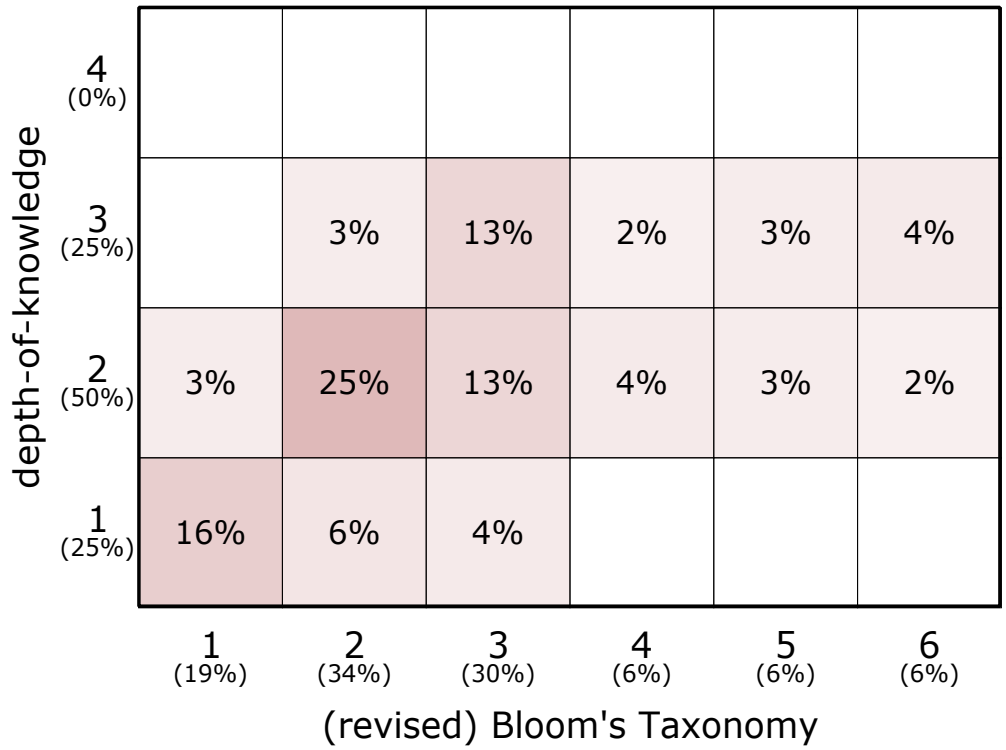

Figure 56: The cognitive rigor found in English language arts, high-performing (eighth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.13 Appearance of DOK-1 in English language arts

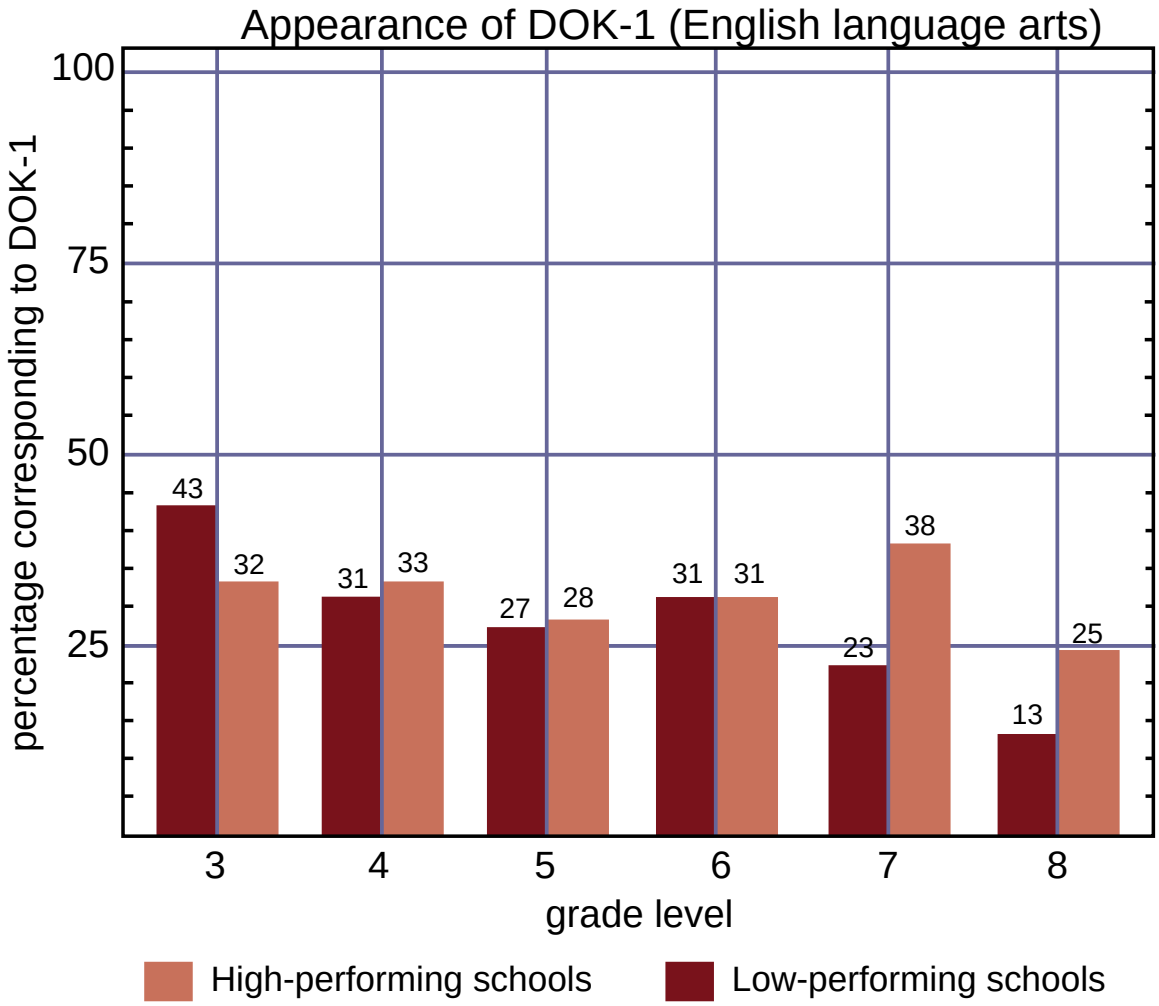

Figure 57: Appearance of the lowest level of depth of knowledge (that is, DOK-1) in the collected student assignments for English language arts. Here, high percentages indicate relatively low rigor in regards to depth of knowledge.

4.2.3.14 mathematics, low-performing (third grade)

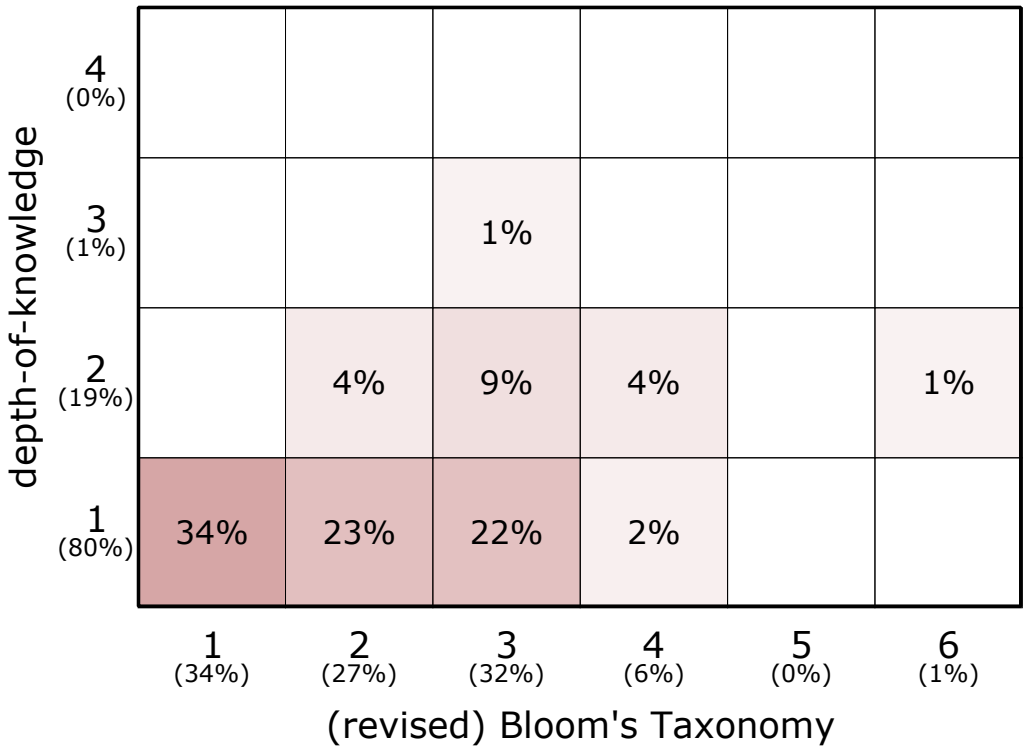

Figure 58: The cognitive rigor found in mathematics, low-performing (third grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.15 mathematics, low-performing (fourth grade)

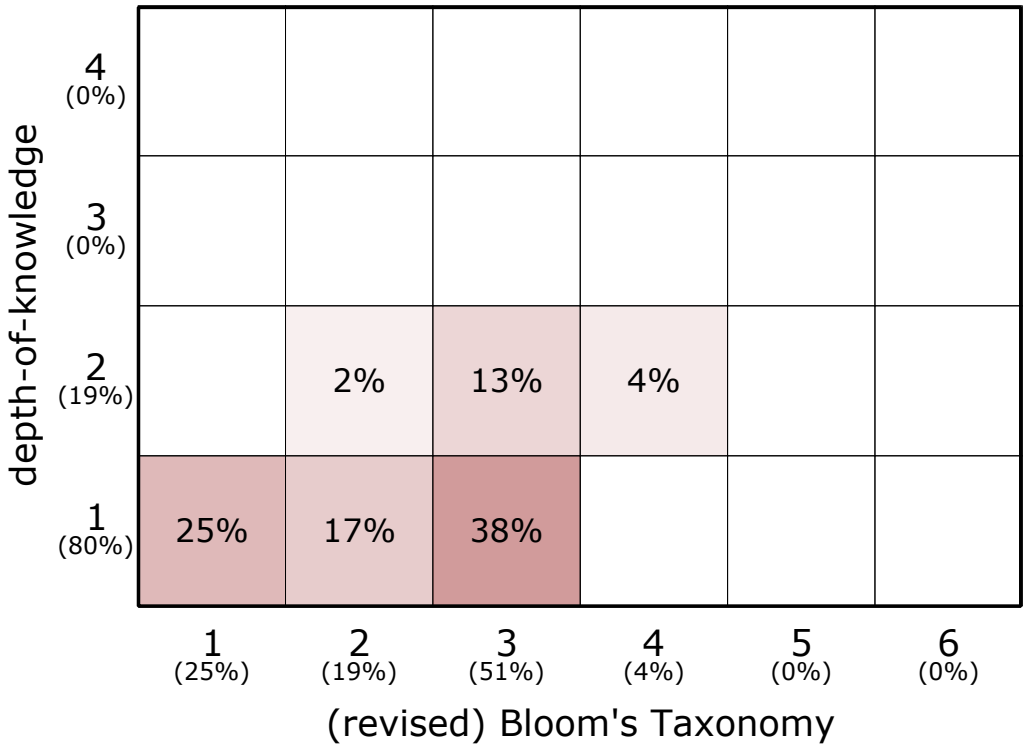

Figure 59: The cognitive rigor found in mathematics, low-performing (fourth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.16 mathematics, low-performing (fifth grade)

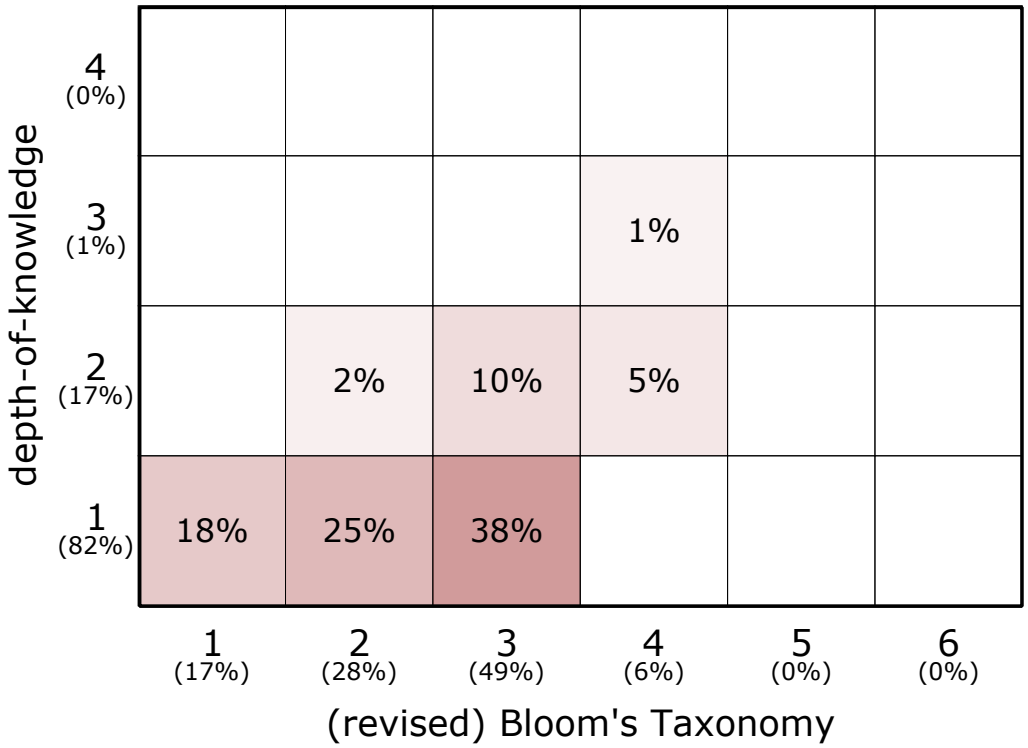

Figure 60: The cognitive rigor found in mathematics, low-performing (fifth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.17 mathematics, low-performing (sixth grade)

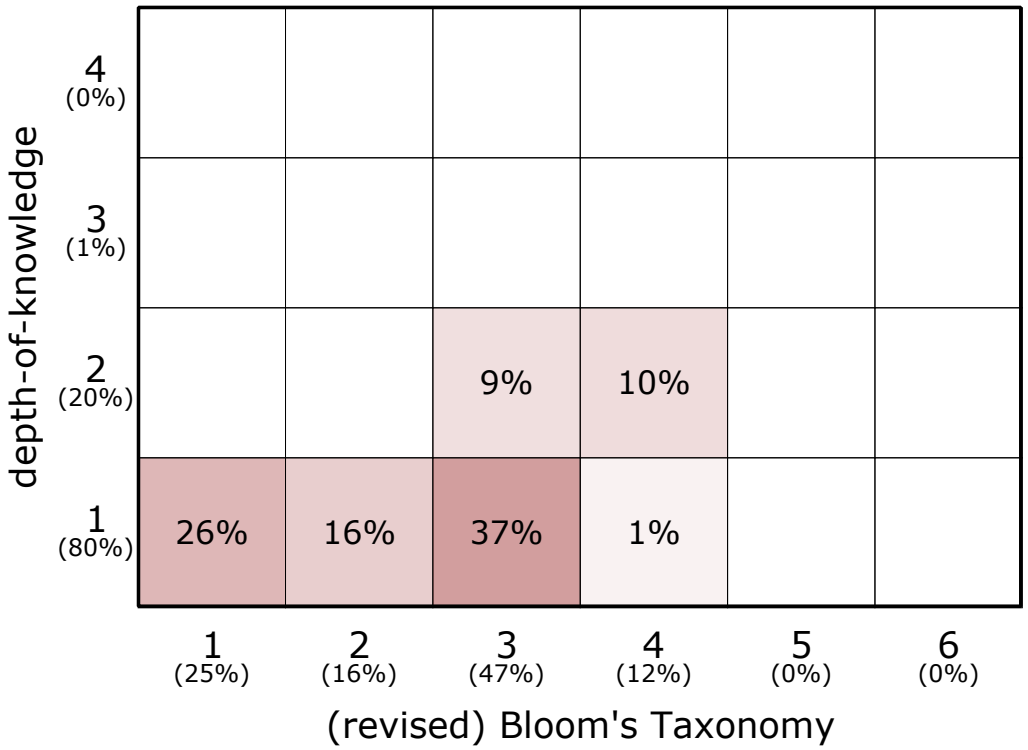

Figure 61: The cognitive rigor found in mathematics, low-performing (sixth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.18 mathematics, low-performing (seventh grade)

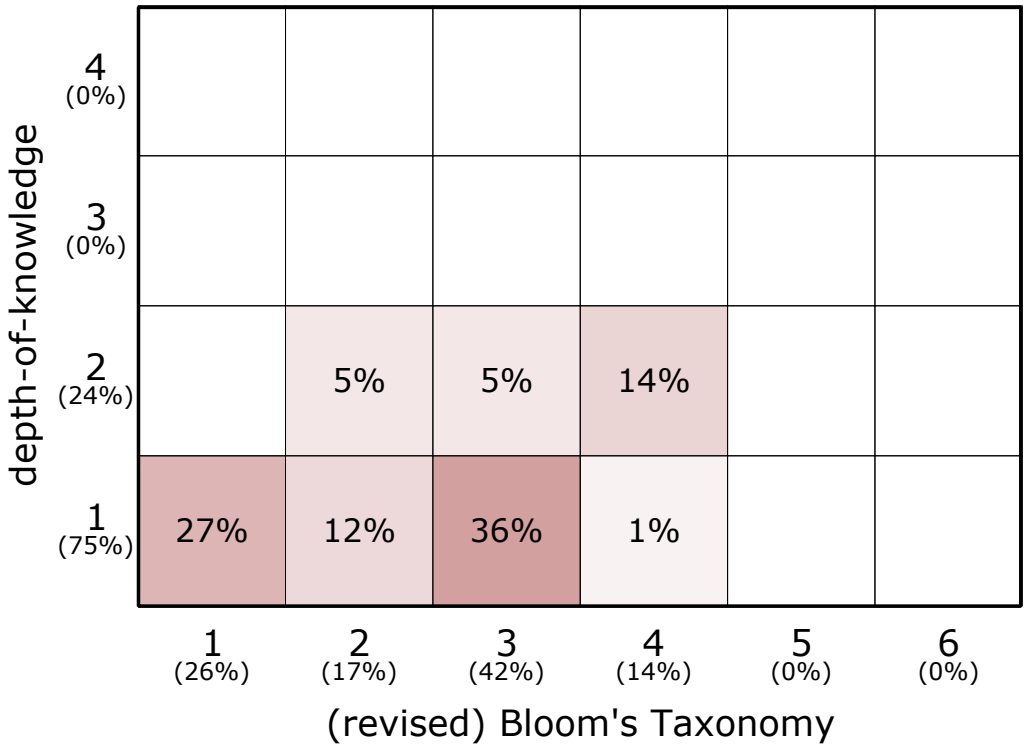

Figure 62: The cognitive rigor found in mathematics, low-performing (seventh grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.19 mathematics, low-performing (eighth grade)

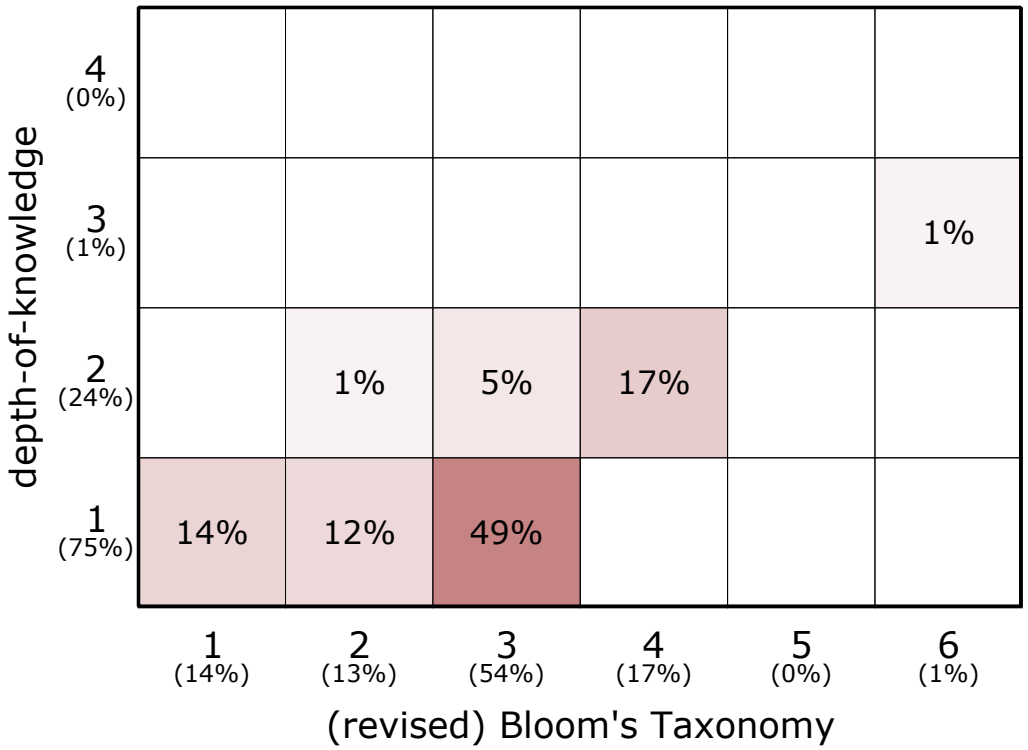

Figure 63: The cognitive rigor found in mathematics, low-performing (eighth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.20 mathematics, high-performing (third grade)

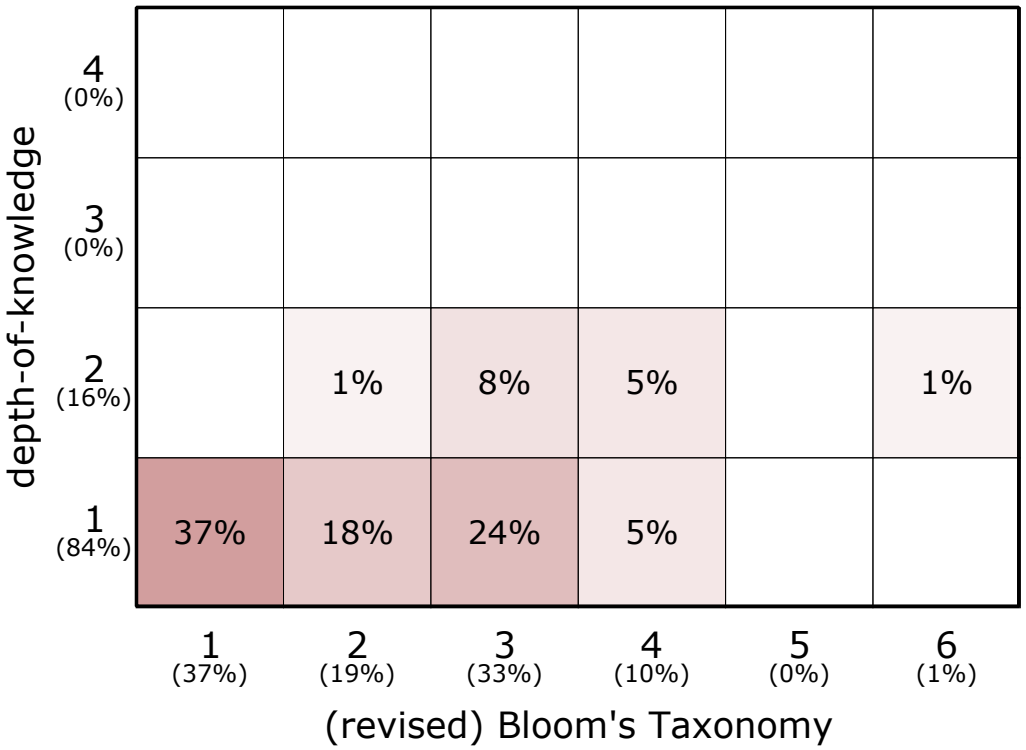

Figure 64: The cognitive rigor found in mathematics, high-performing (third grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.21 mathematics, high-performing (fourth grade)

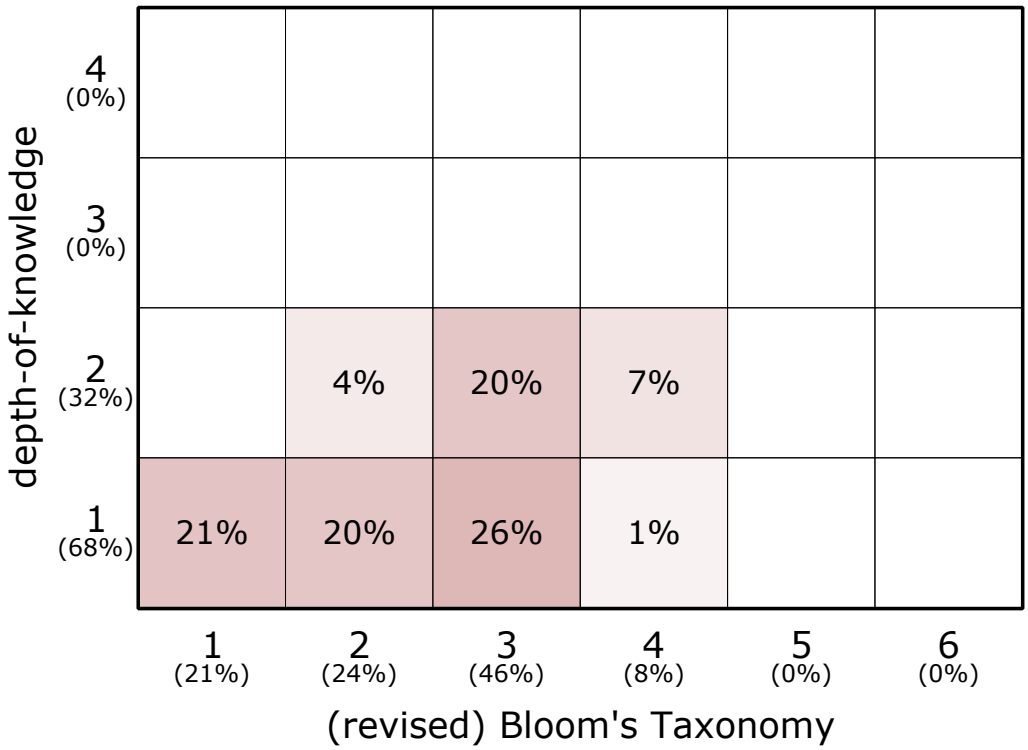

Figure 65: The cognitive rigor found in mathematics, high-performing (fourth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.22 mathematics, high-performing (fifth grade)

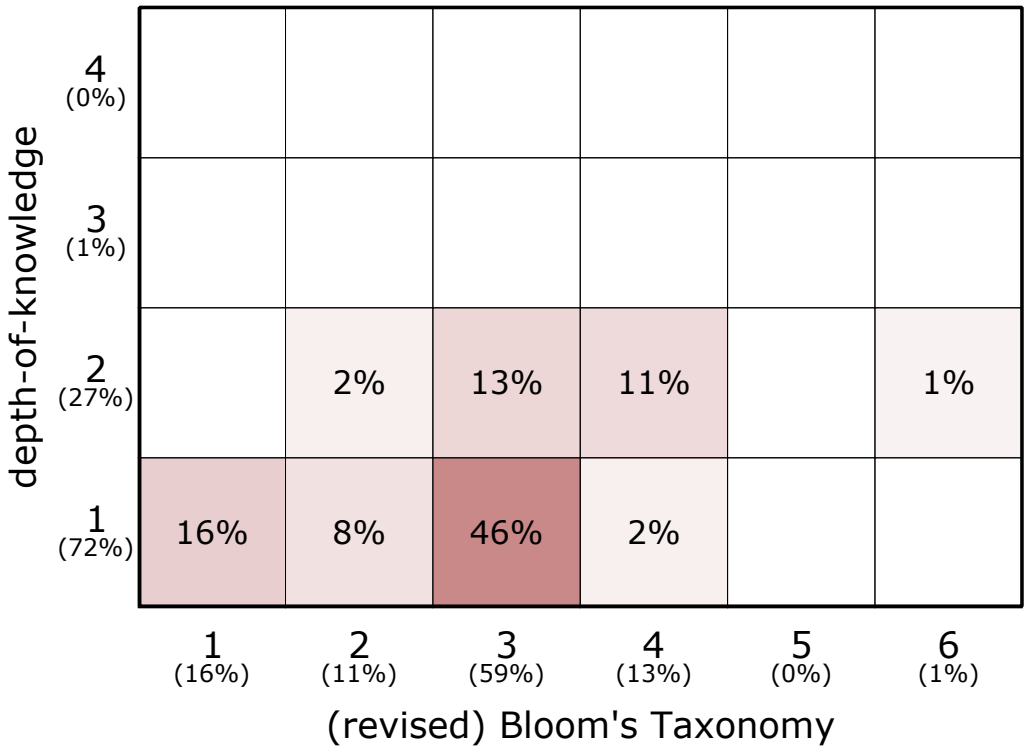

Figure 66: The cognitive rigor found in mathematics, high-performing (fifth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.23 mathematics, high-performing (sixth grade)

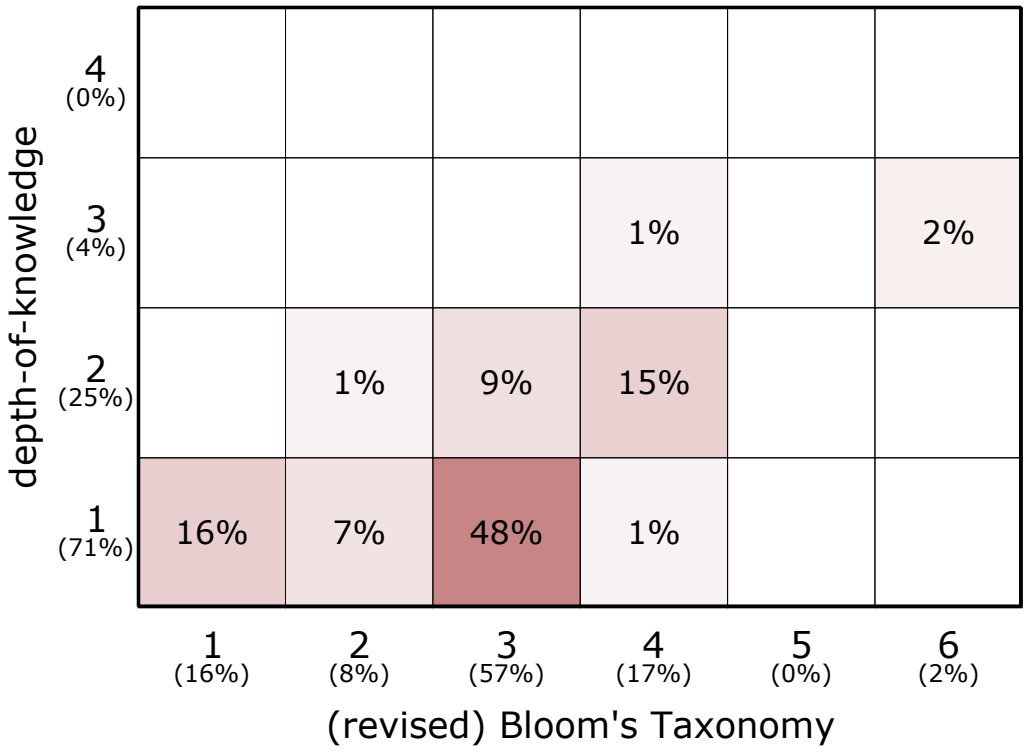

Figure 67: The cognitive rigor found in mathematics, high-performing (sixth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.24 mathematics, high-performing (seventh grade)

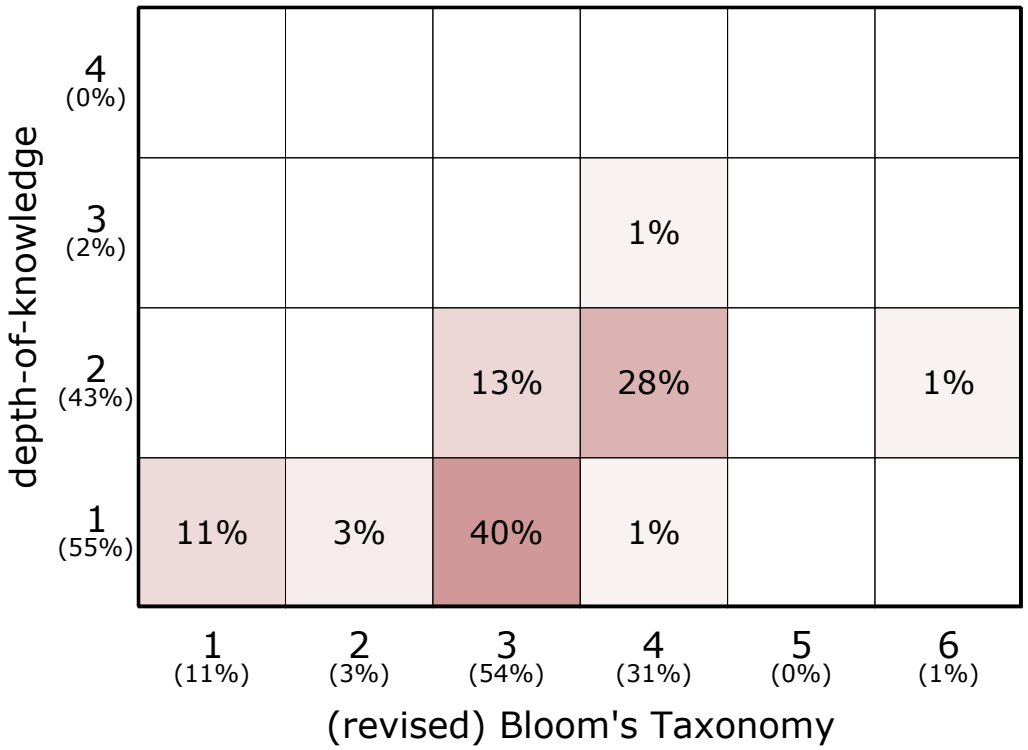

Figure 68: The cognitive rigor found in mathematics, high-performing (seventh grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.25 mathematics, high-performing (eighth grade)

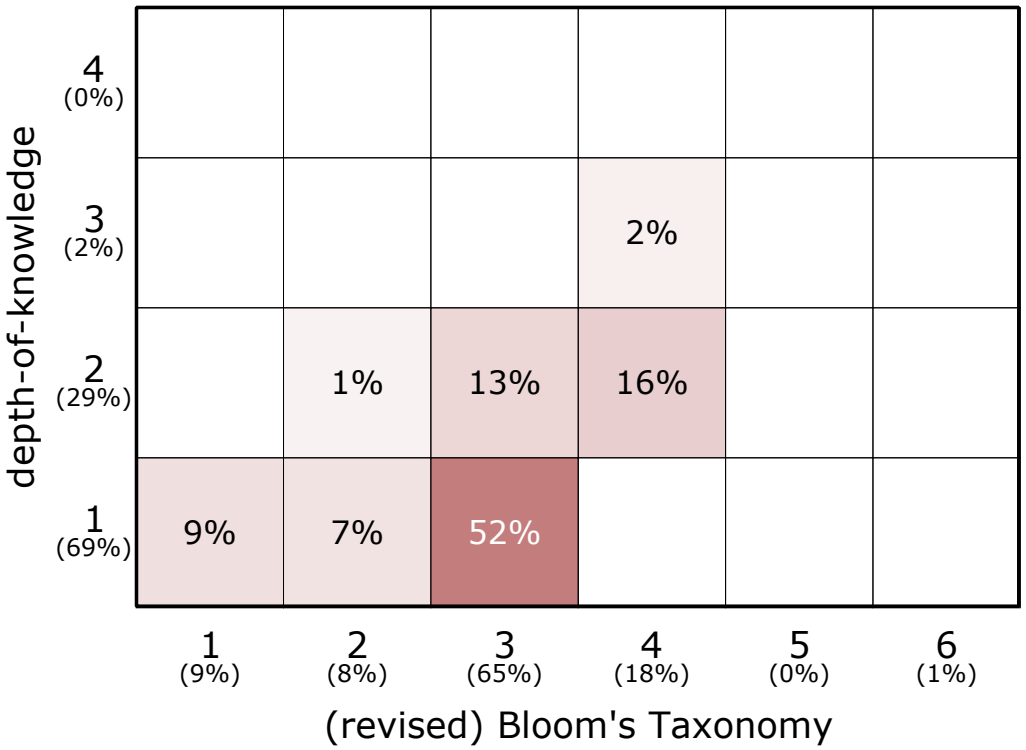

Figure 69: The cognitive rigor found in mathematics, high-performing (eighth grade) assignments. Darkly shaded regions correspond to proportionally larger numbers of assignments. The percentage values at the bottom of the figure indicate the frequency in which particular Bloom's Taxonomy levels were sampled by the assignments. The percentages on the left of the figure indicate the frequency in which particular depth-of-knowledge levels were sampled by the assignments.

4.2.3.26 Appearance of DOK-1 in mathematics

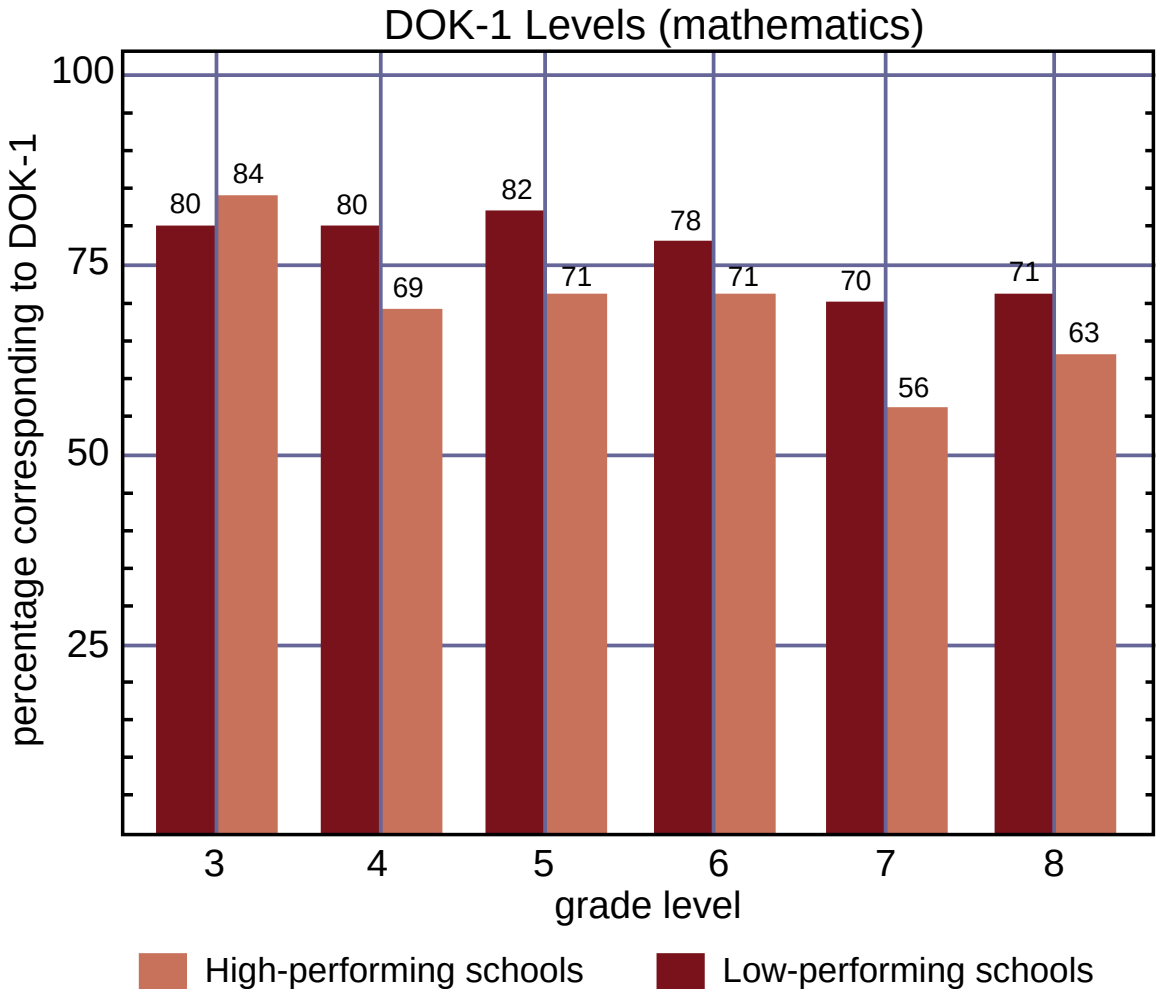

Figure 70: Appearance of the lowest level of depth of knowledge (that is, DOK-1) in the collected student assignments for mathematics. Here, high percentages indicate relatively low rigor in regards to depth of knowledge. Here, low-performing schools featured lower levels of rigor than high-performing schools for all grade levels, with the exception of third grade.

4.2.4 Letter grade analysis

4.2.4.1 English language arts, low-performing (third grade)

Table 29: An analysis of the grades students received on English language arts, low-performing (third grade) assignments. These results are displayed visually in Fig. 71.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	3	79%	11%	4%	2%	2%
Medium		45%	21%	11%	13%	8%
Low		24%	16%	15%	15%	28%

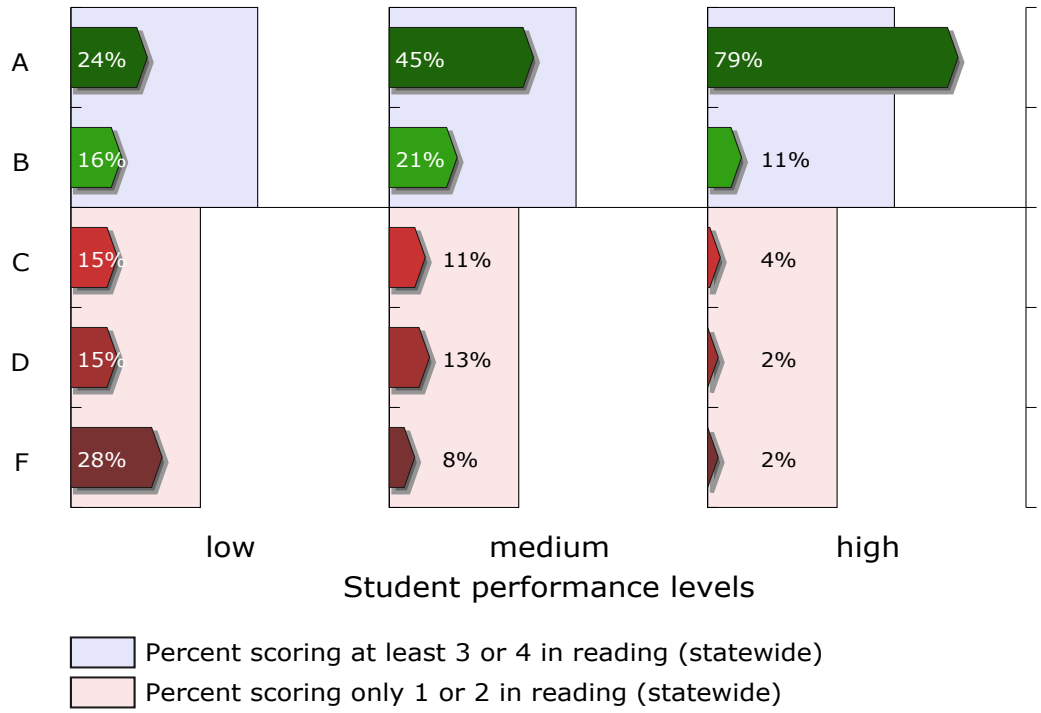

Figure 71: The letter grade analysis found in English language arts, low-performing (third grade) assignments.

4.2.4.2 English language arts, low-performing (fourth grade)

Table 30: An analysis of the grades students received on English language arts, low-performing (fourth grade) assignments. These results are displayed visually in Fig. 72.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	4	71%	17%	7%	0%	1%
Medium		44%	20%	20%	8%	6%
Low		24%	20%	13%	22%	19%

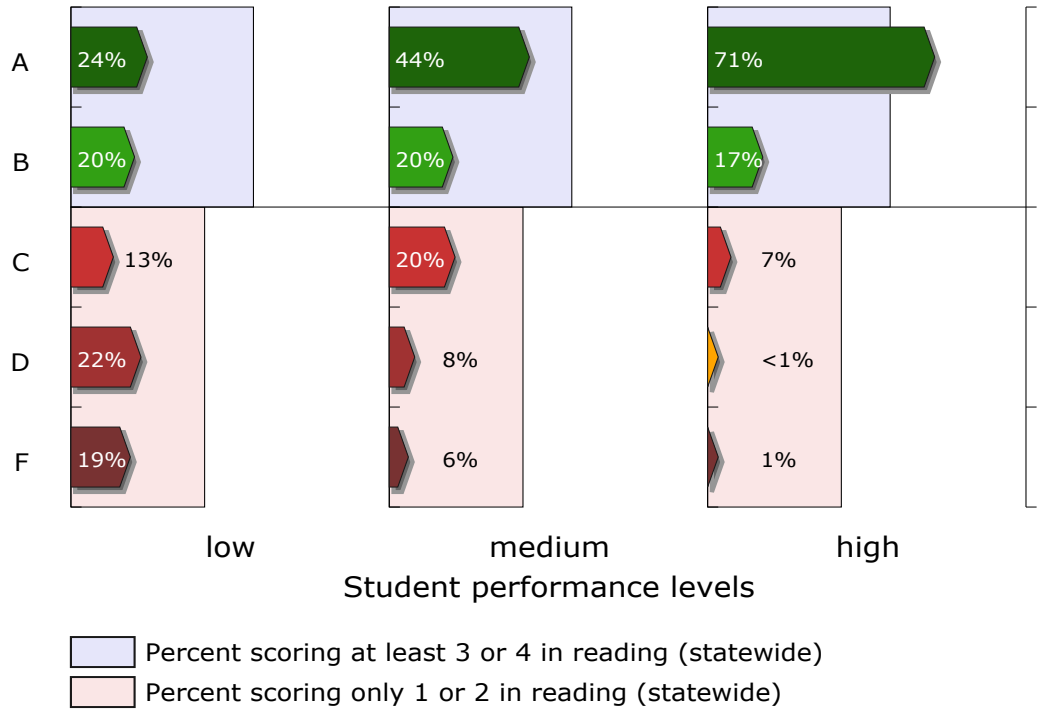

Figure 72: The letter grade analysis found in English language arts, low-performing (fourth grade) assignments.

4.2.4.3 English language arts, low-performing (fifth grade)

Table 31: An analysis of the grades students received on English language arts, low-performing (fifth grade) assignments. These results are displayed visually in Fig. 73.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	5	81%	12%	4%	0%	1%
Medium		37%	27%	16%	8%	9%
Low		20%	20%	23%	11%	23%

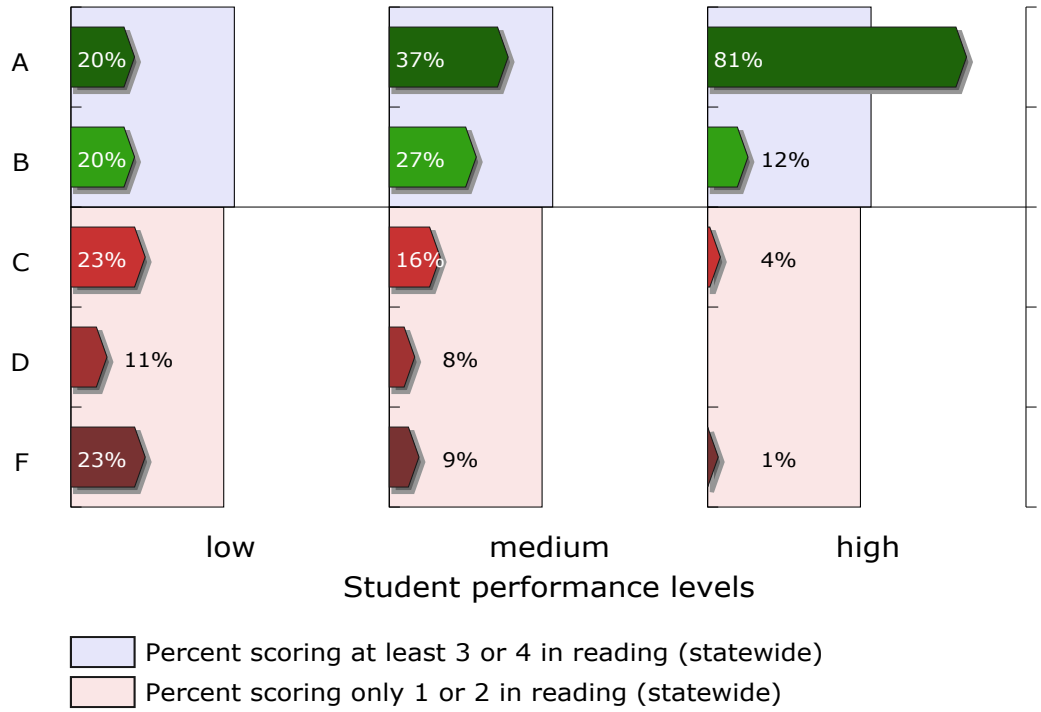

Figure 73: The letter grade analysis found in English language arts, low-performing (fifth grade) assignments.

4.2.4.4 English language arts, low-performing (sixth grade)

Table 32: An analysis of the grades students received on English language arts, low-performing (sixth grade) assignments. These results are displayed visually in Fig. 74.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	6	79%	14%	3%	1%	1%
Medium		31%	34%	19%	8%	5%
Low		18%	13%	21%	25%	21%

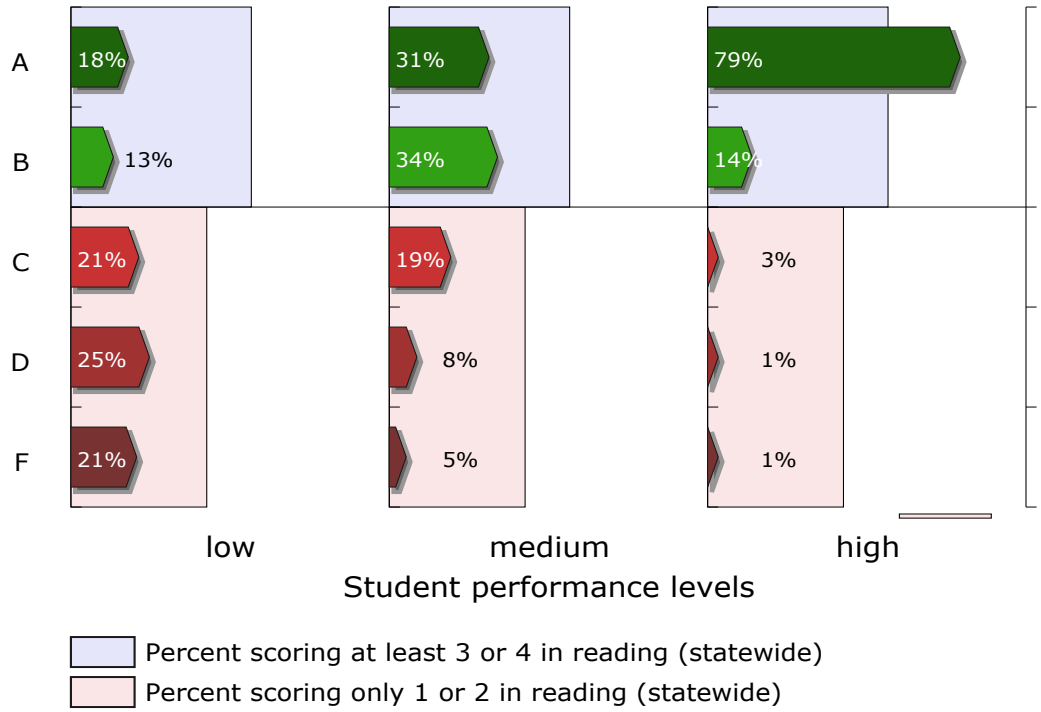

Figure 74: The letter grade analysis found in English language arts, low-performing (sixth grade) assignments.

4.2.4.5 English language arts, low-performing (seventh grade)

Table 33: An analysis of the grades students received on English language arts, low-performing (seventh grade) assignments. These results are displayed visually in Fig. 75.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	7	77%	14%	5%	1%	2%
Medium		37%	23%	26%	7%	5%
Low		23%	12%	18%	19%	25%

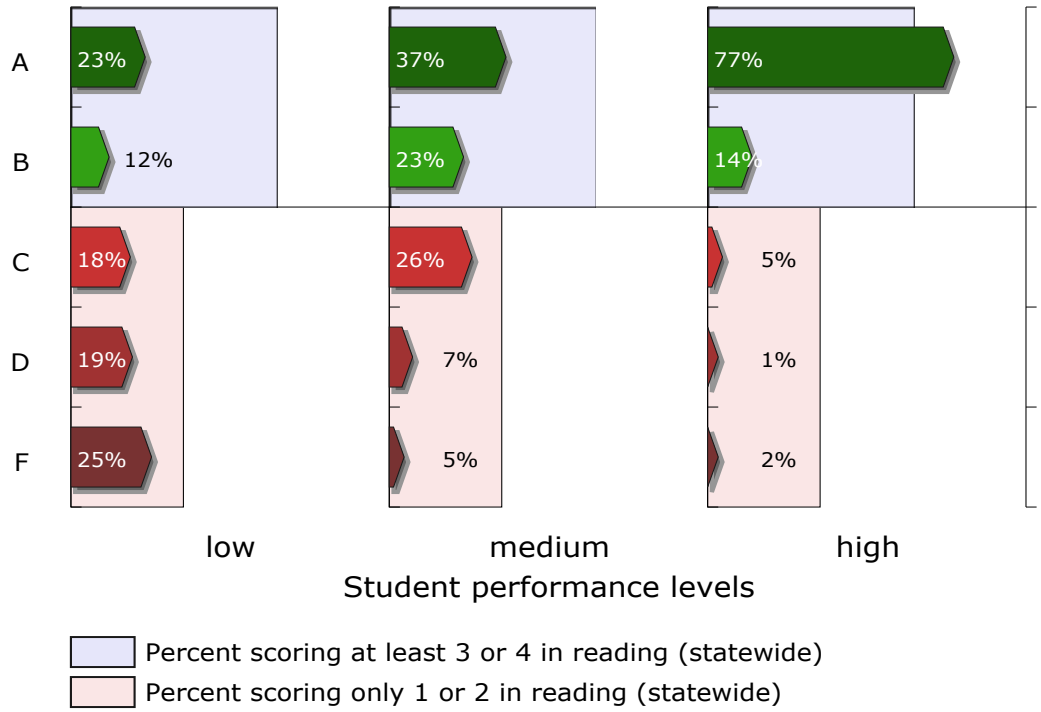

Figure 75: The letter grade analysis found in English language arts, low-performing (seventh grade) assignments.

4.2.4.6 English language arts, low-performing (eighth grade)

Table 34: An analysis of the grades students received on English language arts, low-performing (eighth grade) assignments. These results are displayed visually in Fig. 76.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	8	77%	13%	4%	3%	0%
Medium		42%	21%	21%	8%	5%
Low		23%	12%	17%	27%	19%

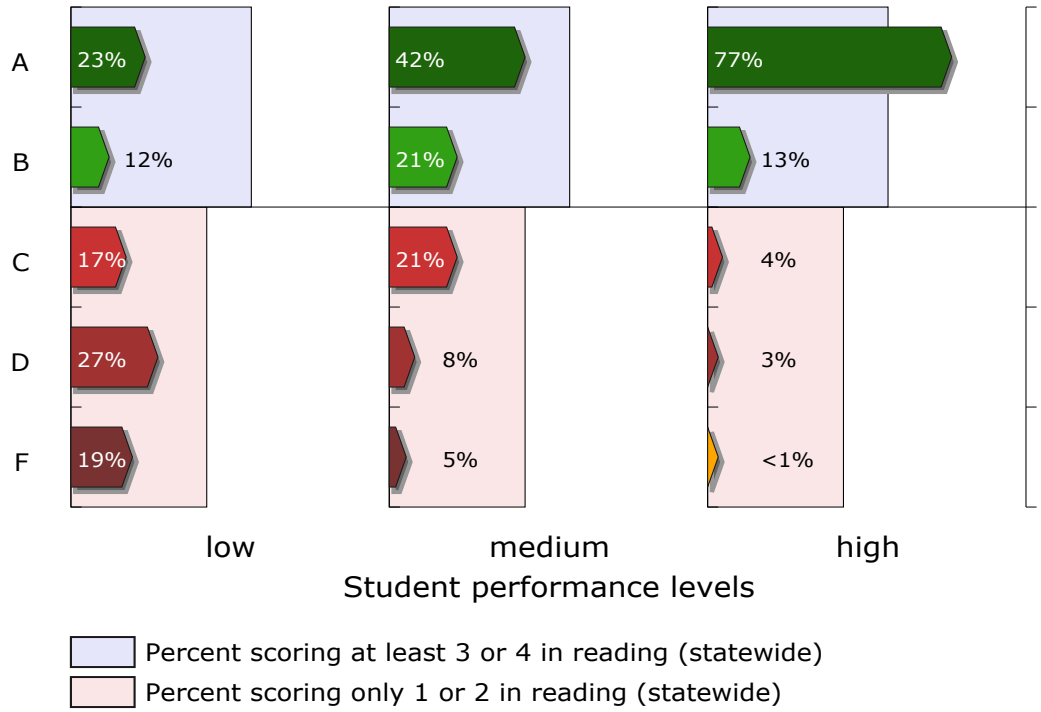

Figure 76: The letter grade analysis found in English language arts, low-performing (eighth grade) assignments.

4.2.4.7 mathematics, low-performing (third grade)

Table 35: An analysis of the grades students received on mathematics, low-performing (third grade) assignments. These results are displayed visually in Fig. 77.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	3	80%	11%	4%	2%	1%
Medium		54%	22%	10%	7%	4%
Low		36%	10%	13%	12%	26%

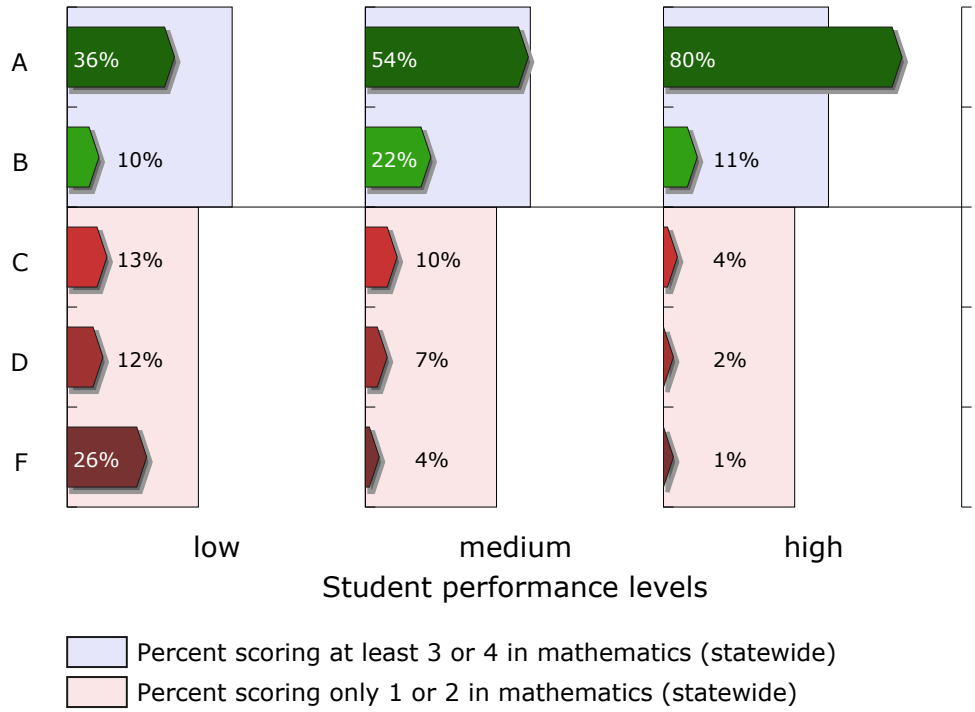

Figure 77: The letter grade analysis found in mathematics, low-performing (third grade) assignments.

4.2.4.8 mathematics, low-performing (fourth grade)

Table 36: An analysis of the grades students received on mathematics, low-performing (fourth grade) assignments. These results are displayed visually in Fig. 78.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	4	69%	17%	7%	3%	2%
Medium		43%	20%	16%	10%	8%
Low		25%	19%	7%	16%	30%

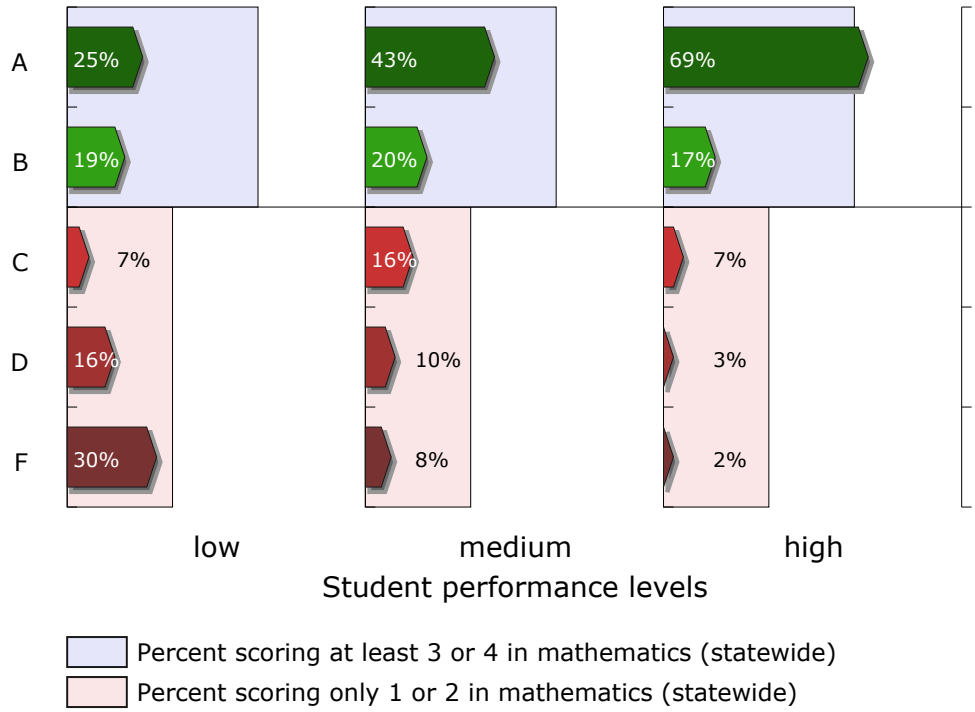

Figure 78: The letter grade analysis found in mathematics, low-performing (fourth grade) assignments.

4.2.4.9 mathematics, low-performing (fifth grade)

Table 37: An analysis of the grades students received on mathematics, low-performing (fifth grade) assignments. These results are displayed visually in Fig. 79.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	5	66%	26%	4%	0%	2%
Medium		33%	14%	21%	11%	17%
Low		20%	12%	8%	11%	46%

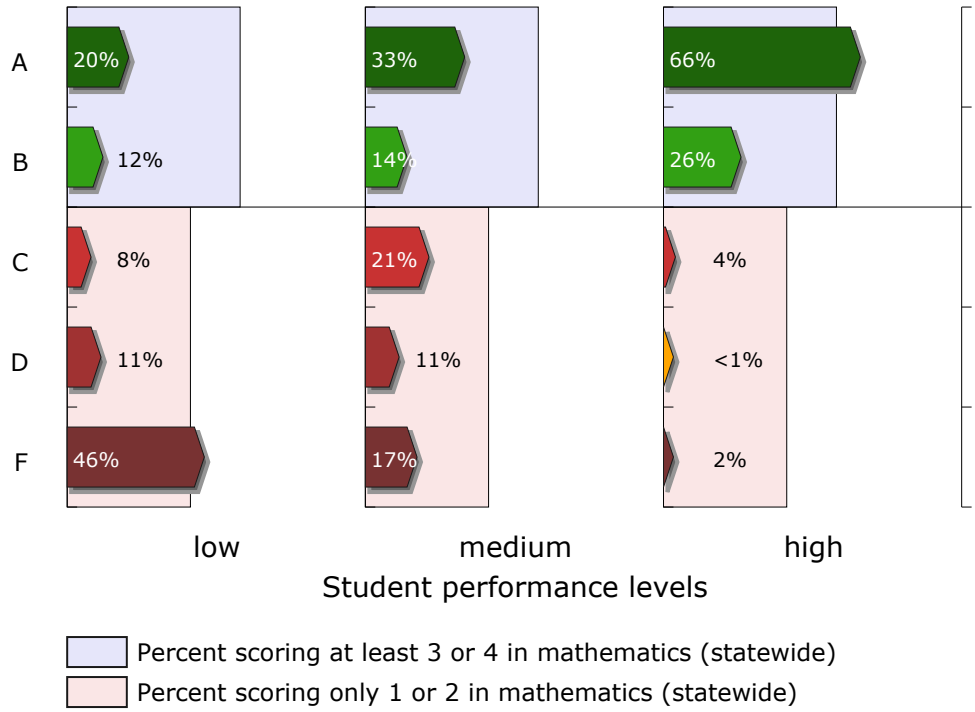

Figure 79: The letter grade analysis found in mathematics, low-performing (fifth grade) assignments.

4.2.4.10 mathematics, low-performing (sixth grade)

Table 38: An analysis of the grades students received on mathematics, low-performing (sixth grade) assignments. These results are displayed visually in Fig. 80.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	6	65%	19%	8%	3%	3%
Medium		35%	21%	19%	9%	14%
Low		21%	12%	15%	12%	38%

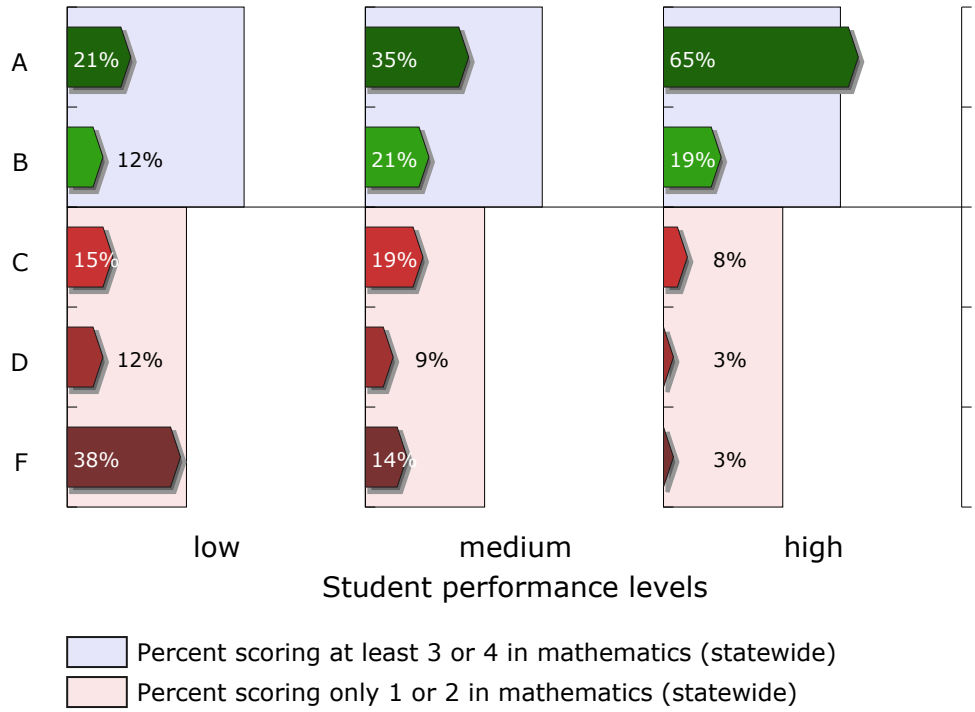

Figure 80: The letter grade analysis found in mathematics, low-performing (sixth grade) assignments.

4.2.4.11 mathematics, low-performing (seventh grade)

Table 39: An analysis of the grades students received on mathematics, low-performing (seventh grade) assignments. These results are displayed visually in Fig. 81.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	7	63%	17%	7%	6%	4%
Medium		33%	19%	19%	7%	19%
Low		19%	14%	11%	13%	40%

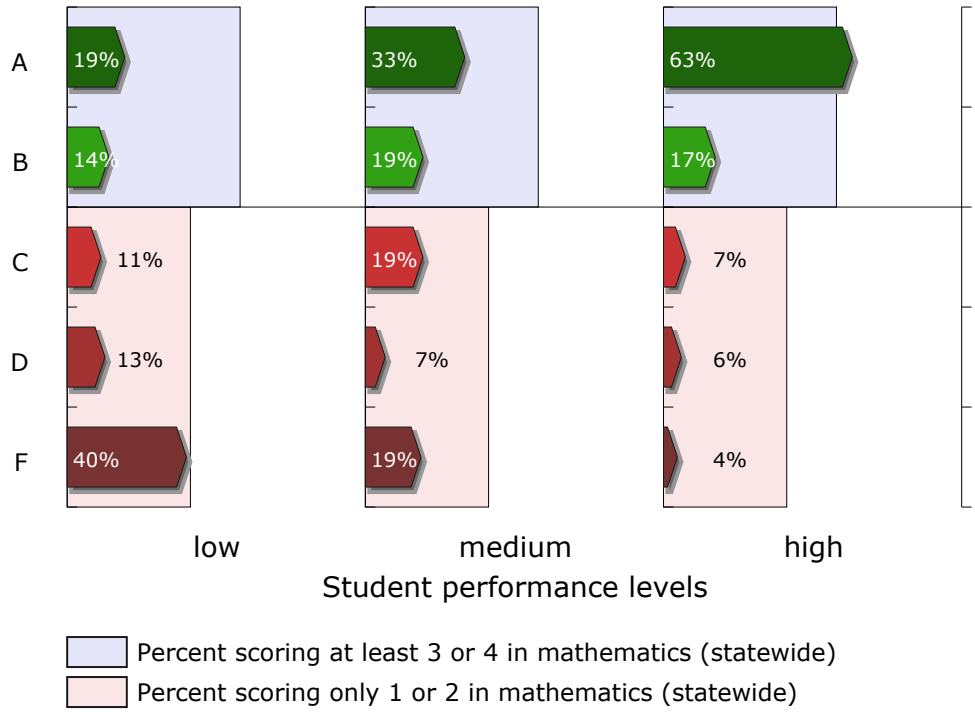

Figure 81: The letter grade analysis found in mathematics, low-performing (seventh grade) assignments.

4.2.4.12 mathematics, low-performing (eighth grade)

Table 40: An analysis of the grades students received on mathematics, low-performing (eighth grade) assignments. These results are displayed visually in Fig. 82.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	8	71%	14%	8%	5%	1%
Medium		38%	24%	16%	10%	10%
Low		21%	12%	13%	14%	37%

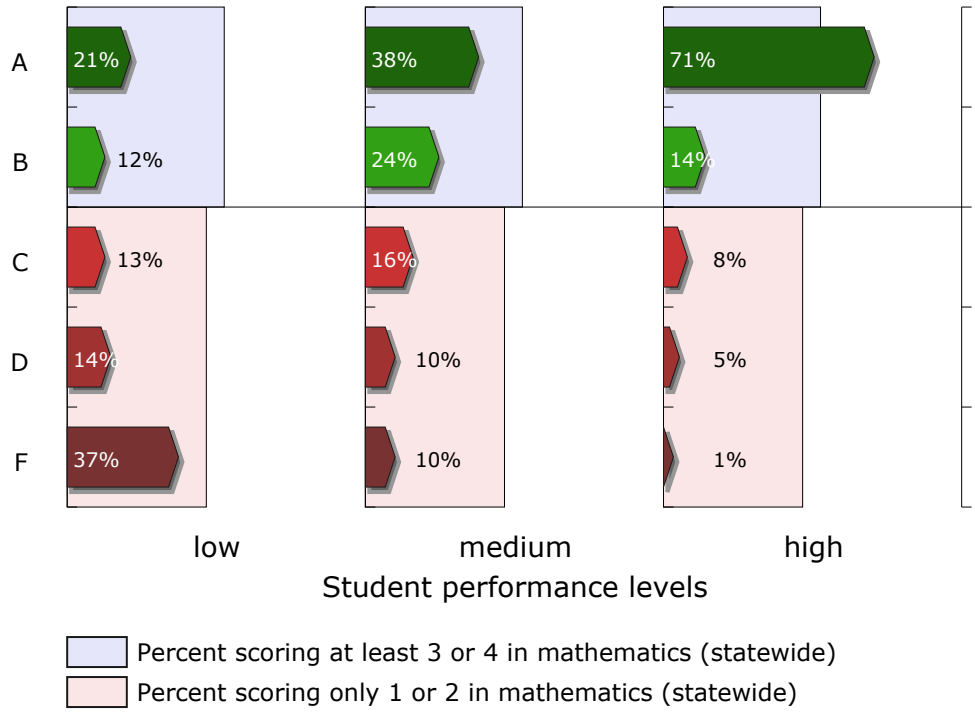

Figure 82: The letter grade analysis found in mathematics, low-performing (eighth grade) assignments.

4.2.4.13 English language arts, high-performing (third grade)

Table 41: An analysis of the grades students received on English language arts, high-performing (third grade) assignments. These results are displayed visually in Fig. 83.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	3	79%	13%	4%	1%	0%
Medium		46%	27%	15%	5%	4%
Low		23%	17%	17%	16%	24%

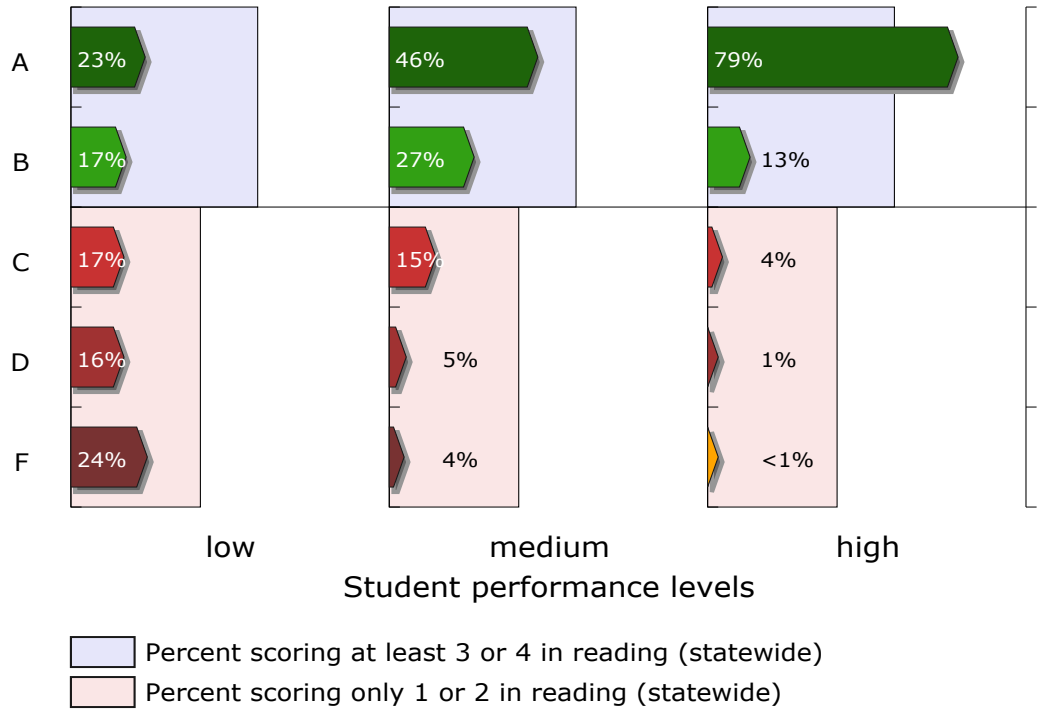

Figure 83: The letter grade analysis found in English language arts, high-performing (third grade) assignments.

4.2.4.14 English language arts, high-performing (fourth grade)

Table 42: An analysis of the grades students received on English language arts, high-performing (fourth grade) assignments. These results are displayed visually in Fig. 84.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	4	85%	8%	4%	0%	0%
Medium		48%	25%	18%	5%	1%
Low		30%	17%	19%	14%	17%

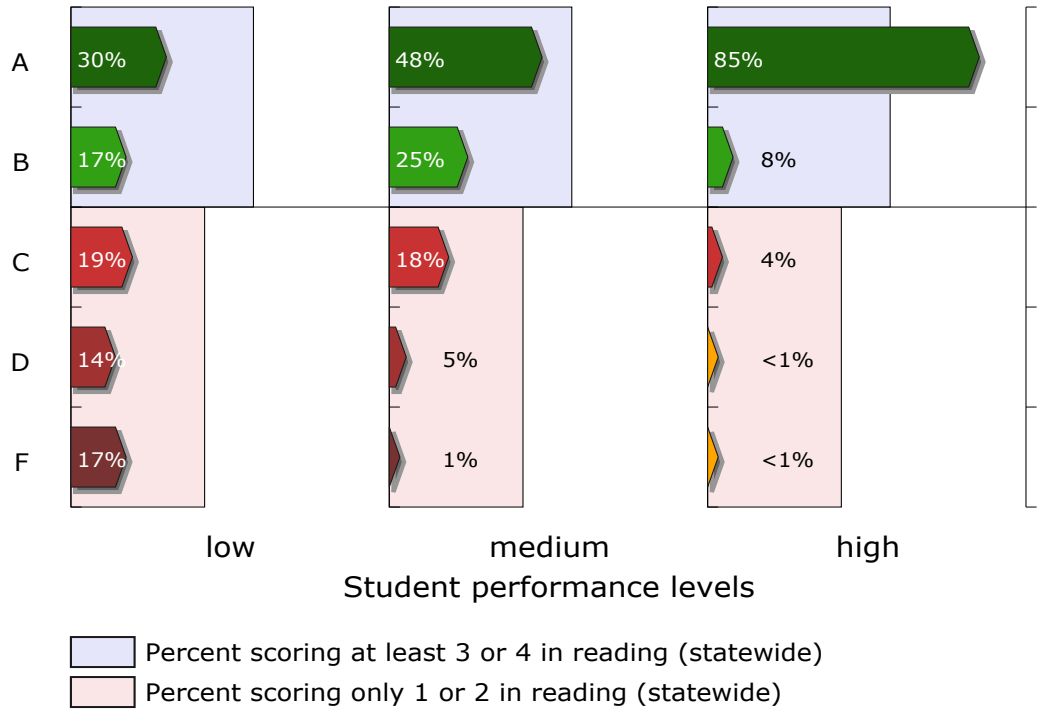

Figure 84: The letter grade analysis found in English language arts, high-performing (fourth grade) assignments.

4.2.4.15 English language arts, high-performing (fifth grade)

Table 43: An analysis of the grades students received on English language arts, high-performing (fifth grade) assignments. These results are displayed visually in Fig. 85.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	5	81%	13%	3%	1%	0%
Medium		46%	23%	20%	4%	5%
Low		21%	16%	19%	16%	24%

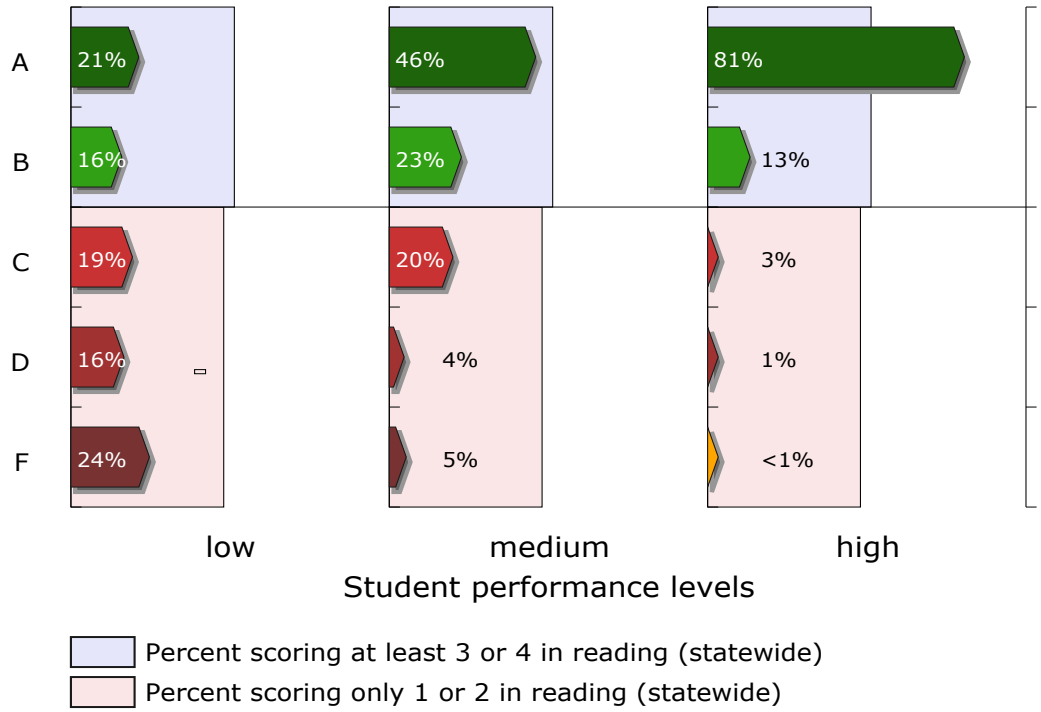

Figure 85: The letter grade analysis found in English language arts, high-performing (fifth grade) assignments.

4.2.4.16 English language arts, high-performing (sixth grade)

Table 44: An analysis of the grades students received on English language arts, high-performing (sixth grade) assignments. These results are displayed visually in Fig. 86.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	6	79%	11%	4%	1%	2%
Medium		40%	31%	17%	5%	4%
Low		18%	16%	24%	11%	28%

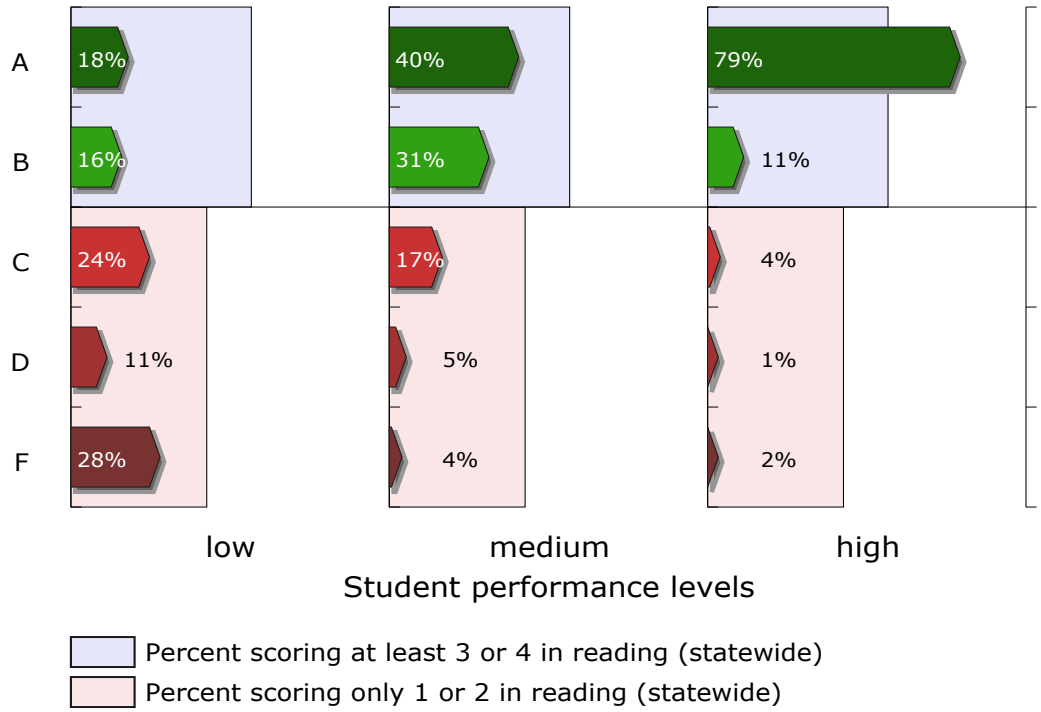

Figure 86: The letter grade analysis found in English language arts, high-performing (sixth grade) assignments.

4.2.4.17 English language arts, high-performing (seventh grade)

Table 45: An analysis of the grades students received on English language arts, high-performing (seventh grade) assignments. These results are displayed visually in Fig. 87.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	7	80%	12%	4%	1%	0%
Medium		38%	31%	18%	4%	6%
Low		28%	13%	20%	12%	25%

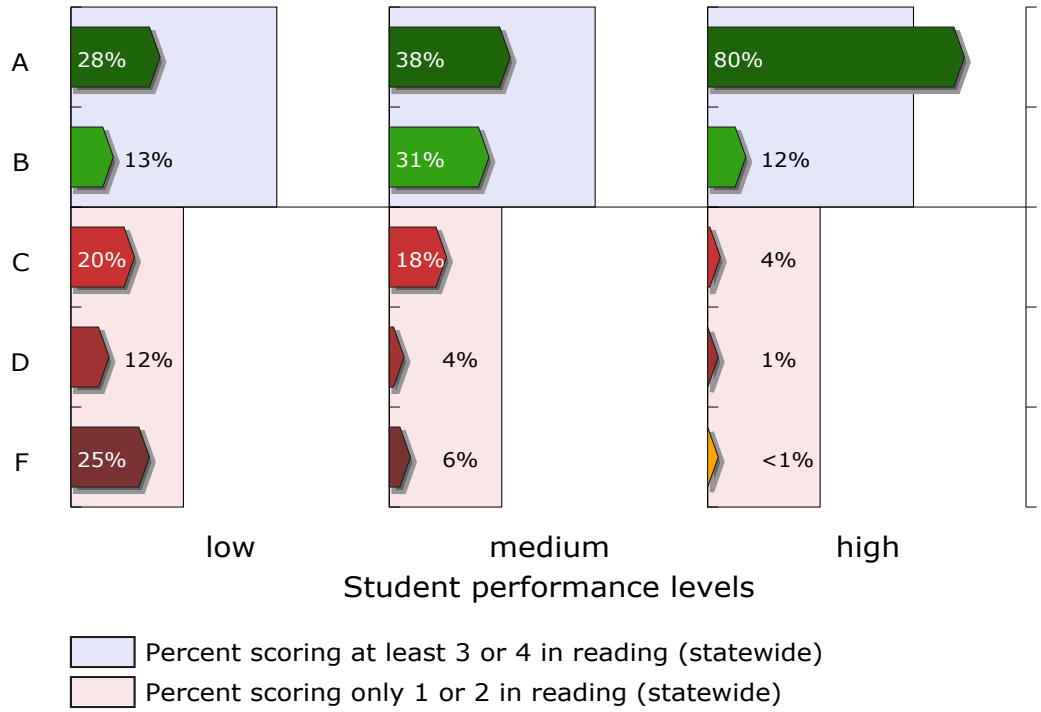

Figure 87: The letter grade analysis found in English language arts, high-performing (seventh grade) assignments.

4.2.4.18 English language arts, high-performing (eighth grade)

Table 46: An analysis of the grades students received on English language arts, high-performing (eighth grade) assignments. These results are displayed visually in Fig. 88.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	8	83%	11%	1%	1%	1%
Medium		29%	37%	23%	4%	4%
Low		19%	13%	21%	21%	24%

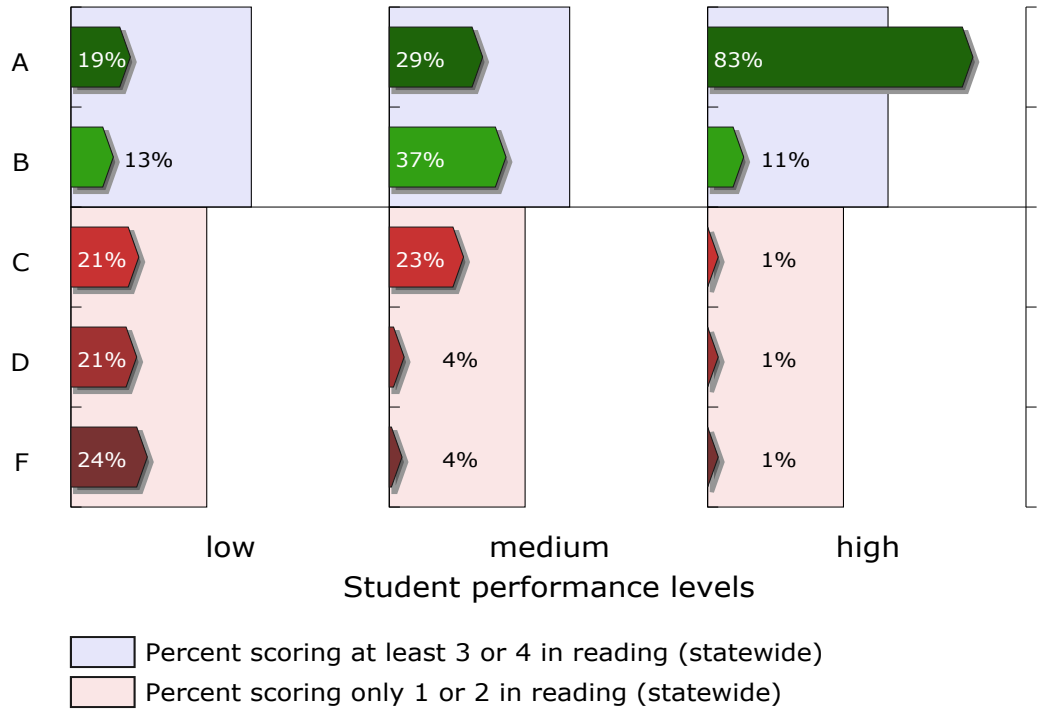

Figure 88: The letter grade analysis found in English language arts, high-performing (eighth grade) assignments.

4.2.4.19 mathematics, high-performing (third grade)

Table 47: An analysis of the grades students received on mathematics, high-performing (third grade) assignments. These results are displayed visually in Fig. 89.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	3	78%	11%	5%	2%	2%
Medium		48%	22%	13%	9%	6%
Low		28%	15%	15%	11%	28%

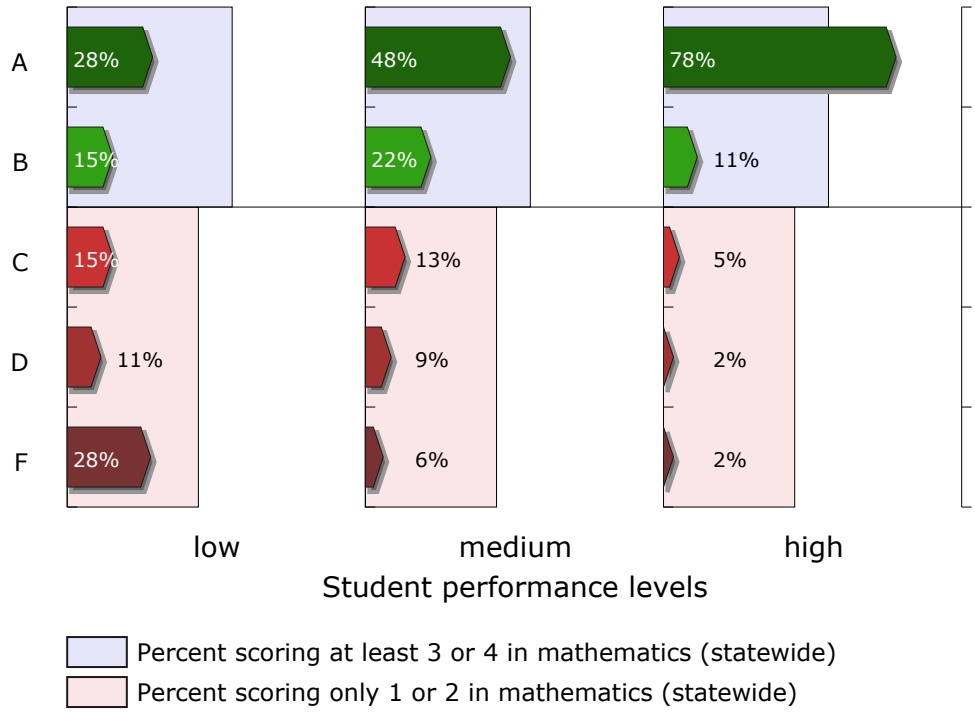

Figure 89: The letter grade analysis found in mathematics, high-performing (third grade) assignments.

4.2.4.20 mathematics, high-performing (fourth grade)

Table 48: An analysis of the grades students received on mathematics, high-performing (fourth grade) assignments. These results are displayed visually in Fig. 90.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	4	79%	10%	5%	3%	1%
Medium		45%	22%	12%	11%	7%
Low		20%	15%	31%	11%	21%

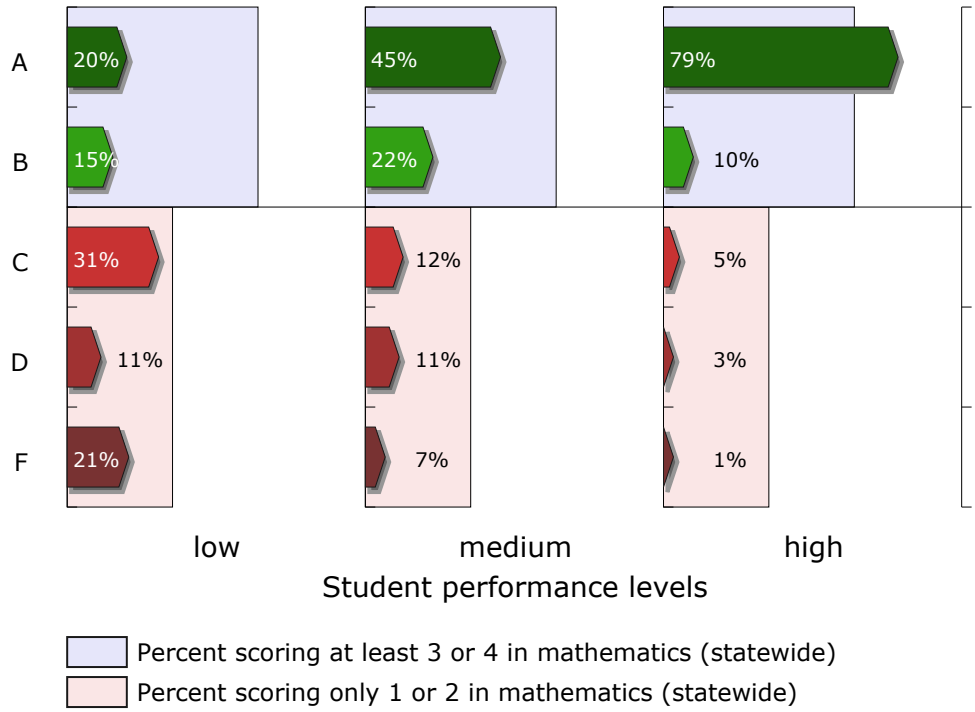

Figure 90: The letter grade analysis found in mathematics, high-performing (fourth grade) assignments.

4.2.4.21 mathematics, high-performing (fifth grade)

Table 49: An analysis of the grades students received on mathematics, high-performing (fifth grade) assignments. These results are displayed visually in Fig. 91.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	5	78%	15%	5%	0%	0%
Medium		35%	28%	20%	8%	7%
Low		15%	10%	19%	24%	30%

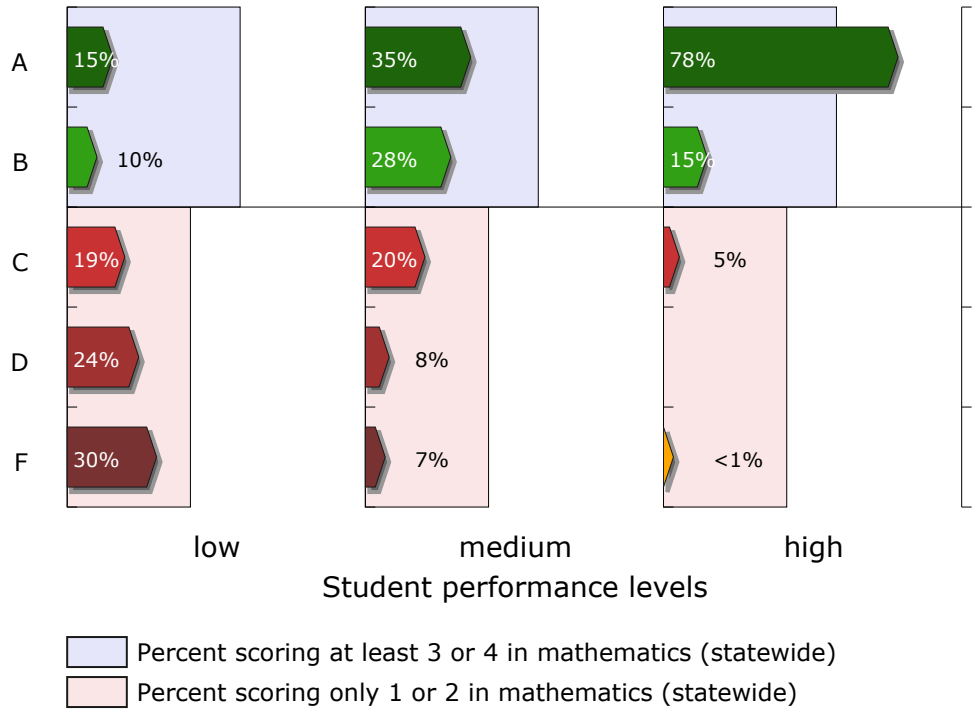

Figure 91: The letter grade analysis found in mathematics, high-performing (fifth grade) assignments.

4.2.4.22 mathematics, high-performing (sixth grade)

Table 50: An analysis of the grades students received on mathematics, high-performing (sixth grade) assignments. These results are displayed visually in Fig. 92.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	6	81%	10%	2%	3%	1%
Medium		34%	26%	21%	8%	8%
Low		18%	16%	11%	16%	36%

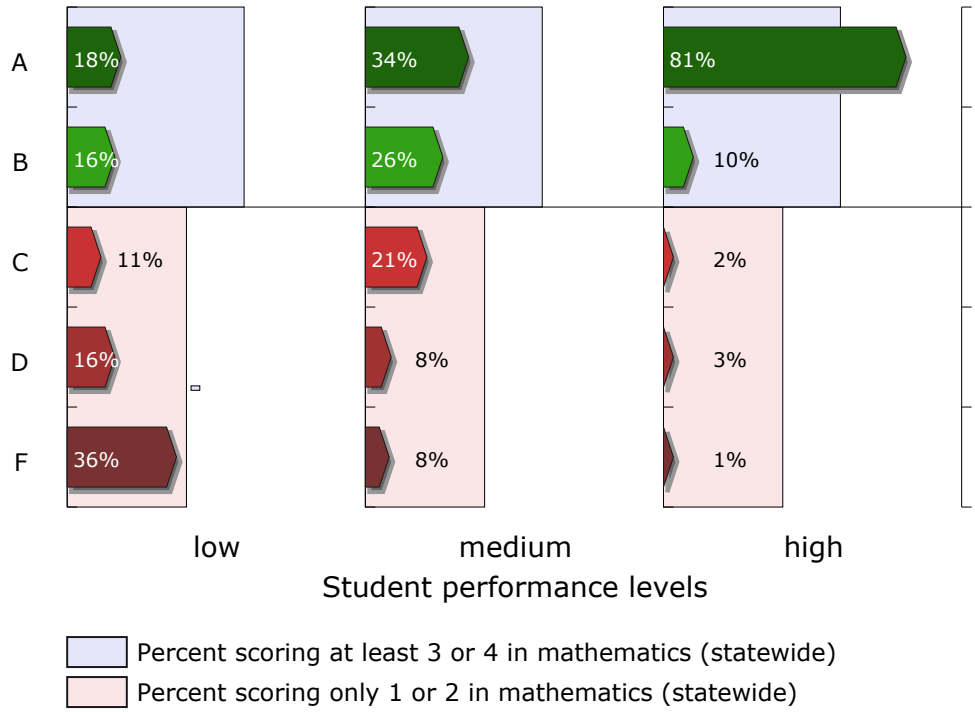

Figure 92: The letter grade analysis found in mathematics, high-performing (sixth grade) assignments.

4.2.4.23 mathematics, high-performing (seventh grade)

Table 51: An analysis of the grades students received on mathematics, high-performing (seventh grade) assignments. These results are displayed visually in Fig. 93.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	7	74%	15%	4%	2%	3%
Medium		41%	21%	22%	8%	5%
Low		22%	11%	14%	22%	27%

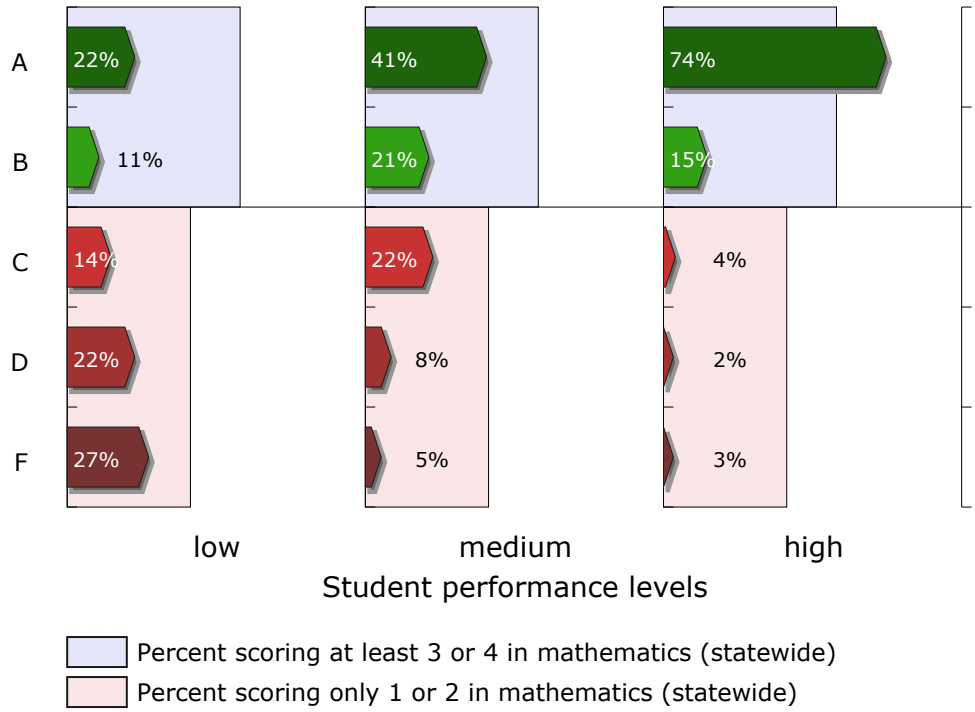

Figure 93: The letter grade analysis found in mathematics, high-performing (seventh grade) assignments.

4.2.4.24 mathematics, high-performing (eighth grade)

Table 52: An analysis of the grades students received on mathematics, high-performing (eighth grade) assignments. These results are displayed visually in Fig. 94.

		Teacher declared assignment grades				
Student Level	Grade	A	B	C	D	F
High	8	75%	13%	6%	3%	2%
Medium		41%	20%	18%	6%	12%
Low		32%	13%	11%	18%	24%

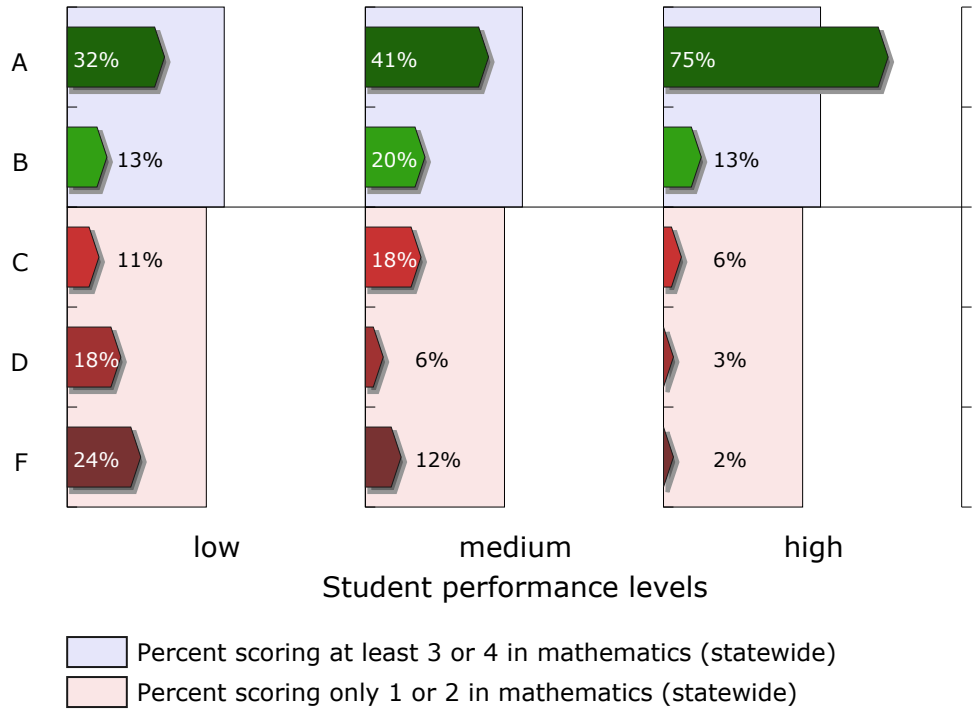

Figure 94: The letter grade analysis found in mathematics, high-performing (eighth grade) assignments.

4.2.5 Sources of assignments

4.2.5.1 English language arts, low-performing (all grade levels)

Table 53: An analysis of the sources of assignments found in English language arts, low-performing (all grade levels). These results are displayed visually in Fig. 95.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	4%	6%	27%	5%	55%
4	9%	2%	26%	6%	55%
5	6%	3%	32%	4%	52%
6	1%	3%	41%	6%	46%
7	2%	6%	46%	5%	39%
8	0%	11%	54%	6%	26%

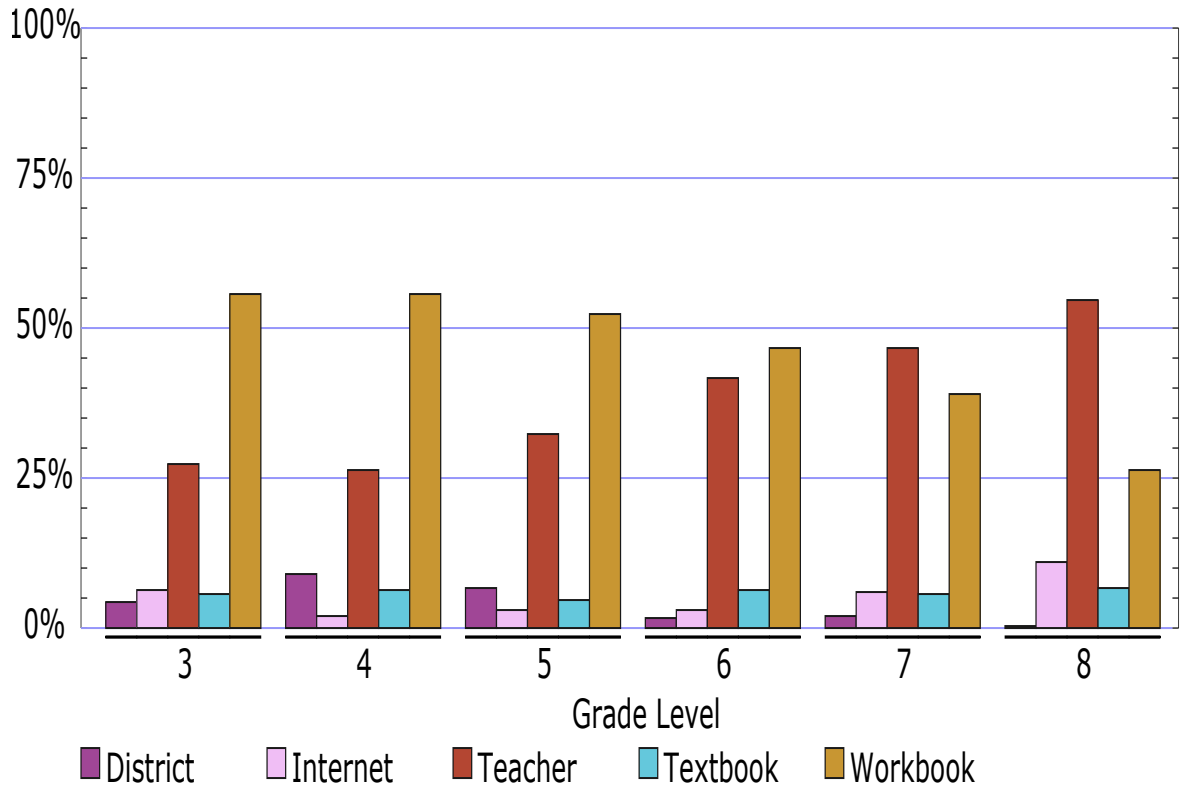

Figure 95: Sources of assignments found in English language arts, low-performing (all grade levels).

4.2.5.2 mathematics, low-performing (all grade levels)

Table 54: An analysis of the sources of assignments found in mathematics, low-performing (all grade levels). These results are displayed visually in Fig. 96.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	1%	7%	3%	8%	78%
4	3%	0%	15%	14%	66%
5	4%	1%	9%	3%	80%
6	0%	1%	18%	5%	74%
7	1%	2%	18%	20%	57%
8	3%	0%	22%	19%	54%

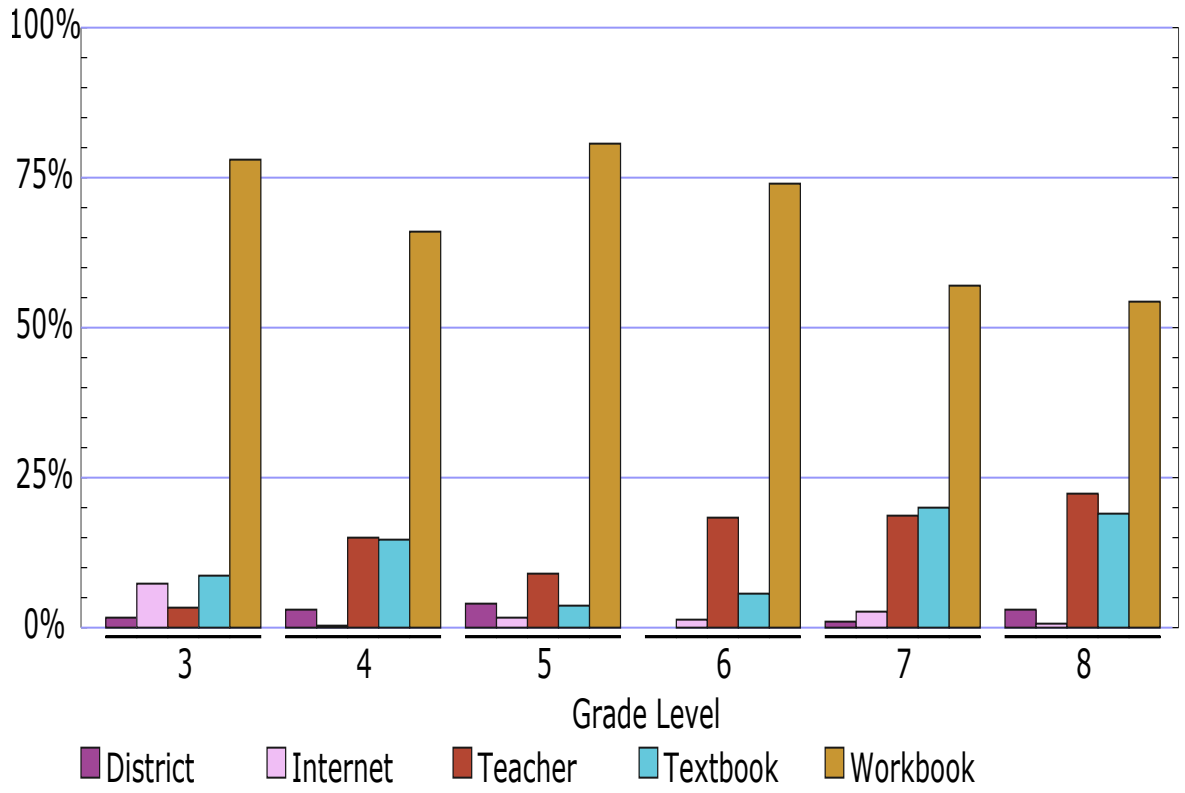

Figure 96: Sources of assignments found in mathematics, low-performing (all grade levels).

4.2.5.3 English language arts, high-performing (all grade levels)

Table 55: An analysis of the sources of assignments found in English language arts, high-performing (all grade levels). These results are displayed visually in Fig. 97.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	1%	7%	18%	7%	64%
4	8%	3%	21%	8%	57%
5	1%	5%	27%	10%	55%
6	1%	5%	51%	5%	35%
7	1%	3%	49%	5%	39%
8	0%	5%	56%	7%	30%

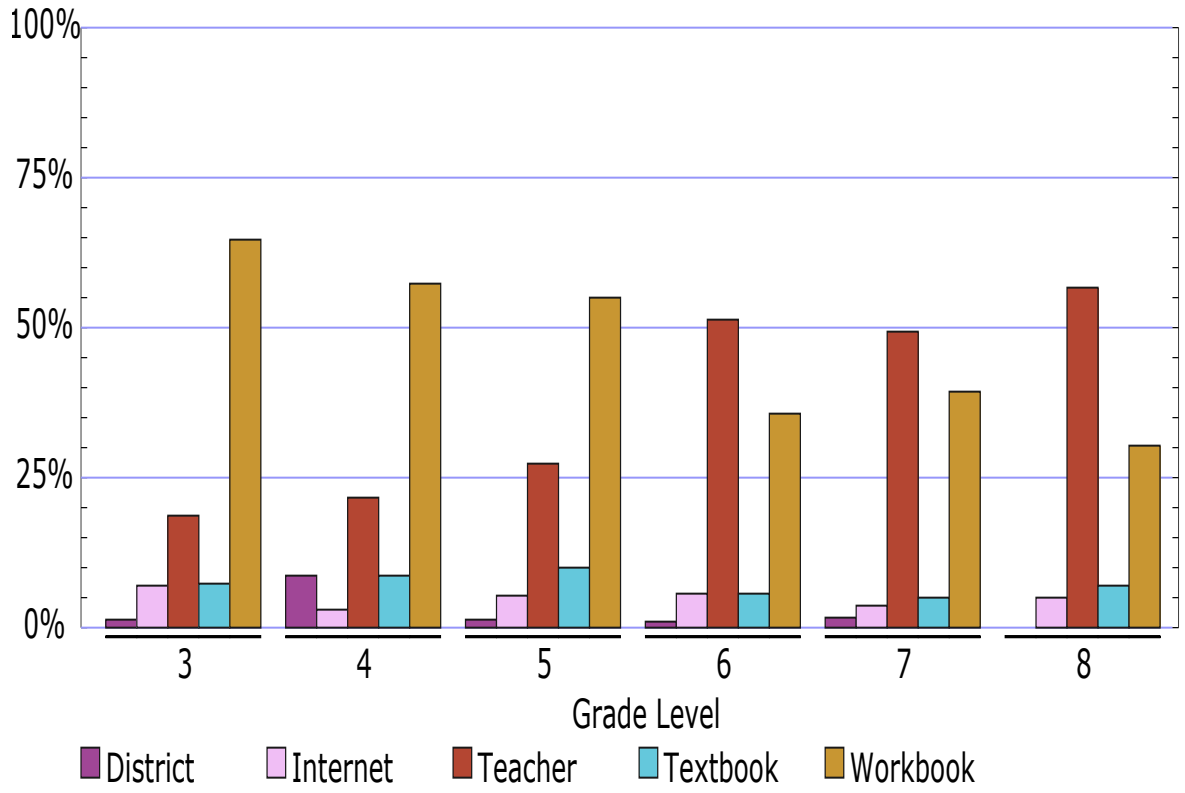

Figure 97: Sources of assignments found in English language arts, high-performing (all grade levels).

4.2.5.4 mathematics, high-performing (all grade levels)

Table 56: An analysis of the sources of assignments found in mathematics, high-performing (all grade levels). These results are displayed visually in Fig. 98.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	0%	2%	11%	9%	75%
4	11%	4%	7%	5%	70%
5	2%	11%	8%	13%	64%
6	1%	1%	22%	4%	68%
7	0%	1%	18%	10%	70%
8	0%	0%	21%	13%	64%

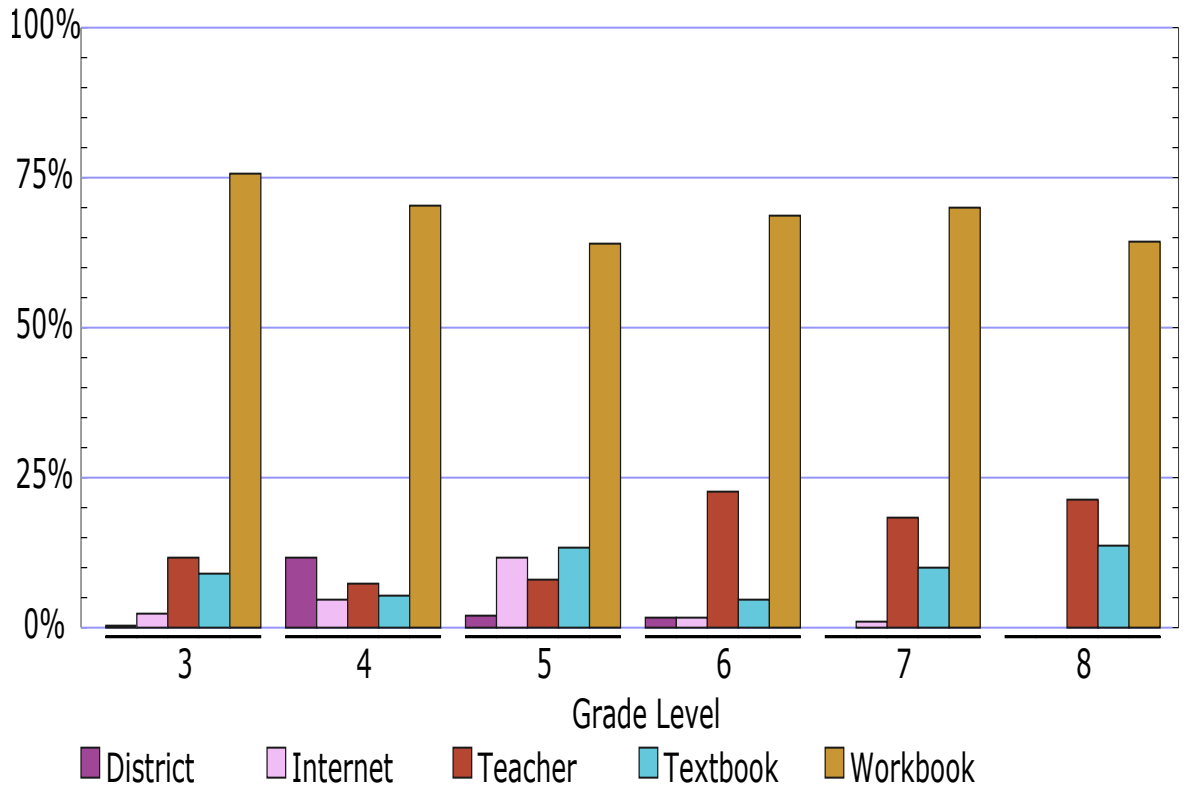

Figure 98: Sources of assignments found in mathematics, high-performing (all grade levels).

4.2.6 Types of assignments

4.2.6.1 English language arts, low-performing (all grade levels)

Table 57: An analysis of the types of assignments found in English language arts, low-performing (all grade levels). These results are displayed visually in Fig. 99.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	11%	56%	4%	3%	24%
4	9%	61%	4%	4%	19%
5	11%	70%	3%	5%	9%
6	11%	63%	5%	8%	12%
7	17%	58%	9%	8%	6%
8	12%	66%	6%	5%	9%

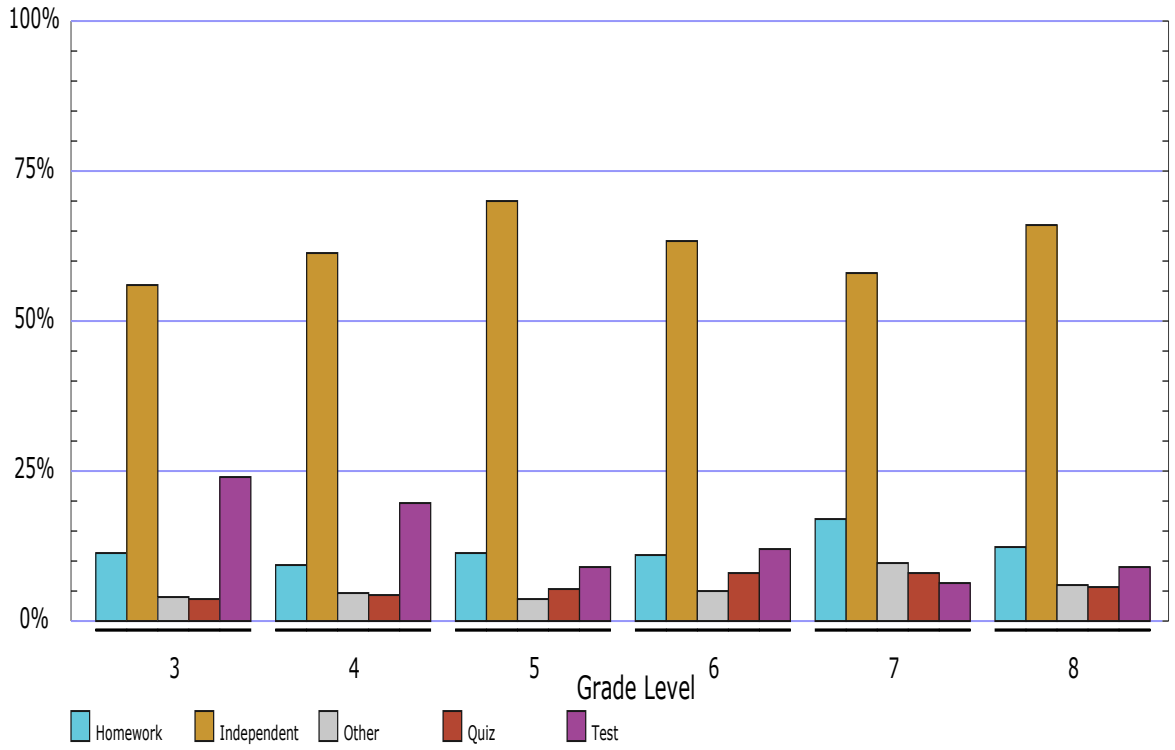

Figure 99: Types of assignments found in English language arts, low-performing (all grade levels).

4.2.6.2 mathematics, low-performing (all grade levels)

Table 58: An analysis of the types of assignments found in mathematics, low-performing (all grade levels). These results are displayed visually in Fig. 100.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	20%	42%	6%	12%	18%
4	34%	41%	14%	7%	2%
5	8%	57%	10%	7%	15%
6	32%	38%	12%	12%	3%
7	33%	28%	9%	16%	12%
8	30%	33%	15%	13%	8%

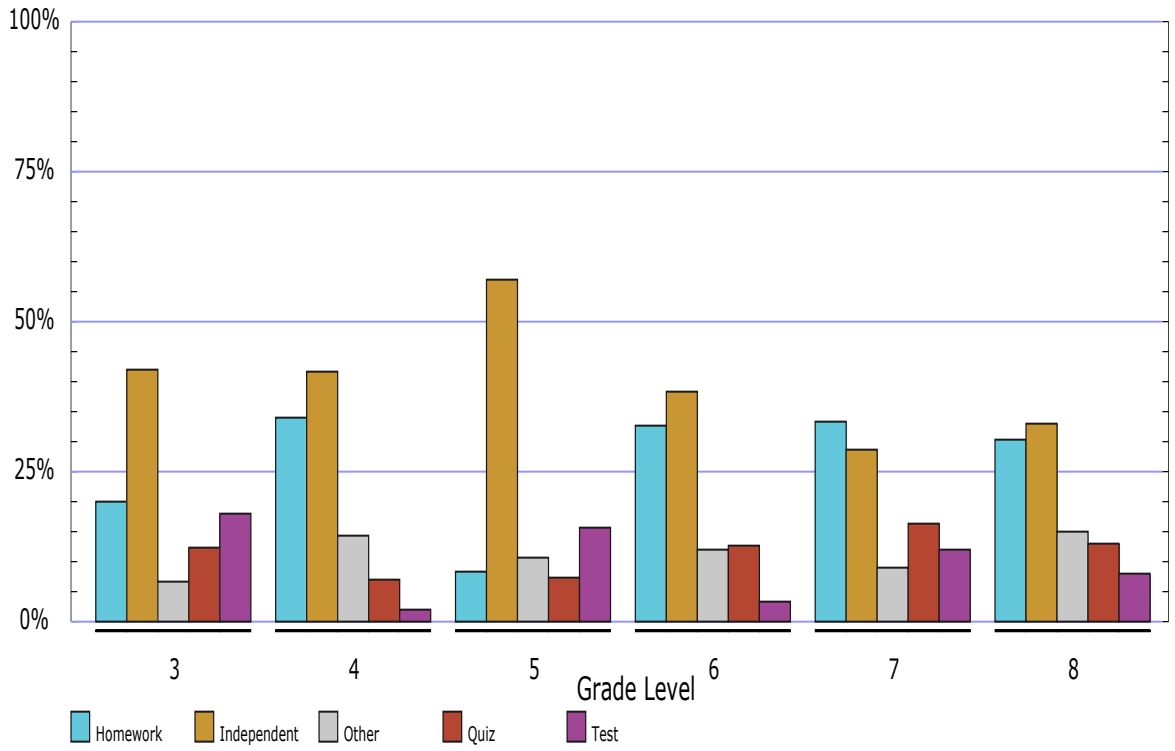

Figure 100: Types of assignments found in mathematics, low-performing (all grade levels).

4.2.6.3 English language arts, high-performing (all grade levels)

Table 59: An analysis of the types of assignments found in English language arts, high-performing (all grade levels). These results are displayed visually in Fig. 101.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	12%	48%	5%	6%	27%
4	10%	47%	5%	8%	27%
5	12%	51%	2%	7%	25%
6	17%	49%	9%	9%	13%
7	24%	47%	6%	11%	9%
8	19%	53%	10%	5%	11%

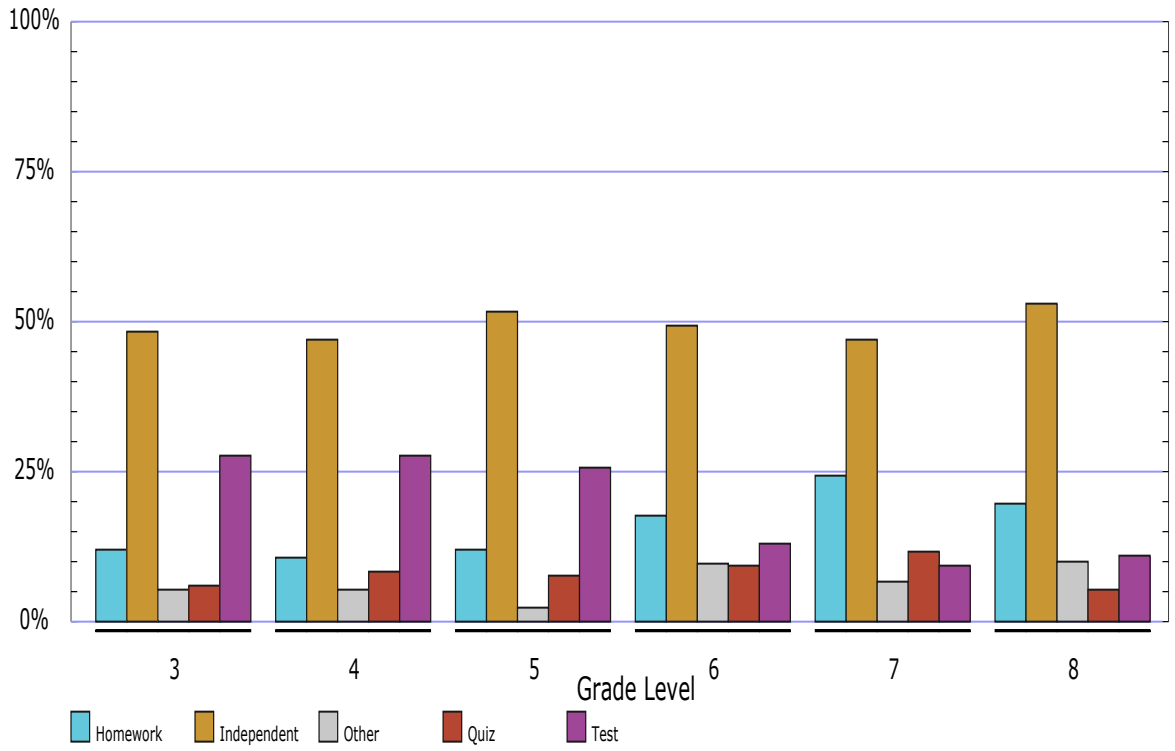

Figure 101: Types of assignments found in English language arts, high-performing (all grade levels).

4.2.6.4 mathematics, high-performing (all grade levels)

Table 60: An analysis of the types of assignments found in mathematics, high-performing (all grade levels). These results are displayed visually in Fig. 102.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	19%	48%	3%	9%	18%
4	15%	42%	1%	12%	27%
5	24%	49%	2%	10%	14%
6	22%	47%	0%	5%	22%
7	53%	31%	3%	8%	3%
8	40%	23%	20%	10%	4%

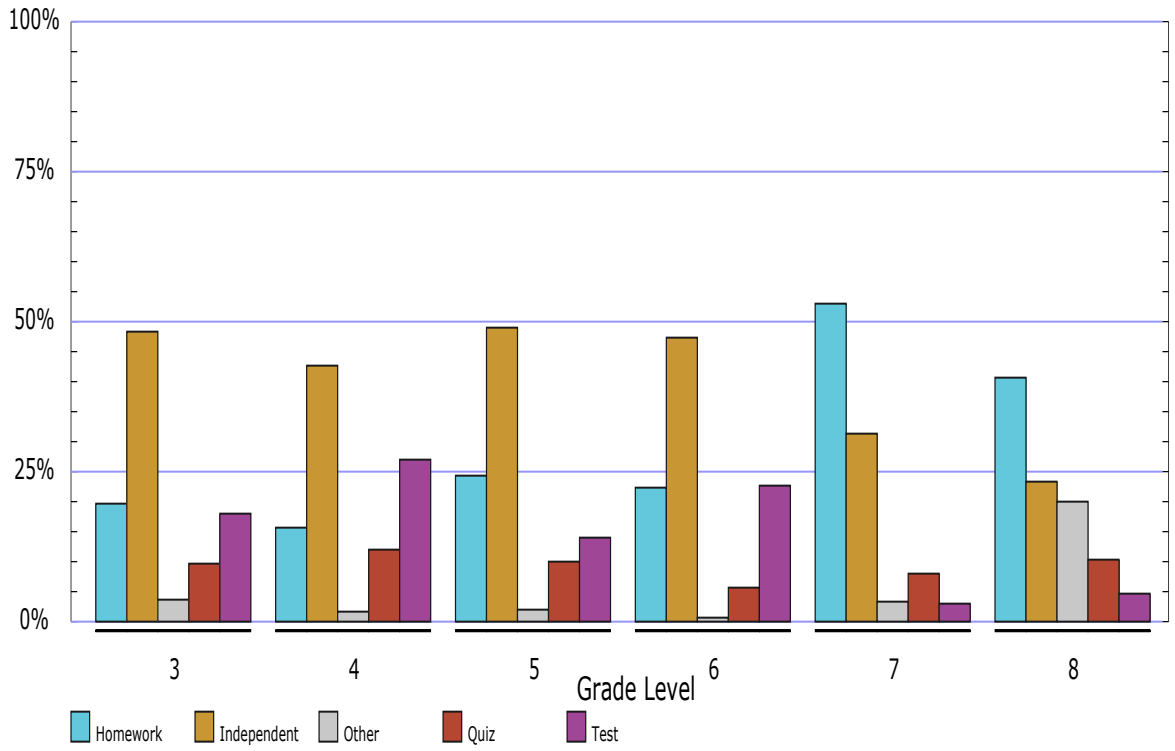

Figure 102: Types of assignments found in mathematics, high-performing (all grade levels).

4.2.7 Types of activities rigor

4.2.7.1 English language arts, low-performing (all grade levels)

Table 61: An analysis of the types of activities found in English language arts, low-performing (all grade levels). These results are displayed visually in Fig. 103.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	9%	82%	7%
4	13%	80%	5%
5	10%	82%	7%
6	12%	77%	10%
7	10%	78%	10%
8	15%	79%	5%

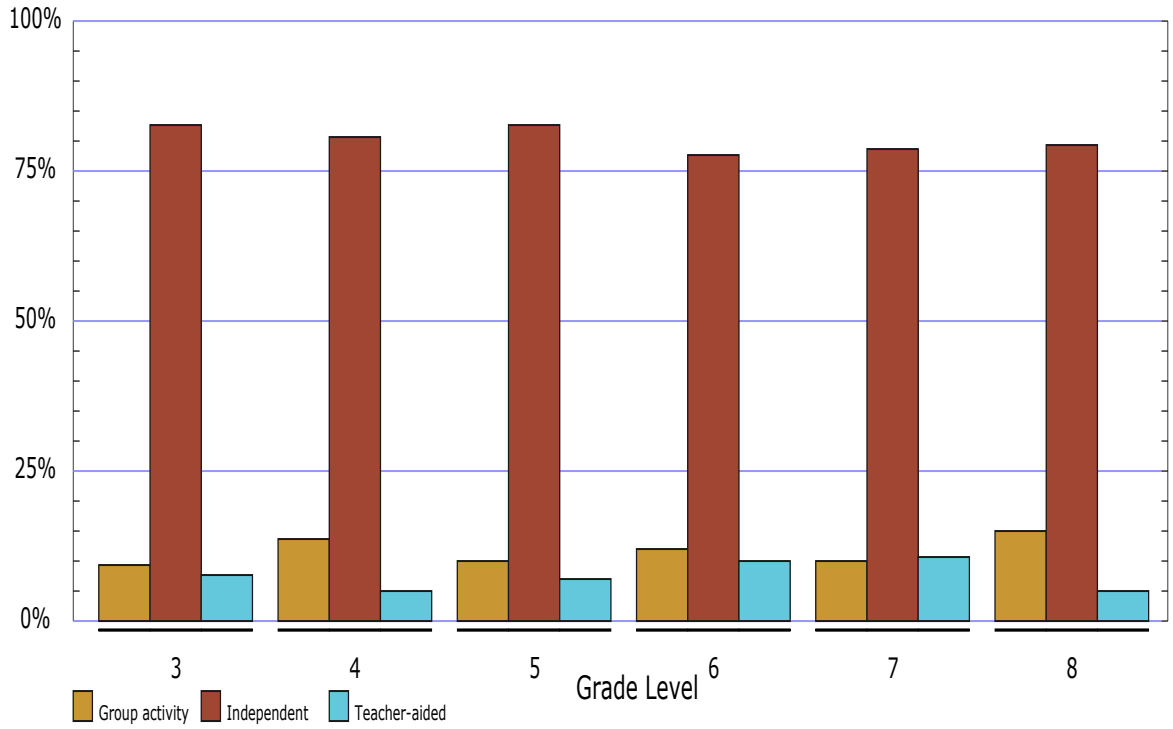

Figure 103: Types of activities found in English language arts, low-performing (all grade levels).

4.2.7.2 mathematics, low-performing (all grade levels)

Table 62: An analysis of the types of activities found in mathematics, low-performing (all grade levels). These results are displayed visually in Fig. 104.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	11%	86%	1%
4	21%	70%	7%
5	12%	86%	0%
6	14%	74%	10%
7	7%	87%	5%
8	9%	82%	7%

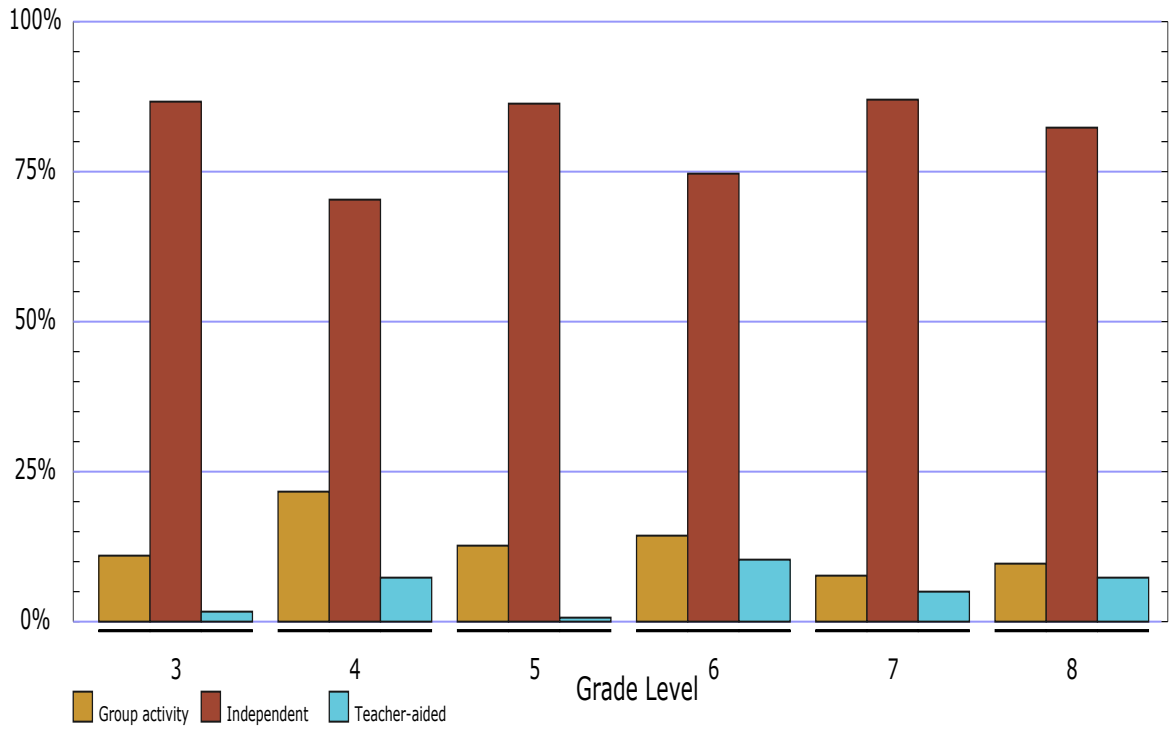

Figure 104: Types of activities found in mathematics, low-performing (all grade levels).

4.2.7.3 English language arts, high-performing (all grade levels)

Table 63: An analysis of the types of activities found in English language arts, high-performing (all grade levels). These results are displayed visually in Fig. 105.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	7%	82%	9%
4	10%	84%	5%
5	8%	86%	5%
6	6%	88%	4%
7	8%	84%	7%
8	6%	89%	3%

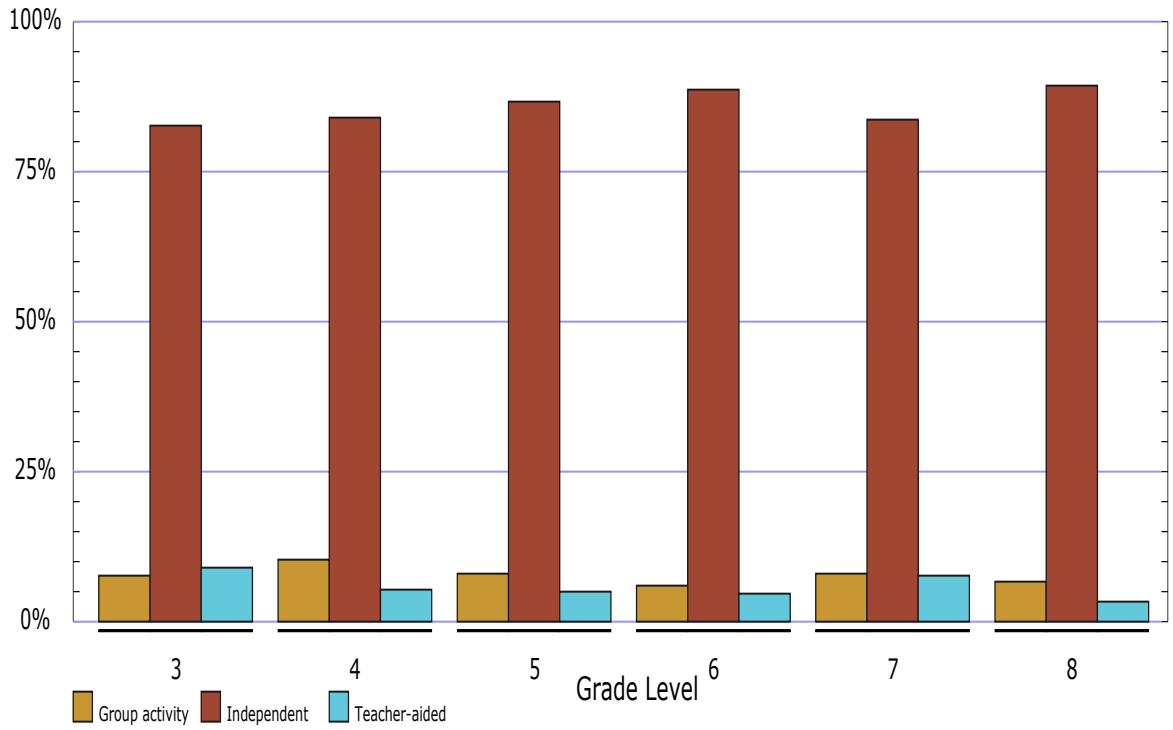

Figure 105: Types of activities found in English language arts, high-performing (all grade levels).

4.2.7.4 mathematics, high-performing (all grade levels)

Table 64: An analysis of the types of activities found in mathematics, high-performing (all grade levels). These results are displayed visually in Fig. 106.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	9%	86%	3%
4	3%	94%	1%
5	4%	89%	5%
6	6%	92%	1%
7	8%	85%	6%
8	4%	87%	8%

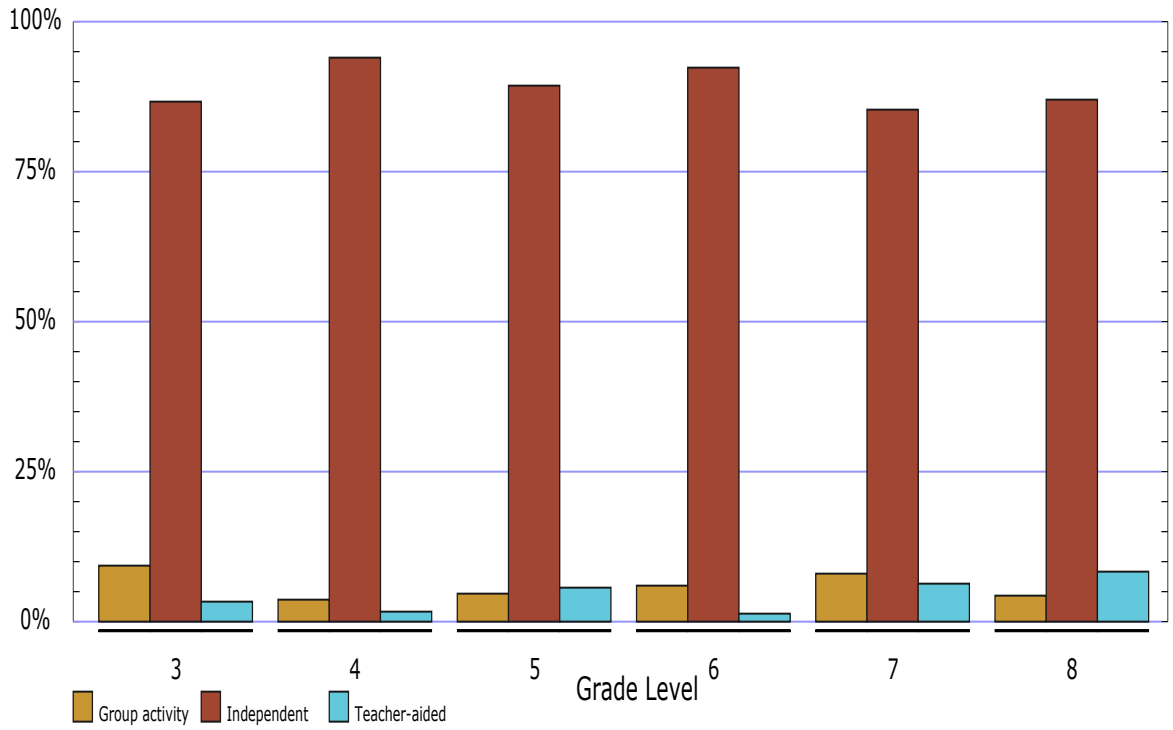

Figure 106: Types of activities found in mathematics, high-performing (all grade levels).

4.2.8 Extent of coverage

4.2.8.1 English language arts, low-performing (all grade levels)

Table 65: Extent of coverage of English language arts, low-performing (all grade levels) standards in the enacted curriculum. For each grade level, the left-side column illustrates the percentage of questions from each content cluster appearing on the state exam. The right-side illustrates the corresponding percentages for the enacted curriculum. Ideally, for a given grade level, the heights of each column shaded the same color should roughly match between the two columns. These results are displayed visually in Fig. 107.

	English language arts low-performing schools (all grade levels)		
Grade	C1	C2	C3
3	55%	25%	18%
4	46%	25%	27%
5	62%	18%	19%
6	27%	39%	32%
7	55%	19%	25%
8	57%	31%	11%

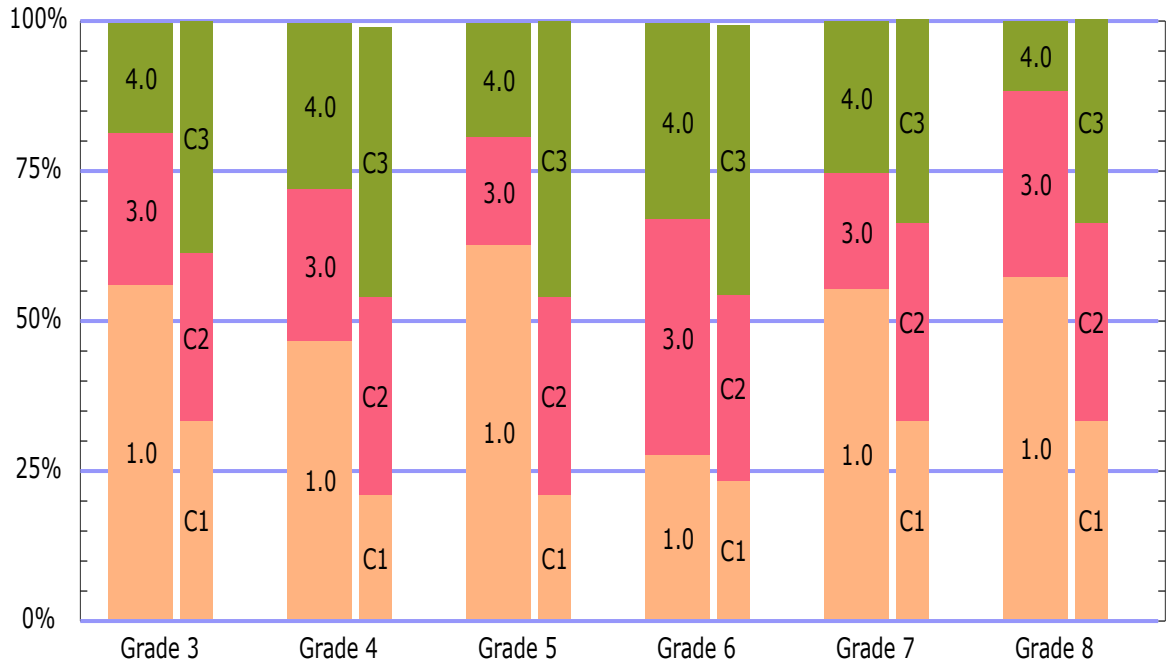

Figure 107: Extent of coverage in English language arts, low-performing (all grade levels).

4.2.8.2 mathematics, low-performing (all grade levels)

Table 66: Extent of coverage of mathematics, low-performing (all grade levels) standards in the enacted curriculum. For each grade level, the left-side column illustrates the percentage of questions from each content cluster appearing on the state exam. The right-side illustrates the corresponding percentages for the enacted curriculum. Ideally, for a given grade level, the heights of each column shaded the same color should roughly match between the two columns. These results are displayed visually in Fig. 108.

	Mathematics low-performing schools (all grade levels)		
Grade	C1	C2	C3
3	74%	18%	7%
4	69%	15%	15%
5	54%	23%	21%
6	44%	25%	29%
7	29%	22%	47%
8	41%	18%	39%

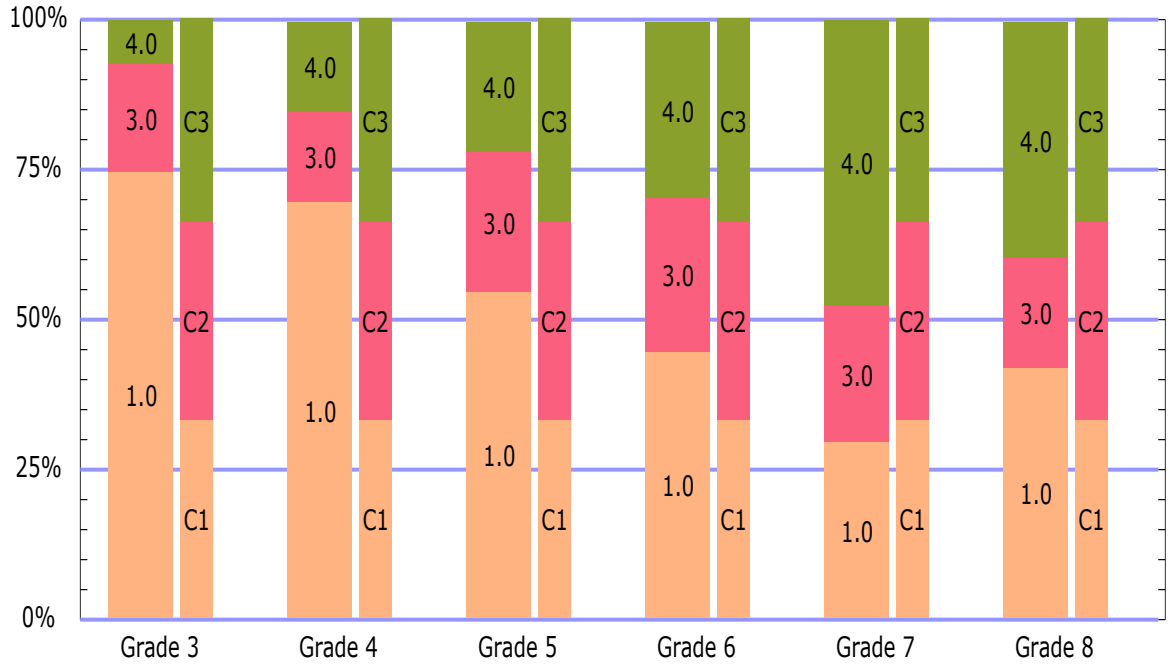

Figure 108: Extent of coverage in mathematics, low-performing (all grade levels).

4.2.8.3 English language arts, high-performing (all grade levels)

Table 67: Extent of coverage of English language arts, high-performing (all grade levels) standards in the enacted curriculum. For each grade level, the left-side column illustrates the percentage of questions from each content cluster appearing on the state exam. The right-side illustrates the corresponding percentages for the enacted curriculum. Ideally, for a given grade level, the heights of each column shaded the same color should roughly match between the two columns. These results are displayed visually in Fig. 109.

	English language arts high-performing schools (all grade levels)		
Grade	C1	C2	C3
3	64%	18%	16%
4	52%	19%	28%
5	47%	26%	26%
6	53%	31%	14%
7	65%	20%	13%
8	55%	33%	10%

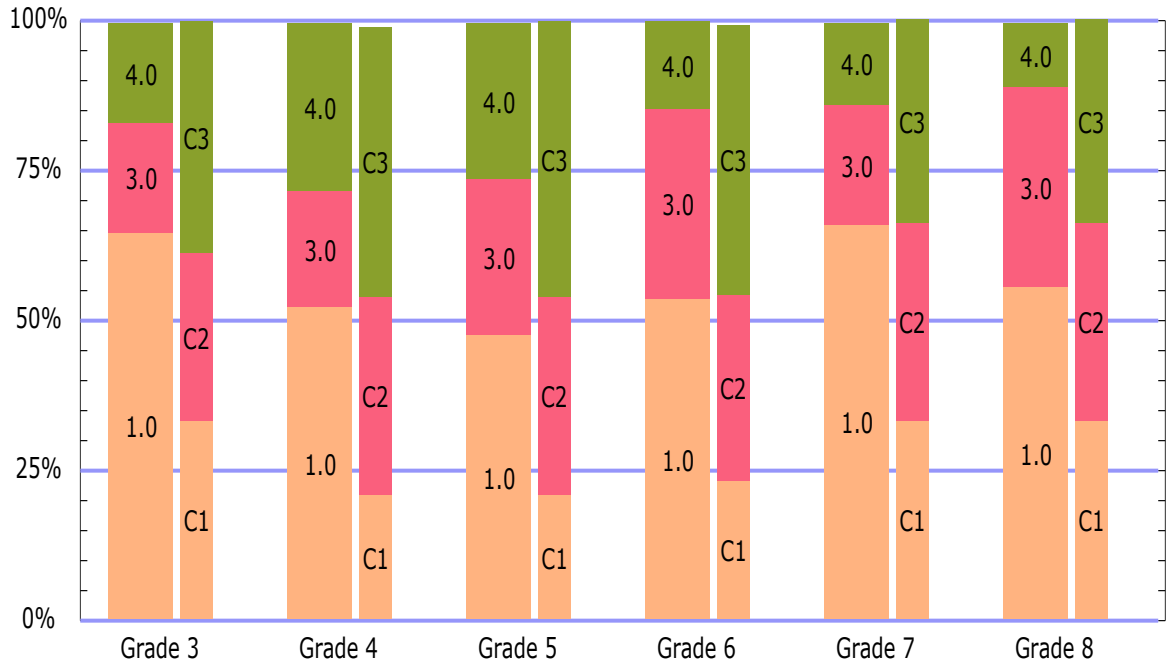

Figure 109: Extent of coverage in English language arts, high-performing (all grade levels).

4.2.8.4 mathematics, high-performing (all grade levels)

Table 68: Extent of coverage of mathematics, high-performing (all grade levels) standards in the enacted curriculum. For each grade level, the left-side column illustrates the percentage of questions from each content cluster appearing on the state exam. The right-side illustrates the corresponding percentages for the enacted curriculum. Ideally, for a given grade level, the heights of each column shaded the same color should roughly match between the two columns. These results are displayed visually in Fig. 110.

	Mathematics high-performing schools (all grade levels)		
Grade	C1	C2	C3
3	74%	17%	7%
4	73%	16%	9%
5	68%	20%	10%
6	37%	41%	20%
7	48%	27%	24%
8	23%	33%	43%

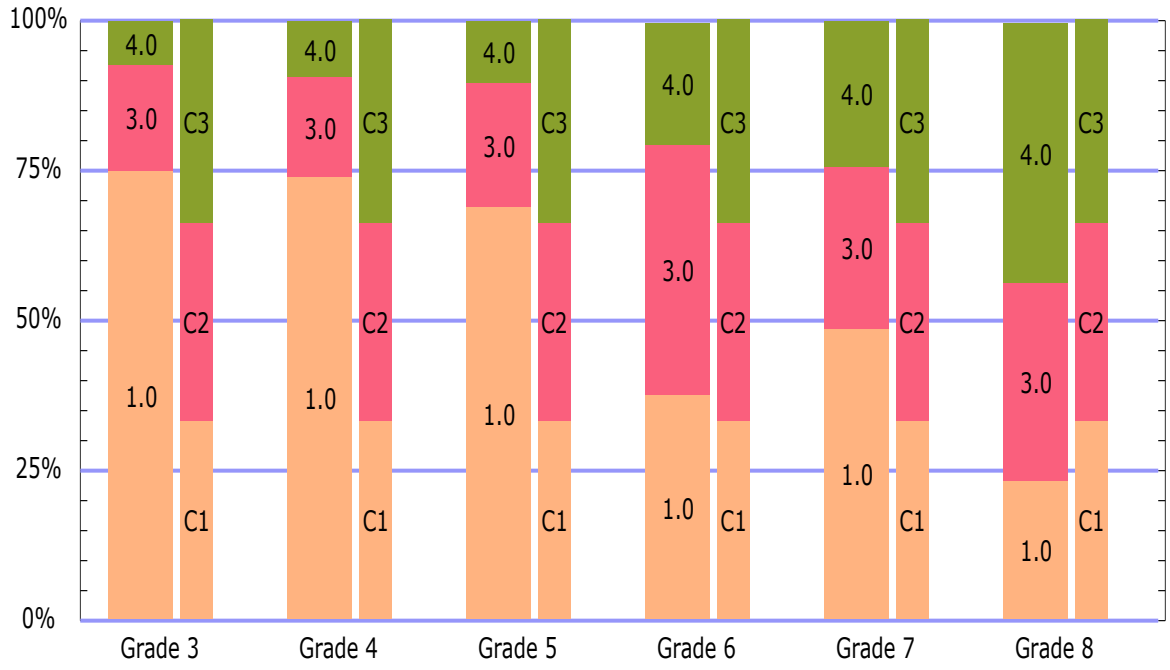

Figure 110: Extent of coverage in mathematics, high-performing (all grade levels).

4.3 School locality disaggregation

4.3.1 Sample sizes

4.3.1.1 all subjects, rural-schools (all grade levels)

Table 69: Sample sizes of student assignments collected from teachers. Only samples for which a clear learning objective could be discerned are included. Percentages in which each individual sample size contributed to the total sample size are shown in parentheses. These results are displayed in Fig. 111.

	Collected subject areas		
Grade level	ELA	MATH	Combined
3	1836 (8%)	1258 (5%)	3,094 (14%)
4	1600 (7%)	944 (4%)	2,544 (12%)
5	1202 (5%)	780 (3%)	1,982 (9%)
6	2114 (9%)	1746 (8%)	3,860 (18%)
7	2230 (10%)	2325 (10%)	4,555 (21%)
8	2392 (11%)	2722 (12%)	5,114 (24%)
Total	**11,374 (53%)**	**9,775 (46%)**	**21,149 (100%)**

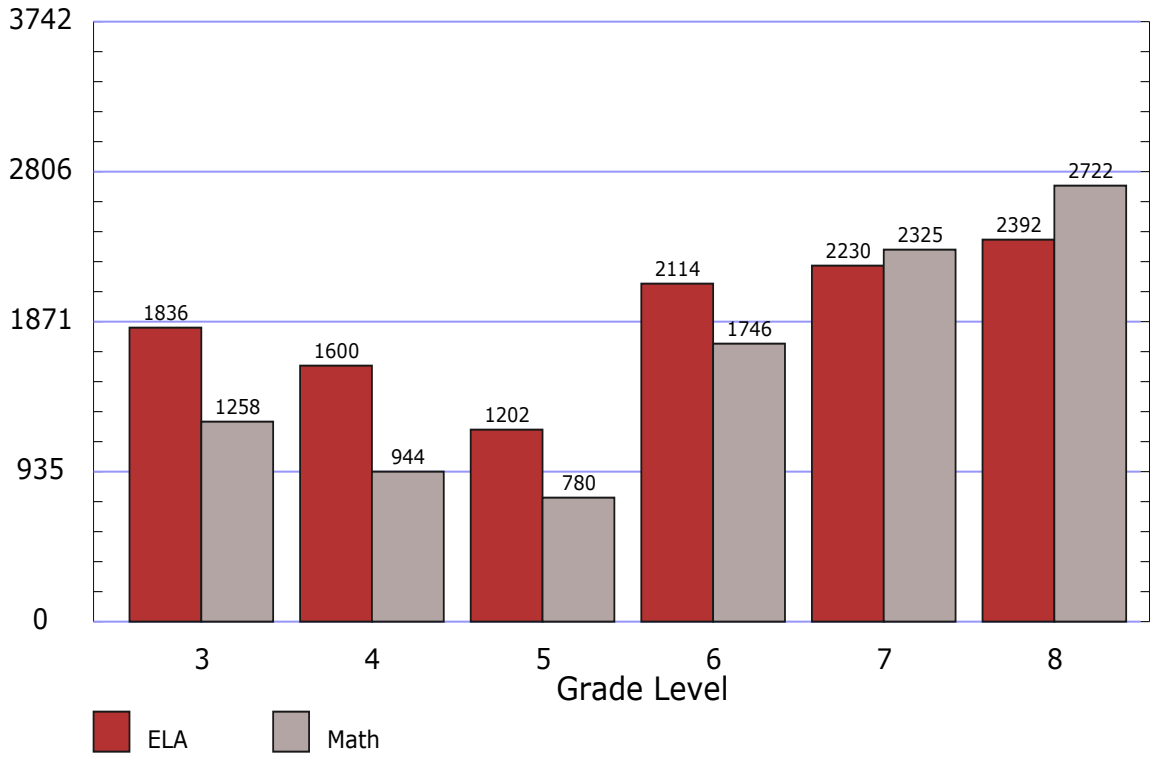

Figure 111: Sample sizes of student assignments collected from Nevada enacted curriculum study teachers that were analyzed as part of the study.

4.3.1.2 all subjects, urban-schools (all grade levels)

Table 70: Sample sizes of student assignments collected from teachers. Only samples for which a clear learning objective could be discerned are included. Percentages in which each individual sample size contributed to the total sample size are shown in parentheses. These results are displayed in Fig. 112.

	Collected subject areas		
Grade level	ELA	MATH	Combined
3	6357 (9%)	4363 (6%)	10,720 (16%)
4	3916 (5%)	3011 (4%)	6,927 (10%)
5	3587 (5%)	2565 (3%)	6,152 (9%)
6	9981 (14%)	5783 (8%)	15,764 (23%)
7	9545 (14%)	6520 (9%)	16,065 (24%)
8	5404 (8%)	5712 (8%)	11,116 (16%)
Total	**38,790 (58%)**	**27,954 (41%)**	**66,744 (100%)**

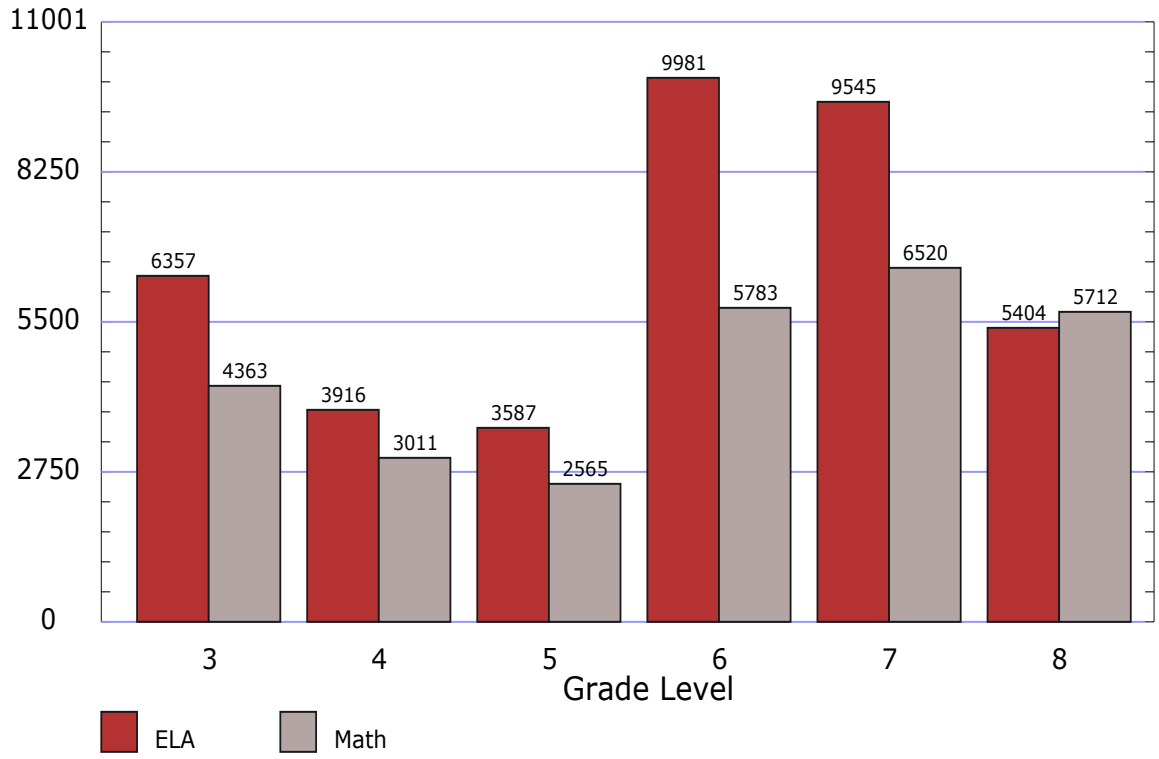

Figure 112: Sample sizes of student assignments collected from Nevada enacted curriculum study teachers that were analyzed as part of the study.

4.3.2 Alignment to standards

4.3.2.1 English language arts, rural-schools (all grade levels)

Table 71: Alignment to state content standards for student assignments in English language arts (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 113.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
9	0%	0%	0%	0%	0%	2%
8	0%	0%	0%	7%	4%	**71%**
7	0%	0%	2%	4%	**48%**	5%
6	0%	0%	6%	**46%**	6%	0%
5	0%	5%	**61%**	28%	30%	8%
4	9%	**57%**	8%	3%	2%	2%
3	**59%**	25%	10%	5%	2%	5%
2	20%	8%	6%	2%	5%	0%
1	6%	0%	3%	0%	0%	0%

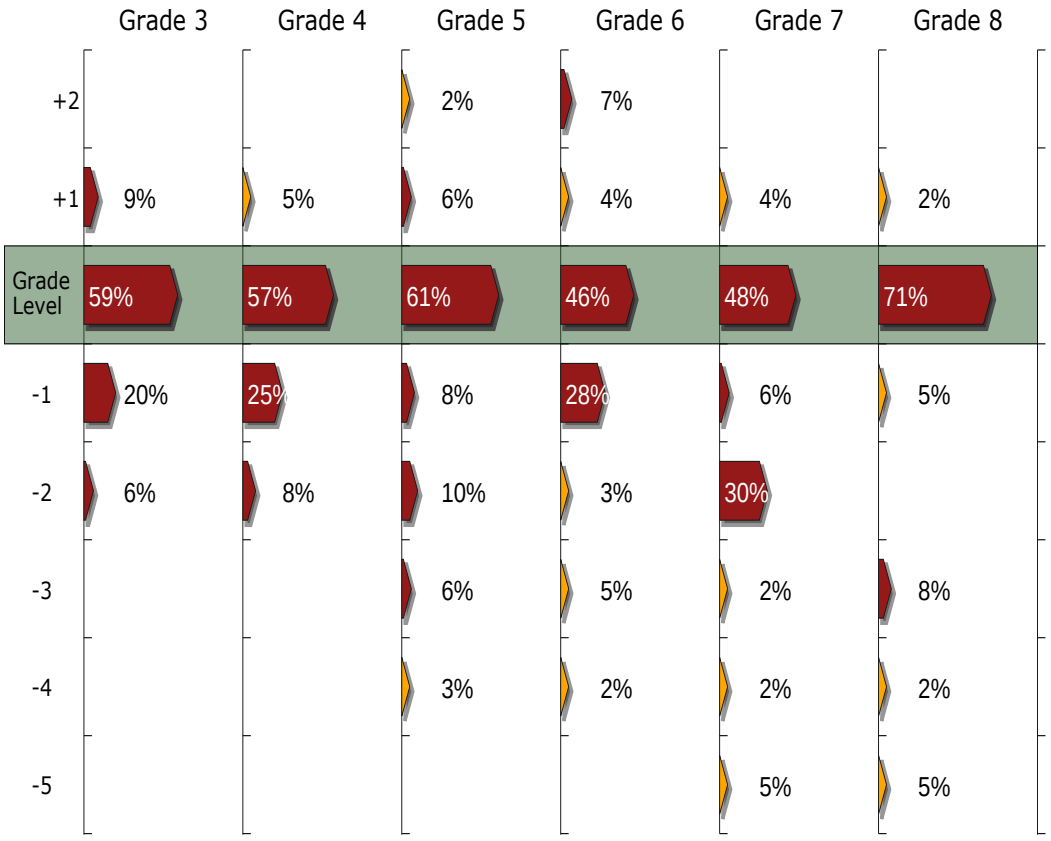

Figure 113: A visual representation of Table 71. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.3.2.2 mathematics, rural-schools (all grade levels)

Table 72: Alignment to state content standards for student assignments in mathematics (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 114.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
9	0%	0%	0%	0%	0%	11%
8	0%	0%	0%	2%	5%	**55%**
7	0%	2%	2%	6%	**59%**	18%
6	3%	13%	18%	**68%**	15%	7%
5	2%	5%	**65%**	17%	16%	6%
4	11%	**71%**	9%	4%	0%	0%
3	**74%**	2%	2%	0%	0%	0%
2	7%	3%	2%	0%	0%	0%
1	0%	0%	0%	0%	0%	0%

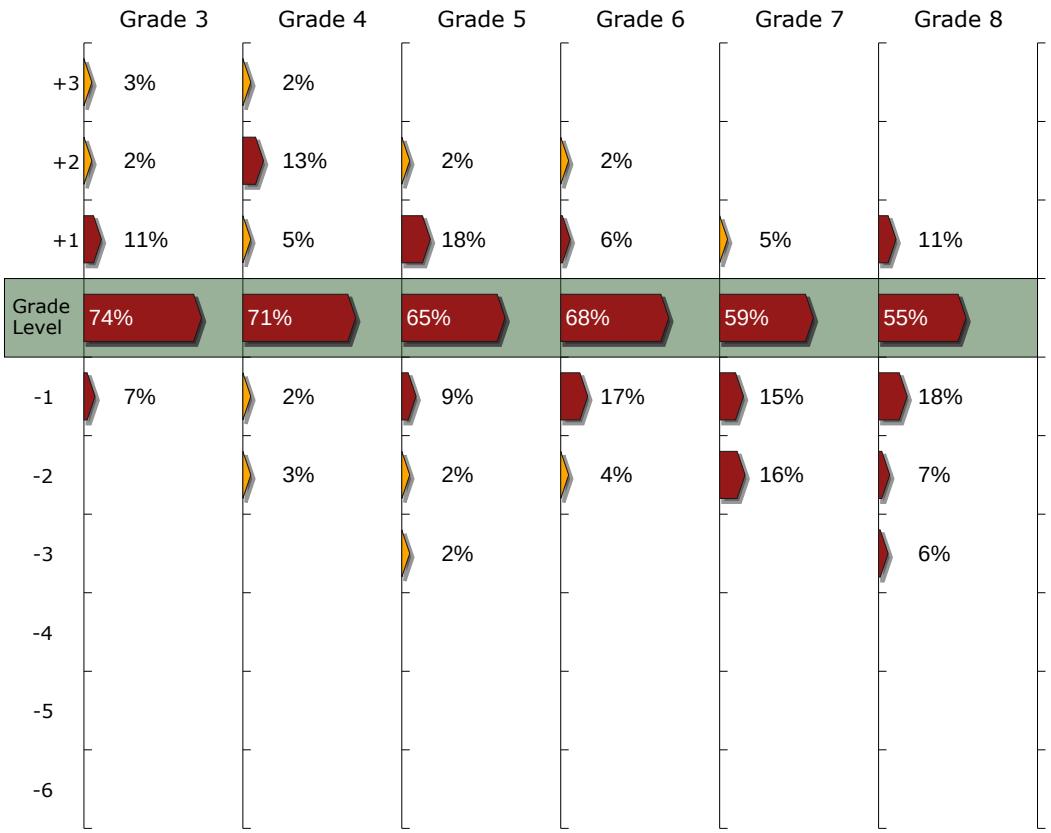

Figure 114: A visual representation of Table 72. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.3.2.3 English language arts, urban-schools (all grade levels)

Table 73: Alignment to state content standards for student assignments in English language arts (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 115.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
8	0%	0%	0%	3%	6%	**59%**
7	0%	0%	0%	3%	**59%**	5%
6	0%	0%	0%	**52%**	9%	4%
5	0%	3%	**71%**	24%	12%	13%
4	11%	**58%**	10%	6%	4%	3%
3	**66%**	25%	9%	5%	4%	8%
2	15%	6%	3%	3%	0%	3%
1	3%	3%	0%	0%	0%	0%
K	0%	0%	0%	0%	0%	0%

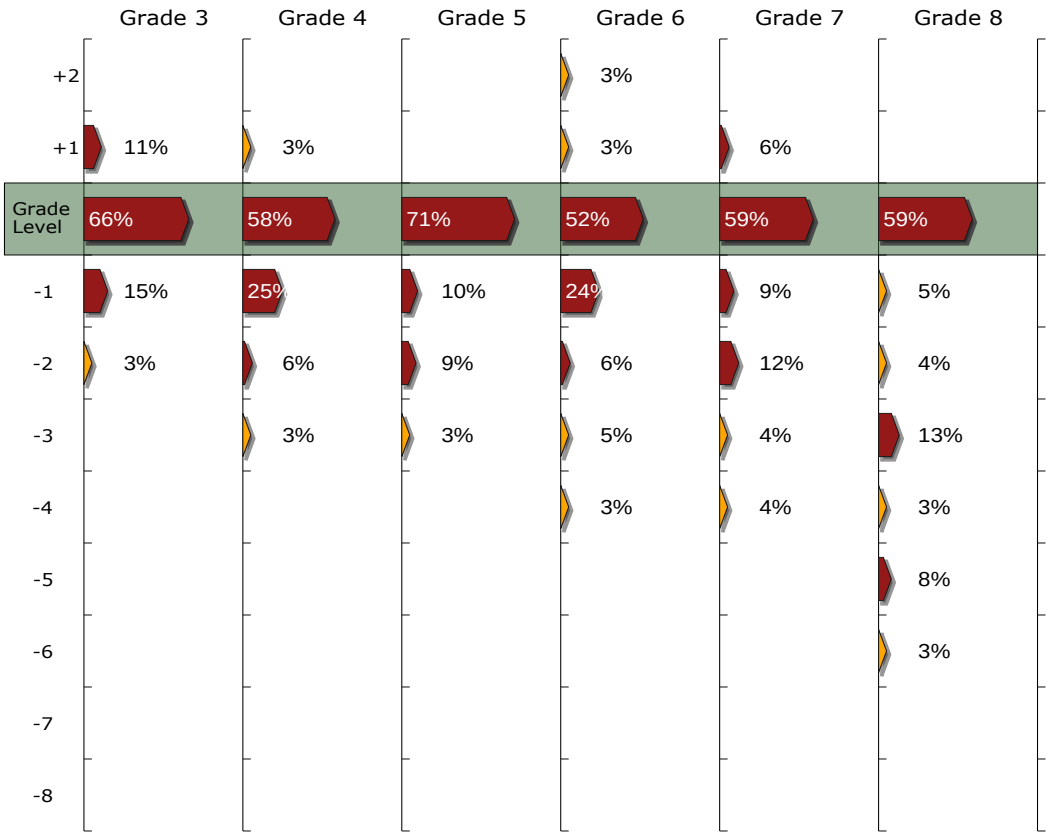

Figure 115: A visual representation of Table 73. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.3.2.4 mathematics, urban-schools (all grade levels)

Table 74: Alignment to state content standards for student assignments in mathematics (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 116.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
9	0%	0%	0%	0%	2%	7%
8	0%	0%	0%	0%	6%	**55%**
7	0%	3%	3%	8%	**52%**	22%
6	2%	10%	28%	**51%**	13%	5%
5	0%	7%	**53%**	25%	17%	6%
4	8%	**66%**	9%	6%	3%	0%
3	**80%**	7%	2%	2%	0%	0%
2	6%	4%	2%	3%	2%	0%
1	0%	0%	0%	0%	0%	0%

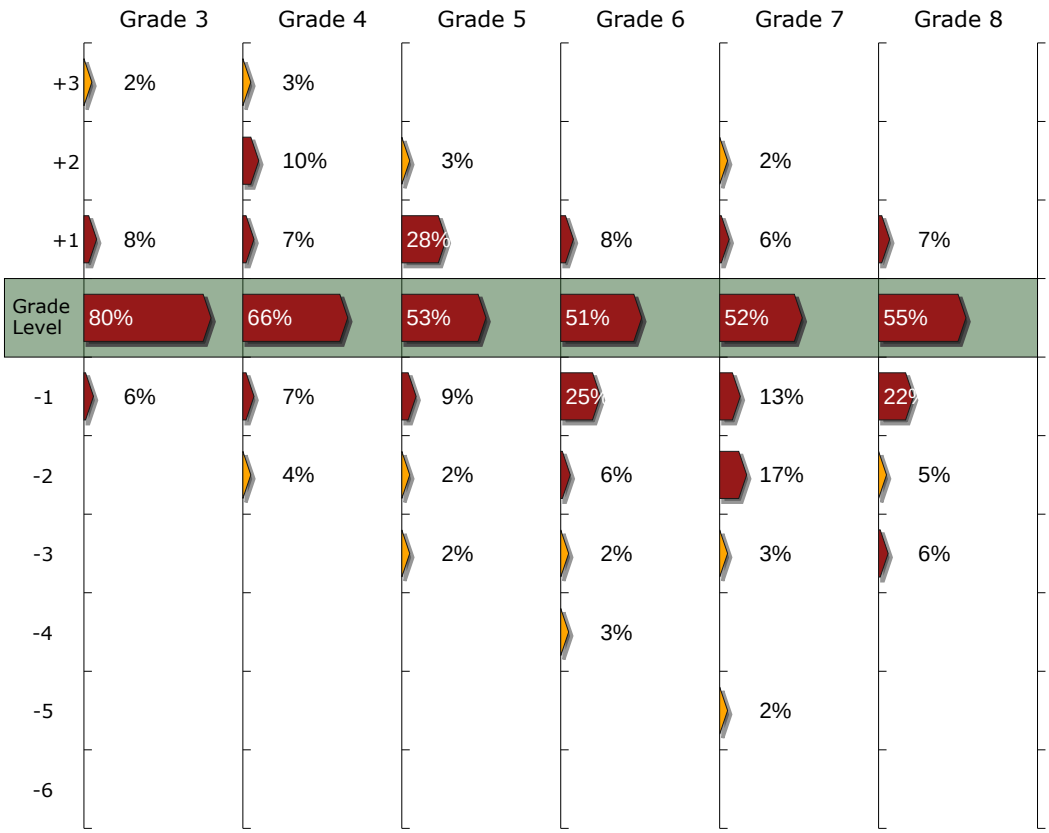

Figure 116: A visual representation of Table 74. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.3.3 Sources of assignments

4.3.3.1 English language arts, rural-schools (all grade levels)

Table 75: An analysis of the sources of assignments found in English language arts, rural-schools (all grade levels). These results are displayed visually in Fig. 117.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	2%	2%	28%	1%	65%
4	18%	4%	28%	2%	45%
5	3%	1%	41%	3%	51%
6	1%	9%	35%	6%	46%
7	7%	4%	37%	4%	45%
8	0%	11%	50%	10%	26%

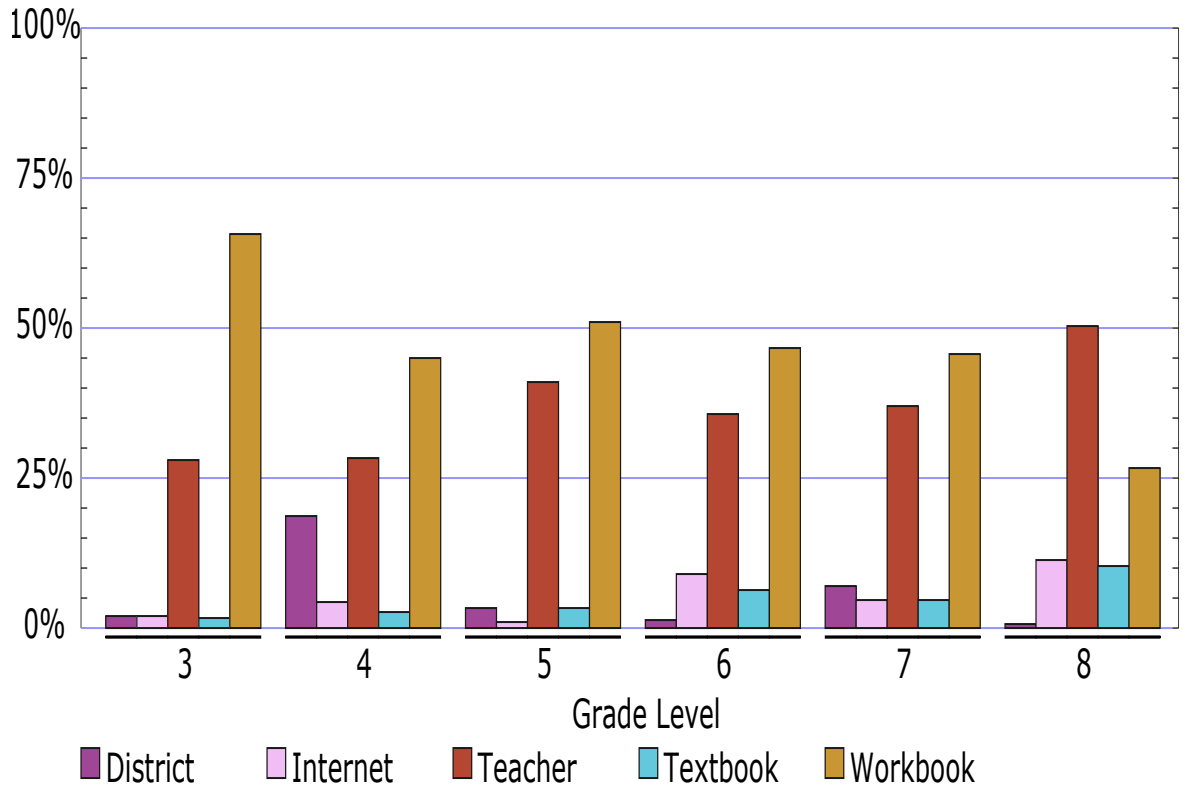

Figure 117: Sources of assignments found in English language arts, rural-schools (all grade levels).

4.3.3.2 mathematics, rural-schools (all grade levels)

Table 76: An analysis of the sources of assignments found in mathematics, rural-schools (all grade levels). These results are displayed visually in Fig. 118.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	1%	1%	10%	3%	82%
4	28%	6%	4%	3%	57%
5	3%	12%	2%	5%	76%
6	4%	3%	11%	3%	76%
7	0%	0%	13%	5%	80%
8	0%	0%	19%	10%	69%

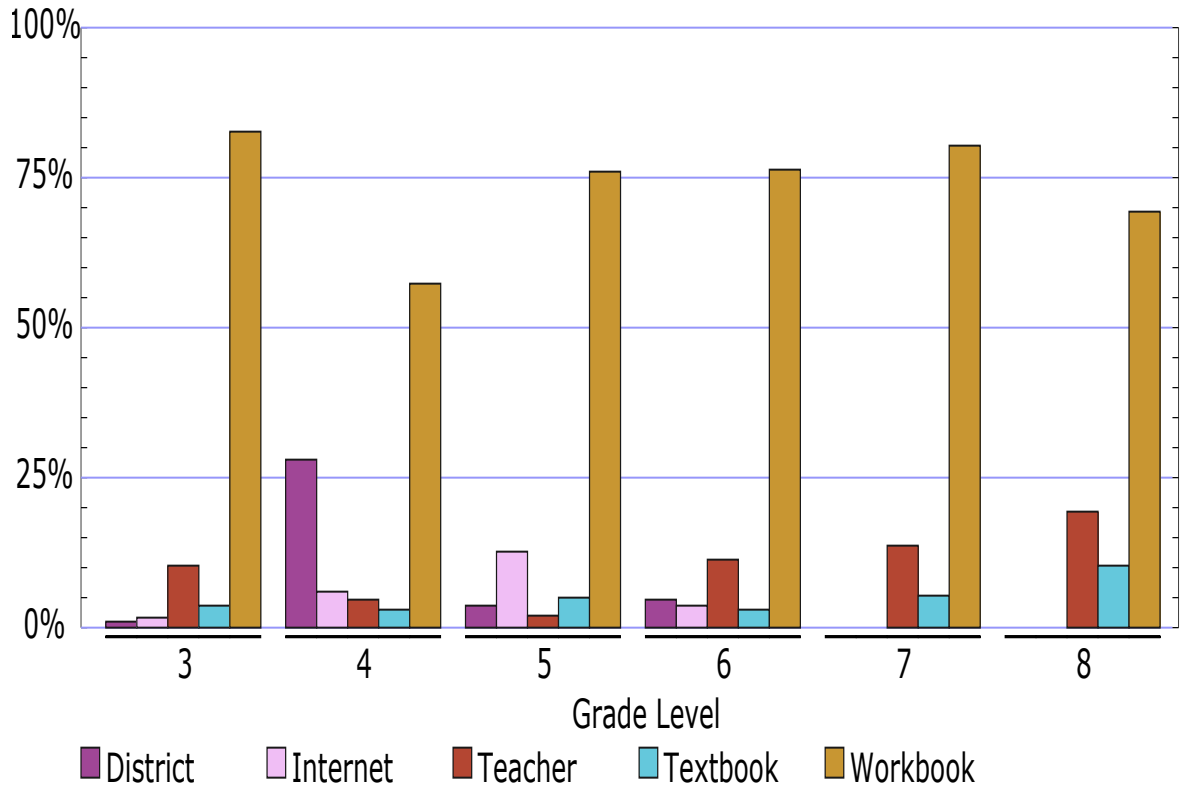

Figure 118: Sources of assignments found in mathematics, rural-schools (all grade levels).

4.3.3.3 English language arts, urban-schools (all grade levels)

Table 77: An analysis of the sources of assignments found in English language arts, urban-schools (all grade levels). These results are displayed visually in Fig. 119.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	4%	7%	22%	7%	57%
4	6%	2%	24%	9%	58%
5	4%	7%	28%	9%	49%
6	1%	2%	46%	5%	42%
7	0%	5%	50%	5%	37%
8	0%	7%	57%	5%	29%

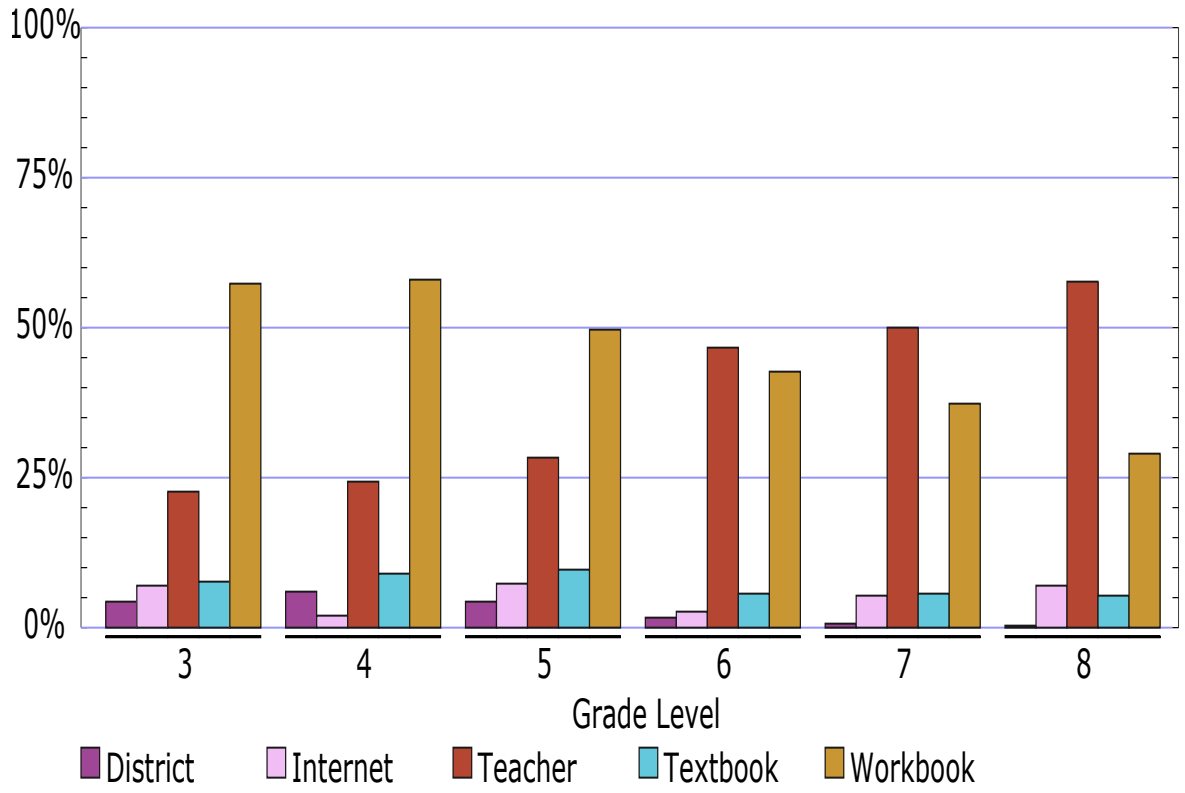

Figure 119: Sources of assignments found in English language arts, urban-schools (all grade levels).

4.3.3.4 mathematics, urban-schools (all grade levels)

Table 78: An analysis of the sources of assignments found in mathematics, urban-schools (all grade levels). These results are displayed visually in Fig. 120.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	0%	4%	7%	9%	77%
4	1%	1%	9%	16%	70%
5	1%	7%	9%	15%	64%
6	0%	1%	20%	5%	72%
7	0%	2%	18%	18%	59%
8	2%	0%	22%	18%	56%

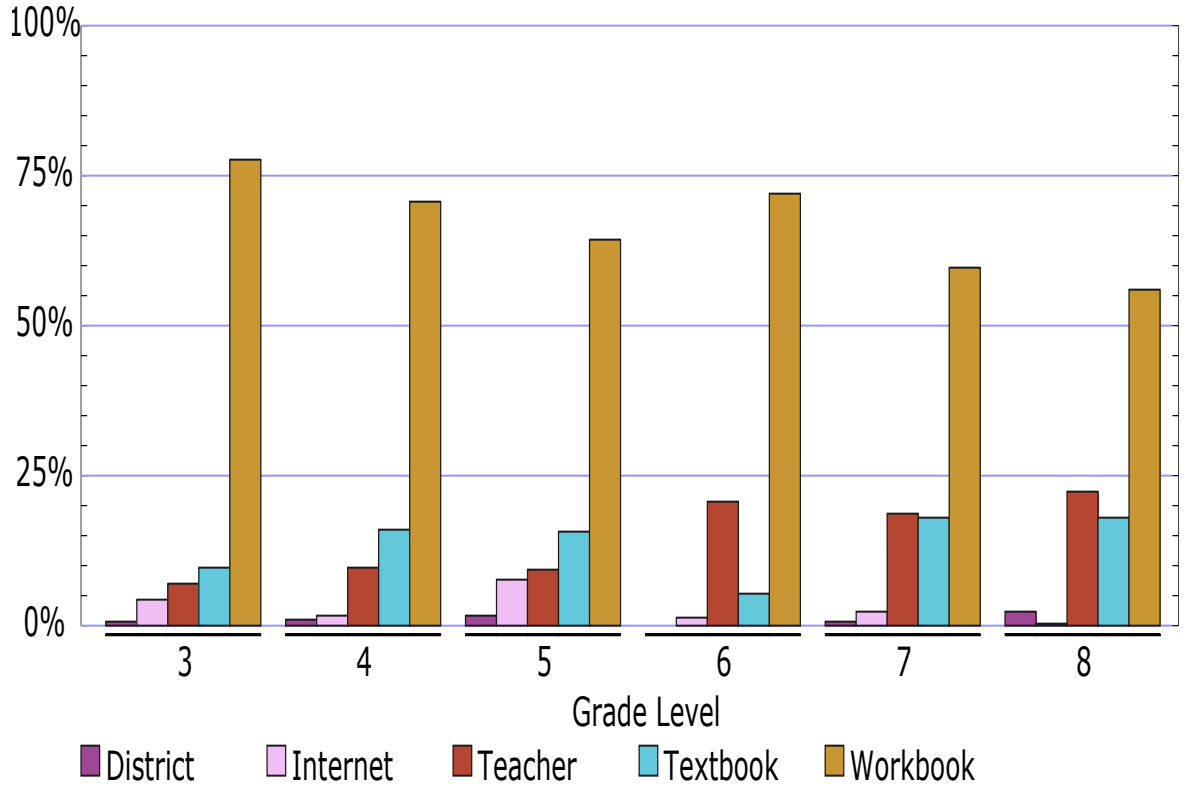

Figure 120: Sources of assignments found in mathematics, urban-schools (all grade levels).

4.3.4 Types of assignments

4.3.4.1 English language arts, rural-schools (all grade levels)

Table 79: An analysis of the types of assignments found in English language arts, rural-schools (all grade levels). These results are displayed visually in Fig. 121.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	5%	68%	5%	3%	17%
4	7%	58%	4%	5%	24%
5	16%	59%	1%	2%	20%
6	18%	51%	5%	14%	9%
7	21%	47%	8%	12%	10%
8	18%	59%	5%	4%	11%

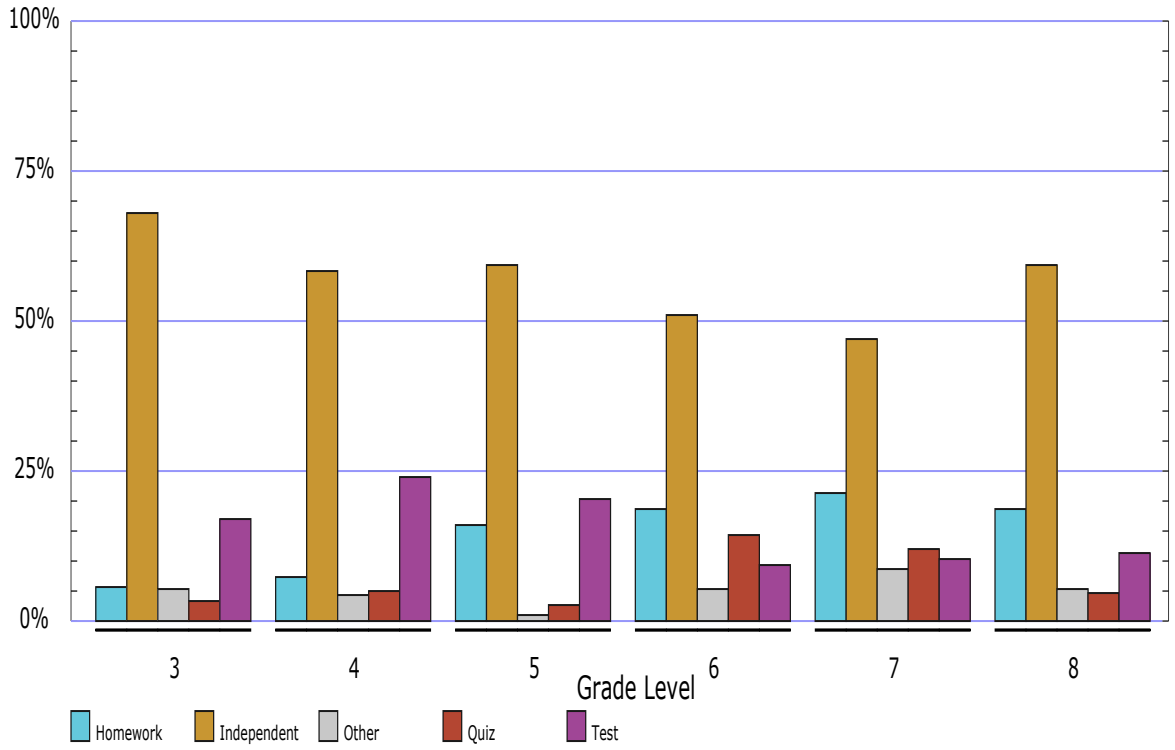

Figure 121: Types of assignments found in English language arts, rural-schools (all grade levels).

4.3.4.2 mathematics, rural-schools (all grade levels)

Table 80: An analysis of the types of assignments found in mathematics, rural-schools (all grade levels). These results are displayed visually in Fig. 122.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	14%	52%	8%	12%	10%
4	5%	30%	1%	7%	54%
5	24%	37%	4%	14%	18%
6	9%	53%	1%	6%	29%
7	70%	16%	6%	1%	5%
8	33%	16%	24%	20%	5%

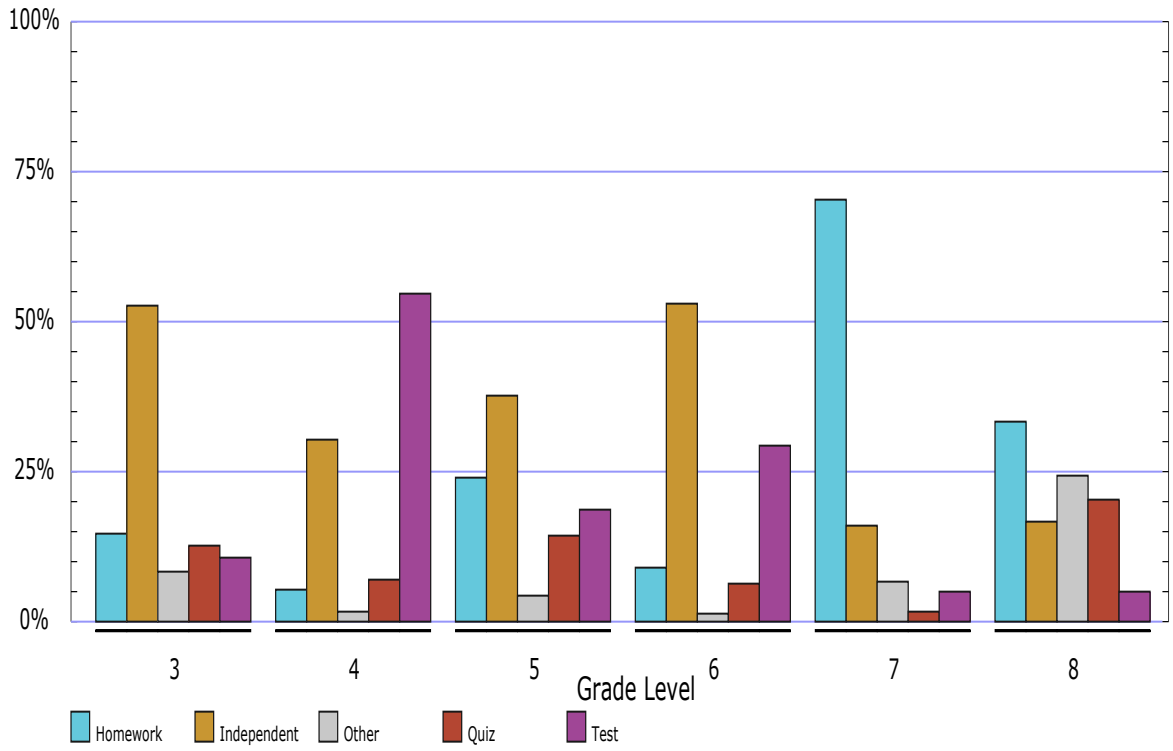

Figure 122: Types of assignments found in mathematics, rural-schools (all grade levels).

4.3.4.3 English language arts, urban-schools (all grade levels)

Table 81: An analysis of the types of assignments found in English language arts, urban-schools (all grade levels). These results are displayed visually in Fig. 123.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	12%	49%	4%	6%	27%
4	11%	52%	5%	7%	22%
5	13%	55%	3%	7%	20%
6	11%	60%	6%	7%	13%
7	18%	57%	8%	8%	6%
8	14%	61%	8%	6%	9%

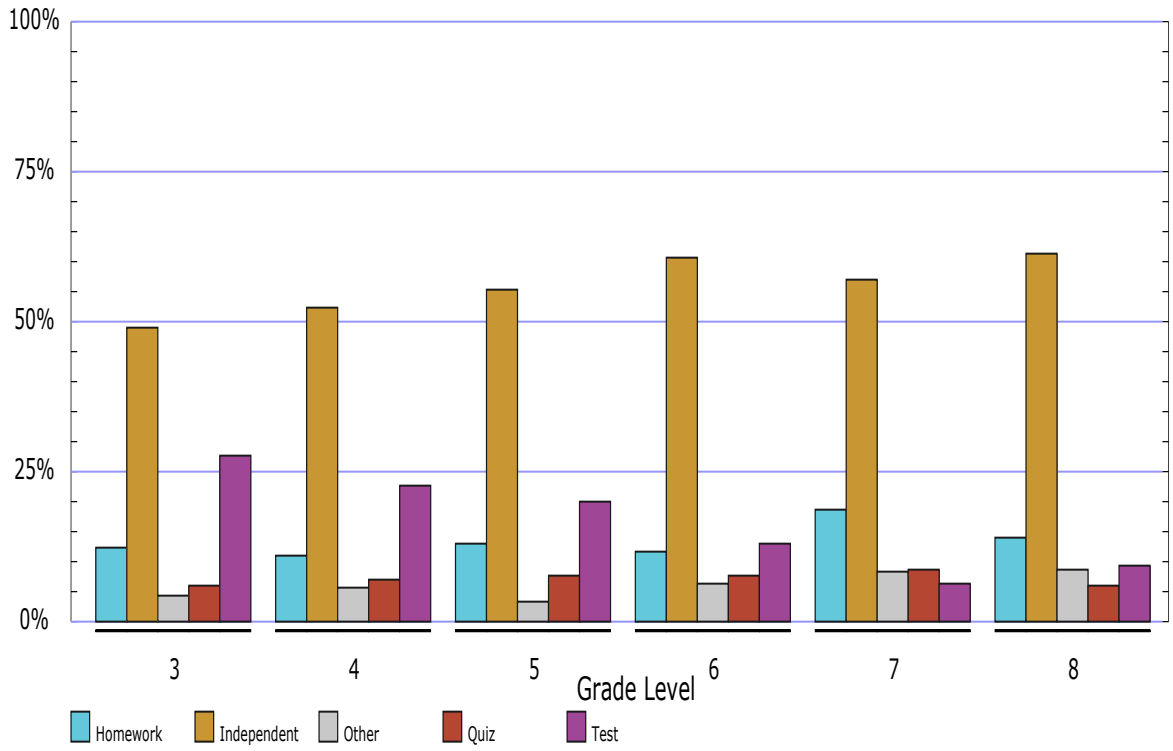

Figure 123: Types of assignments found in English language arts, urban-schools (all grade levels).

4.3.4.4 mathematics, urban-schools (all grade levels)

Table 82: An analysis of the types of assignments found in mathematics, urban-schools (all grade levels). These results are displayed visually in Fig. 124.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	24%	40%	3%	8%	22%
4	24%	46%	6%	11%	11%
5	23%	50%	3%	7%	14%
6	33%	39%	10%	11%	5%
7	37%	30%	7%	15%	9%
8	33%	32%	15%	10%	7%

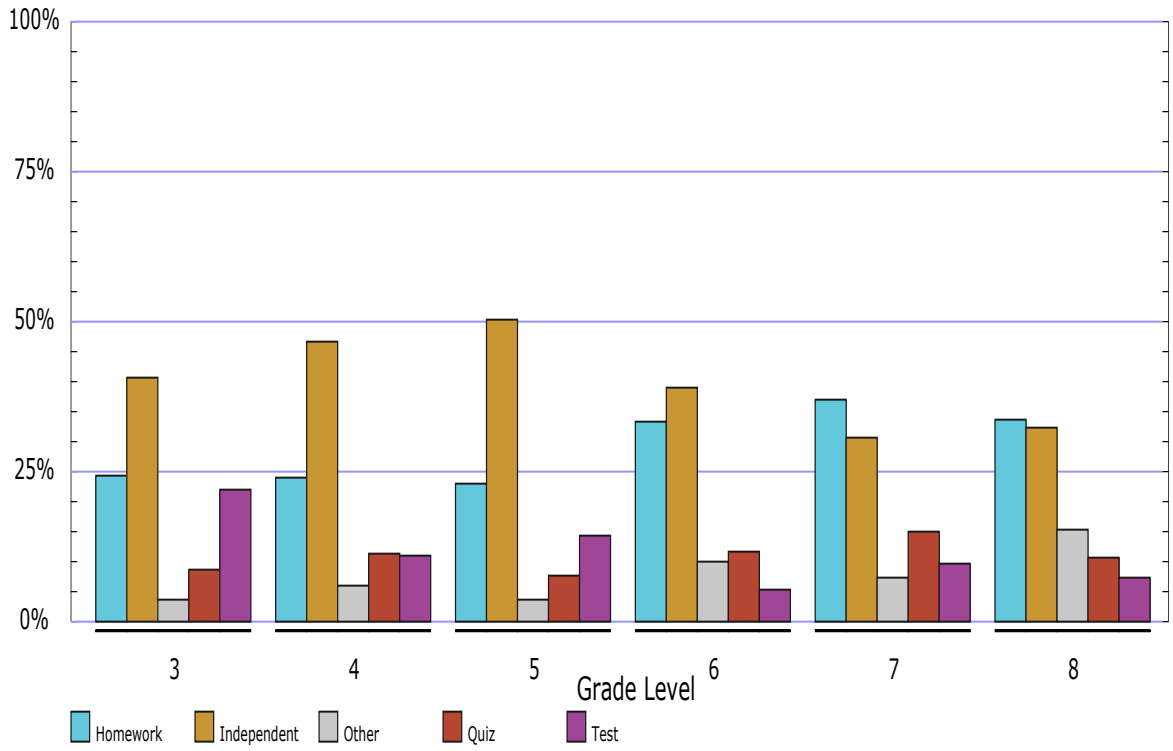

Figure 124: Types of assignments found in mathematics, urban-schools (all grade levels).

4.3.5 Types of activities rigor

4.3.5.1 English language arts, rural-schools (all grade levels)

Table 83: An analysis of the types of activities found in English language arts, rural-schools (all grade levels). These results are displayed visually in Fig. 125.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	12%	79%	8%
4	11%	81%	7%
5	7%	86%	6%
6	8%	85%	6%
7	14%	80%	4%
8	13%	84%	2%

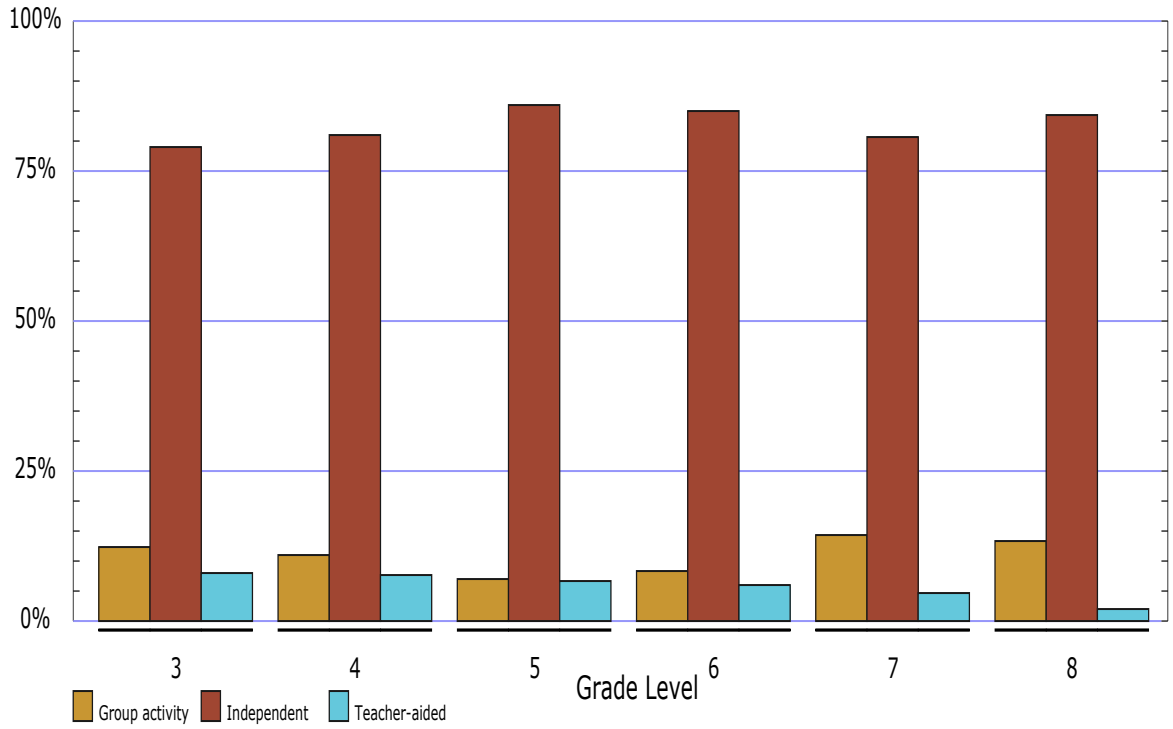

Figure 125: Types of activities found in English language arts, rural-schools (all grade levels).

4.3.5.2 mathematics, rural-schools (all grade levels)

Table 84: An analysis of the types of activities found in mathematics, rural-schools (all grade levels). These results are displayed visually in Fig. 126.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	15%	82%	2%
4	6%	92%	0%
5	5%	90%	3%
6	3%	95%	1%
7	5%	80%	13%
8	7%	86%	5%

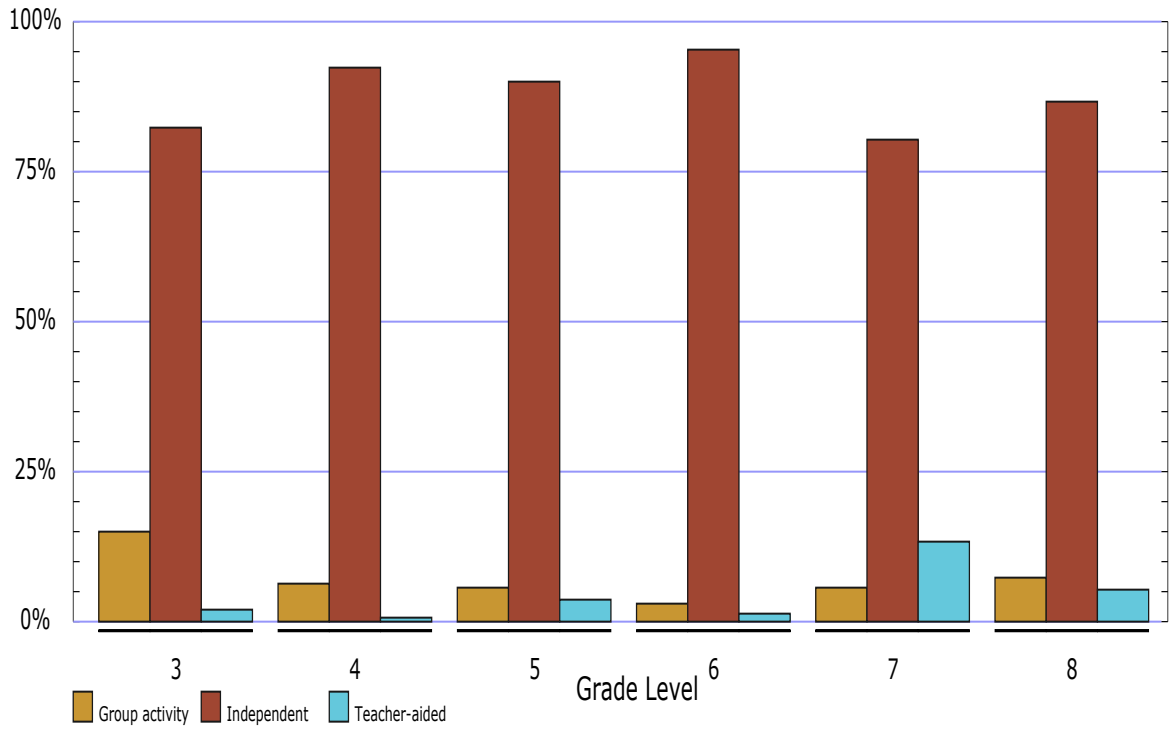

Figure 126: Types of activities found in mathematics, rural-schools (all grade levels).

4.3.5.3 English language arts, urban-schools (all grade levels)

Table 85: An analysis of the types of activities found in English language arts, urban-schools (all grade levels). These results are displayed visually in Fig. 127.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	7%	84%	7%
4	12%	82%	5%
5	8%	85%	5%
6	11%	79%	8%
7	8%	80%	11%
8	10%	83%	5%

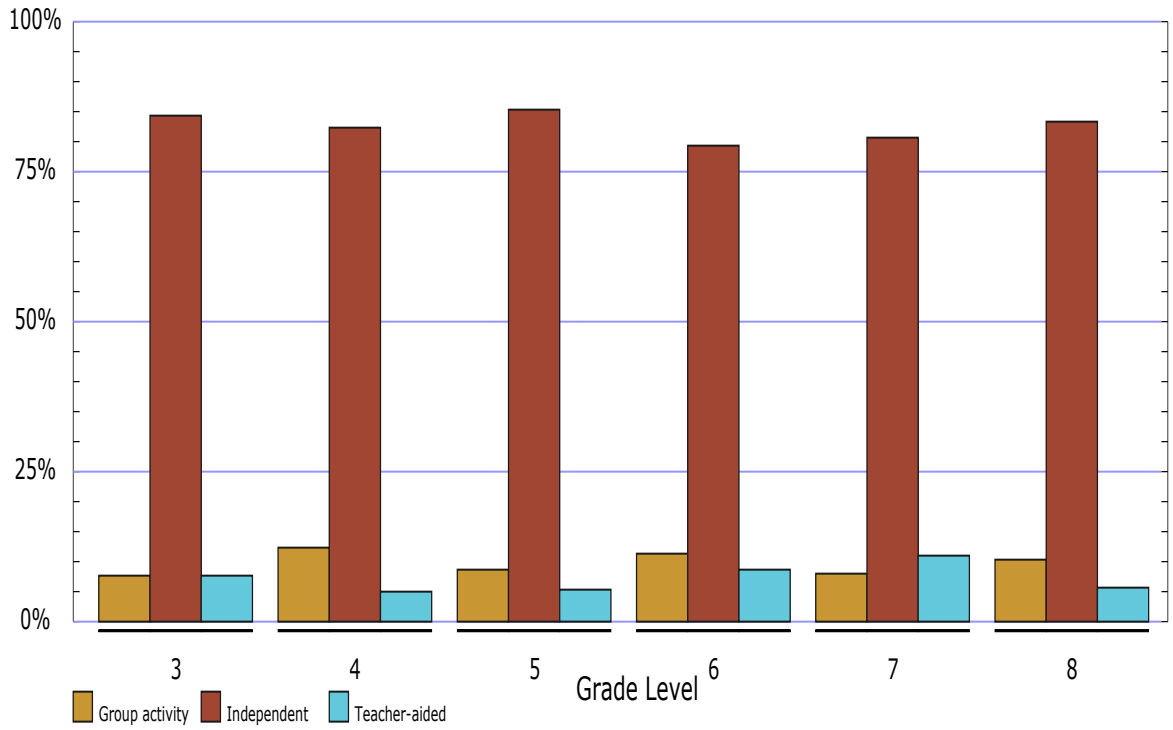

Figure 127: Types of activities found in English language arts, urban-schools (all grade levels).

4.3.5.4 mathematics, urban-schools (all grade levels)

Table 86: An analysis of the types of activities found in mathematics, urban-schools (all grade levels). These results are displayed visually in Fig. 128.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	8%	86%	4%
4	9%	86%	3%
5	5%	88%	5%
6	13%	76%	9%
7	8%	87%	4%
8	8%	83%	8%

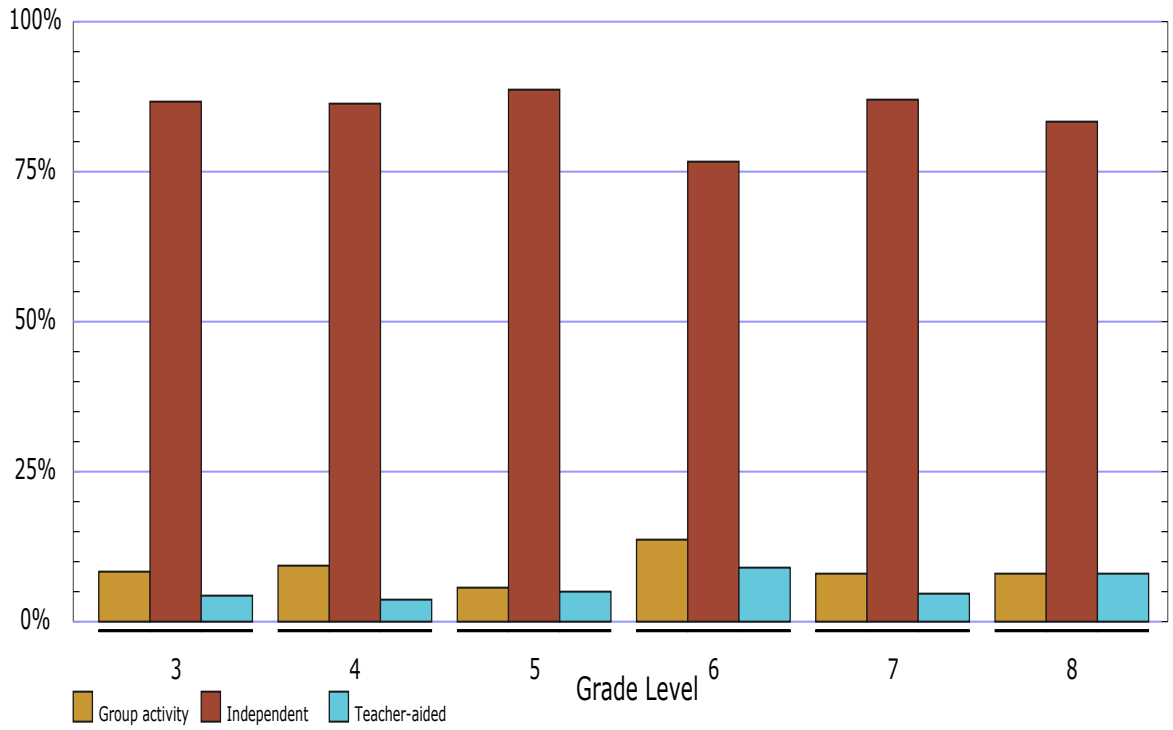

Figure 128: Types of activities found in mathematics, urban-schools (all grade levels).

4.4 Socioeconomic disaggregation

4.4.1 Sample sizes

4.4.1.1 all subjects, low-ses (all grade levels)

Table 87: Sample sizes of student assignments collected from teachers. Only samples for which a clear learning objective could be discerned are included. Percentages in which each individual sample size contributed to the total sample size are shown in parentheses. These results are displayed in Fig. 129.

	Collected subject areas		
Grade level	ELA	MATH	Combined
3	4371 (10%)	2955 (6%)	7,326 (17%)
4	2804 (6%)	1961 (4%)	4,765 (11%)
5	2666 (6%)	1650 (3%)	4,316 (10%)
6	4692 (10%)	3407 (7%)	8,099 (18%)
7	5519 (12%)	4667 (10%)	10,186 (23%)
8	3860 (8%)	4490 (10%)	8,350 (19%)
Total	**23,912 (55%)**	**19,130 (44%)**	**43,042 (100%)**

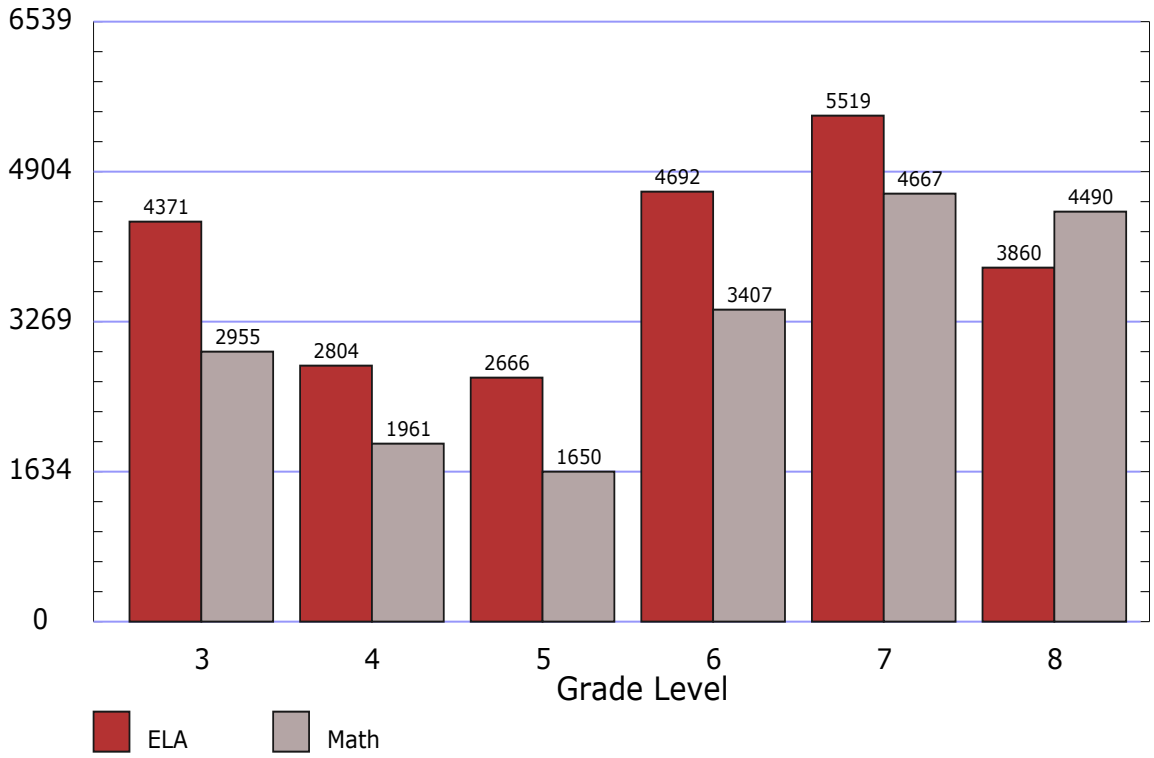

Figure 129: Sample sizes of student assignments collected from Nevada enacted curriculum study teachers that were analyzed as part of the study.

4.4.1.2 all subjects, high-ses (all grade levels)

Table 88: Sample sizes of student assignments collected from teachers. Only samples for which a clear learning objective could be discerned are included. Percentages in which each individual sample size contributed to the total sample size are shown in parentheses. These results are displayed in Fig. 130.

	Collected subject areas		
Grade level	ELA	MATH	Combined
3	1946 (7%)	1271 (4%)	3,217 (12%)
4	1280 (4%)	948 (3%)	2,228 (8%)
5	1190 (4%)	916 (3%)	2,106 (8%)
6	4417 (17%)	2488 (9%)	6,905 (26%)
7	4327 (16%)	2604 (10%)	6,931 (26%)
8	2408 (9%)	1957 (7%)	4,365 (16%)
Total	**15,568 (60%)**	**10,184 (39%)**	**25,752 (100%)**

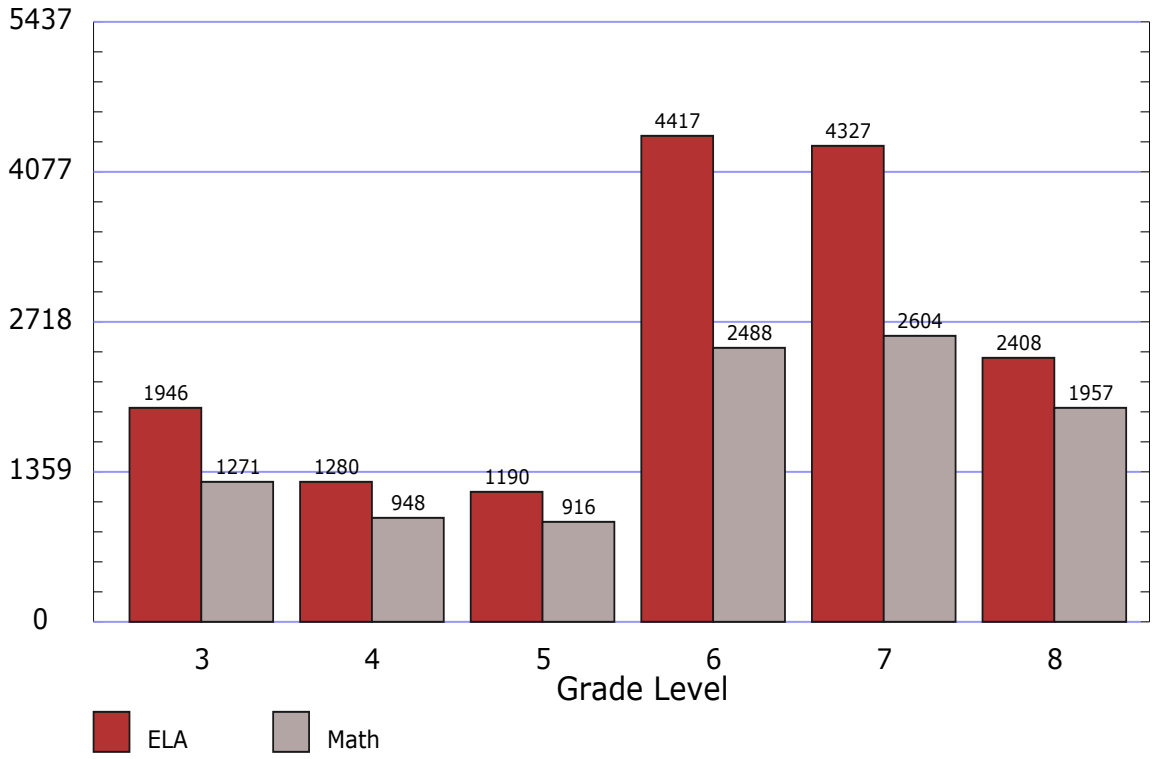

Figure 130: Sample sizes of student assignments collected from Nevada enacted curriculum study teachers that were analyzed as part of the study.

4.4.2 Alignment to standards

4.4.2.1 English language arts, low-ses (all grade levels)

Table 89: Alignment to state content standards for student assignments in English language arts (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 131.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
8	0%	0%	0%	6%	5%	**68%**
7	0%	0%	0%	5%	**53%**	6%
6	0%	0%	3%	**56%**	10%	5%
5	0%	4%	**68%**	18%	17%	8%
4	10%	**57%**	7%	3%	4%	3%
3	**65%**	27%	10%	5%	4%	4%
2	16%	6%	5%	3%	3%	2%
1	3%	0%	2%	0%	0%	0%

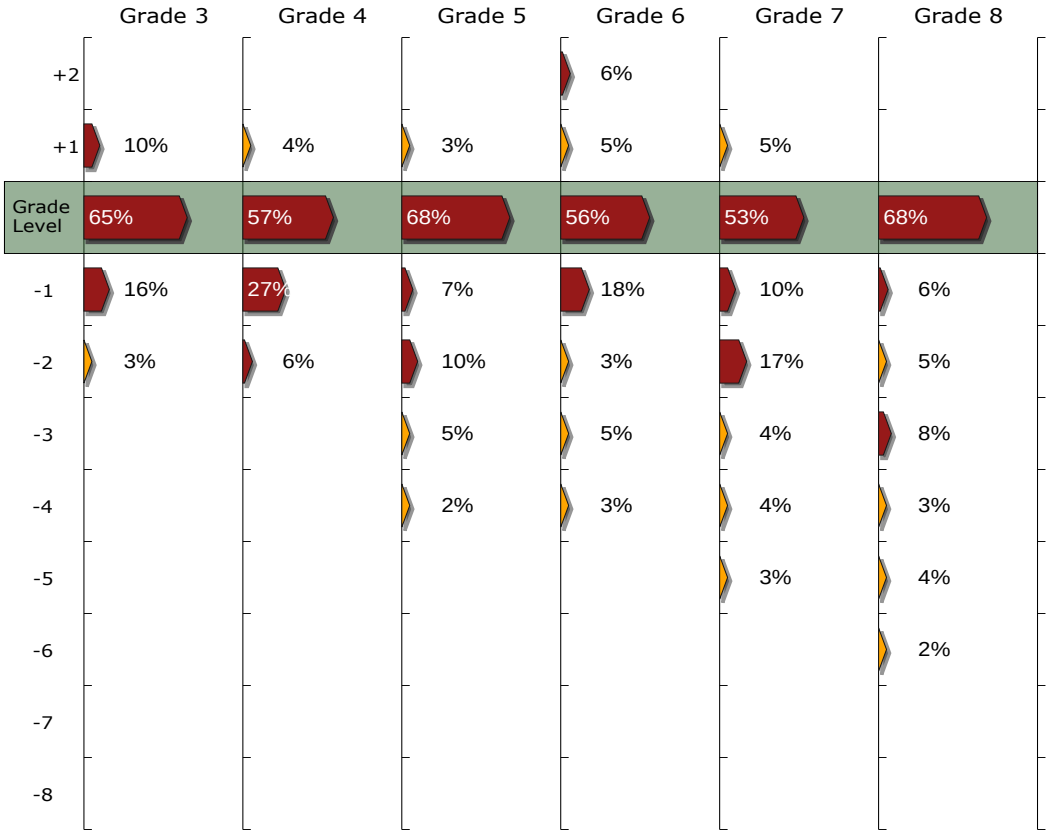

Figure 131: A visual representation of Table 89. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.4.2.2 mathematics, low-ses (all grade levels)

Table 90: Alignment to state content standards for student assignments in mathematics (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 132.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
9	0%	0%	0%	0%	2%	8%
8	0%	0%	0%	2%	6%	**53%**
7	0%	3%	2%	10%	**58%**	23%
6	3%	11%	29%	**52%**	12%	8%
5	2%	6%	**52%**	22%	16%	4%
4	10%	**69%**	8%	6%	2%	0%
3	**76%**	4%	3%	2%	0%	0%
2	6%	3%	2%	2%	0%	0%
1	0%	0%	0%	0%	0%	0%

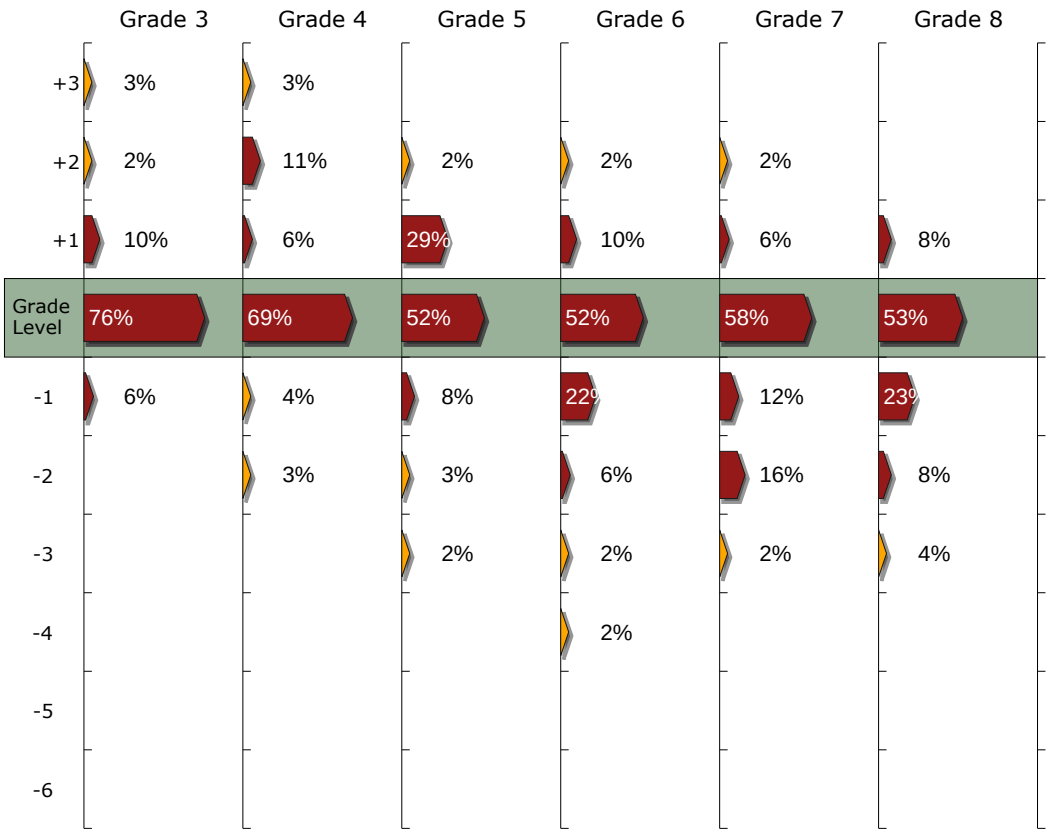

Figure 132: A visual representation of Table 90. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.4.2.3 English language arts, high-ses (all grade levels)

Table 91: Alignment to state content standards for student assignments in English language arts (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 133.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
8	0%	0%	2%	2%	6%	**50%**
7	0%	0%	0%	2%	**59%**	4%
6	0%	0%	0%	**45%**	10%	0%
5	0%	3%	**71%**	31%	10%	14%
4	13%	**60%**	9%	8%	4%	3%
3	**64%**	23%	11%	4%	5%	18%
2	13%	6%	2%	2%	2%	4%
1	6%	4%	0%	2%	0%	0%
K	0%	0%	0%	0%	0%	0%

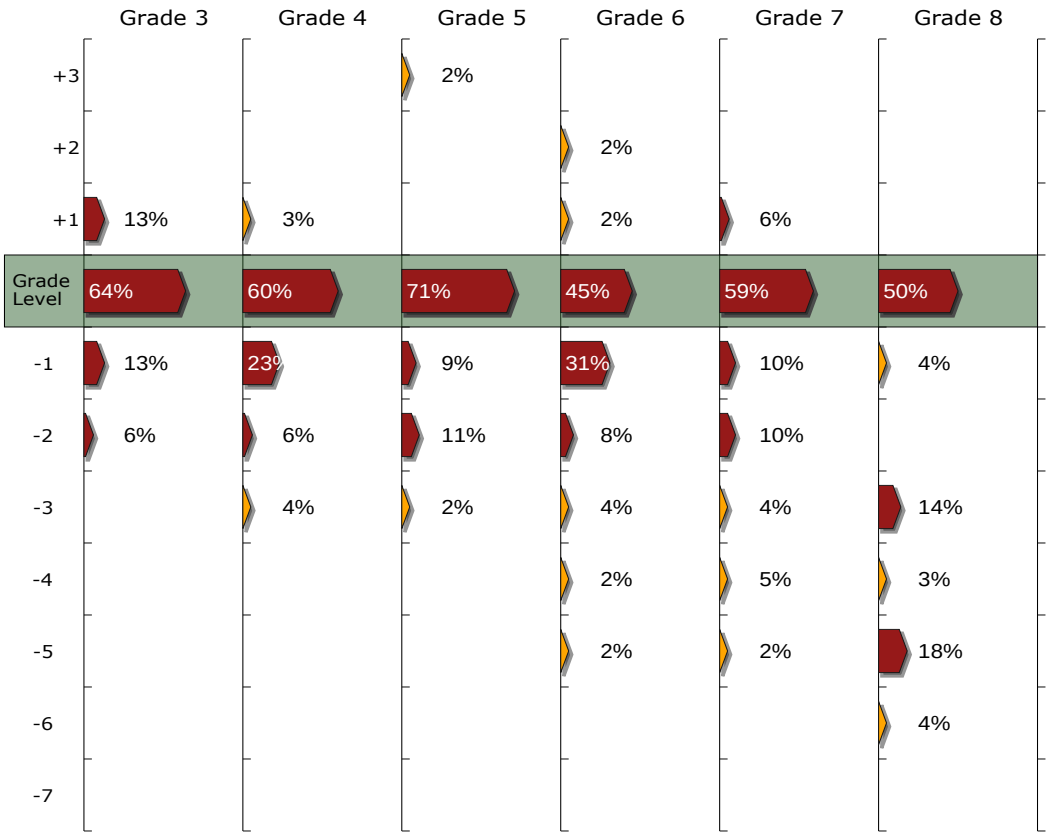

Figure 133: A visual representation of Table 91. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.4.2.4 mathematics, high-ses (all grade levels)

Table 92: Alignment to state content standards for student assignments in mathematics (all grade levels). Percentages in bold correspond to grade-level content. These results are displayed visually in Fig. 134.

	Official grade level					
Enacted grade level	3	4	5	6	7	8
9	0%	0%	0%	0%	0%	8%
8	0%	0%	0%	0%	5%	**57%**
7	0%	4%	4%	7%	**47%**	17%
6	0%	12%	21%	**46%**	14%	5%
5	0%	6%	**58%**	29%	20%	9%
4	7%	**63%**	10%	7%	4%	0%
3	**80%**	7%	0%	0%	2%	0%
2	7%	4%	3%	5%	3%	0%
1	0%	0%	0%	0%	0%	0%

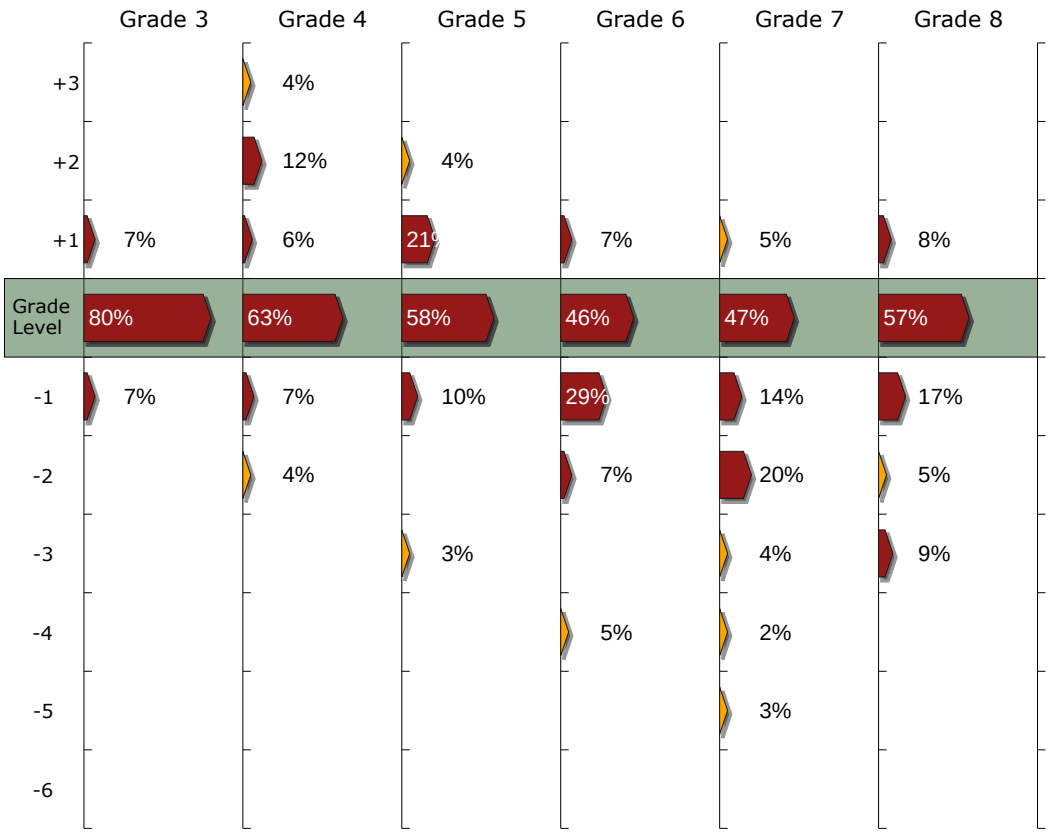

Figure 134: A visual representation of Table 92. Percentages reflect the number of grade levels the assignments aligned *above* or *below* the class grade level.

4.4.3 Sources of assignments

4.4.3.1 English language arts, low-ses (all grade levels)

Table 93: An analysis of the sources of assignments found in English language arts, low-ses (all grade levels). These results are displayed visually in Fig. 135.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	4%	7%	18%	7%	62%
4	7%	3%	20%	9%	58%
5	1%	8%	29%	9%	50%
6	1%	4%	45%	6%	41%
7	3%	2%	48%	7%	39%
8	0%	6%	56%	7%	29%

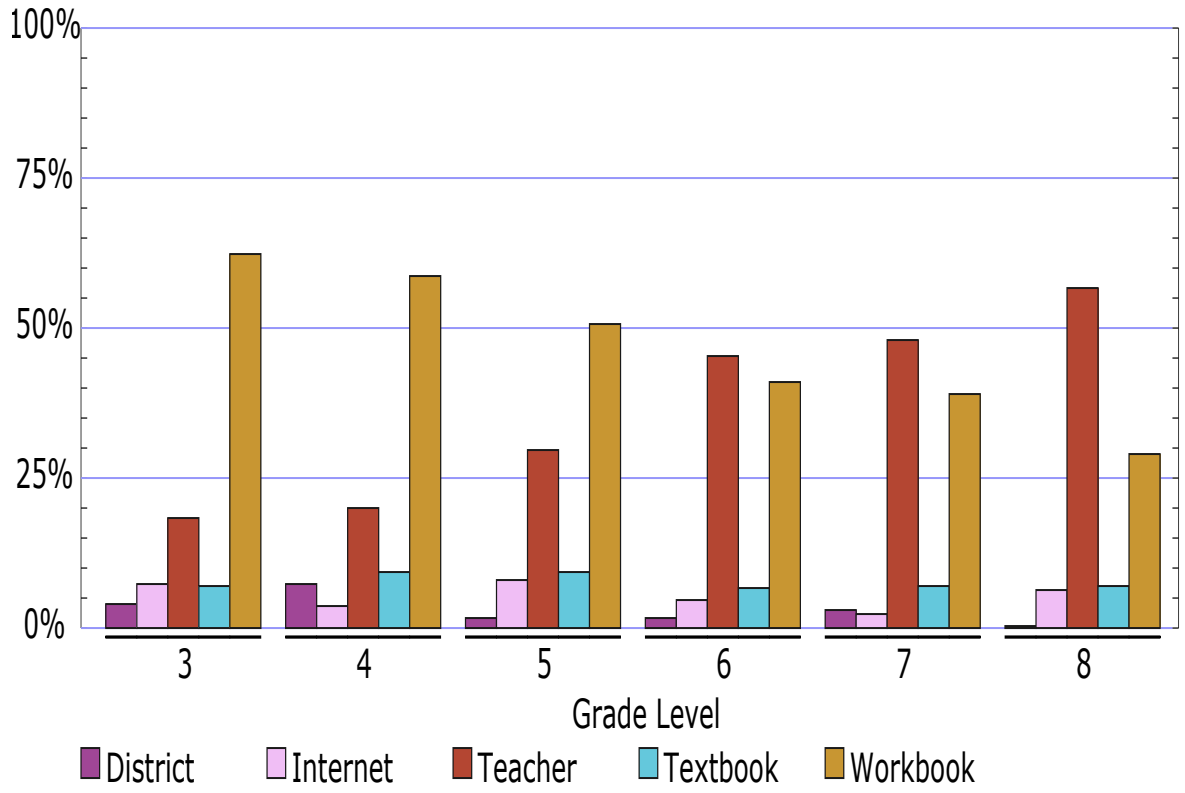

Figure 135: Sources of assignments found in English language arts, low-ses (all grade levels).

4.4.3.2 mathematics, low-ses (all grade levels)

Table 94: An analysis of the sources of assignments found in mathematics, low-ses (all grade levels). These results are displayed visually in Fig. 136.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	0%	1%	9%	8%	78%
4	10%	4%	5%	14%	65%
5	2%	10%	7%	17%	62%
6	1%	1%	21%	5%	70%
7	0%	0%	23%	13%	62%
8	0%	0%	24%	17%	57%

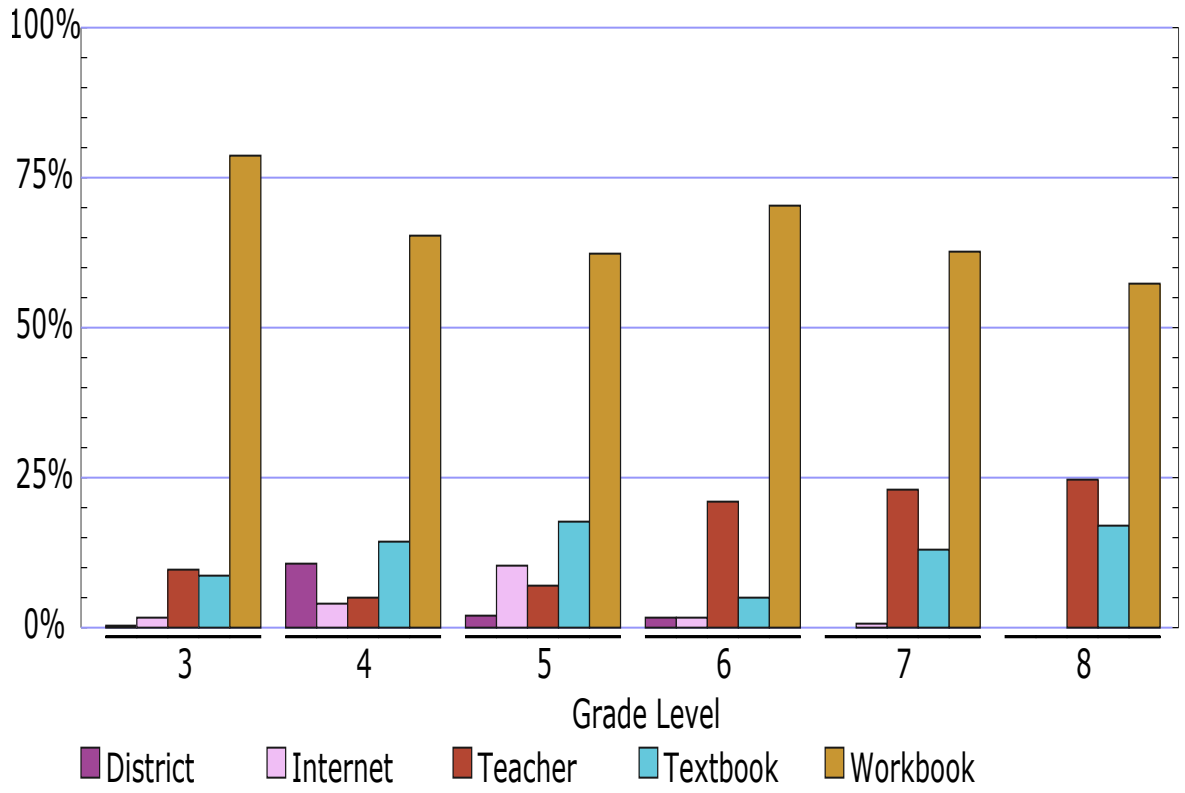

Figure 136: Sources of assignments found in mathematics, low-ses (all grade levels).

4.4.3.3 English language arts, high-ses (all grade levels)

Table 95: An analysis of the sources of assignments found in English language arts, high-ses (all grade levels). These results are displayed visually in Fig. 137.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	4%	6%	29%	6%	51%
4	14%	1%	24%	8%	51%
5	7%	4%	36%	6%	44%
6	0%	2%	43%	6%	46%
7	0%	6%	46%	4%	41%
8	0%	12%	50%	8%	27%

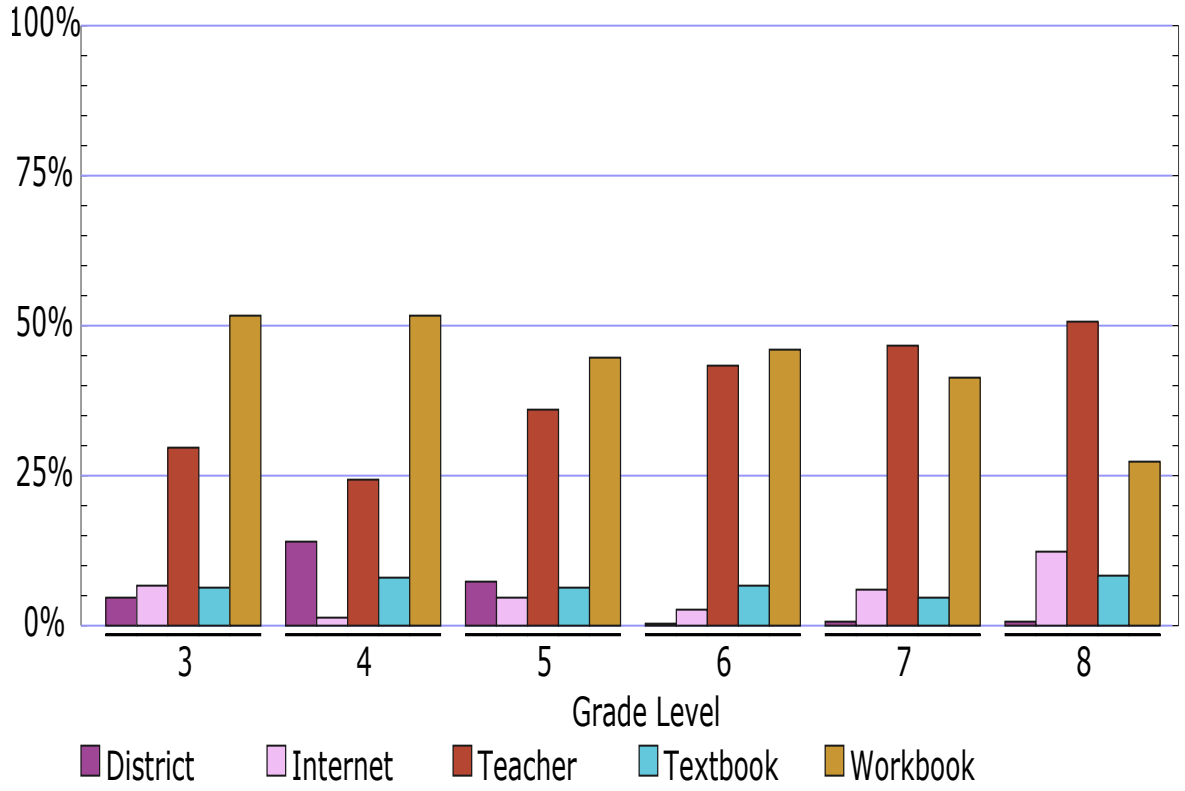

Figure 137: Sources of assignments found in English language arts, high-ses (all grade levels).

4.4.3.4 mathematics, high-ses (all grade levels)

Table 96: An analysis of the sources of assignments found in mathematics, high-ses (all grade levels). These results are displayed visually in Fig. 138.

	Teacher declared assignment sources				
Grade	district	internet	teacher_made	textbook	workbook
3	1%	5%	5%	6%	80%
4	3%	1%	11%	12%	71%
5	3%	2%	11%	7%	75%
6	0%	1%	18%	5%	74%
7	1%	4%	14%	25%	53%
8	5%	0%	17%	23%	52%

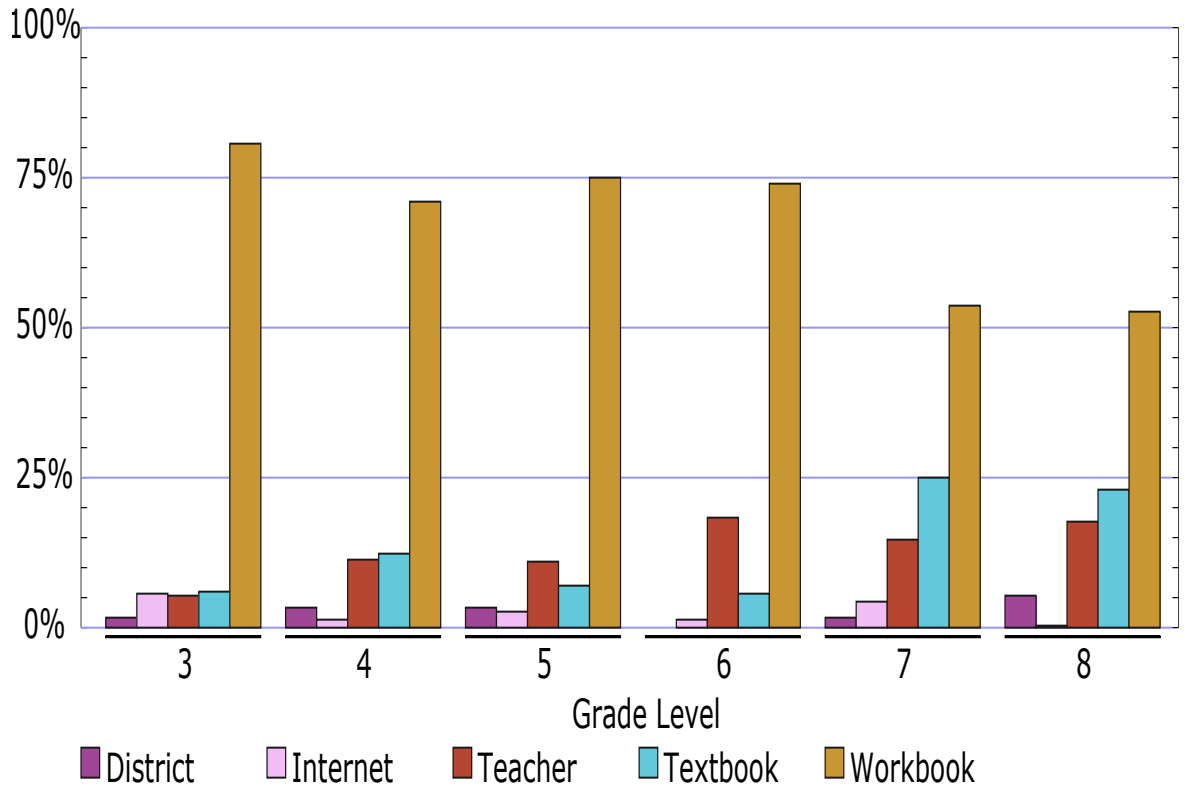

Figure 138: Sources of assignments found in mathematics, high-ses (all grade levels).

4.4.4 Types of assignments

4.4.4.1 English language arts, low-ses (all grade levels)

Table 97: An analysis of the types of assignments found in English language arts, low-ses (all grade levels). These results are displayed visually in Fig. 139.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	11%	48%	5%	6%	27%
4	9%	48%	5%	7%	28%
5	13%	51%	2%	7%	24%
6	16%	58%	4%	9%	9%
7	17%	57%	5%	10%	8%
8	20%	60%	6%	4%	8%

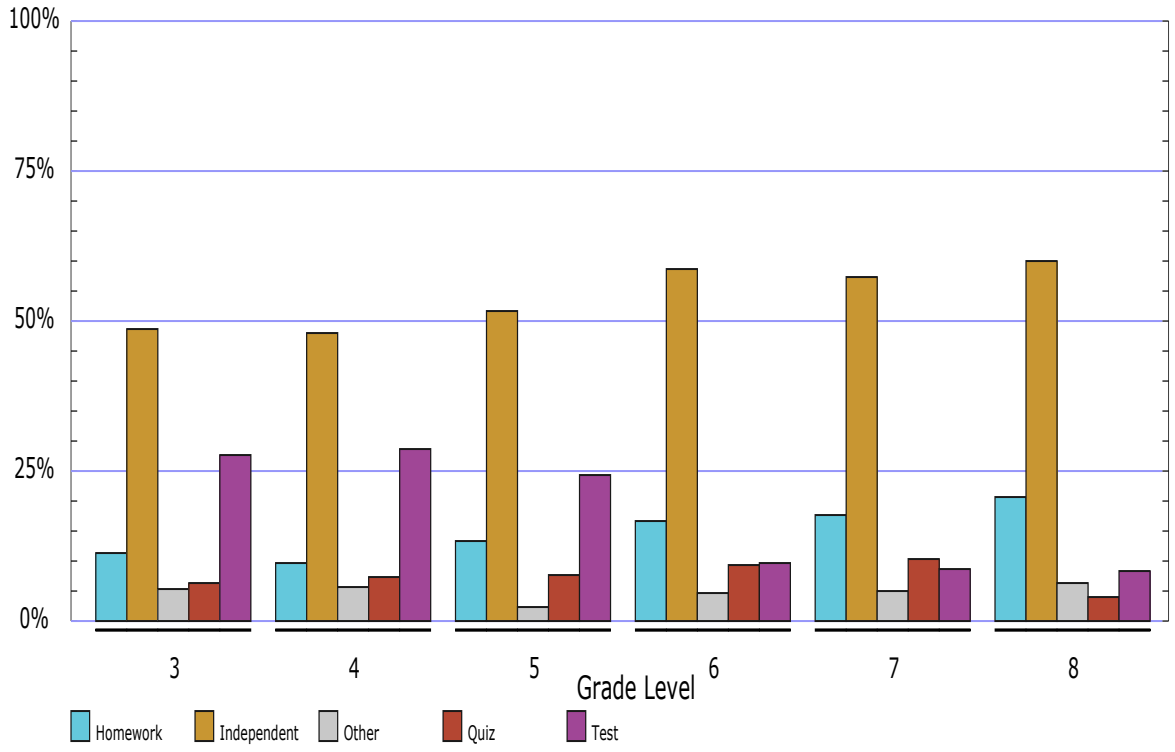

Figure 139: Types of assignments found in English language arts, low-ses (all grade levels).

4.4.4.2 mathematics, low-ses (all grade levels)

Table 98: An analysis of the types of assignments found in mathematics, low-ses (all grade levels). These results are displayed visually in Fig. 140.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	22%	45%	4%	9%	18%
4	14%	41%	2%	9%	31%
5	26%	49%	1%	10%	11%
6	22%	49%	14%	5%	7%
7	45%	34%	2%	13%	4%
8	33%	29%	23%	8%	4%

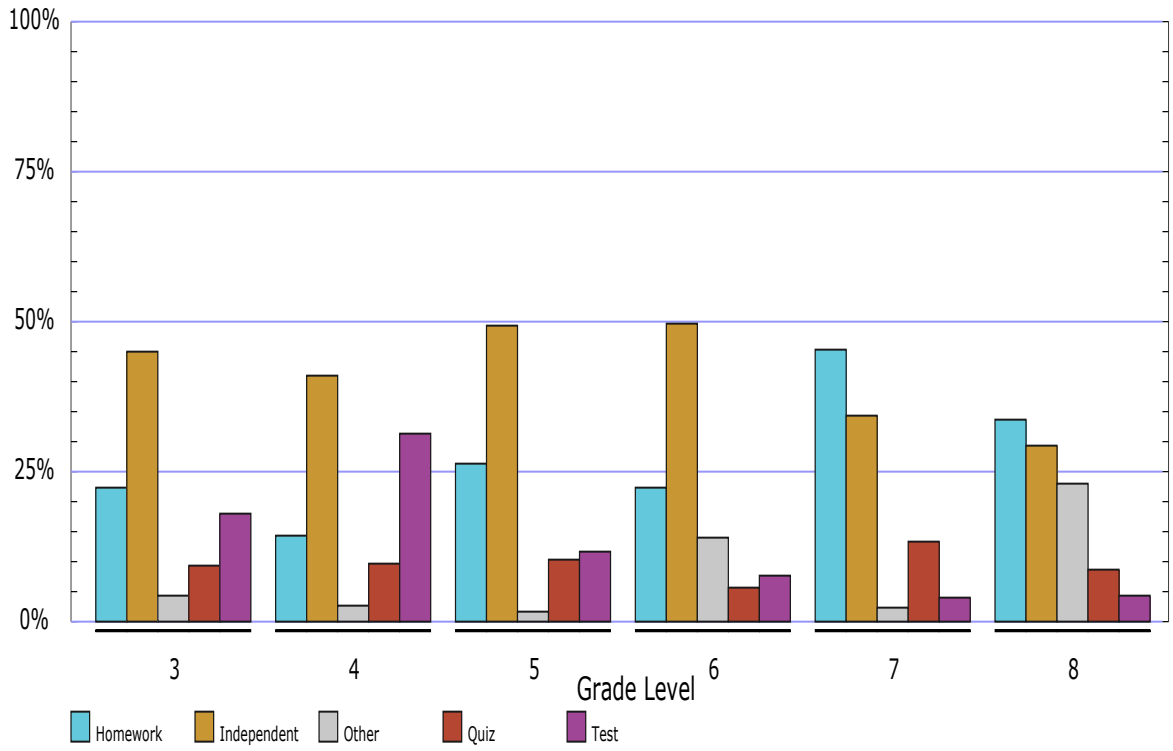

Figure 140: Types of assignments found in mathematics, low-ses (all grade levels).

4.4.4.3 English language arts, high-ses (all grade levels)

Table 99: An analysis of the types of assignments found in English language arts, high-ses (all grade levels). These results are displayed visually in Fig. 141.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	10%	53%	2%	4%	29%
4	7%	58%	6%	6%	21%
5	12%	60%	2%	5%	18%
6	9%	63%	5%	2%	18%
7	23%	51%	12%	6%	5%
8	6%	57%	11%	10%	14%

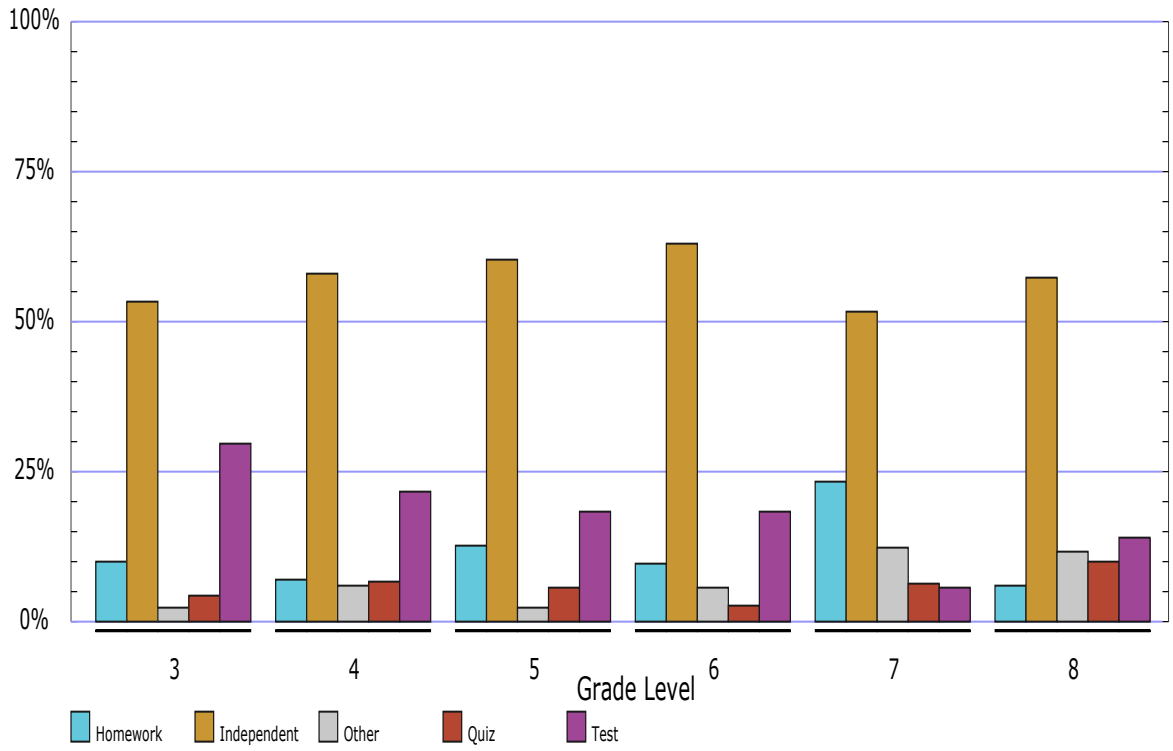

Figure 141: Types of assignments found in English language arts, high-ses (all grade levels).

4.4.4.4 mathematics, high-ses (all grade levels)

Table 100: An analysis of the types of assignments found in mathematics, high-ses (all grade levels). These results are displayed visually in Fig. 142.

	Teacher declared assignment types				
Grade	homework	independent	other	quiz	test
3	27%	20%	9%	8%	34%
4	25%	42%	13%	13%	5%
5	21%	34%	13%	7%	22%
6	48%	25%	1%	21%	3%
7	29%	24%	13%	16%	17%
8	35%	26%	10%	15%	11%

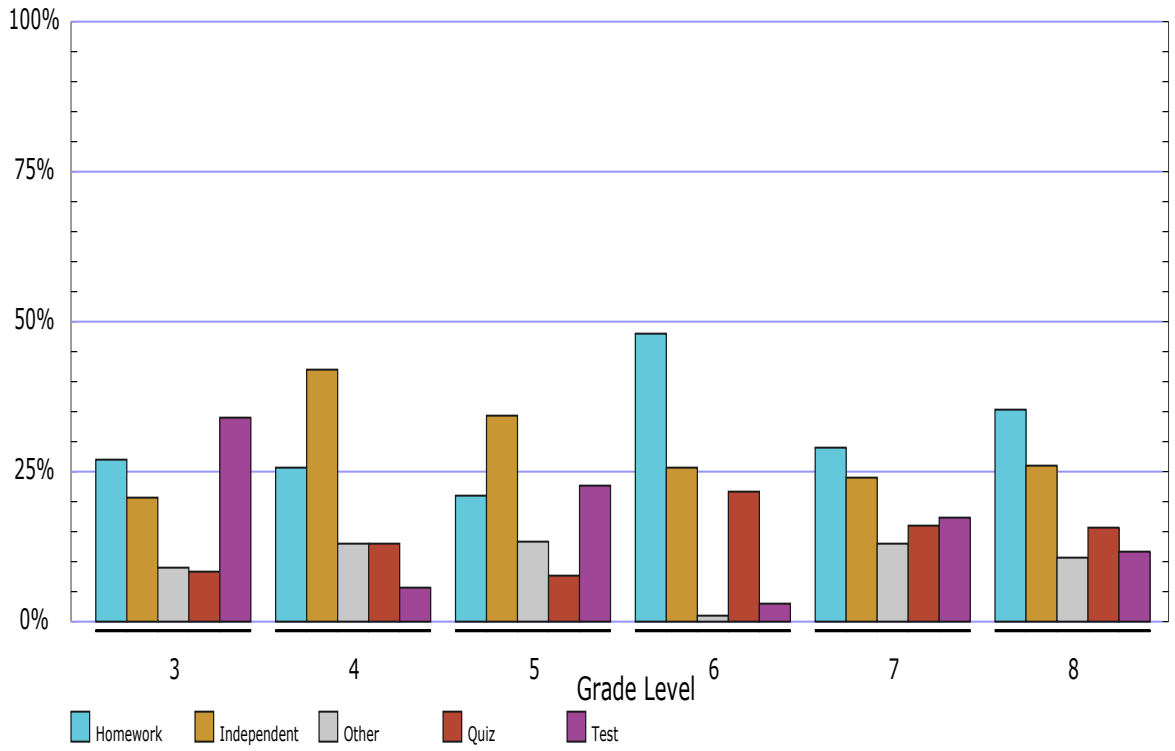

Figure 142: Types of assignments found in mathematics, high-ses (all grade levels).

4.4.5 Types of activities rigor

4.4.5.1 English language arts, low-ses (all grade levels)

Table 101: An analysis of the types of activities found in English language arts, low-ses (all grade levels). These results are displayed visually in Fig. 143.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	8%	81%	9%
4	10%	84%	5%
5	7%	87%	5%
6	11%	82%	6%
7	10%	79%	9%
8	9%	86%	4%

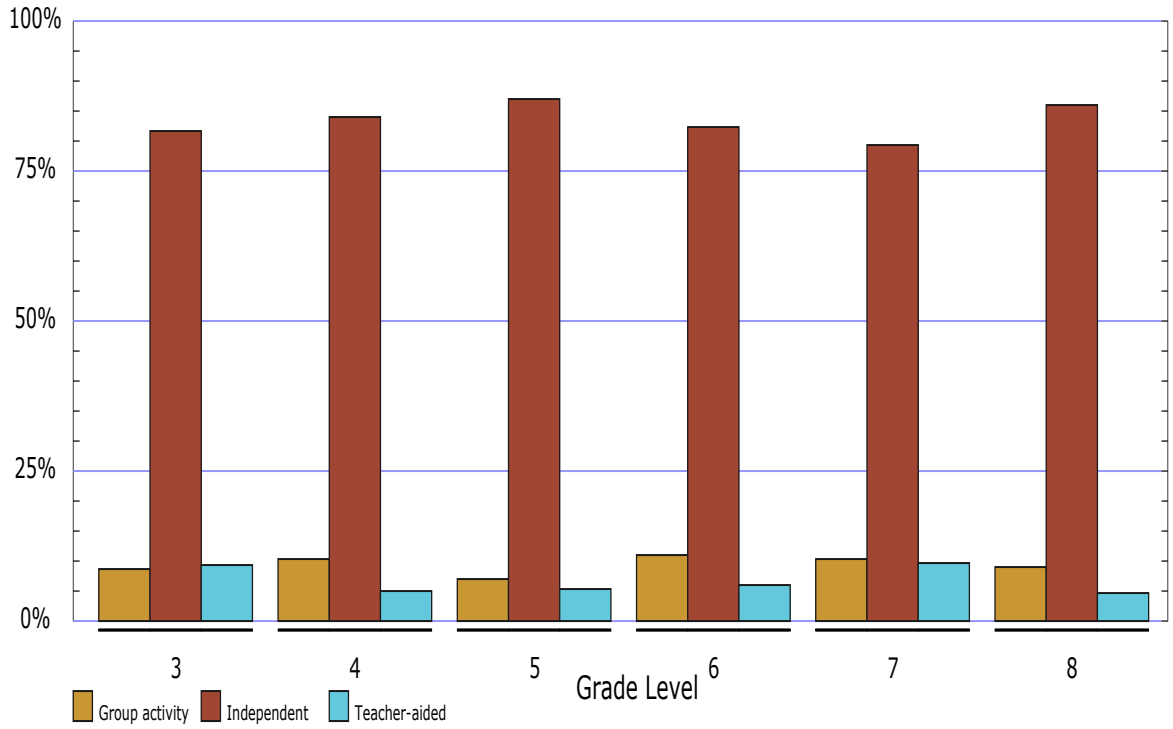

Figure 143: Types of activities found in English language arts, low-ses (all grade levels).

4.4.5.2 mathematics, low-ses (all grade levels)

Table 102: An analysis of the types of activities found in mathematics, low-ses (all grade levels). These results are displayed visually in Fig. 114.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	11%	83%	4%
4	5%	92%	2%
5	4%	88%	6%
6	15%	76%	7%
7	9%	86%	3%
8	5%	87%	7%

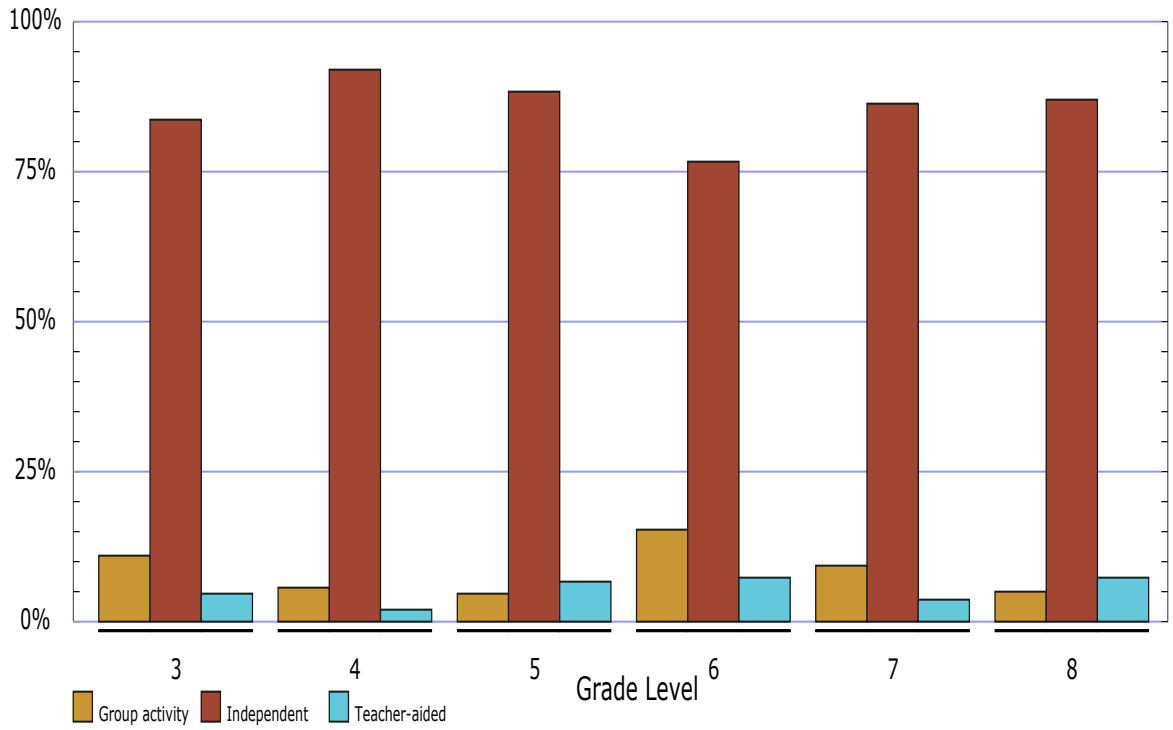

Figure 144: Types of activities found in mathematics, low-ses (all grade levels).

4.4.5.3 English language arts, high-ses (all grade levels)

Table 103: An analysis of the types of activities found in English language arts, high-ses (all grade levels). These results are displayed visually in Fig. 145.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	8%	86%	5%
4	15%	76%	7%
5	9%	86%	4%
6	9%	78%	12%
7	7%	82%	9%
8	19%	75%	5%

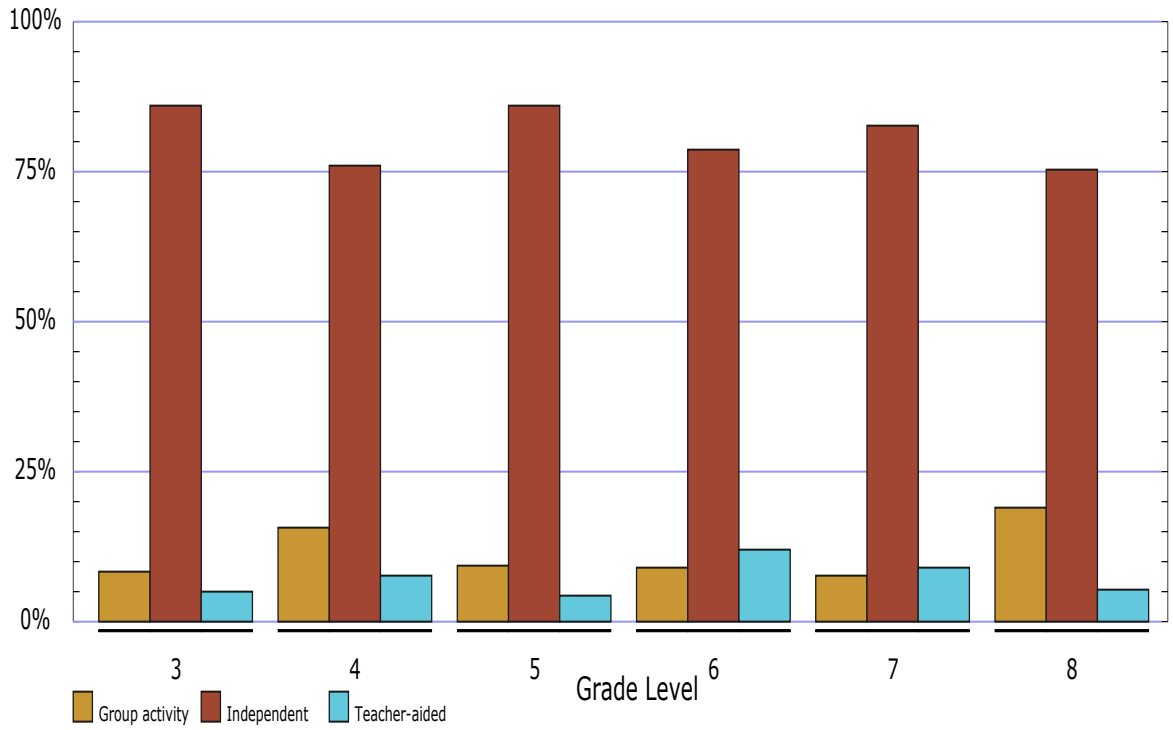

Figure 145: Types of activities found in English language arts, high-ses (all grade levels).

4.4.5.4 mathematics, high-ses (all grade levels)

Table 104: An analysis of the types of activities found in mathematics, high-ses (all grade levels). These results are displayed visually in Fig. 146.

	Teacher declared activity types		
Grade	group	independent	teacher-aided
3	9%	89%	0%
4	15%	80%	4%
5	11%	87%	0%
6	8%	82%	9%
7	4%	89%	5%
8	12%	77%	9%

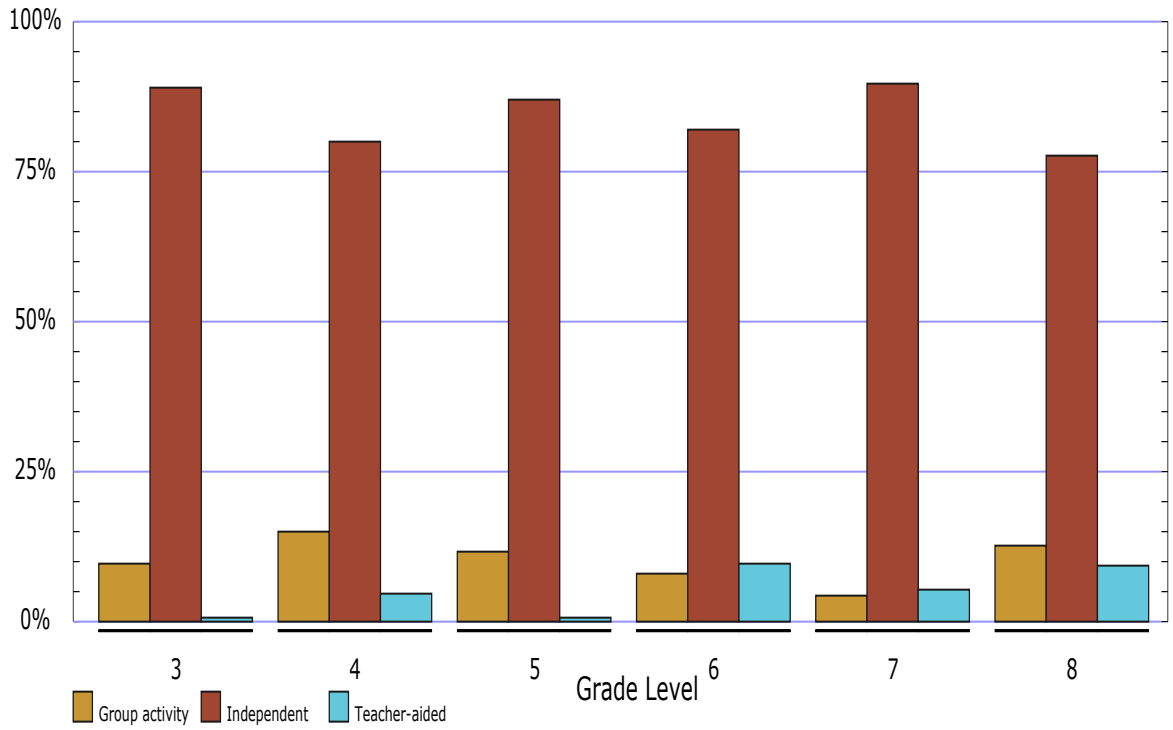

Figure 146: Types of activities found in mathematics, high-ses (all grade levels).

5 Recommendations

Based on its prior experience in curricular issues and professional development, the staff of The Standards Company LLC suggests that the state of Nevada initiate changes based on the following recommendations:

1. In English language arts, the appearance of large quantities of fifth-grade content appearing at grade levels 6-8 was the result of repeated teaching of fifth-grade content centered on low-level grammar, English conventions, and mechanical skills. Two examples, Standard 1-5-5 and Standard 2-5-3 accounted for much of the repeated teaching of fifth-grade content. Standard 1-5-5 centers on the use of context clues to determine the meaning of unknown words; however, by sixth grade teachers should focus lessons on distinguishing literal and figurative text, which requires more abstract thinking. Standard 2-5-3 lists a host of low cognitive rigor skills, such as identifying the main idea in a passage, a skill low in cognitive rigor. However, sixth-grade students should be connecting the main idea to supporting details, a skill higher in cognitive rigor and necessary to write summaries and literature reviews. The re-teaching of low-level, sentence-level lessons could limit growth in writing skills at the paragraph level and beyond. Middle school English language arts teachers should examine fifth grade standards associated with these concepts and skills in light of what they are expected to teach at their own grade levels and adjust their lesson plans accordingly. Professional development for middle school English language arts teachers related to lesson plan development and curriculum could improve future results. Since these results appeared in all categories of schools defined in this study, such professional development should not be limited to a specific category of middle schools.
2. The steady, yet strong, drop in alignment as the grade levels increased indicates that the curriculum in middle schools and high schools could potentially be limiting achievement. High school mathematics assignments were not included in this study but warrant their own thorough examination since the results in this study indicate a potential severe misalignment to standards.
3. Low Bloom's Taxonomy levels indicate that students are exercising a limited type of thinking when completing activities. Low depth-of-knowledge levels are associated with short, straightforward, and relatively unsophisticated activities in which content items appearing in student work are largely performed in isolation with respect to other items. The results of this study indicate that teachers of mathematics from low-performing schools need additional training in cognitive rigor as associated with assigned activities. The manner in which the concept of cognitive rigor is incorporated in lesson plan development is also an area of potential training.
4. As stated previously, schools located in areas of low socioeconomic conditions submitted student work containing higher letter grades than schools located in more affluent communities. Artificially high letter grades can produce unrealistic expectations about the knowledge and skill levels of students and can mask problem areas in learning. Those teaching in schools located in low socioeconomic communities should revisit what defines a letter grade, discuss the ramifications of grade inflation, and ensure that the letter grades they administer are reasonable.
5. High incidences of independent activity, as opposed to teacher-aided and group-based activities, appeared at every grade level and remained fairly steady as the grade levels progressed. In contrast, it has been the experience of The Standards Company LLC personnel that the lower grade levels traditionally feature more group-based and teacher-aided activity, conducive to the extra assistance young students need to complete tasks. We suggest that school and district administrators discuss the roles that group activities and teacher assistance play in learning, especially in elementary schools. If the results of this study conflict with desired targets, we suggest that teachers receive additional professional development.

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