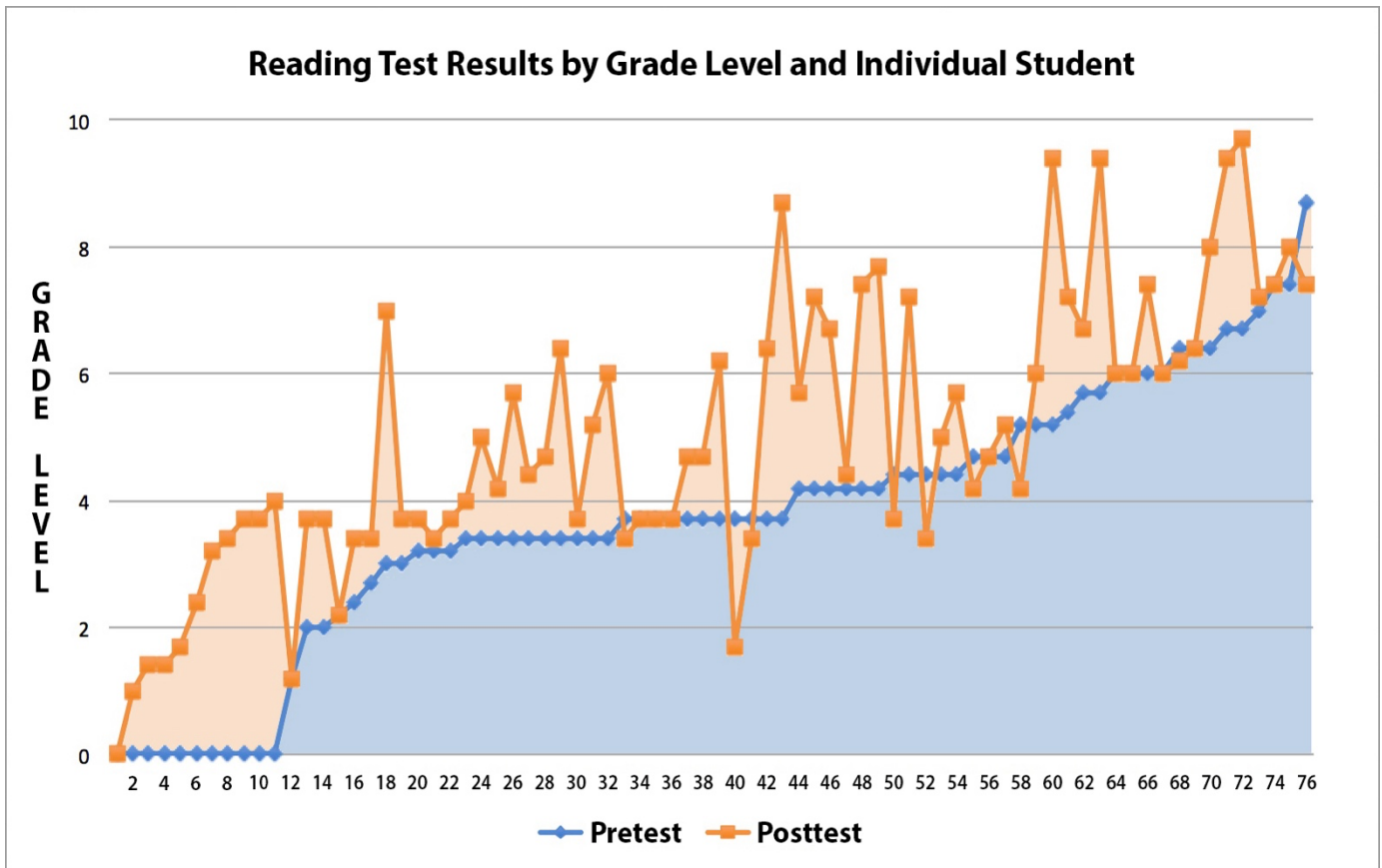




The Nardagani Reading Program and Buhl Middle School Pilot Program: Fall 2020

Introduction:

Buhl Middle School, in Buhl, Idaho, was chosen for a pilot program using the Nardagani Reading Program for the 2020 Fall Semester. This school's 6th grade class, consisting of one hundred and two (102) students total, was selected due to the excessively low reading and writing scores from the 2018-19 The Idaho Standards Achievement Test (ISAT). Sandra Bosteder, M.H.E., M.P.E., Buhl Middle School 6th grade writing instructor was the educator who taught each student the Nardagani Reading Program, as well as administered the pretests and posttests.



Bottom numbers: Students [seventy-six (76) students total].
 Side numbers: Grade levels [zero (0) to ten (10)].
 Blue line: Pretest grade level in September 2020.
 Orange line: Posttest grade level in December 2020.

The Nardagani Reading Program Instruction:

English is a difficult language to learn to read, because 14 of the 26 letters in the English alphabet make multiple sounds. Reading programs typically combine letters, and have many complicated rules in order to learn to read.

The Nardagani Reading Program is designed to eliminate the guesswork involved in reading. The program is comprised of 12 simple symbols, used below letters, that allow the reader to know which sound to make. Students learn a few symbols at a time. They memorize the symbols through exercises, games, and reading books coded with the symbols. Once students learn the first few symbols, they work on sounding out words, and increase their list of sight words.

Within eight hours of Nardagani instruction, students have learned the 12 symbols and are reading our coded practice books with ease.

Once students have gained confidence in sounding out words, the symbols will no longer be needed, and can be removed, like training wheels on a bicycle.

For a brief overview of the Nardagani program, please watch Narda's TEDx Talk at www.nardagani.com. In less than 10 minutes, see examples of the program.

For a deeper understanding of how Nardagani is taught, watch the free Nardagani Masterclass, a 25-minute video, www.nardagani.com.

Pretest and Posttest Methodology:

The TOSWRF (Test of Silent Word Reading Fluency) pretest was administered on September 7th and 8th 2020 for both spelling and reading fluency, and on December 14th and 15th for the posttest. TOSWRF was selected because the test can be administered easily and accurately in a group format. In addition, TOSWRF measures word identification, word comprehension, and speed, while giving an estimate of general reading ability and identifies poor readers quickly. The spelling test was comprised of a list of approximately 45 words. The same list was used for both the pretest and posttest. The students were not given these words to memorize nor received instruction prior to testing or during the 2020 Fall Semester. All tests were scored by Ann Richmond, an Idaho State Department of Education certified reading teacher at Wendell Middle School, in Wendell, Idaho.

The Buhl School District is a public school district located in Buhl, Idaho. The district has approximately 1,315 students who are enrolled in grades pre-K, K-12 with a student-teacher ratio of 17:1. The Buhl High School graduation rate is 70-74%, and is in the bottom 50% of Idaho public schools per student graduation. Buhl Middle School serves approximately 325 students who are enrolled in grades 6-8. The median household income is \$38,390 for the area. The minority enrollment for both the district and the middle school is over 39% of the student body (majority Hispanic), which is higher than the Idaho state average of 24% (majority Hispanic).

Buhl School District Enrollment by Group:

Ethnic/Racial Groups	Buhl School District	Idaho
White (non-Hispanic)	60.6%	77.2%
Black	0.2%	1.1%
Hispanic	38.7%	18.8%
Asian Or Pacific Islander	0.2%	1.2%
Other	0.3%	1.7%

The Nardagani Reading Program instruction began after the pretest was completed. However, due to COVID-19, students were placed on an A/B schedule at the start of the year and only attended class at school two days per week. After a few weeks, the school went to a mandated mask policy and a five-day-a-week in-class schedule.

The Center for Disease Control and Prevention (CDC) states the following regarding operating schools during COVID-19: “The risk for hybrid and in-person learning can be lowered depending on the mitigation strategies put in place and the extent to which they are followed.”

Some risk (continuum):

- Small, in-person classes, activities, and events
- Cohorting and alternating or staggered schedules, rigorously applied
- No mixing of groups of students and teachers throughout/across school days
- No sharing of objects between students and teachers
- Students, teachers, and staff following all steps to protect themselves and others at all times including proper use of face masks, social distancing, and hand hygiene
- Regularly scheduled and consistent (i.e., at least daily or between uses) cleaning of frequently touched areas”

Although students and faculty were subject to many of the above CDC guidelines due to COVID-19, which caused a varying learning environment, and attendance was not as consistent as in other years, students did receive the Nardagani Reading Program instruction, including all symbols, and reading books from one through eight. They also decoded books, various other items, and instructional materials using the symbols.

Study Outcome:

At the start of the school year one hundred and two (102) students were enrolled in the reading study and the spelling study. Overall, sixty-five (65) students completed both the pretest and posttest in reading and seventy-nine (79) students completed both the pretest and posttest in spelling. The reading test's pretest and posttest scores have a grade-level equivalent. The spelling test's pretest and posttest scores are a direct percentage of the students' 6th grade spelling level.

Reading Test Mean:

Reading gain mean: 27.10%

Range: The lowest pretest score was 20 and the highest was 127 or a 107 change.

Grade equivalent 1.2 and 8.7. The mean grade equivalent: 4.4.

Range: The lowest posttest score was 24 and the highest was 137 or a 113 change.

Grade equivalent 1.4 and 9.7. The mean grade equivalent: 5.5.

The students gained from a 4.4 to 5.5 grade mean equivalent growth.

Overall mean grade equivalent improvement: 1.1 grade levels.

Spelling Test Mean:

Spelling gain mean: 17.29%

Range: The lowest pretest score was 4% and the highest was 96% or a 92% change.

The lowest posttest score was 4% and the highest was 97%.

Reading Test Median:

Pretest: The median pretest scores were 60-89: 60-69 [thirteen (13) students total], 70-79 [fourteen (14) students total], and 80-89 [eleven (11) students total], thirty-eight (38) students total.

Reading Test Median Scores:

Score = Grade Equivalent	Number of Students
60-69 score = 3.0-3.4 grade equivalents	13 students total
70-79 score = 3.4-4.2 grade equivalents	14 students total
80-89 score = 4.2-5.0 grade equivalents	11 students total

Posttest: The median posttest scores were: 30-39 [one (1) student total], 60-69 [two (2) students total], 70-79 [ten (10) students total], 80-89 [nine (9) students total], 90-99 [six (6) students total], 100-109 [four (4) students total], 110-119 [five (5) students total], and 120-129 [one (1) student total], thirty-eight (38) students total.

Reading Posttest Median Scores:

Score = Grade Equivalent	Number of Students
30-39 score = 1.7-2.0 grade equivalents	1 student total
60-69 score = 3.0-3.4 grade equivalents	2 students total
70-79 score = 3.4-4.2 grade equivalents	10 students total
80-89 score = 4.2-5.0 grade equivalents	9 students total
90-99 score = 5.0-5.7 grade equivalents	6 students total
100-109 score = 6.0-6.7 grade equivalents	4 students total
110-119 score = 7.0-7.7 grade equivalents	5 students total
120-129 score = 7.7-8.7 grade equivalents	1 student total

The average median gain: 18.27%

The lowest pretest score was 64 and the highest was 87.

Grade equivalent 3.2 and 4.7. The mean grade equivalent: 3.8.

The lowest posttest score was 34 and the highest was 127.

Grade equivalent 1.7 and 8.7. The mean grade equivalent: 5.0.

**The students gained from a 3.8 to 5.0 grade median equivalent growth.
Overall median grade equivalent improvement: 1.2 grade levels.**

Spelling Test Median: The pretest and posttest scores are a direct percentage of the student's 6th grade spelling level. The median pretest scores were: 30-39 [seven (7) students total], 40-49 [sixteen (16) students total] and 50-59 [ten (10) students total], thirty-three (33) students total.

Spelling Pretest Median Scores:

Score in Percentage	Number of Students
30-39% score	7 students total
40-49% score	16 students total
50-59% score	10 students total

The median posttest scores were: 30-39 [three (3) students total], 40-49 [seven (7) students total], 50-59 [nine (9) students total], 60-69 [eleven (11) students total], 70-79 [two (2) student total], and 80-89 [one (1) student total], thirty-three (33) students total.

Spelling Posttest Median Scores:

Score in Percentage	Number of Students
30-39% score	3 students total
40-49% score	7 students total
50-59% score	9 students total
60-69% score	11 students total
70-79% score	2 students total
80-89% score	1 student total

Overall a 22.35% median improvement for 6th grade spelling level.

Reading Pretest, Students Scoring Zero (0):

For the group of eleven (11) students who pretested at zero (0) on the reading test, gains were even greater than the first group. These scores are not included in any additional reports. These students were not able to complete two (2) full reading lines without error, and therefore scored a zero (0) on the pretest.

Reading gain mean: 46% or grade equivalent: 2.3

Reading gain median: 73% or grade growth equivalent: 3.5

The lowest posttest score was 11 and the highest was 75.

NA or NS Explanation:

NA (not applicable) refers to students who did not take both the pretest or the posttest, meaning they took one test but not both.

NS (no score) refers to either student non-participation or grader error. The test was unable to be graded.

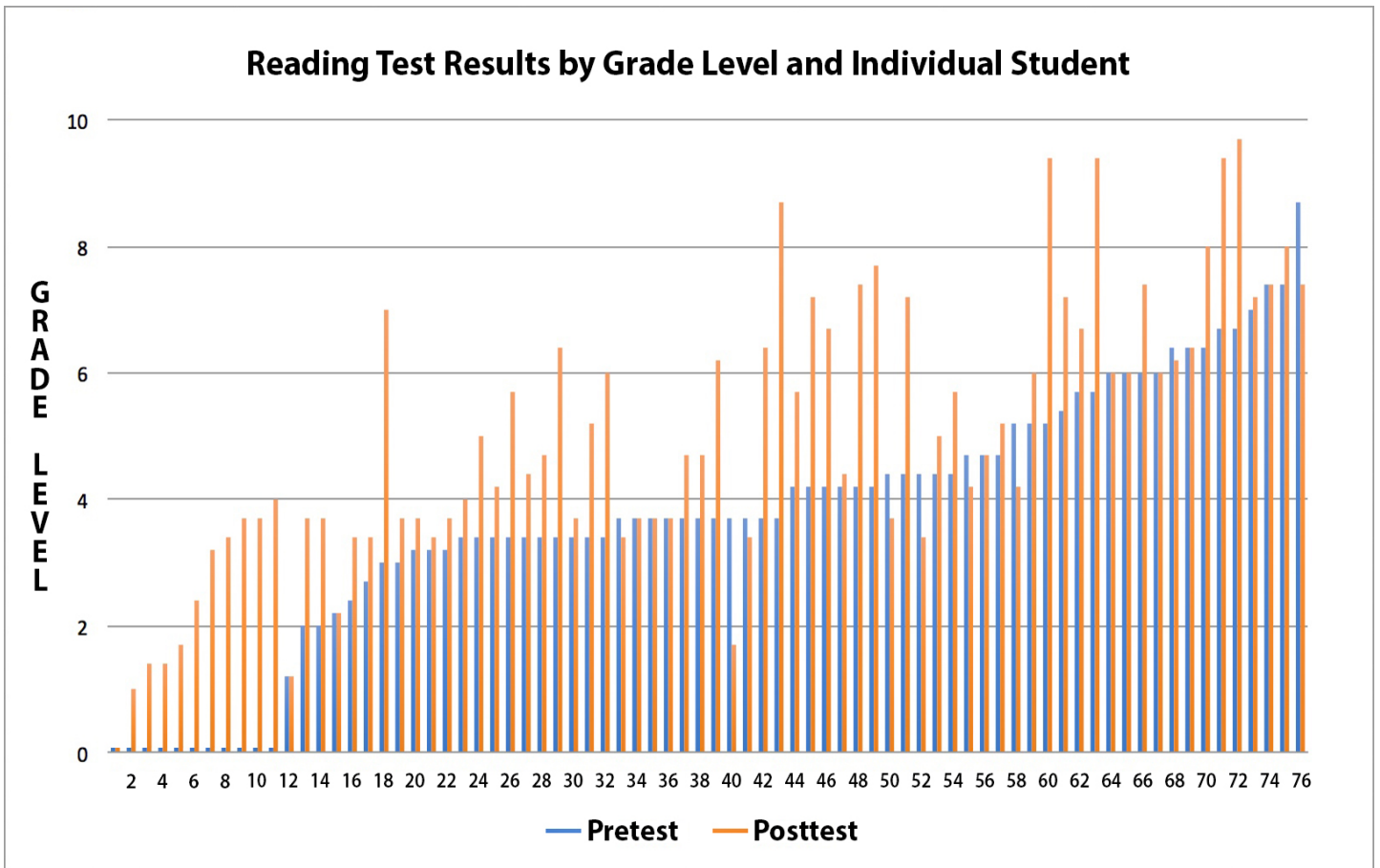
Twenty-six (26) students were not counted in the final reading test score gains due to a NA or NS rating.

Twenty (20) students were not counted in the total spelling test gains due to a NA or NS rating.

Conclusion:

Despite being impacted by COVID-19 health issues and school regulations in Fall 2020 (from September-December), The Nardagani Reading Program and Buhl Middle School Pilot Program achieved positive results. Student median reading gained 3.8 to 5.0 grade equivalent growth with an overall improvement of 1.2 grade levels. Student spelling growth was 22.35% median improvement for 6th grade spelling. When teaching The Nardagani Reading Program, Buhl Middle School's median results are the growth numbers school districts can expect to duplicate. The Nardagani Reading Program looks forward to replicating these test scores with new school districts in the future.

Chart A: Student Reading Test Results by Grade Level:



Bottom numbers: Students [seventy-six (76) students total].
Side numbers: Grade levels [zero (0) to ten (10)].
Blue line: Pretest grade level in September 2020.
Orange line: Posttest grade level in December 2020.

Chart B: Student Mean Gain Percentage:

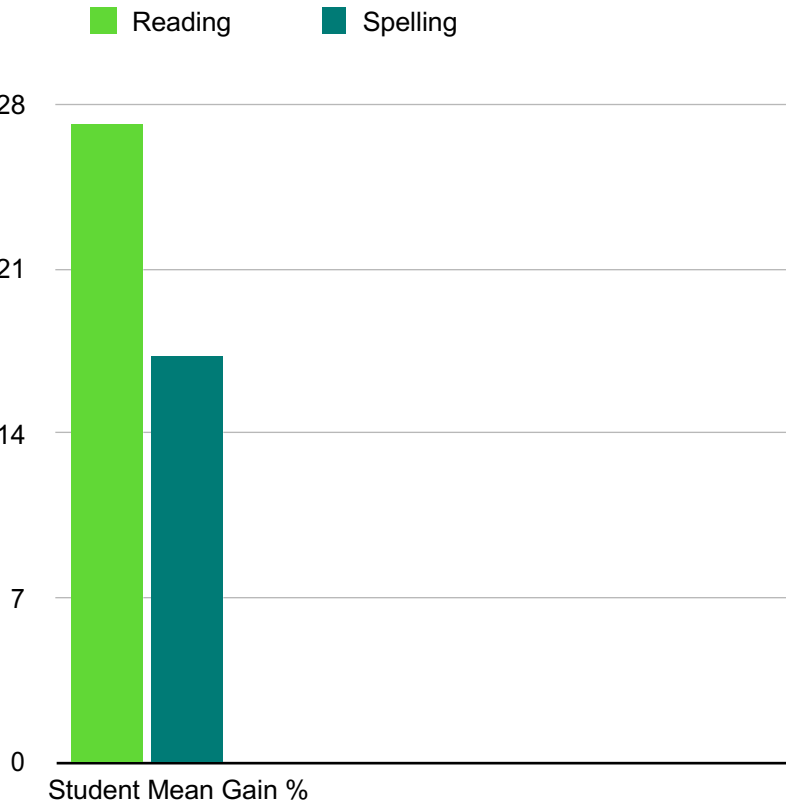
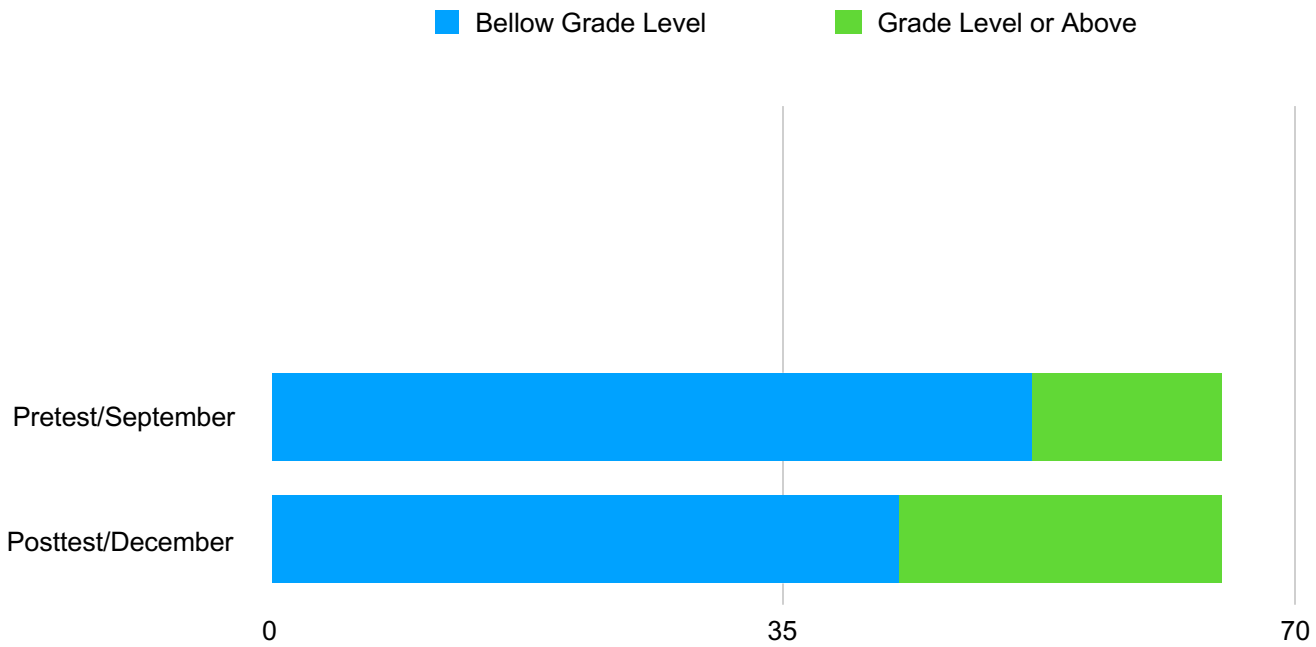


Chart C: Students Reading at a 6th Grade Level:

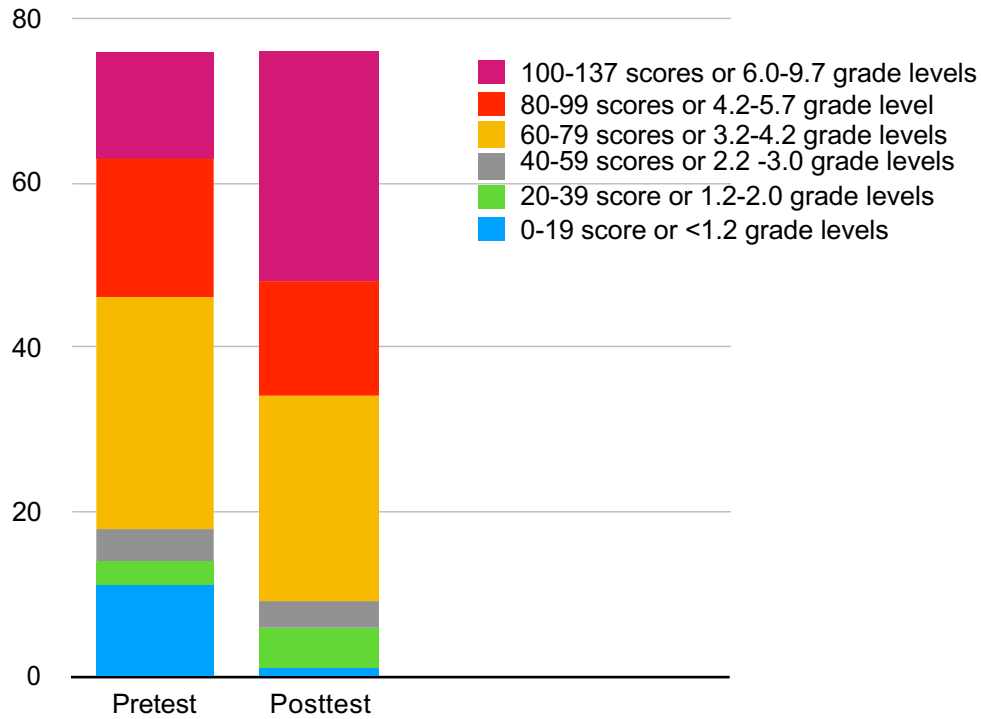


[Numbers represent students, sixty-five (65) students total]

Pretest/September: Students that tested at 6.0 grade level equivalent for reading (100 or above).

Posttest/December: Students that tested at 6.4 grade level equivalent for reading (106 or higher). 69.2% change of students reading a 6th grade level.

Chart D: Overall Student Reading Growth:



[Numbers represent students, seventy-six (76) students total]

- pretest: 13 students, posttest: 28 students
- pretest: 17 students, posttest: 14 students
- pretest: 28 students, posttest: 25 students
- pretest: 4 students, posttest: 3 students
- pretest: 3 students, posttest: 5 students
- pretest: 11 students, posttest: 1 student

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