



Amount of Instruction Makes a Difference on SOL Gains

Newport News, VA 2014–2016 Data



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Newport News Public Schools have been using the **LANGUAGE!® Live** program since the 2014–2015 school year. **LANGUAGE! Live** provides individualized, engaging, explicit, and systematic literacy instruction to middle school students reading substantially below grade level. This report will use the Standards of Learning (SOL) test scores to determine progress made by students receiving **LANGUAGE! Live** instruction from the 2014 administration of the SOL to the 2016 administration.

One of the differences between **LANGUAGE! Live** and other adolescent reading programs from Voyager Sopris Learning is the ability to determine how much instruction has been delivered through the online component of the program. This feature allows for the grouping and comparison of students who have received different amounts of instruction. In this case, we are able to compare the gains in SOL scores across four different groups. These groups are identified by a color and defined as follows:

- **Gray:** Being placed in the Gray group means students completed either 0 Word Training (WT) or 0 Text Training (TT) units.
- **Blue:** Blue means students completed between 1 and 3 TT units and at least 1 WT unit.
- **Blue with Green TT:** Blue with Green TT is a hybrid group and means students completed between 1 and 3 WT units and 4 or more TT units.
- **Green:** Being placed in the Green group means students completed 4 or more units of WT and TT. The Green group indicates sufficient instruction was received based on a 45-minute, 5-day-a-week implementation.

There is definitely a difference on the SOL score gains between 2014 and 2016 administrations based on the amount of instruction students received in **LANGUAGE! Live** during the 2015–2016 school year.

Newport News, VA: LANGUAGE! Live Pacing and SOL Analysis

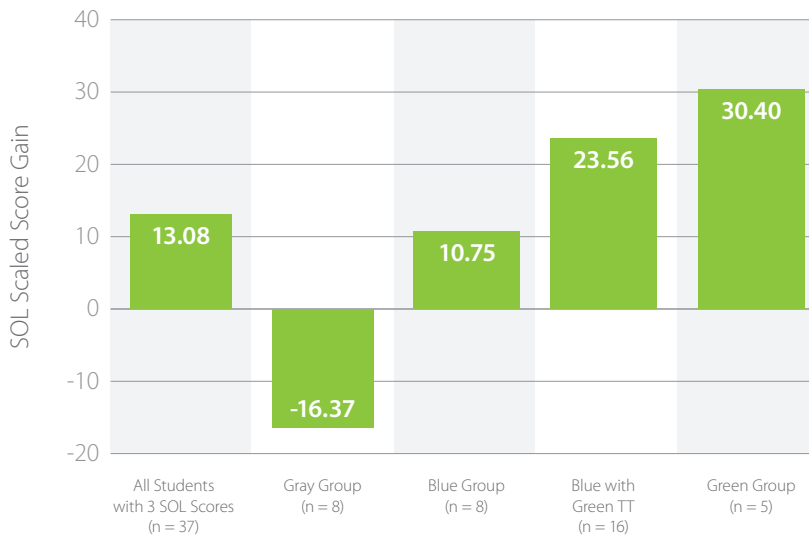


Figure 1. Newport News Results by LANGUAGE! Live Pacing Groups and Average SOL Gains

Figure 1 shows the gain between the 2014 and 2016 SOL administrations. The group representing All Students with 3 SOL Scores is presented first, showing an overall gain of 13.08 scaled score points. Next comes the Gray group, followed by the Blue, then Blue with Green TT, then the Green group. There is almost a 47-point difference between the gain made by the Gray group and the Green group.

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Figure 2 shows the difference in the average SOL scaled score for the 2014 and 2016 administrations for the different groups. Students in the groups Blue and above, with at least 1 unit of both WT and TT made average gains of 10.75 SOL scaled score points. Students in the Green group started below the Blue with Green TT group, but almost caught up on the 2016 administration, gaining an average of 30.40 SOL scaled score points. The Blue with Green TT group started higher than the other groups, except the Gray group, and finished at an average SOL scaled score of 400, which is the cut score for Pass/Proficient.

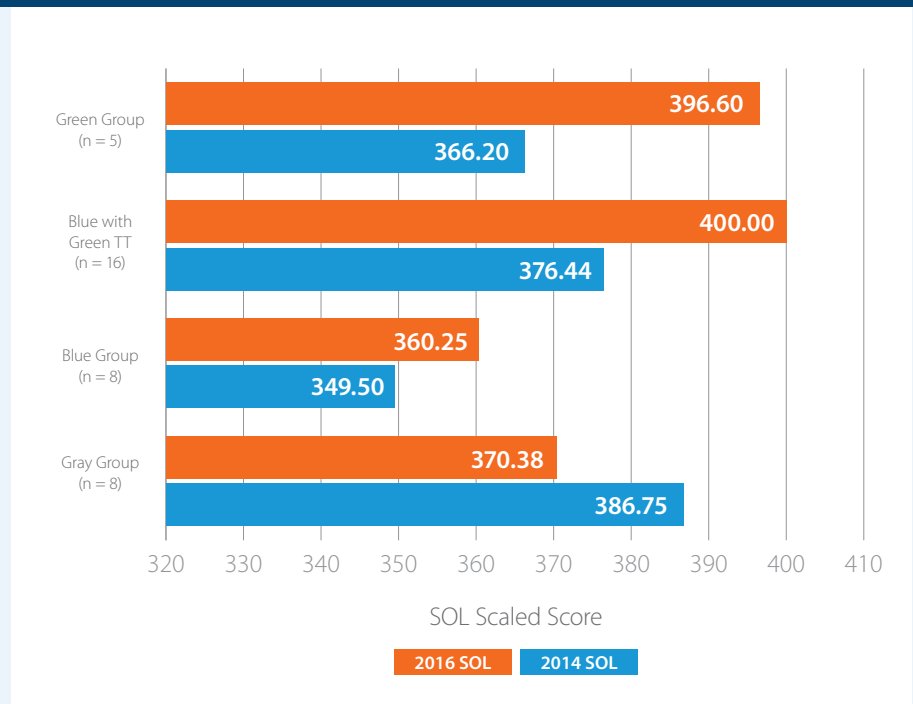


Figure 2. Newport News Results by LANGUAGE! Live Pacing Group and Average SOL Scaled Scores

Table 1 (next page) provides additional information for each of the pacing groups. Besides the average scaled scores for the 2014 and 2016 administrations, the SOL gain for each group is provided in column 5. Next, the standard deviations for each group are provided. The standard deviation is used to quantify the amount of variation or dispersion of the values in each pacing group.

In column 8 of Table 1, the effect size statistic is provided. The effect size statistic¹, usually only calculated for groups of 10 or more students, is used as an indicator of program effectiveness. Effect size, in this case, is the difference between the mean 2014 SOL administration and the 2016 SOL administration scaled scores of students expressed in terms of standard deviation units. The effect sizes for all grades is 0.35, a small, but educationally meaningful effect size. The effect sizes for the pacing groups start in the negative range for the Gray group (-0.42) and then get positive and larger for the Blue through Green groups, 0.51 to 0.76, which are medium and educationally meaningful effect sizes. There is a statistically significant difference between the 2014 and 2016 SOL administrations for the All Grades group and for the Green and Blue with Green TT pacing groups.

¹ According to Cohen (1988), effect sizes (for differences expressed as means) of 0.2 are considered small, 0.5 are regarded as medium, and 0.8 are regarded as large. An effect size of 0.3 is considered educationally meaningful.

Table 1. Newport News Results by *LANGUAGE! Live* Pacing Group and SOL Scaled Scores

PACING GROUP	# STUDENTS	2014 SOL SCALED SCORE	2016 SOL SCALED SCORE	SOL GAIN	2014 SOL STANDARD DEVIATION	2016 SOL STANDARD DEVIATION	EFFECT SIZE	AVERAGE WT UNITS	AVERAGE TT UNITS
All Grades	37	371.46	384.54	13.08	37.100	36.802	0.35	2.70	3.43
Gray	8	386.75	370.38	-16.37	34.125	44.737	-0.42	1.75	1.63
Blue	8	349.50	360.25	10.75	28.420	13.895	0.51	3.25	1.38
Blue with Green TT	16	376.44	400.00	23.56	41.362	29.344	0.67	2.31	4.94
Green	5	366.20	396.60	30.40	30.906	48.998	0.76	4.60	4.80

The last two columns in Table 1 show the average number of WT and TT units for each group. For a 45-minute, 5-day-a-week implementation, the expected number of units that could be completed is 6 WT and 6 TT. Because interruptions occur during the school day, sufficient instruction is defined as 4 or more WT and TT units completed during the academic year. In Table 1, the Green pacing group meets this pacing goal and shows the most SOL gain for any group. Also, the Green group had the largest effect size for any pacing group. The Blue with Green TT meets the TT unit goal, but not the WT unit goal, but still shows good SOL gain and a respectable effect size. The Blue with Green TT pacing groups demonstrates the importance of a balance between WT and TT instruction.

In summary and to provide context, students who received sufficient, or a good amount of instruction, as demonstrated by the number of WT and TT units completed, showed higher average SOL gain, 21.57 scaled score points, than the average across the 6th, 7th, and 8th grade students at An Achievable Dream Middle and High School of 10.50 scaled score points². Basically doubling the gain achieved by the 6th through 8th graders is a very good start. The Blue, Blue with Green TT, and Green pacing groups were used to calculate the average for *LANGUAGE! Live* students. The next implementation goal would be to have more students receiving sufficient instruction to reach the Green pacing group.

² This average was derived from the results found at the Virginia Department of Education SOL Test Scoring & Performance Reports Web site (<http://www.pen.k12.va.us/testing/scoring/index.shtml>).