

# PD 360 Impact Assessment: Updated Findings regarding the Impact of PD 360 on Student Proficiency Rates

*Prepared by Steven H. Shaha, PhD, DBA*



# PD 360 Impact Assessment Executive Summary: Initial Findings

- Statistically significant advantages were verified favoring schools with PD 360 versus District Benchmarks.
  - 4<sup>th</sup> Grade and 8<sup>th</sup> Grade for:
    - Math proficient and advanced
    - Reading proficient and advanced



# Note to Reader:

To better show the magnitude of the impact of PD 360, graphics included hereafter represent a variety of perspectives and a sampling of different interpretive insights, and not an exhaustive nor uniformly arrayed set of results.

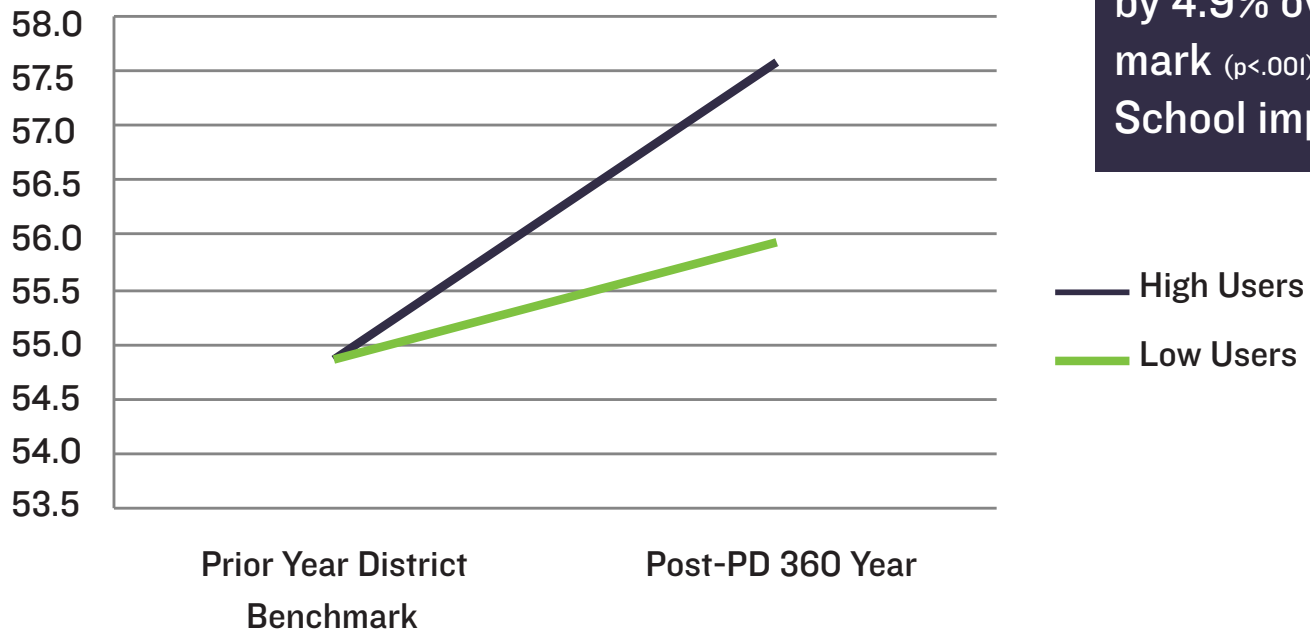


# 4th Grade



# Improvements in Math Proficiency for PD 360

## Math Proficient - 4th Grade

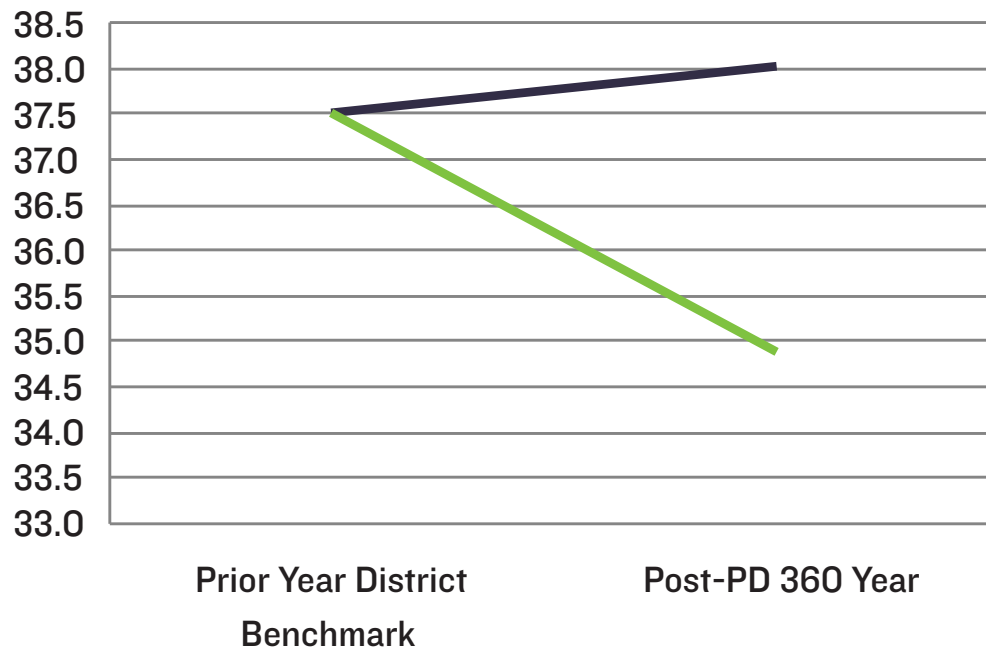


High Utilizing Schools improved by 4.9% over the District benchmark ( $p < .001$ ) and Low Utilizing School improved by 2.0% ( $p < .01$ )



# Improvements in Math Advanced for PD 360

## Math Advanced - 4th Grade



High Utilizing Schools significantly outperformed the collective district benchmark by 1.4% ( $p < .05$ ) While the district fell by 7.0% ( $p < .001$ )

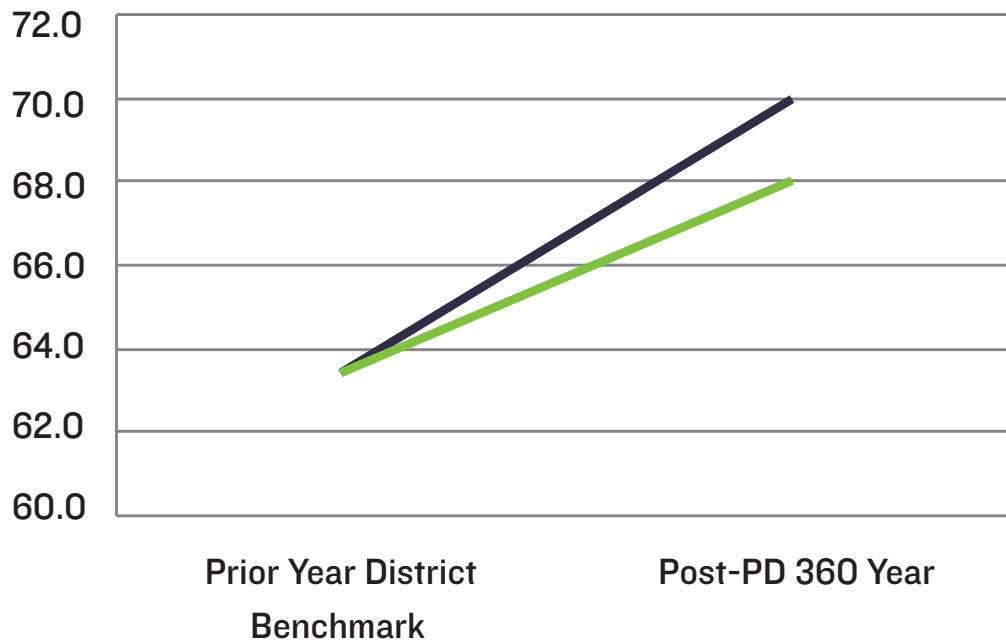
— High Users  
— District Avg

High Utilizing Schools significantly outperformed collective district change between years to create a performance gap of 9.0% ( $p < .001$ )



# Improvements in Reading Proficiency for PD 360

## Reading Proficient - 4th Grade



High Utilizing Schools significantly outperformed the collective district benchmark by 10.3% ( $p < .001$ )

High Utilizing Schools significantly outperformed the Low Utilizing Schools by 2.9% ( $p < .01$ )

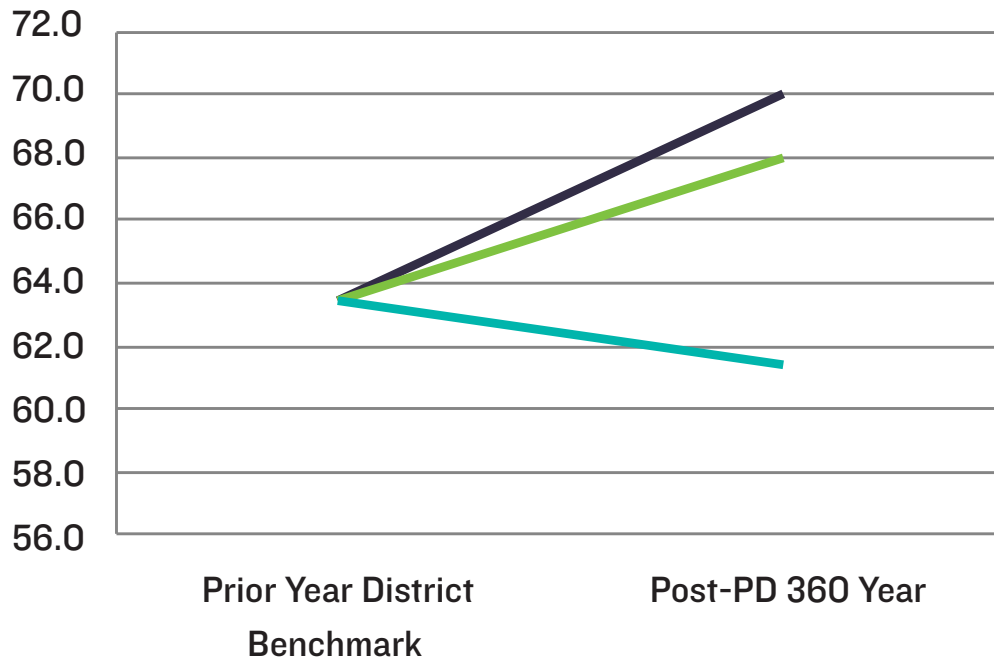
— High Users  
— Low Users

Low Utilizing Schools significantly outperformed the collective district benchmark by 7.2% ( $p < .001$ )



# Improvements in Reading Proficiency for PD 360

## Reading Proficient - 4th Grade



High Utilizing Schools significantly outperformed the collective district benchmark by 10.3% ( $p < .001$ )  
While the district fell by 3.2% ( $p < .001$ )

Low Utilizing Schools significantly outperformed the collective district benchmark by 7.2% ( $p < .001$ )

— High Users  
— Low Users  
— District Avg

High Utilizing Schools created a performance gap of 14.0% ( $p < .001$ )

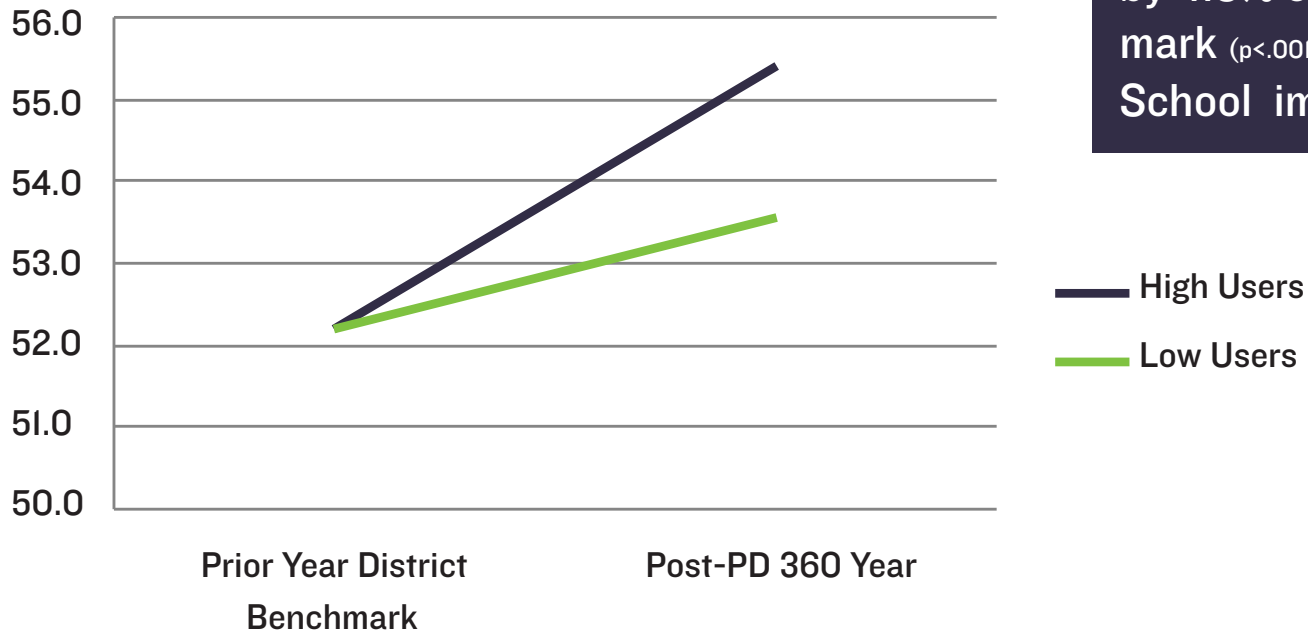


# 8th Grade



# Improvements in Math Proficiency for PD 360

## Math Proficient - 8th Grade

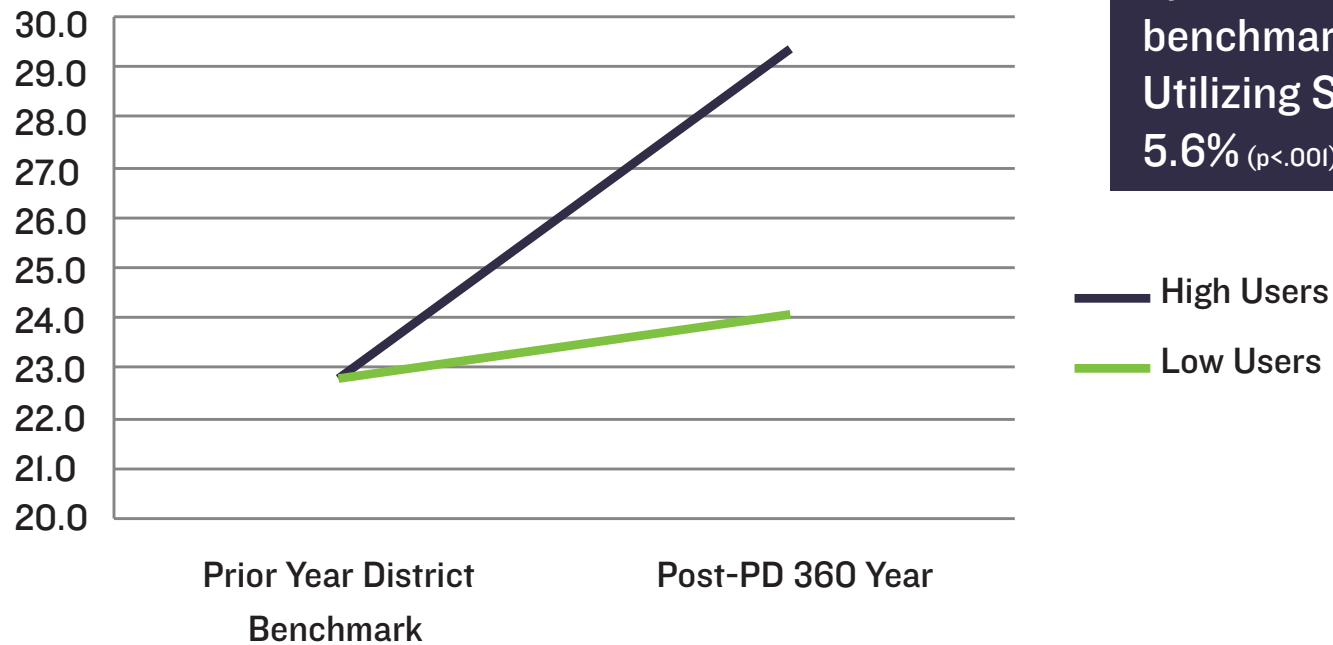


High Utilizing Schools improved by 4.9% over the District benchmark ( $p < .001$ ) and Low Utilizing School improved by 2.6% ( $p < .01$ )



# Improvements in Math Advanced for PD 360

## Math Advanced - 8th Grade

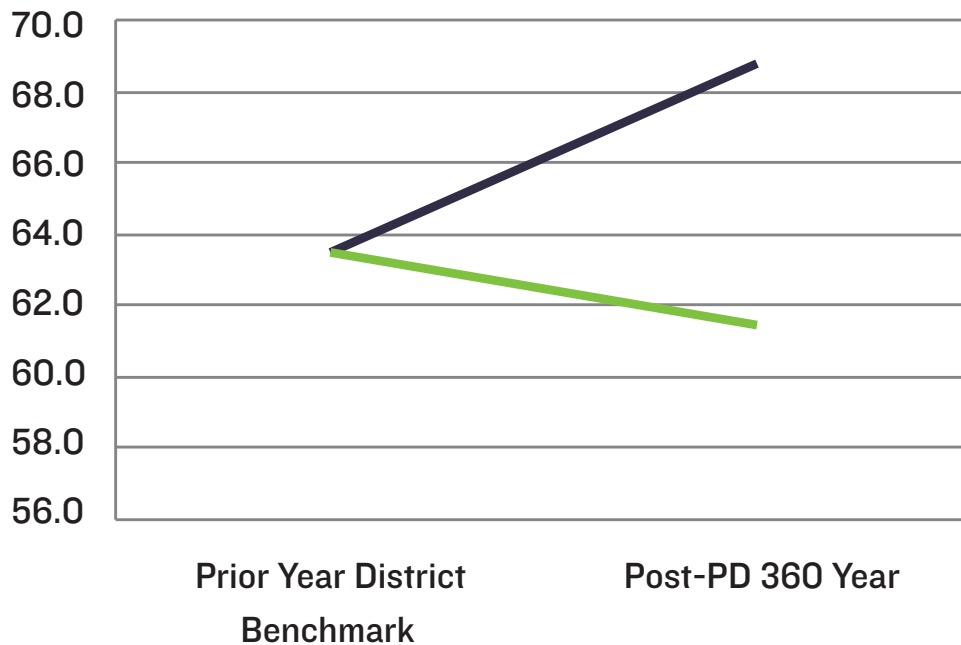


High Utilizing Schools improved by 28.8% over the District benchmark ( $p < .001$ ) and Low Utilizing School improved by 5.6% ( $p < .001$ )



# Improvements in Reading Proficiency for PD 360

## Reading Proficient - 8th Grade



PD 360 Utilizing Schools significantly outperformed the collective district benchmark by 8.3% ( $p < .001$ ) While the district fell by 3.2% ( $p < .001$ )

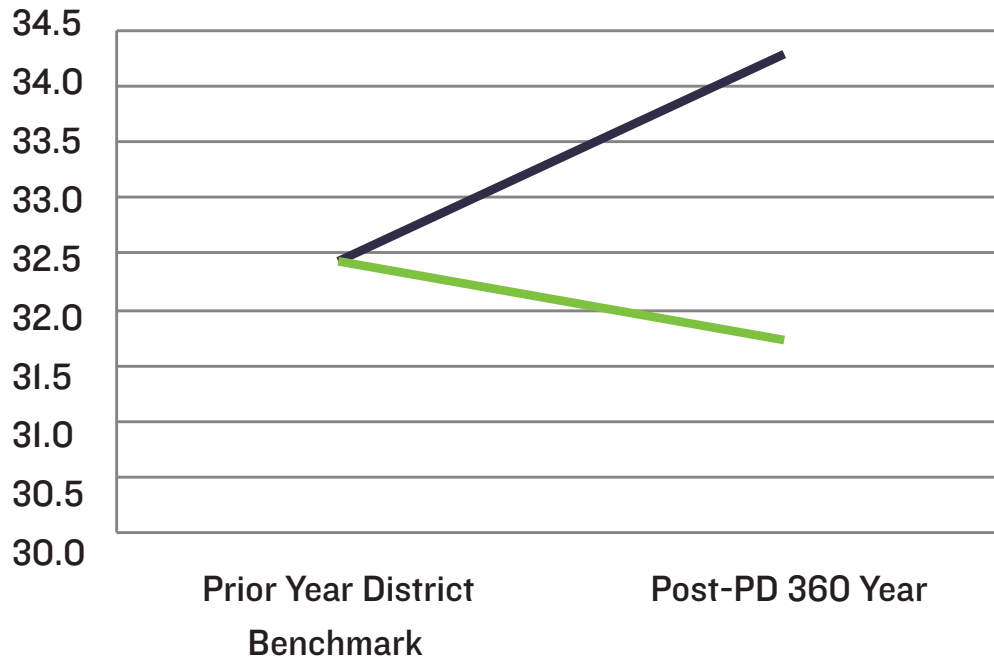
— PD 360 Users  
— District Avg

High Utilizing Schools significantly outperformed collective district change between years to create a performance gap of 11.9% ( $p < .001$ )



# Improvements in Reading Advanced for PD 360

## Reading Advanced - 8th Grade



High Utilizing Schools significantly outperformed the collective district benchmark by **5.7%** ( $p < .001$ ) While the district fell by **2.2%** ( $p < .05$ )

— High Users  
— District Avg

High Utilizing Schools significantly outperformed collective district change between years to create a performance gap of **8.1%** ( $p < .001$ )



# PD 360 Impact Assessment: Former Findings regarding the Impact of PD 360 on Student Proficiency Rates

*Prepared by Steven H. Shaha, PhD, DBA*



# PD 360 Impact Assessment Executive Summary: Initial

- Statistically significant and resounding advantages were identified favoring schools with PD 360.
- The higher the quantified utilization, the greater the statistical advantage.
  - High utilization led to performance advantages ranging **from twice to 15 times** the gains in proficiency rates versus district averages (p<.01 and p<.001, respectively) ■
  - Low utilization led to gains in proficiency rates **from 10% to twice** the district averages (p<.01 and p<.001, respectively) ■



# Improvements in Proficiency Rates Correlated with PD 360

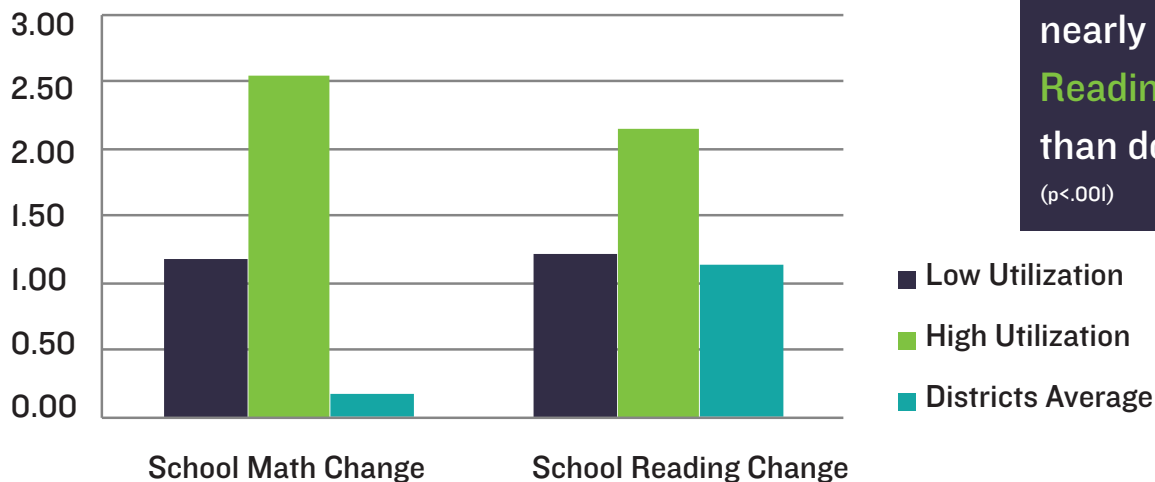
High Utilizers Outperformed all others

But even low utilizers outperformed no PD 360

High Utilization results in more the **TWICE** the gains in Math proficiency rates than does Low Utilization  
( $p < .001$ )

High Utilization results in nearly **TWICE** the gains in Reading proficiency rates than does Low Utilization  
( $p < .001$ )

## Comparative Change for Low vs. High Utilization



	Low Utilization	High Utilization	Districts Average	Percent Advantage for High vs. Low Utilization	Statistical Significance	An advantage of:
School Math Change	1.18	2.54	0.16	115.3%	$p < .001$	2.2 times greater improvement
School Reading Change	1.22	2.13	1.12	74.4%	$p < .001$	1.7 times greater improvement



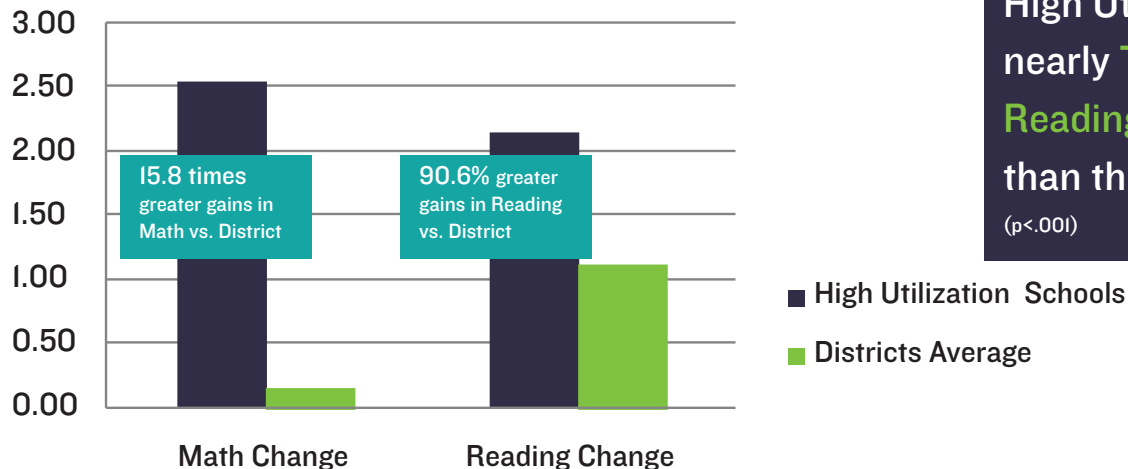
# Improvements in Proficiency Rates Correlated with PD 360

High Utilizers outperformed no PD 360

High Utilization results in more the **FIFTEEN times** the gains in **Math proficiency rates** than the Districts average ( $p < .001$ )

High Utilization results in nearly **TWICE** the gains in **Reading proficiency rates** than the Districts average ( $p < .001$ )

## Comparative Change for High Utilization vs. Districts Average



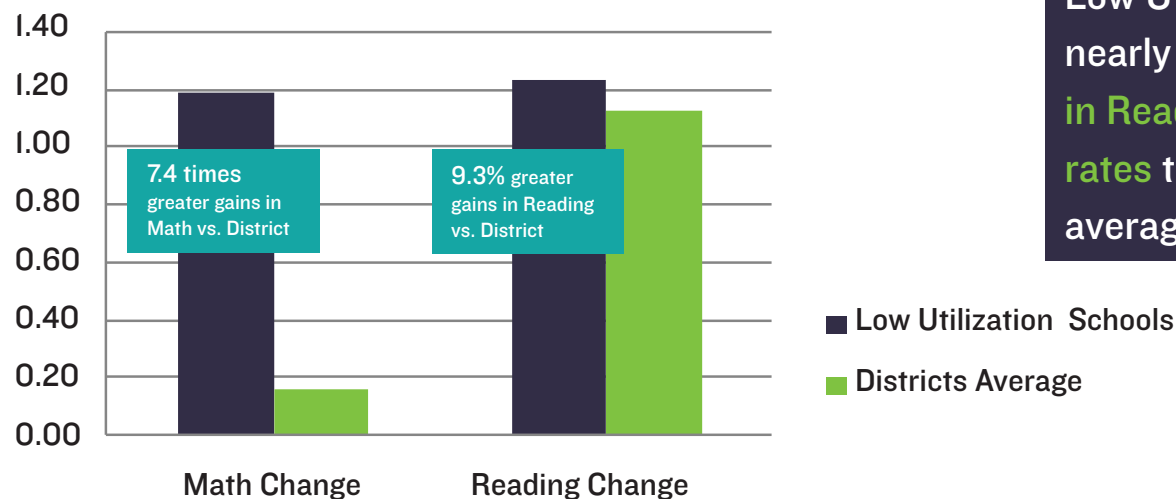
	High Utilization Schools	Districts Average	Percent Advantage	Statistical Significance	An advantage of:	
Math Change	2.54	0.16	1484.7%	$p < .001$	15.8	times greater improvement
Reading Change	2.13	1.12	90.6%	$p < .001$	1.9	times greater improvement



# Improvements in Proficiency Rates Correlated with PD 360

But even **Low Utilizers** outperformed no PD 360

## Comparative Change for Low Utilization vs. Districts Average



Low Utilization results in more the **SEVEN times** the gains in **Math proficiency rates** than the Districts average ( $p < .001$ )

Low Utilization results in nearly **10% greater gains** in **Reading proficiency rates** than the Districts average ( $p < .01$ )

	Low Utilization Schools	Districts Average	Percent Advantage	Statistical Significance	An advantage of:	
Math Change	1.18	0.16	636.1%	$p < .001$	7.4	times greater improvement
Reading Change	1.22	1.12	9.3%	$p < .01$	1.1	times greater improvement



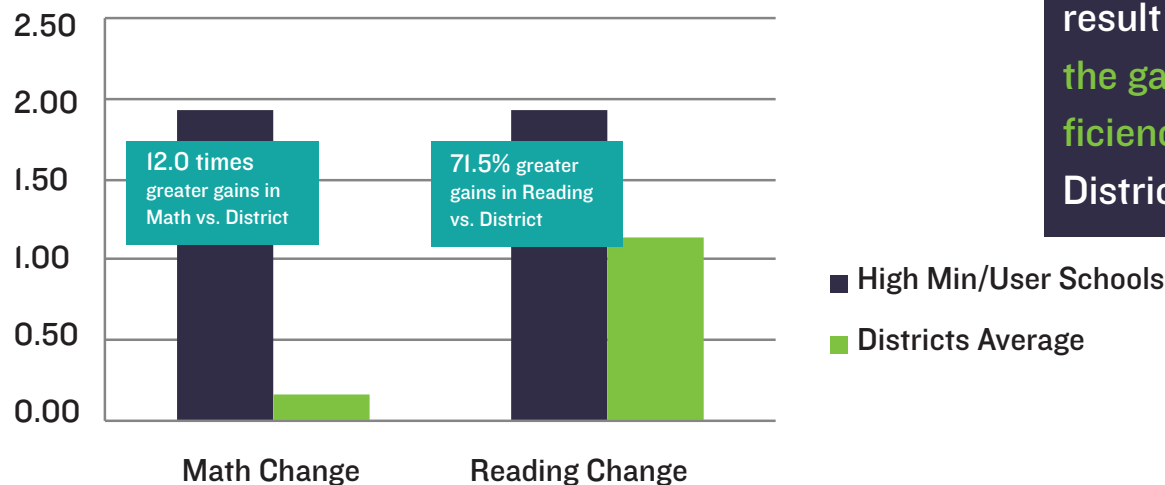
# Improvements in Proficiency Rates Correlated with PD 360

More Minutes per User resulted in Higher Performance

High Minutes per User result in more the **TWELVE** times the gains in Math proficiency rates than Districts avg. ( $p < .001$ )

High Minutes per User result in nearly **TWICE** the gains in Reading proficiency rates than the Districts average ( $p < .001$ )

## Comparative Change for High Min/User Schools vs. Districts



	High Min/User Schools	Districts Average	Percent Advantage	Statistical Significance	An advantage of:
Math Change	1.91	0.16	1096.6%	$p < .001$	12.0 times greater improvement
Reading Change	1.92	1.12	71.5%	$p < .001$	1.7 times greater improvement

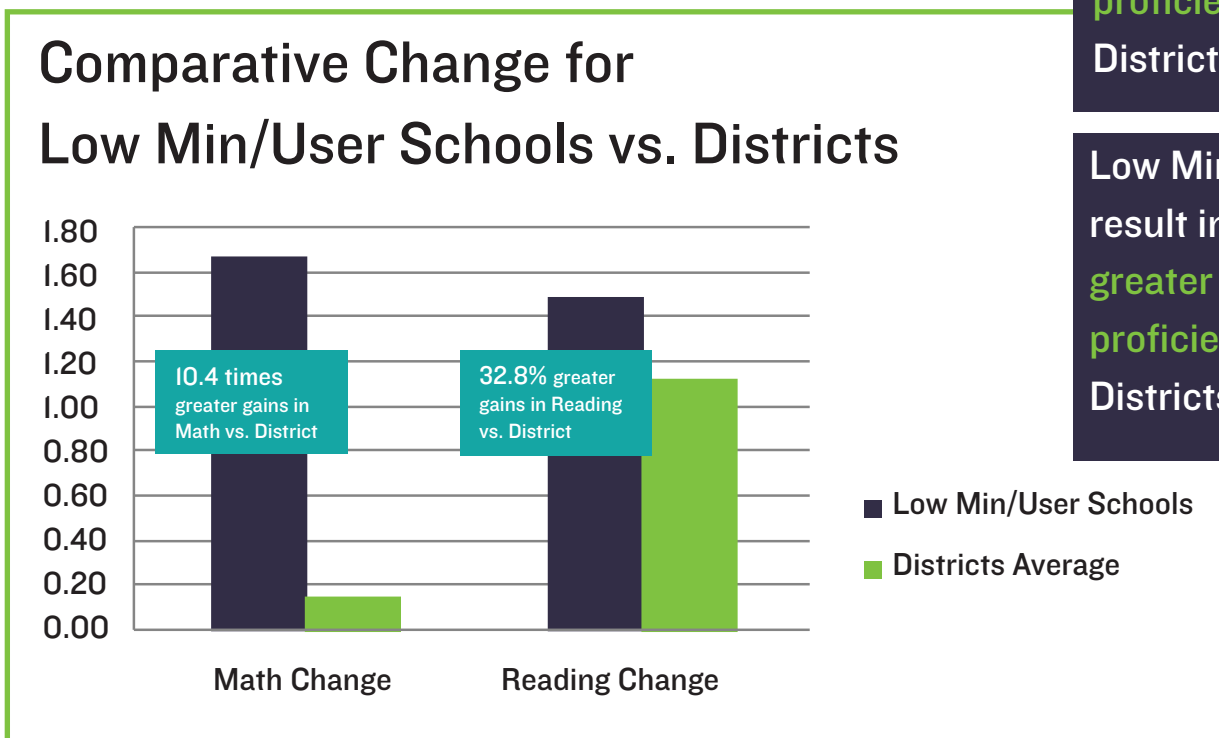


# Improvements in Proficiency Rates Correlated with PD 360

But even **Low Minutes per User** outperformed no PD 360

Low Minutes per User result in more the **TEN times the gains in Math proficiency rates** than the Districts average ( $p < .001$ )

Low Minutes per User result in more than **30% greater gains in Reading proficiency rates** than the Districts average ( $p < .001$ )



	Low Min/User Schools	Districts Average	Percent Advantage	Statistical Significance	An advantage of:
Math Change	1.67	0.16	943.4%	$p < .001$	10.4 times greater improvement
Reading Change	1.49	1.12	32.8%	$p < .001$	1.3 times greater improvement

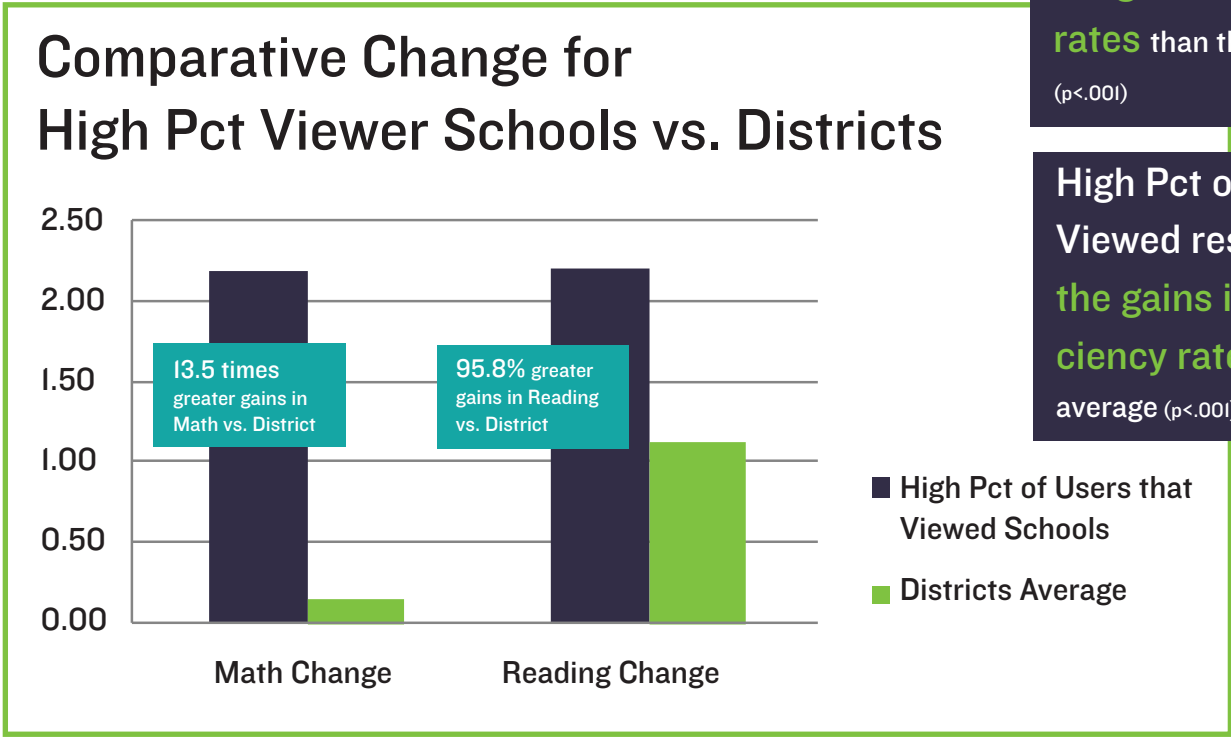


# Improvements in Proficiency Rates Correlated with PD 360

Higher percentage of Viewers resulted in Higher Performance

High Percentage of Users that Viewed resulted in more the **THIRTEEN** times the gains in Math proficiency rates than the Districts average (p<.001)

High Pct of Users that Viewed resulted in **TWICE** the gains in Reading proficiency rates than the Districts average (p<.001)



	High Pct of Users that Viewed Schools	Districts Average	Percent Advantage	Statistical Significance	An advantage of:
Math Change	2.17	0.16	1254.2%	p<.001	13.5 times greater improvement
Reading Change	2.19	1.12	95.8%	p<.001	2.0 times greater improvement



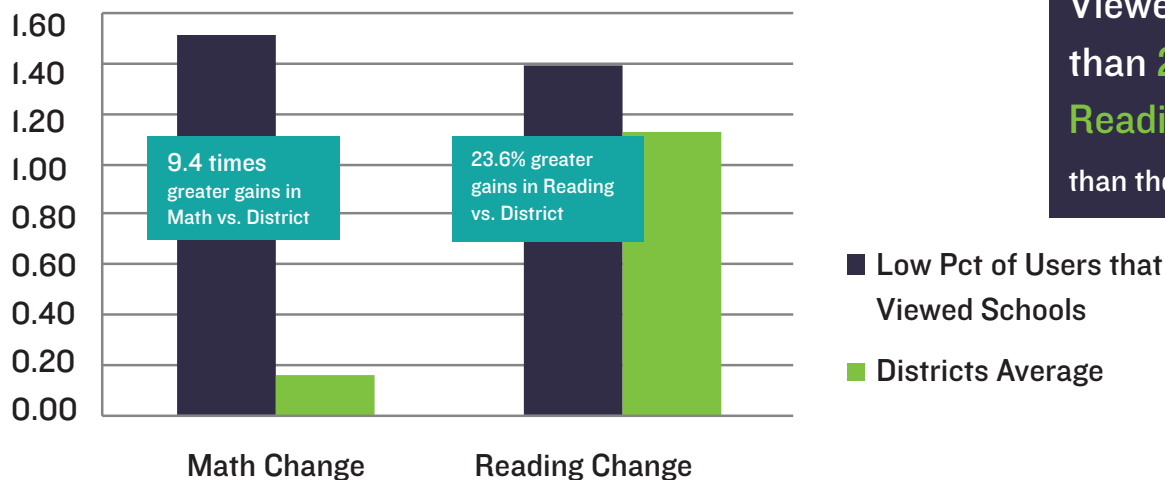
# Improvements in Proficiency Rates Correlated with PD 360

But even **Low percentage of Viewers** outperformed no PD 360

Low Percent of Users that Viewed resulted in more than the **NINE times the gains in Math proficiency rates** than the Districts average ( $p < .001$ )

Low Percent of Users that Viewed resulted in more than **20% greater gains in Reading proficiency rates** than the Districts average ( $p < .001$ )

## Comparative Change for Low Pct Viewer Schools vs. Districts



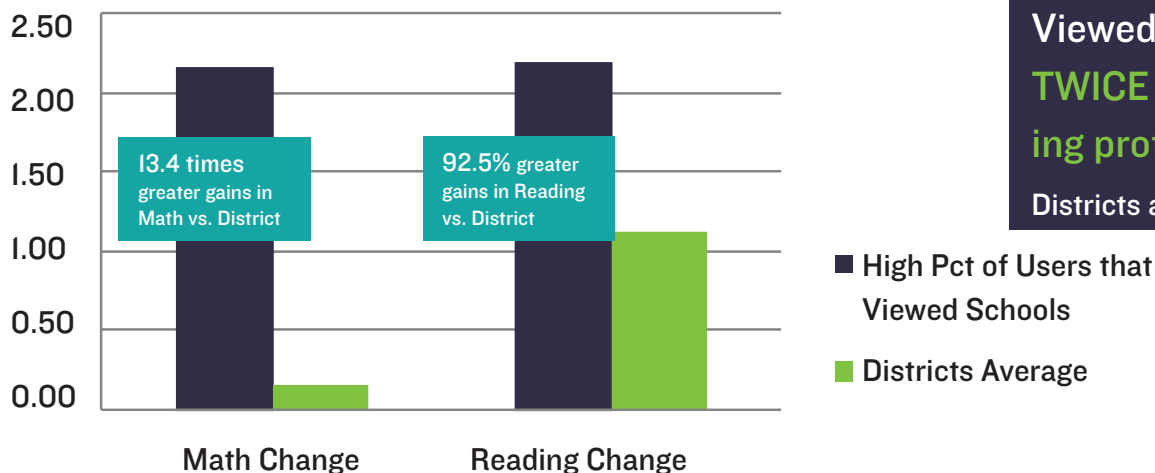
	Low Pct of Users that Viewed Schools	Districts Average	Percent Advantage	Statistical Significance	An advantage of:
Math Change	1.50	0.16	836.5%	$p < .001$	9.4 times greater improvement
Reading Change	1.38	1.12	23.6%	$p < .001$	1.2 times greater improvement



# Improvements in Proficiency Rates Correlated with PD 360

More Viewers resulted in Higher Performance

## Comparative Change for Schools with High # of Viewers vs. Districts



High Number of Users that Viewed resulted in more the **THIRTEEN** times the gains in Math proficiency rates than the Districts average ( $p < .001$ )

High Number of Users that Viewed resulted in nearly **TWICE** the gains in Reading proficiency rates than the Districts average ( $p < .001$ )

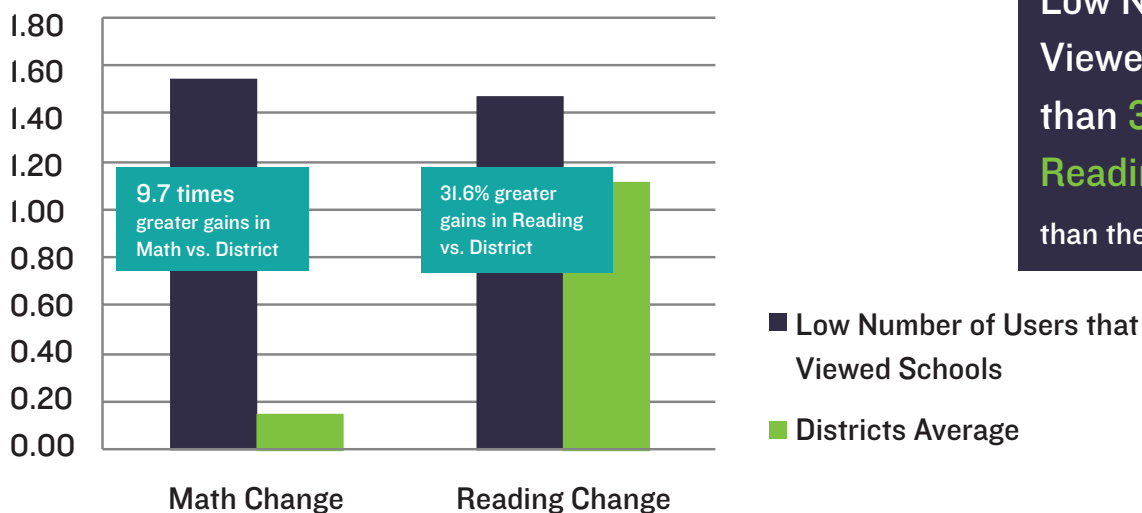
	High Number of Users that Viewed Schools	Districts Average	Percent Advantage	Statistical Significance	An advantage of:
Math Change	2.14	0.16	1237.1%	$p < .001$	13.4 times greater improvement
Reading Change	2.16	1.12	92.5%	$p < .001$	1.9 times greater improvement



# Improvements in Proficiency Rates Correlated with PD 360

But even fewer viewers outperformed no PD 360

## Comparative Change for Schools with Low # of Viewers vs. Districts



Low Number of Users that Viewed resulted in nearly **TEN times the gains in Math proficiency rates** than the Districts average ( $p < .001$ )

Low Number of Users that Viewed resulted in more than **30% greater gains in Reading proficiency rates** than the Districts average ( $p < .001$ )

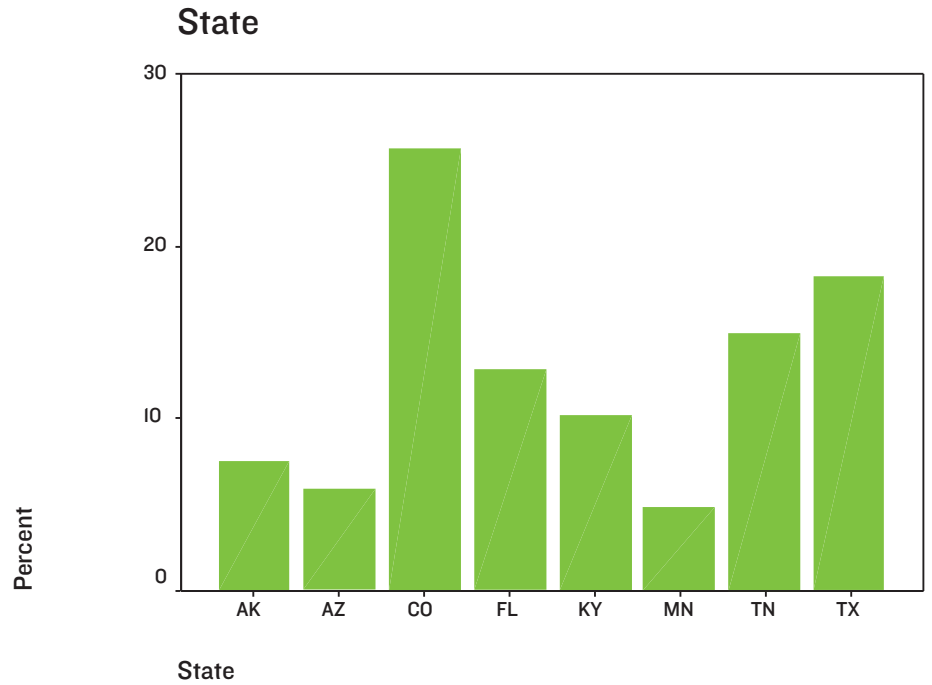
	Low Number of Users that Viewed Schools	Districts Average	Percent Advantage	Statistical Significance	An advantage of:
Math Change	1.55	0.16	870.0%	$p < .001$	9.7 times greater improvement
Reading Change	1.47	1.12	31.6%	$p < .001$	1.3 times greater improvement



# Improvements in Proficiency Rates Correlated with PD 360

## Sample Demographics

- Eight States
- 187 Schools



		School Level			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Elementary	107	57.2	57.2	57.2
	Middle - JH (incl 6-8)	29	15.5	15.5	72.7
	El-Mid (e.g. K-8)	29	15.5	15.5	88.2
	High School	14	7.5	7.5	95.7
	Mid-Hi (e.g. 6-12)	7	3.7	3.7	99.5
	El-High (e.g. K-12)	1	.5	.5	100.0
Total		187	100.0	100.0	

