



READING RATE DATA ANALYSIS AND FINDINGS

Paired sample t-tests were conducted on secondary data collected from multiple program sites in 2017 to compare reading speeds from baseline to outgoing (end of program) for students in both middle school and high school programs. These analyses were conducted to determine whether there were significant increases in reading speeds for students in the program.

For the middle school group (N=5,985 students in grades 6-8), differences between the baseline speed (M=169.64, SD=75.71) and outgoing speed (M=387.60, SD=162.21) are statistically significant, $t(5984)=112.70$, $p=.000$. In other words, there is a statistically significant average gain in reading speeds as measured among middle school students in the program. On average, there was a statistically significant gain of 218 words per minute, among all middle school students who completed the program.

Summary table of statistical findings per INDIVIDUAL MIDDLE SCHOOL LEVELS.

	Paired Sample Statistics					
	M(SD) Baseline	M(SD) Outgoing	Mean Difference	t	df	p
6th grade students (N=2,644)	165.66 (75.90)	387.91 (165.60)	222.25	74.02	2643	.000
7th grade students (N=1,847)	170.93 (74.95)	388.75 (161.25)	217.82	62.95	1846	.000
8th grade students (N=1,494)	175.08 (74.95)	385.63 (157.40)	210.55	57.40	1493	.000

* M=Mean (or average)

SD=Standard deviation (provides indication of variation)

N=size of group

t=the statistic used in analysis

df=degrees of freedom

p=the probability that your finding is due to chance

For the high school group (N=2,860 in grades 9-11), differences between the baseline (M=178.23, SD=72.34) and outgoing (M=371.50, SD=146.16) are statistically significant, $t(2859)=81.42$, $p=.000$. In other words, there is a statistically significant average gain in reading speeds as measured among high school students in the program. On average, there was a statistically significant gain of 193 words per minute, among all high school students who completed the program.

Summary table of statistical findings per INDIVIDUAL HIGH SCHOOL LEVELS.

	<i>Paired Sample Statistics</i>					
	M(SD) Baseline	M(SD) Outgoing	Mean Difference	t	df	p
9th grade students (N=1,397)	179.25 (76.49)	373.81 (148.96)	194.56	56.33	1396	.000
10th grade students (N= 831)	175.95 (69.48)	365.64 (146.23)	189.69	43.33	830	.000
11th grade students (N=632)	178.95 (66.37)	374.11 (139.68)	195.05	39.83	631	.000

* M=Mean (or average)

SD=Standard deviation (provides indication of variation)

N=size of group

t=the statistic used in analysis

df=degrees of freedom

p=the probability that your finding is due to chance

While all differences in speed were statistically significant, it is important to note the data was not collected under the guidelines of an experimental or quasi-experimental design, which would provide control for external factors and implementation differences. Nevertheless, we can definitively say that **the experience of completing the program contributed to positive increases in reading speeds.**

