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CASA Enrichment Program 2018

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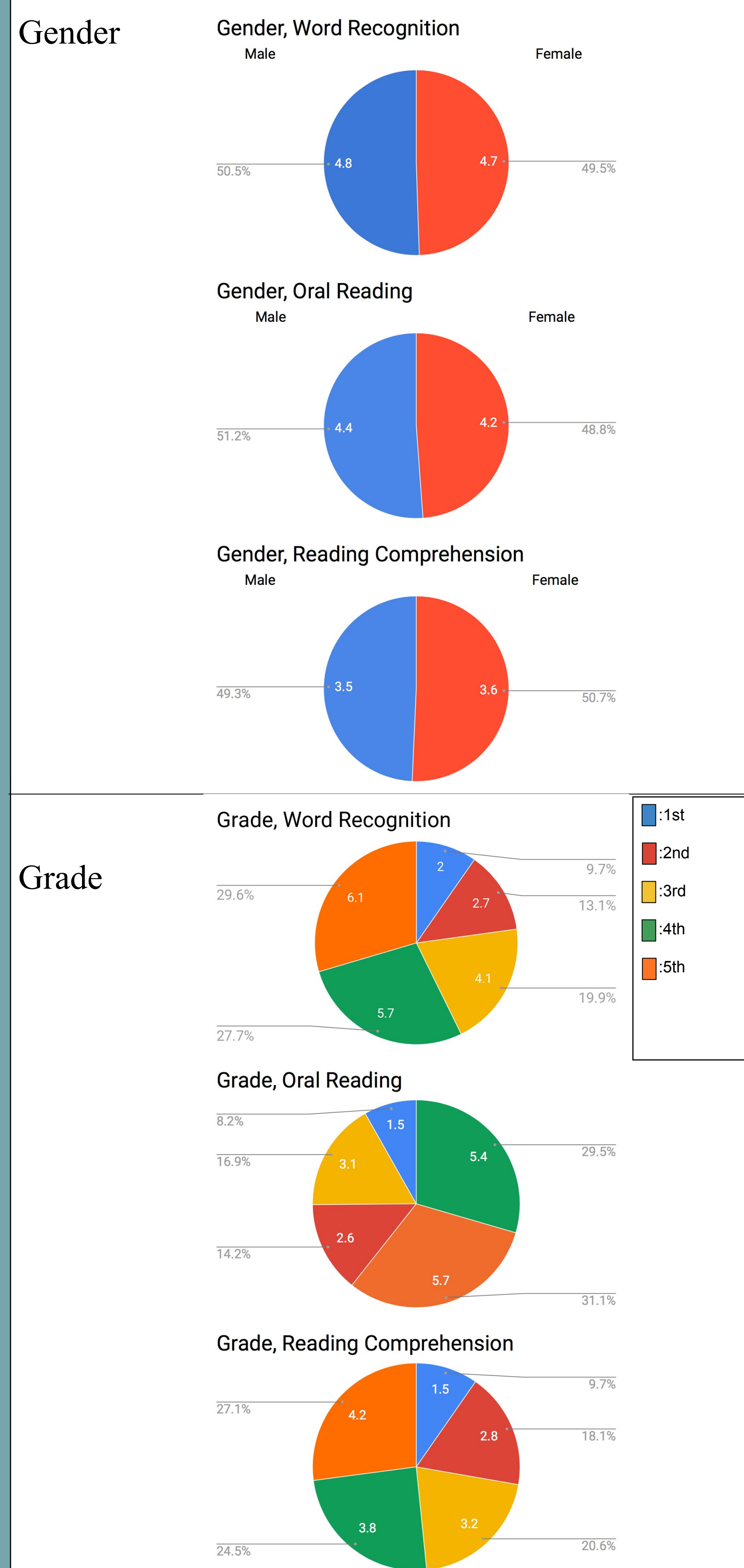
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INTRODUCTION

The purpose of this study was to see if there was growth in student achievement through the CASA enrichment program. Specifically, we looked at literacy through Brigance testing: Oral Reading(OR), Word Recognition(WR), and Reading Comprehension(RC).

- What is the impact of gender on OR, WR and RC scores?
- What is the impact of grade level on OR, WR, and RC scores?
- Longitudinally, what is the reading trend from 2017 to 2018?

POPULATION STUDIED



The averages are shown on the pie charts



METHOD

Casa students were given these three subsets of the Brigance test: Word Recognition, Oral Reading, and Reading Comprehension. Scores were reported in terms of grade level, quantified, with a .5 referring to "upper" as in Upper 3rd grade = 3.5. The pre-test was given in October, and the post-test was given in April for two consecutive years. We analyzed the data using paired t-tests to compare pre and post test scores for each sublevel; ANOVA comparing literacy subtest scores by gender; and ANOVA to compare grade level. Results are reported in the aggregate to ensure student confidentiality.

PROCEDURE

1. A human subject review of the CASA students were completed, and the CASA staff retained the parent permission for the testing.
2. The students were tested in the fall of 2017 in Word Recognition, Reading Comprehension, and Oral Reading through Brigance testing.
3. After completing the program, the post tests were given in April of 2018. The tests take around 2 hours.
4. Our test takers names are taken off of the results to ensure their privacy.
5. The accumulated information was entered into google sheets and analyzed using ANOVA.

RESULTS

OVERALL – Paired Samples 2018 – Content Test Pre-Post

		Mean	N	Std. Dev	Sig
Pair 1	PreWR	4.314	70	2.2493	
	PostWR	5.129	70	2.4372	.0000
Pair 2	PreOR	3.743	70	2.1648	
	PostOR	4.786	70	2.5475	.0000
Pair 3	PreRC	3.409	66	1.4542	
	PostRC	3.886	66	1.4406	.0002

They significantly improved in all content areas. In both Word recognition and Oral Reading, they improved approximately one grade level. In Reading Comp., they improved about half a grade level.

GENDER – 2018 - Literacy Subtests by Gender

	Mean Diff.	Std. Error	Sig.	Confidence Interval
Male Word Recognition vs Reading Comprehension	1.333	.4237	.01	(.12 , 2.55)

Gender was only a factor between males Word Recognition and Reading Comp. scores; Males improved one grade higher in Word Recognition. They improved the same in Oral Reading.

GRADE LEVEL – 2018 - Literacy Subtests by Grade Level

	Mean Diff.	N	Std. Error	Sig.
4 th OR-RC	1.6	26	.497	.04
5 th OR-RC	1.5	30	.462	.05

In both fourth and fifth grade, students scored about a grade and a half better in Oral Reading than Reading Comp.

LONGITUDINAL – Comparing overall mean scores between 2017 and 2018

	Mean	N	Std. Dev	Sig
2017	4.13	88	1.84	
2018	4.23	97	2.11	>.05

CASA's teaching is consistent There was similar improvement between 2017-2018.

DISCUSSION

Based on our collected data from this research study, our students overall tests scores rose after going through the program. Our p-values from the paired t-tests of the post-test score averages were all considered significant, because they were less than (0.05).

Specifically, students at each grade level improved in at least one of the reading skills.

These results demonstrate that the program and teaching practices used throughout the school year have made an impact on the academic progression K-5 in the Holland area.

Another possible contributing factor of the overall improvement could be the repeated attendance throughout the years of students in the program. Also as the students start school and attend classes, their learning experience in the classroom can affect and enhance their post-test scores in the spring.

LIMITATIONS

- Before starting the study, we experienced some limiting factors in the recorded data. In order to gather the information before analyzing, we had to resort in guessing the children's ethnicity and gender, which lead us to possible false data. Eventually, we were not able to use ethnicity as a factor affecting the overall growth of the students. Throughout the study I also experienced a frustration with missing test scores for multiple students. There were many cases of students who did not complete the pre tests, so improvement could not be shown within the data.
- To further the growth of efficiency in the CASA program and analysis of it, the pre-tests and post-tests should be required for all students to ensure more reliable analysis of the data. We can also improve our results by making sure the assessors record gender, grade, and the ethnicity of the students.