Newsela Efficacy Study: Building Reading Comprehension Through Leveled Nonfiction Content

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WestEd

Efficacy Study

Methods

Newsela is an adaptive, Instructional Content Platform in use by more than 13.8 million students and 1.2 million teachers in U.S. classrooms. Newsela aims to improve comprehension, vocabulary, and motivation outcomes for students in grades 2-12 by uniting high-interest content at multiple reading levels with accompanying assessments and reading activities that share insights designed for teachers and learners. WestEd was contracted to conduct efficacy and formative research studies. For the efficacy study, a true, group-randomized, experimental design was used to control for most threats to internal validity (Cook & Campbell, 1979; Murray, 1998) where teachers were randomly assigned into treatment (access to Newsela) and control (business-as-usual English Language Arts instruction) conditions. The study relied on hierarchical modeling techniques to determine whether the Newsela intervention treatment was more effective than business-as-usual for improving reading proficiency on the *STAR Reading Assessment* and the *Motivation to Read Survey*. Student socioeconomic status, student EL status, and student baseline reading comprehension and motivation were included as moderators of interest. For the formative research study, additional data were collected via teacher interviews and surveys in order to make recommendations regarding usability, feasibility and social validity. Finally, the impact of Newsela was measured when students in the treatment condition received the ***recommended*** dosage.

Participants

Setting

WestEd conducted a randomized controlled trial and formative research study on the use of Newsela in two large suburban school districts—one in Southern California (CA) and one in South Florida (FL). The two districts are economically and ethnically diverse with approximately 75% of students receiving free-and-reduced lunch and 80% minority students. There were a total of 63 participating teachers, 26 from CA and 37 from FL.

Students

All 5th grade students enrolled in these teachers' classrooms were eligible for inclusion in the study provided their parents gave consent for their participation in the assessments. Across all classrooms, 1,238 students were randomly assigned to either the Treatment condition or the Control condition (N_{treat} = 634 students; N_{cntrl} = 604 students; described in more detail below). See Tables 1 and 2 for a breakdown of students by demographic categories.

Table 1. Demographic characteristics of participating students by district and combined.

	All	California	Florida
N	1238	679	559
% Female	47.01%	44.77%	49.73%
% Ethnicity			
Asian	3.63%	2.50%	5.01%
Black	20.52%	8.39%	35.24%
Latino	13.49%	0.00%	29.87%
White	31.91%	38.14%	24.33%
Other	26.58%	44.18%	5.19%
%Home Language			
Spanish	37.64%	54.20%	17.53%
English	53.23%	37.56%	72.27%
Other	5.25%	1.47%	9.84%
Mean STAR Pretest	514.83	482.16	554.02
Mean School SES	77.89	88.16	65.42

Table 2. Demographic characteristics of participating students by treatment condition.

	Newsela	Control
N	634	604
% Female	45.69%	52.35%
% Ethnicity		
Asian	3.47%	3.81%
Black	20.82%	20.20%
Latino	12.78%	14.24%
White	31.70%	32.12%
Other	28.23%	24.83%
%Home Language		
Spanish	38.49%	36.75%
English	53.63%	52.81%
Other	4.88%	5.64%
Mean STAR Pretest	514.58	515.10
Mean School SES	78.32	77.44

Measures

Reading Comprehension

The *STAR Reading Assessment* (Renaissance Learning, 2014) is a computer-based adaptive reading measure for K-12 students. It is 25 items at each grade level and takes 2nd graders under 13 minutes to complete. Extensive psychometric analyses have been conducted in the development

of the STAR Reading Assessment, including item/scale calibration, reliability, validity, and norming. Reliability scores were about 0.92, with a range 0.88 in grade 1 to 0.91 in grade 12. The STAR Reading assessment was validated using test results for more than 12,000 students from such measures as the California Achievement Test (CAT) and the Stanford Achievement Test (SAT9) and several statewide tests. The within-grade average concurrent validity coefficients for grades 1–6 ranged from 0.72–0.80, with an overall average of 0.74. Predictive validity coefficients varied from 0.69–0.72 in grades 1–6, with an average of 0.71. For the purposes of norming, analyses were conducted from a stratified random sample of approximately 70,000 students. Test scores were joined to the student-level demographics and school-level information. Sample weights from the regional, race/ethnicity, and gender results were calculated and applied to each student's ability estimate, in order to develop norms that were then transformed to the STAR Reading scaled score scale.

Reading Motivation

The *Motivation to Read Profile* (MRP: Gambrell, Palmer, Codling, & Mazzoni, 1996) is a reading survey developed with third and fifth graders. To determine whether the characteristics measured by the reading survey (self-concept as a reader and value of reading) corresponded to the two subscales, factor analyses were conducted using the unweighted least squares method and a varimax rotation (Palmer et al., 1996). Only items that loaded on one of the two traits made it on the final instrument. Cronbach's alpha indicated moderately high reliability for both subscales (self-concept=.75; value =.82). Pre- and posttest reliability coefficients confirmed moderately high reliability of the instrument (self-concept=.68; value=.70).

Study Procedures

Newsela

Newsela staff conducted in-person trainings and webinars with treatment teachers on implementing Newsela with the students during the study. The treatment teachers were directed to assign their students one article and respective quiz during class time and another for homework. Newsela staff worked with the teachers to provide them with a pacing guide and additional resources and support as needed.

Recruitment

District administrators provided approval for their schools to participate and allowed WestEd staff to send online consent forms out to teachers. As teachers consented to participate, research staff contacted them to ensure the teachers understood the study requirements and were willing to assist with consenting the student sample. In FL, the district required direct consents for students, whereas the CA district agreed to the use of opt-out forms. In FL, WestEd staff visited schools to pick up consent forms and coordinated

In total, 1,238 students participated, 559 in FL and 679 in CA.

directly with teachers regarding ongoing consenting. In CA, teachers scanned copies of opt-out forms using WestEd's secure server. WestEd researchers ensured that any data received for students who opted-out were not used in any of the analyses. In total, 1,238 students participated, 559 in FL and 679 in CA.

Pre-assessments

Teachers conducted the student assessments with some technical assistance from WestEd's research staff. All participating students were pre-assessed on the STAR Reading Comprehension test and the Motivation to Read Survey prior to the intervention start date of 1/30/17 in CA and 2/6/17 in FL except for 23 students in CA and 32 students in FL who took the pre-assessments after intervention was underway. Student assessments were administered without a fixed order. Random assignment of students to condition was conducted well after the pre-assessments were underway, so as to not influence the administration of assessments in anyway.

Dosage

Students in the Treatment condition were expected to use Newsela for twice a week for 14 weeks by reading an assigned article and an article of their choosing and completing the quiz for each article respectively. Usage of Newsela varied greatly throughout the duration of the study. Specifically, the variability of student usage ranged from 0 to 17 weeks with a median of 13 weeks. Although 71% of the students

A study challenge was that only 52% and 59% of the treatment students met the recommended dosage in CA and FL respectively.

exceeded the expected number of quizzes taken for the 14-week period, the number of total quizzes taken ranged from 0 to 133 with a median of 31. This indicates that while treatment students were given access and encouraged to use Newsela some students were not compliant with the recommend usage. In fact, of the students who had access to Newsela, only 55% of the students met the recommended dosage. Specifically, in CA only 52% of the students met the recommended dosage, and in FL, 59%.

Figure 1 shows the Newsela usage broken down by the CA and FL districts. On average, both districts show similar patterns of student usage of Newsela and large ranges in variability of usage. In CA, students had consistently more active weeks, took more quizzes in total per week, and spent more time reading than students in FL.
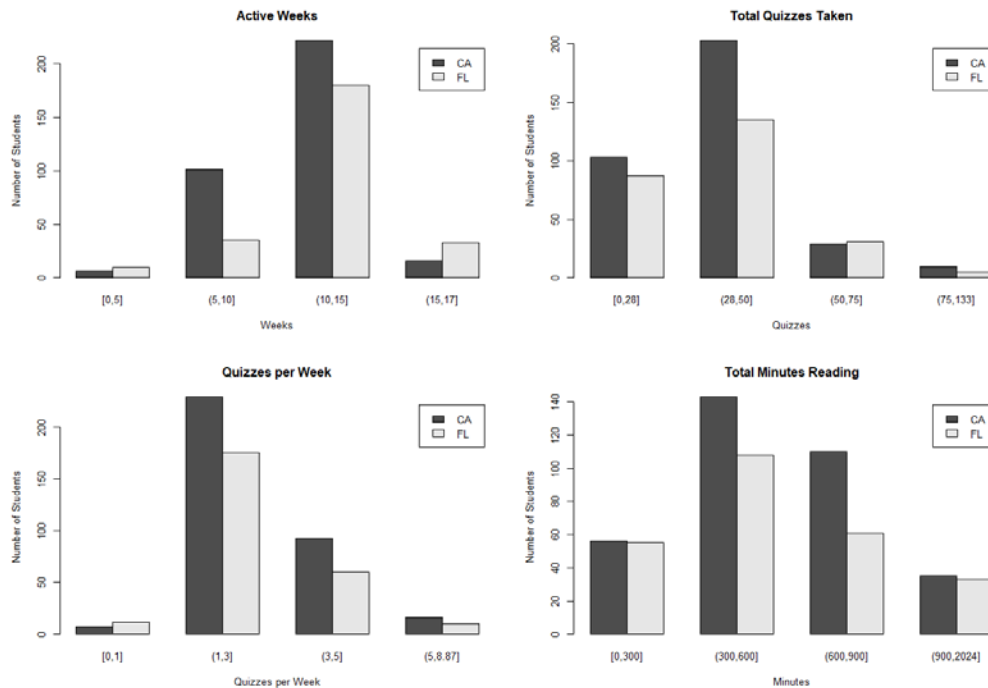
Figure 1. Newsela Usage by District.

Random Assignment

The study consisted of a classroom-randomized control trial. Classes were randomly assigned with equal chance of being assigned to either the Treatment (Newsela) condition or the Control condition. In CA, 14 and14 classes were randomized to the Treatment and Control conditions respectively. In FL, 18 and 19 classes were randomized to the Treatment and Control conditions respectively. Randomization occurred at the classroom-level by site wherever possible. As such, there were Treatment and Control classes within the same school in some cases. Issues related to potential contamination (i.e., Control students obtaining access to the Newsela Treatment) were addressed on several levels. Newsela developers addressed the issues of contamination directly in discussions with district-level administration and teachers, excluding any classrooms that had any prior usage history with Newsela. Newsela staff also addressed contamination in trainings with treatment teachers and monitored it carefully during implementation via internal analytics.

Research Questions

In order to determine the promise of Newsela for use in a school setting, we posed the following research questions.

1. After controlling for baseline scores and student demographics, what is the impact of using Newsela for 14 weeks on students' reading comprehension and motivation to read?

2. Are these impacts moderated by district, student demographics, and/or students' baseline performance in reading comprehension or motivation to read?

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Results: *STAR Reading Assessment*

Attrition

Attrition in this study was defined as the percentage of students that had missing test data - either at the beginning or end of the study - as well as missing demographic information.

Two types of attrition were calculated: 1) *overall attrition* – which refers to the percentage of missing post-test data for a given outcome measure for the study sample overall (i.e., regardless of condition), and 2) *differential attrition* – which refers to the percentage of missing post-test data in the Treatment condition relative to the percentage of missing post-test data in the Control condition for a given outcome measure.

Table 3 below shows the percentages of overall and differential attrition for the STAR Reading Assessment.

Table 3. Percentage of overall and differential attrition for STAR Reading Assessment.

	Overall Attrition	Differential Attrition
Overall STAR	8.16%	-1.87%
CA STAR	6.96%	-4.56%
FL STAR	9.68%	1.64%

For the STAR Reading Assessment, overall attrition was less than 10% which means that a small proportion of students did not submit a completed assessment. Differential attrition values varied from positive to negative; although most differential attrition was negative. Negative differential attrition indicates higher attrition in the Control condition relative to the Treatment condition. Specifically, the Control condition was less likely to submit both completed measures than the Treatment condition, overall and within districts.

Descriptive Statistics

Prior to conducting the primary impact analyses, we examined the raw scores for students in the Treatment and Control conditions at the beginning and end of the study for the STAR Reading Assessment (see Table 4). The means suggest a trend of greater growth for the Treatment group.

Table 4. Unadjusted means and standard deviations for pre-test, post-test, and growth for STAR.

	Control		Treatment	
	Mean	SE	Mean	SE
STAR Pretest	520.42	9.18	515.47	8.15
STAR Posttest	535.06	9.74	533.75	9.10
STAR Growth	**16.17**	5.14	**17.59**	5.29

In the next section, we examine the impact of the Treatment condition after statistically adjusting for other variables related to students' demographic and baseline achievement scores.

Overall Impact Analyses: STAR Reading Assessment

The goal of the impact analysis was to answer the following question: After controlling for student characteristics, what is the effect of the Newsela intervention on students' reading comprehension after a 14-week intervention period? The impact analysis specifically attempts to adjust for students' background information (e.g., gender, ethnicity) and prior performance at the beginning of the study.

Multi-level modeling was used to estimate the impact of the Newsela intervention. The outcome variable of each measure consisted of the growth in pre- to post-test scores (calculated by subtracting the pre-score from the post-score). Each outcome growth was regressed onto the condition variable (Treatment or Control) and a host of other student characteristics, including gender, ethnicity, socioeconomic disadvantaged status, home language status, and reading comprehension and motivation pre-test scores. These procedures were followed first for the intention-to-treat (ITT) sample, which included every student who was randomized to the Newsela treatment condition ignoring noncompliance, withdrawal, or anything that happened after randomization. Then, these same procedures were applied for the treatment on the treated (TOT) sample, including only those students who received the minimum recommended dosage of Newsela (i.e., two articles for a minimum of 12 consecutive weeks). See Table 5 for a summary of the results for both the ITT and TOT.

Table 5. Summary of impact analyses for ITT and TOT, overall and by district.

Overall	Newsela Growth	BAU Growth	Growth Change	SE	P-Value	Hedge's G Effect Size	
STAR Reading ITT	14.28	16.22	-1.94	13.70	0.89	-0.02	
STAR Reading TOT	34.14	16.23	17.91	14.22	0.21	0.15	a

California	Newsela Growth	BAU Growth	Growth Change	SE	P-Value	Hedge's G Effect Size	
STAR Reading ITT	20.20	20.33	-0.12	15.69	0.99	0.00	
STAR Reading TOT	38.18	21.16	17.03	16.16	0.30	0.16	a

Florida	Newsela Growth	BAU Growth	Growth Change	SE	P-Value	Hedge's G Effect Size	
STAR Reading ITT	6.05	9.46	-3.41	24.05	0.89	-0.02	
STAR Reading TOT	26.34	11.13	15.21	24.62	0.54	0.11	a

[a] The effects of receiving the recommended dosage of Newsela (two articles per week for a minimum of 12 consecutive weeks)

On average, the Newsela treatment group had an adjusted-mean reading comprehension growth of 14.28 points while the control group had an adjusted-mean reading comprehension growth of 16.22 points. Both conditions showed improved reading comprehension; however, the difference in

reading comprehension growth between the two conditions was not statistically significant and had an effect size of -0.02 indicating no meaningful difference in growth.

Analyses by District. Table 5 above also shows the impact of reading comprehension by district. When we further looked at these results by district, CA saw higher overall reading gains when compared to FL due to higher usage of Newsela. In CA on average, the Newsela condition had an adjusted-mean reading comprehension growth of 20.20 points while the control condition had an adjusted-mean reading comprehension growth of 20.33 points indicating no meaningful difference in reading comprehension growth yielding an effect size of 0.00.

In FL on average, the Newsela condition had an adjusted-mean reading comprehension growth of 6.05 points while the control condition had an adjusted-mean reading comprehension growth of 9.46 points indicating that the control condition experienced greater reading comprehension growth than the Newsela condition. Again, the difference in reading comprehension growth between the two conditions was not statistically significant and yielded a small negative effect size of -0.02 suggesting no meaningful difference between the two conditions.

Impact of Students that Met Recommended Newsela Dosage

However, the usage of Newsela varied greatly in the treatment condition where only 55% of the treatment students actually used Newsela at the recommended dosage. When considering the impact of Newsela when receiving the recommended dosage on outcome measures, students who used Newsela at the recommended dosage had larger growth in reading comprehension than the control condition. When the treatment students used Newsela at the recommended dosage, treatment students experienced an additional growth almost double in magnitude compared to the business-as-usual control group.

Additionally, when we look at the impact of meeting the recommended Newsela dosage by district we see an increase in growth for those students who met the recommended dosage compared to the control group (see Figure 2). In CA, students who used Newsela at recommended dosage saw an additional 80% growth in size compared to the CA control group. In FL, students that used Newsela as recommended saw an additional in reading comprehension that was more than double in magnitude compared to the FL control group.
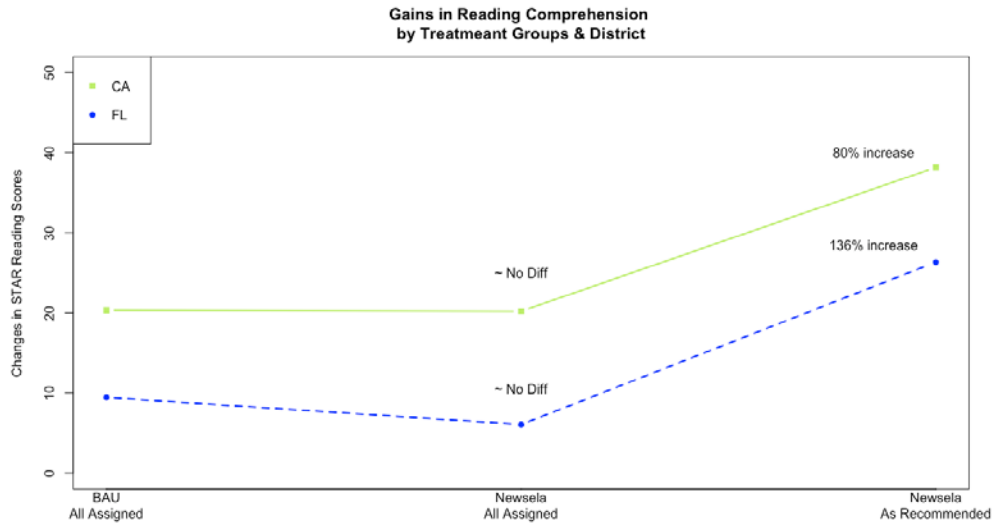
Gains in Reading Comprehension
by Treatmeant Groups & District

Figure 2. Gains in Reading Comprehension by District and Treatment Group

> *When students used Newsela as recommended all effect sizes trended in a positive direction, suggesting that students in the Treatment group exhibited more growth than the Control group.*

Overall, when students used Newsela as recommended all effect sizes trended in a positive direction, suggesting that students in the Treatment group exhibited higher growth than students in the Control group. While these effect sizes are considered small, they provide evidence of promise of the impact of Newsela and the potential if more students fully used Newsela as recommended. When usage is allowed to vary greatly, the potential impact of Newsela on student outcomes becomes more variable.

Results: *Motivation to Read Profile*

Attrition

Table 6 below shows the percentages of overall and differential attrition for each the Motivation to Read Profile. For the Motivation to Read Profile, the overall attrition is about 15% meaning a larger proportion of study participants did not submit the completed measure. Differential attrition was negative, meaning the Control condition was less likely to submit both completed measures than the Treatment condition, overall and within districts.

Table 6. Percentage of overall and differential attrition for Motivation to Read Profile.

	Overall Attrition	Differential Attrition
Overall		
MRP	15.40 %	-4.49%
CA		
MRP	16.14%	-3.38%
FL		
MRP	14.28 %	-6.38%

Descriptive Statistics

Table 7 below reports the raw scores for the Motivation to Read Profile measure at the beginning and end of the study. The means suggest a trend of greater growth for the Treatment group.

Table 7. Unadjusted means and standard deviations for pre-test, post-test, and growth for MRP.

	Control		Treatment	
	Mean	SE	Mean	SE
MRP Full Scale (Pre)	39.46	0.34	39.28	0.32
MRP Full Scale (Post)	40.15	0.36	40.94	0.36
MRP Full Scale Growth	**0.89**	0.30	**1.64**	0.27
MRP Self-Concept (Pre)	19.28	0.19	19.32	0.19
MRP Self-Concept (Post)	19.25	0.19	19.64	0.20
MRP Self-Concept Growth	**-0.01**	0.17	**0.38**	0.15
MRP Value Reading (Pre)	20.18	0.22	19.95	0.20
MRP Value Reading (Post)	20.90	0.24	21.29	0.23
MRP Value Reading Growth	**0.90**	0.20	**1.26**	0.18

In the next section, we examine the impact of the Treatment condition after statistically adjusting for other variables related to students' demographic and baseline achievement scores.

Impact Analyses: Motivation to Read

The goal of the impact analysis was to answer the following question: After controlling for student characteristics, what is the effect of the Newsela intervention on students' reading motivation after a 14-week intervention period? The impact analysis specifically attempts to adjust for students' background information (e.g., gender, ethnicity) and prior performance at the beginning of the study. The same multi-leveling modeling and analytic procedures described above for the reading comprehension measure were also used for the reading motivation survey. See Table 9 for a summary of the results.

Table 8. Summary of impact analyses, overall and by district.

Overall	Newsela Growth	BAU Growth	Growth Change	SE	P-Value	EffectSize	
MRP Full Scale	1.63	0.92	0.71	0.54	0.20	0.12	
MRP Self-Concept	0.32	-0.05	0.37	0.23	0.12	0.11	
MRP Value Reading	1.35	0.96	0.39	0.41	0.36	0.09	
MRP Full Scale	1.25	0.91	0.33	0.56	0.56	0.05	a

California	Newsela Growth	BAU Growth	Growth Change	SE	P-Value	Hedge's G Effect Size	
MRP Full Scale	1.46	1.52	-0.06	0.87	0.94	-0.01	
MRP Self-Concept	0.38	0.24	0.14	0.36	0.71	0.04	
MRP Value Reading	1.10	1.25	-0.15	0.62	0.81	-0.04	
MRP Full Scale	1.41	1.36	0.05	0.89	0.95	0.01	a

Florida	Newsela Growth	BAU Growth	Growth Change	SE	P-Value	Hedge's G Effect Size	
MRP Full Scale	1.85	0.33	1.52	0.74	0.05	0.24	
MRP Self-Concept	0.32	-0.35	0.68	0.38	0.09	0.19	
MRP Value Reading	1.59	0.69	0.90	0.58	0.13	0.21	
MRP Full Scale	1.12	0.34	0.78	0.80	0.34	0.13	a

[a] The effects of receiving the recommended dosage of Newsela (two articles per week for a minimum of 12 consecutive weeks)

Overall, the Newsela treatment group showed greater growth on the motivation to read measures than the control condition. The adjusted-mean reading motivation growth for the control condition ranged from -0.05 to 0.96 points, while the adjusted-mean reading motivation growth for the treatment condition ranged from 0.32 to 1.63 points. The corresponding effect sizes for the reading motivation growth in favor of the treatment condition range from 0.09 to 0.12. Although the effects are small, they are consistently positive suggesting that the treatment group experienced larger growth in reading motivation. The effect for reading motivation was consistently positive although not as large when treatment students used the recommend dosage.

Analyses by District. We also conducted the separate analyses for the Reading Motivation measure by District (i.e., in CA and in FL). In CA, the average change in growth in reading motivation between the treatment and control conditions varied and was quiet small. The effect sizes for the change in reading motivation growth ranged from -0.03 to 0.04 suggesting no consistent meaningful difference between the two conditions.

On the other hand, in FL the average change in growth in reading motivation between the treatment and control conditions varied and was quiet large. The effect sizes for the change in reading motivation growth ranged from 0.19 to 0.24 suggesting a consistent positive difference between the two conditions.

Summary of Results

Within the two districts, the usage of Newsela varied greatly in the treatment condition where only 52% and 59% of the treatment students actually used Newsela at the recommended dosage. When considering the impact of Newsela when receiving the recommended dosage on outcome measures, in both districts the treatment conditions had a larger growth in reading comprehension than the control condition. When the treatment students used Newsela at the recommended dosage, treatment students' growth in reading comprehension lead to an effect size of 0.11 to 0.16 vs -0.02 to 0.00 when treatment dosage varied greatly. However, only in the FL district the effect for reading motivation was consistently positive although not as large when treatment students used the recommend dosage.

> *When students used Newsela at least 2 times per week for 12 consecutive weeks, they consistently outperformed their peers in reading comprehension growth.*

Overall, looking across districts there is evidence of promise of the impact of Newsela and the potential if more students fully used Newsela as recommended.

Association between Newsela Usage, Reading Comprehension, and Motivation

> *Students who used Newsela daily are more likely to see 48% more growth, on average, in reading comprehension.*

The correlations between Newsela usage and gains in reading comprehension and motivation varied greatly. No meaningful relationships were found between the different aspects of Newsela usage and gains reading motivation. However, modest correlations between Newsela usage and gains in reading comprehension were found. The number of continued active weeks and total time reading on Newsela had correlations of 0.17 and 0.14, respectively. These two Newsela usage measures were found to be the most consistent predictors of gains in reading comprehension. This suggests that students who spend more time actively using Newsela will benefit more.

This finding was exemplified with a small group of Newsela users (6%) who experienced larger gains in reading comprehension than compared to control students. This small group of students who actively used Newsela 5 times a week for more than 12 weeks had gains 3 times larger in size in reading comprehension compared to the business-as-usual group (see Figure 3).
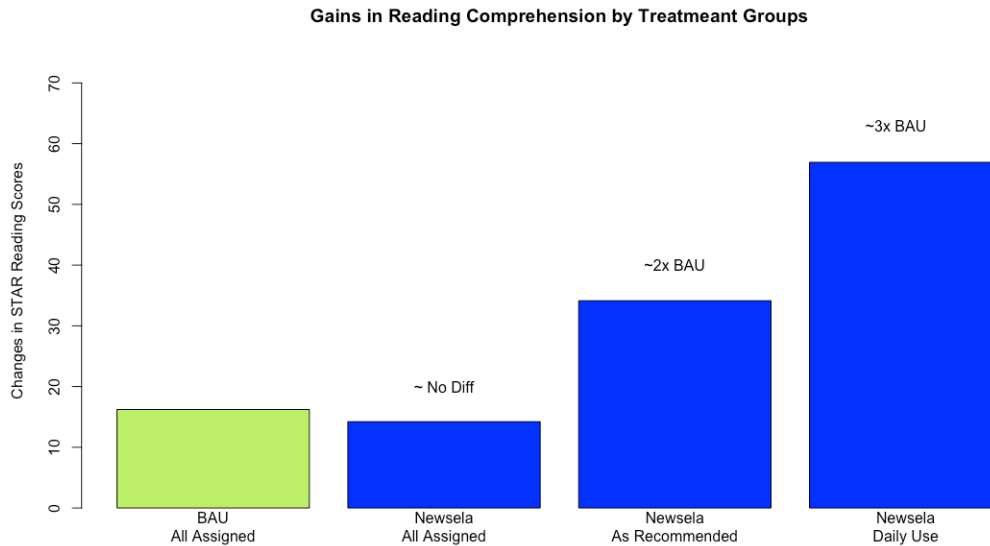
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Gains in Reading Comprehension by Treatmeant Groups

Figure 3. Gains in Reading Comprehension by Treatment Group (and Subgroups)

Teacher Usability: Methods

As part of the RCT, WestEd also included formative research on Newsela's usability and efficacy of their digital informational text product during the spring semester of the 2016-2017 school year. The goals of the formative research were 1) to provide feedback to Newsela that will help the company further develop its product to be attractive and effective for use by teachers in an elementary school setting, and 2) to gather preliminary data showing the product is an effective tool for improving reading skills in grades 4-5 students.

As part of the study, WestEd conducted individual 30-45 minute phone interviews with ten elementary school teachers—six from FL County, Florida and four from CA, California—in April 2017. The main goals of the interviews were to determine:

○ How do teachers use Newsela in their classrooms (classroom structures, lesson preparation, use of features, etc.)?
○ Are there features of classrooms or patterns of use that appear to correlate with more successful or less successful implementation of Newsela (active users vs. less-active users)?
○ To what extent do teachers find Newsela useful?
○ To what extent do teachers find Newsela easy or challenging to use, and why?

Another element of the study involved collecting online survey data from teachers assigned to both the treatment and control conditions in both districts. Many of the online survey questions were the same or similar as the interview questions.

Description of the Sample

Phone Interview Subjects

The ten teachers interviewed by researchers were drawn from nine different schools in FL and CA. Teachers were selected based on their level of usage at that point in the study. Of the six FL teachers, four were identified by Newsela as active users implementing Newsela in their classrooms successfully on a regular basis, and two were identified as less-active users, meaning their usage data indicated that they were not consistently implementing Newsela. In the CA group, two of the teachers were identified as active users and two as less-active users.

Fig. 4. Breakdown of the interview sample by district and success with implementation.

	Active Users	Less-active Users
CA	2	2
FL	4	2

CA teachers taught all subjects in self-contained classrooms; FL teachers were more diverse in their teaching responsibilities. Of the six, only one taught all subjects in a self-contained classroom. One taught math and science only (using Newsela in her science block), two taught Social Studies and ELA only, and two (the two less-active users) taught all subjects except math. Because of the variation in classroom models and teaching responsibilities, it is difficult to directly compare the amount of time spent on reading instruction in different classrooms; for example, some teachers have a dedicated block of time devoted purely to reading and writing instruction, while others spent 2+ hours in which ELA instruction may be embedded in the teaching of one or more other subjects (for example, science or social studies). One teacher had 90 minutes devoted to reading instruction, but a different teacher teaches the same students writing. On average, most teachers seemed to have 1-1.5 hours per day to devote to ELA instruction (or in the case of the math/science only teachers, science), with most teachers reporting 2+ hours using the time to address other subjects in addition to ELA.

Teaching experience among the ten teachers ranged from two to 26 years, with an average of 12 years of experience. Although the sample may be too small for the differences to be significant, there is a clear difference between active and less-active users in terms of average years of teaching experience, which may indicate that more experienced teachers are more likely to implement Newsela successfully. The average years of experience was not significantly different between the two districts.

Fig. 5. Breakdown of the interview sample by average years of teaching experience.

	Active Users	Less-active Users	Average
CA	19.5	6	12.75
FL	15	5.75	11.9
Average	16.5	5.9	

Class size did not vary significantly across the sample, with teachers reporting class sizes from 20-34 students with an average class size of 25.

Fig. 6. Breakdown of the interview sample by average class size.

	Active Users	Less-active Users	Average
CA	31.5	28.5	30
FL	22.7	19.5	21.4
Average	26.2	24	

Based on this small sample, class size did not appear to be a factor in terms of whether a user was identified as an active-user or a less-active user.

The greatest variation in access to computer devices was between the two districts. All four CA teachers reported having three to five student desktop computers available in their classrooms, as well as about an hour of available time each week in a school computer lab. Two of the CA teachers also reported having access to a ChromeBook cart with 18-20 ChromeBooks. For the most part, CA teachers reported using Newsela during their weekly computer lab time. In contrast, FL teachers all had virtual classrooms or one-to-one laptop access in their classrooms and used these computers for Newsela lessons in their regular classrooms. Based on interview data, there does not appear to be a significant difference between the active and less-active user groups in terms of device access.

Teachers were also asked to describe any other relevant features or characteristics of their classrooms. Five of the six FL teachers described their classrooms as very diverse, with large numbers of ELLs, students with exceptional needs, low SES students, and/or students reading below grade level. The sixth teacher, an active-user, described her school in the same way but also mentioned that her study class was a gifted and talented class and not necessarily representative of the wider school population. Of the four CA teachers, only one teacher explicitly described her classroom as diverse, with large numbers of ELLs, students with exceptional needs, low SES

students, and/or students reading below grade level, though three of the four mentioned that they had a wide range of reading levels in their classrooms, ranging from below to above grade level.

Near the beginning of the interview, teachers were asked to describe their personal philosophy of teaching and learning to read as well as how they tended to structure their classes and what they were likely to emphasize the most in their reading blocks. Teachers did not always understand or interpret the question in the same way, but a number of common elements were mentioned by the majority of participants.

Attitudes & Beliefs:

- **Reading must be enjoyable for students.** One of the first things that many teachers mentioned was the importance of students enjoying and developing a love of reading. Teachers felt that when students see reading as a chore, they choose to read less and are less likely to fully engage with the assignment.

- **The texts students read must be relevant to and interesting for them.** The majority of teachers felt that students are significantly more likely to progress in their reading skills when the texts they are reading reflect their personal interests or are relevant in other ways (current events, topics they are studying in other subject areas, etc.).

- **Reading is foundational in all subject areas.** Most of the teachers mentioned that they felt reading was the most critical subject area they taught because learning to read and enjoying reading is necessary for success in all other subject areas (math, social studies, science, etc.)

Key Elements of Reading Instruction

- **Focus on comprehension and meaning-making, not just decoding.** Several teachers mentioned although most students are able to decode individual words, many still struggle with comprehending the *meaning* of the text on a sentence and paragraph level. They felt that reading instruction can sometimes focus on the skill of decoding words at the expense of reading comprehension and learning to make sense of an entire text, and a balanced approach was needed.

- **Balancing phonics and sight reading.** Most teachers referred in some way to the need to teach students to decode words using tools like phonics, root words, prefixes/suffixes, etc., *as well as* teaching them "sight words" to recognize holistically, rather than espousing primarily one strategy or the other.

- **Emphasis on vocabulary.** Most teachers also referred to the key role that learning vocabulary words plays in reading instruction, especially those who taught a range of

subjects (i.e., teaching science vocabulary is an important part of embedding reading instruction in a math/science block).

Classroom Practices & Structures:

- **Differentiating for reading level and learning style.** All of the teachers communicated that they believed students have different reading ability levels, learning styles, and needs that need to be considered and addressed. Differentiation strategies mentioned included ability grouping, giving students different assignments, and adaptive tools like Newsela.

- **A mix of whole group and small group work.** All of the teachers expressed that, while whole-class instruction can be useful and plays an important role in teaching and learning to read, they also spent some amount of instruction working with students in small groups. For the most part, these groups were described as homogenous or ability-based and as rotating through a variety of different activities or "stations," usually involving Newsela as well as small-group reading instruction with the teacher.

- **Some amount of independent reading of students' own choice.** All of the teachers mentioned that they give students at least some autonomy in terms of their independent reading, and that this is important because students are more motivated to read when what they're reading is more interesting and relevant to them. Teachers mentioned that the amount of autonomy varies with the time of year (e.g., less independent reading around test prep time), but all either devoted some class time to independent reading, or assigned "student's choice" independent reading with some amount of regularity.

Excepting one less-active user (the least experienced teacher in the group) who reported that she has not yet developed a philosophy of reading instruction, responses to this set of questions were fairly similar across all participants and did not differ significantly between active and less-active users.

> *Teachers' philosophies around reading instruction aligned with Newsela's framework of providing*: *1) high-interest nonfiction content that's accessible for everyone; 2) a library of content that covers a wide range of topics to motivate readers of all ages and ethnic groups; 3) texts at an appropriate reading level with a rich vocabulary; and 4) the ability for teachers to differentiate instruction based on student progress.*

Online Survey Respondents

Online survey respondents were drawn from the same study population as the phone interview subjects. A total of 63 teachers responded to the online survey, with the breakdown of

treatment/control and CA/FL respondents generally proportionate to the overall study numbers.

Fig. 7. Breakdown of online survey respondents by district and study condition.

	Treatment	Control
CA	14	12
FL	18	19
Totals	32	31

Treatment and control groups responded in about even numbers in both districts, with the number of respondents from each district roughly in proportion to the number of teachers in the study in each district.

Usage Groups. After the implementation was complete for the entire sample, additional analyses were done in order to determine sub-category groups of usage among the treatment teachers. Specifically, a cluster analysis was conducted using four key usage metrics: active weeks, total quizzes taken, independently viewed articles, and total minutes reading time. When all four of these usage metrics were correlated, six teachers were identified as being more active and three teachers were identified as being less active based on the average composite of these variables. Thus, three usage groups were identified—high usage, average usage, low usage—and used for some sub-group analyses of the online survey data.

Fig. 8. Breakdown of the online treatment sample by usage group.

	Active Usage	Average Usage	Low Usage
CA	2	11	1
FL	4	12	2
Total	6	23	3

Usage was distributed fairly evenly by state with the majority of teachers (11 for CA and 12 for FL) implementing with average usage, and smaller numbers of teachers in the active (2 for CA and 4 for FL) and low (1 for CA and 2 for FL) usage groups.

Further, similar to the interview sub-group, there was a trend among the online respondents for active-users to have more years of teaching experience overall. However, there was variance at the state level. Specifically, FL teachers with active usage had an average of 22 years of teaching experience compared to 11 years for the average usage group, whereas the CA teachers had an average of 16 years and 20 years for the active and average usage groups respectively.

Fig. 9. Treatment sample by average years of teaching experience and usage.

	Active Users	Average Users	Low Users	Mean
CA	16	20	18	19
FL	22	11	11	13
Average	20	15	13	

Across both conditions, all CA teachers taught in self-contained, multi-subject classrooms, while some FL teachers taught only certain classes (ELA and social studies, math and science, all subjects except math, etc.). Most CA classes were 26-30 students, while most FL classes were 20-25 students. In general CA classes were somewhat bigger, with some teachers reporting classes larger than 30 students, while some FL teachers reported classes with fewer than 20 students.

Fig. 10. Breakdown of online survey respondents by subject(s) taught.

Subjects Taught				
		Treatment	Control	Totals
CA	All subjects	14	12	100%
FL	All subjects	11	8	51%
	ELA/humanities only	4	7	30%
	Math/science only	2	2	11%
	Other	1	2	8%
Totals	All subjects	78%	65%	71%
	ELA/humanities only	13%	23%	17%
	Math/science only	6%	6%	6%
	Other	3%	3%	3%

Fig. 11. Breakdown of online survey respondents by class size.

Class Size		Treatment	Control	Totals
CA	**< 20**	0	0	0%
	20-25	1	1	8%
	26-30	10	7	65%
	31-35	3	4	27%
FL	**< 20**	3	0	8%
	20-25	11	13	65%
	26-30	1	6	19%
	31-35	0	0	0%
Totals	**< 20**	9%	0%	5%
	20-25	38%	45%	41%
	26-30	34%	42%	38%
	31-35	9%	13%	11%

Classroom Environment. The two districts were significantly different in terms of access to technological devices. The overwhelming majority of CA teachers reported having only one to five computers or tablets available in their classrooms, while most FL teachers reported having enough for students to have one-to-one access. However, nearly all teachers in both districts reported having access to enough devices on their site (usually via a laptop cart or computer lab) for all students to have one-to-one device access if needed. Device access did not vary significantly between treatment and control groups.

Teachers were asked to indicate any key characteristics of their classroom or population, including whether their class was an EL/sheltered classroom, a special education/resource room, whether they had a high number of English Learners or students with IEPs or 504 plans regardless of the official designation of the class, if they had a high number of attendance issues, or many students reading below grade level.

The two districts differed significantly in almost every case. Significantly more CA teachers reported teaching in a designated EL or sheltered classroom (63% vs. 13%), and those who did not teach in such a classroom still reported having a high number of ELs in their classrooms at higher rates than the FL teachers (31% vs. 19%). More CA teachers reported teaching a special education or resource class (12% vs. 3%), but more FL teachers reported having a high number of IEP or 504 students in their classrooms (41% vs. 12%). A small to moderate number of teachers in both districts reported attendance issues (25% in CA, 15% in FL), and the majority of teachers in both districts reported a high number of students who read below grade level (84% in CA, 78% in FL). Across the board, treatment teachers reported having all of these factors present in their classrooms at a slightly higher rate than control teachers did.

Fig. 12. Breakdown of online survey respondents by special classroom features

The frequency with which teachers screened students for reading difficulties was not appreciably

Designated EL/Sheltered			
	Tx	Cx	Totals
CA	79%	50%	65%
FL	21%	5%	13%
Totals	46%	23%	

Special Ed/Resource			
	Tx	Cx	Totals
CA	7%	17%	12%
FL	7%	0%	3%
Totals	7%	6%	

Attendance Issues			
	Tx	Cx	Totals
CA	36%	17%	27%
FL	14%	16%	15%
Totals	24%	16%	

Not sheltered, high EL population			
	Tx	Cx	Totals
CA	79%	50%	65%
FL	21%	5%	13%
Totals	46%	23%	

Not special ed, high IEP/504 population			
	Tx	Cx	Totals
CA	7%	17%	12%
FL	7%	0%	3%
Totals	7%	6%	

Many students reading below grade			
	Tx	Cx	Totals
CA	36%	17%	27%
FL	14%	16%	15%
Totals	24%	16%	

different between the two districts or between the treatment and control group. Most teachers reported spending 30 to 60 minutes per day on differentiated reading instruction. There were not marked differences between the two districts or the treatment and control groups, though the FL and treatment groups did skew very slightly higher.

Survey respondents reported a wide range of frequency in terms of students reading nonfiction in their classrooms, from daily to monthly, but the majority (or close to a majority) of teachers across both districts and in both conditions reported having their students read nonfiction weekly.

Treatment teachers reported having their students read nonfiction significantly more often than controls, with 41% reporting daily and 59% reporting weekly, versus 26% and 48% for controls.

Fig. 13. Breakdown of online survey respondents by time spent reading nonfiction.

How often do students read nonfiction in class?		Treatment	Control	Totals
CA	Daily	5	1	23%
	Weekly	9	6	58%
	1-2 per month	0	5	19%
FL	Daily	8	7	41%
	Weekly	10	9	51%
	1-2 per month	0	3	33%
Totals	Daily	41%	26%	54%
	Weekly	59%	48%	13%
	1-2 per month	0%	26%	0%

Fig. 14. Online survey respondents time spent reading nonfiction by usage groups.

In the active and less-active usage groups, the majority of teachers reported that students read nonfiction in class daily whereas the majority of teachers in the average usage group reported that students read nonfiction in class once per week.

How often do students read nonfiction in class?	Active Usage Group	Average Usage Group	Low Usage Group
Daily	4	7	2
Weekly	2	16	1
1-2 per month	0	0	0

When asked whether they used texts of varying reading levels for groups of different ability levels, nearly all teachers reported that they did. 100% of the CA teachers reported that they did so, while 89% of the FL group did. It is interesting to note that while all of the CA treatment teachers said yes, only 94% of the FL treatment teachers said they did so (the same rate reported by the control group).

Fig. 15. Varying Reading Levels.

Do you use texts of varying reading level for different ability groups?				
		Treatment	Control	Totals
CA	Yes	14	12	100%
	No	0	0	0%
FL	Yes	16	17	89%
	No	2	2	11%
Totals	Yes	94%	94%	94%
	No	6%	3%	5%

Prior to Newsela

Interview participants described using a wide range of resources and curricular materials to teach nonfiction or informational text prior to participating in the Newsela study. Most said that they mostly used their adopted school curriculum (Wonders, Journeys, Houghton-Mifflin, Guided Reading, Accelerated Reader, science or social studies textbooks) but also supplemented with either a collection of the school's own resources (i.e., periodical subscriptions such as *Time* for kids, *Teen Tribute*, *Sports Illustrated* for kids, *National Geographic* for kids, *ZooBooks*) or a variety of nonfiction books such as *The Magic School Bus*. Many also mentioned that they spent significant amounts of time on their own searching online for additional texts or subscribed to periodicals like those above out of their own pocket, especially those who found their adopted curriculum unsatisfactory or whose schools did not have access to a large collection of grade level-appropriate nonfiction. Teachers also cited specific reading programs like iReady reading, Achieve 3000, and ReadWorks.org.

Nearly all of the interview participants described addressing students' varying reading levels as one of the biggest challenges they faced before Newsela. Several mentioned using Achieve 3000, iReady, or STAR test results to determine students' reading levels or strengths and weaknesses. Most teachers then said that they tried to accommodate students' different needs by locating a range of readings of different complexity that addressed the same topic, or closely related topics, an extremely inefficient and time-consuming strategy even for those with easy access to large nonfiction collections. Other strategies included using Leveled Readers, giving the students the same reading and varying the degree of scaffolding, or dividing students into ability groups and simply not worrying about students having texts on different topics. One teacher mentioned that ReadWorks.org has a variety of readings of different levels on a selected topic. All described Newsela as a better, more efficient alternative.

> *Addressing students' varying reading levels was one of the biggest challenges teachers faced before Newsela.*

Typical Use of Newsela

Phone Interview Subjects

Interview participants reported using Newsela in their classrooms one to four times per week (about twice per week on average) during their reading/ELA (or science) block as part of classwork, though they varied greatly to the extent that they used it with the whole group, in small groups, as independent work, or some combination of these. Nearly all teachers reported using Newsela in some kind of whole-group setting, and most also reported using it during rotating stations (i.e., small groups of students move around to different activities for set amounts of time, usually including a Newsela station as well as teacher-guided reading). Almost all teachers reported that completing two articles each week in enough depth to be meaningful seemed like about the right amount as long as the teacher prioritized and planned for it, and that although three was sometimes doable, it was more of a stretch. (Most teachers reported using a rotating schedule of using two articles for two weeks in a row, then three in the third week.) Several teachers also mentioned giving students opportunities to read additional articles on their own in their spare time or parents asking if they could have their students read additional articles at home. The number of articles assigned each week did not vary significantly between active users and less-active users.

Interview participants selected Newsela articles in a variety of ways. For almost all teachers, finding something that the students would find interesting and engaging was the top criteria in selecting an article, and many described selecting articles in response to students' interests in

particular topics (Star Wars, endangered species, gaming, etc.). Several, especially those who teach subjects in addition to ELA like social studies or science, mentioned intentionally selecting articles that supported or related to the topics the class was studying on other subject areas in order to make the most of limited class time and provide students with a topic where they already had some background information (the solar system, stem cells, historical figures, etc.). One teacher mentioned that he lets his class vote on the 3rd article in a given week (assigned for homework).

Only a few of the interview participants reported using Newsela as part of homework. Lack of device access at home was a common challenge, though one teacher reported that her students had no trouble doing the assignments on their phones, and a couple of teachers printed articles for students to read for homework and then had students type any responses later during class. (One reported that she was hesitant to do this because she did not feel printing out so many articles was environmentally sound.) A couple of teachers experimented with assigning articles for homework and abandoned it due to students' lack of device access, though one compromised by giving students the option of completing the homework article at home or in their spare time at school.

Teachers' whole-group use of Newsela followed one of three general patterns:

1. **Structured Whole-Class Newsela.** The teacher has the students complete the Newsela article in a whole-class setting in a highly structured way, alternating whole-group activities and discussions with chunks of individual reading/work time. (1 CA active user, 4 FL active users)

2. **Whole Class Start + Independent Newsela.** The teacher begins class with a non-Newsela activity (introducing the day's focus, a quiz, etc.) and may have a brief whole-class discussion about the subject matter of the article, then has the students read a Newsela article and complete the annotations, writing prompt, and/or quiz individually. (2 FL less-active users)

3. **Independent Newsela Only.** The teacher has the students read a Newsela article and complete the annotations, writing prompt, and/or quiz individually, start to finish. (2 CA less-active users, 1 CA power user)

Again, although the sample size is small, it is interesting to note that all four of the less-active users had students complete Newsela assignments independently, and all of the teachers whose instruction followed a structured, whole-class approach were identified as active users.

Fig. 16. Breakdown of the interview sample by whole-class implementation patterns.

	Active Users	Less-active Users
CA	1 Independent Newsela Only *1 Structured Whole-Class Newsela*	2 Independent Newsela Only
FL	*4 Structured Whole-Class Newsela*	2 Whole-Class Start + Independent Newsela

Structured Whole-Class Newsela implementation:

"The first time they read the article, I have them read independently and use the red highlighter to highlight unfamiliar words and phrases. [Next] I ask for anything they identified as unfamiliar in any section, and then we'll annotate the meaning of that word. Then we'll read together [out loud], and if there are annotations in the margin, [what we do with them] depends on the day. If it's the first day of the week that I'm using Newsela, then I'll model that for them. I'll model my thinking and type it in and they can type along with me. If it's the second day, I'll have them turn and talk with partner or small group, and they'll type it in and we'll discuss as a class. If it's the third day that I'm using Newsela that week or the third time in a series, they do the annotations independently. I'll either have them do the annotations or the writing prompt, and I always have them do the quiz, but I never have them do annotations, writing prompt, and the quiz….If there are no annotations, then typically it's the same process except we'll verbally talk about those questions [rather than] typing them in the margins. Then they always take the quiz independently on their own at the end." ~CA Active User

Whole-Class Start + Independent Newsela implementation:

Independent Newsela Only:

> *"They come in and sit down at their regular desks, they log into Newsela, and then they click on the article that's assigned. They'll read it by themselves, answer the quiz by themselves, and do the writing prompt by themselves....Some kids are done very quickly, in 15-20 minutes, and some kids take 45-50 minutes. I would say the average is about 30 minutes....The kids who were done would do Google classroom assignments or work on their math or their typing skills. Or some of them actually read other Newsela articles. They'll scroll down and say, 'Can I read another one?' 'Absolutely!' I know initially I would say, 'The article is about this today, it's going to further your understanding about this today,' I would sort of 'pre-tell' them what it was, but at the end, time sort of ran out." ~CA Less-active User*

Preparing for a Newsela Lesson

Nearly all teachers said that they began planning for a Newsela lesson by deciding either on their

> *"If it's a Newsela day, I usually have a pre- or post-learning bell ringer, meaning I'm about to introduce something new. So when they walk in, they know I've left a quiz in their portal, maybe five questions, to see where they're at. Then we'll review the quiz and [I'll tell them] we're going to start on something new....With Newsela, I'll sometimes change my classroom to a U, and I like to call that 'we're talking' time, so we're going to talk about whatever subject matter the article is addressing to see what they know and feel about it, so their mind is thinking about that subject. At that point, I'll give them twenty minutes...after we've talked, and I'll assign the article to them in class. Read it, answer the questions, do the writing prompt, and if they're finished early and we haven't moved on, then [I'll tell them] 'Okay, start reading some independent articles.' After that, sometimes we'll review the questions. Sometimes I'll put annotations that will scaffold my lesson while they're reading, and then we'll talk about it after they've done the reading and the questions." ~FL Less-active User*

instructional purpose for the lesson or which topic they wanted students to read about. Teachers were more likely to select an article according to the learning objective for the day if the focus of the assignment was specifically ELA or reading; in those cases, teachers might look for something using the filters that particularly lent itself to teaching a concept like main idea, comparing and

contrasting, or looking for supporting evidence. In addition to ELA standards, teachers with large blocks of time in which they needed to teach other subject areas in addition to ELA sometimes selected an article specifically to support or expand on a topic the class had been working on in social studies or science using the filters. However, again, all teachers stressed that the most important aspect of selecting articles was finding something engaging that the students would find interesting.

The two less-active CA teachers reported that they did not use many of the "pro" resources and focused primarily on finding a text that the students would enjoy. The rest of the teachers reported using resources like the lesson suggestions, Newsela emails, or pre-written questions, writing prompts, and annotations at least some of the time; four the teachers (including the two less-active FL teachers) expressed great enthusiasm for these resources and reported using them frequently to help plan their lessons. One active user said that she tended to look more for articles that included lesson suggestions because it saved her time. A few teachers said that they found the writing prompts and annotations helpful, but sometimes changed them in order to better fit with the lesson.

> *"The best thing about Newsela to me is the autonomy you have as a teacher to make the articles fit what you're teaching."* ~CA Active User

Nearly all teachers said that they found the teacher binder to be a great help in preparing for a lesson and determining what to do next in their instruction. A few of the teachers mentioned liking and using the text sets on a regular basis, and a few mentioned that they hadn't yet had enough time using Newsela to become comfortable using all the tools that are available but would like to in the future.

> *Teachers used the results from the quizzes and writing prompts to determine the success of a Newsela lesson.*

All ten teachers reported that they judged whether a Newsela lesson had been successful by looking at the results from the Newsela quizzes and students' responses to the writing prompts. About half of the teachers also mentioned looking at students' responses to the annotations, and a couple mentioned students' engagement or ability to answer questions in a whole-class or small-group discussion after reading the article, but teachers' first comments nearly always referred to quiz results or writing prompt responses. Teachers also mentioned that the ability to customize prompts and annotations was valuable for assessment purposes, because these features could be adjusted to precisely reflect the topic or idea that the teacher wanted to assess.

Online Survey Respondents

Online survey respondents from the treatment condition were asked what teaching strategies they most commonly employed as they implemented Newsela, and whether or not they used students' Newsela work in their grading scheme. Students reading on topics currently studying in class was the most popular strategy across state and usage-group. Of note, all of the teachers in the active-usage group also had students use Newsela as part of their homework. All results are summarized below.

Fig. 17. Breakdown of treatment online survey respondents by Newsela teaching strategies.

Please tell us about the strategies you use for teaching information text through Newsela.		
CA	Students pick topics of their choice	79%
	Students read on topics we're currently studying in class	93%
	Students read informational text as part of homework	43%
	Students read informational text in other subject domains, so I do not address it in my class	14%
	Students choose the topic one out of three times	0%
FL	Students pick topics of their choice	78%
	Students read on topics we're currently studying in class	100%
	Students read informational text as part of homework	68%
	Students read informational text in other subject domains, so I do not address it in my class	6%
	Students choose the topic one out of three times	6%

Fig. 18. Online survey respondents by Newsela teaching strategies and by usage groups.

Please tell us about the strategies you use for teaching information text through Newsela.		
Active Usage Teachers	Students pick topics of their choice	100%
	Students read on topics we're currently studying in class	100%

	Students read informational text as part of homework	100%
	Students read informational text in other subject domains, so I do not address it in my class	16%
	Students choose the topic one out of three times	16%
Average Usage Teachers	Students pick topics of their choice	70%
	Students read on topics we're currently studying in class	96%
	Students read informational text as part of homework	43%
	Students read informational text in other subject domains, so I do not address it in my class	9%
	Students choose the topic one out of three times	0%
Low Usage Teachers	Students pick topics of their choice	100%
	Students read on topics we're currently studying in class	100%
	Students read informational text as part of homework	66%
	Students read informational text in other subject domains, so I do not address it in my class	0%
	Students choose the topic one out of three times	0%

Fig. 19. Breakdown of treatment online survey respondents by use of Newsela in grading scheme.

Does Newsela count toward a grade?		
CA	Yes	64%
	No	36%
FL	Yes	89%
	No	11%

Teachers' Feedback on Newsela

Teachers reported few, relatively minor challenges with using Newsela in their classrooms. The

challenges each group of teachers reported are summarized below.

Phone Interview Subjects

Active Users:

- It's difficult to print out student data; the Excel format is not printer-friendly.

- Lack of computer availability (only having access to a computer lab twice a week)

- Because so many students are ELL, exceptional needs, etc., they are often in and out of the classroom and sometimes miss all or part of Newsela lessons.

- Because standardized testing requires computer use, it has been more challenging to use Newsela consistently during testing season.

- On some days the site has been very slow to load.

Less-active Users:

- Availability of enough working devices for the whole class (not all ChromeBooks in the cart are always working)

- Because standardized testing requires computer use, it has been more challenging to use Newsela consistently during testing season.

- Many students do not have computers at home, making it difficult or impossible to assign Newsela for homework.

- Adding groups has been difficult.

- Some students occasionally get locked out of their accounts and have to create multiple accounts, or are suddenly logged out by the system while working on an assignment.

- Students sometimes adjust the Lexile level on their own to get an easier reading assignment or quiz.

- Student motivation; some students struggled with using the program, which made them less willing to engage with it.

- On some days the site has been very slow to load.

Near the end of the interview, teachers were asked, "If you could wave a magic wand and enable Newsela to do something that it can't currently do, what would it be and why?" Teachers' responses are summarized below.

Active Users:

- Add an easy-to-print format for the student data.

- Vary the writing prompts slightly.

- Provide additional training/professional development on different features.

- Be able to look at two different articles at the same time.

- Be able to assign particular articles to individual students rather than the whole class based on individual interests. "I think I would like to be able to assign particular articles only to certain students rather than the whole class, because just based on their interest, obviously not every kid is interested in the same thing, so if there's an article about Star Wars that I know a particular group is going to be interested in, but this group might want to read more about endangered species, it would nice to be able to just assign some kids certain articles." ~FL active user

- Have math and science standards visible on STEM-related articles.

- Be able to track students' progress over time and see in which areas they are making gains or less-active, and make recommendations about what to focus on with students next.

Less-active Users:

- Give the program the ability to read an article out loud to students in order to support non-readers and very new ELL students.

- Add the capability for Newsela to interface with teacher gradebook programs, or add the ability to export data into a format that can be easily uploaded to popular gradebook programs. (Currently teachers must manually flip back and forth between the two programs and type in each students' score for each assignment, which is inefficient and time consuming.)

- Include individual standards, rather than just the domain.

- Be able to lock students' levels so that they can't adjust them themselves.

- Once you've navigated from an individual student to the articles that s/he's read, have a one-click option to return to the individual students' profile.

Online Survey Respondents

Online survey respondents in the treatment condition were also asked what challenges they faced in their classrooms as they implemented Newsela, as well as what about the product they would like to see changed. Many of the responses overlapped with those mentioned by the interview subjects and are summarized below.

Challenges:

Fig. 20. Challenges Expressed by Teachers in CA and FL

What challenges have you experienced as you implement Newsela in your classroom?		
CA	Lack of access to devices in the school	31%
	Lack of student engagement or motivation	8%
	Not well aligned with current curriculum	4%
	Other	4%
FL	Lack of access to devices in the school	0%
	Lack of student engagement or motivation	3%
	Not well aligned with current curriculum	0%
	Other	16%

It is not surprising that FL teachers reported no challenges with lack of device access since FL features digital classrooms with one-to-one device access for all students, while CA teachers must rely on booking separate computer labs or laptop carts.

Fig. 21. Challenges Expressed by Usage Groups

What challenges have you experienced as you implement Newsela in your classroom?		
Active Usage Teachers	Lack of access to devices in the school	16%
	Testing schedule in schools	16%
	Not well aligned with current curriculum	0%
	Other (progress monitoring reports not clear)	50%
Average Usage Teachers	Lack of access to devices in the school	26%
	Testing schedule in schools	43%
	Lack of student engagement or motivation	4%
	Not well aligned with current curriculum	4%
	Other	17%

Low Usage Teachers	Testing schedule in schools	66%
	Lack of student engagement or motivation	33%
	Not well aligned with current curriculum	0%
	Other	0%

Changes Requested by More Than One User:

- Improve the usability of the reports. Many teachers felt that the reports were difficult to use and needed to be more user friendly. Some mentioned that the process of accessing the reports was tedious, that they could not always remember how to access them, that the reports could be difficult to print (particularly on a single page), and it could be challenging to decipher the information shown there. One teacher also mentioned that she would like to be able to see student usage data.
- Add the capability for Newsela to interface with teacher gradebook programs, or add the ability to export data into a format that can be easily uploaded to popular gradebook programs.
- Give the program the ability to read an article out loud to students in order to support non-readers and very new ELL students.

Changes Requested by One User:

- Be able to look at two different articles at the same time.
- Be able to print hard copies of articles.
- Have math and science standards visible on STEM-related articles, and include individual standards rather than just the domain.
- Add the ability to lock students' Lexile levels (so that students cannot change them on their own)
- Add an auto-grading feature for writing and annotations
- Include more literature and less nonfiction.

Changes in students

Of the ten teachers, eight mentioned that during the pilot study of Newsela, they felt their students had become more engaged and interested in reading informational text and that their enjoyment of and motivation for reading had increased. As one FL active user said, "I do think it's definitely less of a struggle to get them engaged in informational text because the articles are interesting and I can choose them based on what I think they're going to be interested in. I do think it's really

helped keep them engaged in informational text."

These teachers also mentioned that their students had become more confident in their reading skills and spontaneously begun making connections between different Newsela articles they had read, between Newsela articles and content they were learning in science or social studies classes, or between Newsela articles and current events. Several of the teachers mentioned that the students were often excited about using Newsela and looked forward to it, and sometimes even asked to be assigned

> *"There's so much going on in current events in our world, so they really get excited when they've watched the news with their parents or their parents have talked about something…and they love it because they have some background knowledge….I've had a few parents email me just to say, 'Wow, what are you doing in there?...I didn't even know what was going on and I couldn't believe how much he knew!'"*
> *~FL Active User*

additional articles. "Sometimes there are some students who are like, 'Ms. M, can you assign me some extra articles?'," said a FL less-active user. "So they're reading and exploring more, and some students even when I give them independent time, they say, 'Can you just assign it?', because I try to give them different things, and they seem to enjoy that." Overwhelmingly, the teachers attributed these changes to students reading texts that they found interesting and relevant, and in some cases, having the autonomy to search for articles on a topic they were personally interested in.

"My students love Newsela," said a FL active user. "They're always asking about new articles that we have for the week, they're really excited to read them, they mention different topics that they've read about from Newsela in person to me, to their parents, to their friends, and I think that's really interesting because with the other articles I used to use back in the day, my kids were not as engaged…I've found they're talking about the topics more outside of class and I think that's really interesting to see, and I think that's showing a deeper level of engagement than other resources that I've used." A less-active FL user told us, "There is more of a responsibility to read. In the beginning of the school year I would assign articles or readings or questions and they just wouldn't get done. But just them being allowed to choose content, because a lot of the programs that we use, it usually spits out articles for them. There's not a search feature where they can choose an article, so the fact that they have the autonomy to do that, they have more of a love for reading. They're taking more ownership of their reading, and I've seen a gain in their reading from that aspect, and the time that they spend on task with it."

A less-active CA user mentioned that her students become more interested and engaged in the world at large, thanks to the opportunity to read about students like themselves engaging in diverse pursuits they might not otherwise have been exposed to. She also reported that her students have shown interest in careers that they weren't aware of before, like cartoonist or architect, thanks to Newsela articles. "It did spark a lot of conversation....[W]e're doing engineering right now in math,

so I picked an article about a boy baking gingerbread houses because that's his dream, he wants to make a real house. I think that helps bring it back to the kids and remind them that this kid was eight years old, and they're nine and ten years old, so they could do the same thing. So maybe during our other lessons it would empower them to know that there are outside people doing great things that they could do as well."

> "I've seen a spark of interest in reading, because of Newsela, because there's choice….I think it's showed them futures that are possible and increased their motivation to do better in school. It's exposed them to the world, it opened their horizons, especially with the jobs and things like that….Kids are like, 'I'm drawing now because I want to be a cartoonist!' And I'm like okay, that thought wasn't even there but Newsela put it there or allowed me to put it there." ~CA Less-active User

Two of the teachers mentioned that they had seen some improvement in some of their students' ELA skills. One CA active user said that all of her students had gone up in reading level since starting Newsela, and a FL less-active user mentioned that she has seen marked improvement in a particular struggling student and that their other ELA teacher felt the students' reading comprehension had improved over the course of the study. Finally, a CA active user mentioned that although his students struggled with using Newsela at the beginning of the study, they had all become much more comfortable with it over time.

It is interesting to note that as distinct groups, the active users did not report significantly different changes in their students or lessons after using Newsela for a semester than the less-active users. Both groups saw positive changes related mostly to engagement and motivation, with a couple of comments related to potential gains in reading skill/ability.

Online survey respondents in the treatment condition were also asked how engaged their students were with Newsela on a scale of 1-10. In general, teachers reported quite high student engagement, with only a single teacher in each district reporting very low engagement.

Fig. 22. Student engagement with Newsela as reported by online survey respondents.

On a scale of 1 - 10, how engaged are your students on the Newsela platform?			
	CA	FL	Totals
1-2	0	1	1
3-4	1	0	1
5-6	0	4	4
7-8	11	7	18

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9-10	2	12	14
Mean	7.9	7.7	7.8
Mode	9	8	8

Continuing with Newsela

Near the end of the interview, teachers were asked, "On a scale of 1 - 10, how likely are you to continue using Newsela in your classroom after the pilot study is complete (with 1 meaning absolutely not and 10 meaning definitely)?" All teachers answered 8, 9, or 10, with most teachers, even those identified as less-active users, answering 10.

Fig. 23. Breakdown of the interview sample by likelihood of continuing to use Newsela (1 = absolutely not, 10 = definitely).

	Active Users	Less-active Users	Average
CA	10	8.5	9.25
FL	9.4	10	9.6
Average	9.6	9.25	

Fig. 24. Breakdown of the online sample by likelihood of continuing to use Newsela (1 = absolutely not, 10 = definitely).

	Active Users	Average Users	Low Users	Average
CA	9	8.45	2	8
FL	9.25	9.11	8	9
Average	9.16	8.86	5	8.7

When asked why they gave the number they did, teachers cited the motivation that Newsela provides for students, ease of differentiating for a variety of reading levels, diversity of the available readings, easily accessible data for teachers, and instant feedback for students. By far the biggest reservation teachers mentioned for *not* continuing with Newsela was the cost and whether their schools or districts would be able or agree to pay for the Pro version. The only other reason teachers gave for potentially not continuing with Newsela was the amount of time required to get out and put away computers, which detracts from instructional time.

Online treatment respondents were asked the same question. As with the interview subjects, the vast majority of respondents indicated that they would probably or definitely like to continue using Newsela after the pilot study, with only one teacher indicating a lack of interest in continuing to use the product.

Fig. 25. Breakdown of the interview sample by likelihood of continuing to use Newsela (1 = absolutely not, 10 = definitely).

On a scale of 1 - 10, how likely are you to continue using the Newsela platform?			
	CA	FL	Totals
1-2	1	0	1
3-4	0	0	0
5-6	1	1	2
7-8	5	6	11
9-10	7	17	24
Mean	8.7	8.1	8.6
Mode	10	10	10

Conclusions

Based on teacher interview data, there were no significant differences between teachers categorized as active users and those categorized as less-active users in terms of student population, class size, dosage, device access, attitudes and beliefs about teaching and learning reading, features used, what elements of reading teachers emphasized, or changes in students/lessons since introducing Newsela. However, two significant differences did emerge between the groups.

1) Average years of classroom teaching experience. While active users had an average of 16.5 years of experience, less-active users had only 5.9 years. This may suggest that the

ability to implement Newsela consistently and effectively may in part be a consequence of simply having more experience and skill managing the numerous factors that teachers must coordinate each day, including lesson planning and execution, logistical tasks and routines, students' academic progress, managing materials, student behavior, parent communication, administrative duties, etc.

2) Whole-class implementation patterns. Active users were more likely to use Newsela in a whole-class setting and in a pre-planned, highly structured way that supported students through each phase of the activity, including strategies like activating prior knowledge, pair or small group talk, and modeling. Less-active users were more likely to assign students to work through the article on their own with little or no structure or support beyond what is provided by the program itself.

In addition to these differences, we noted some additional significant differences between the two CA less-active users and the two FL less-active users. The two CA less-active users were by far the group that seemed to face the most challenges in implementing Newsela efficiently and effectively, and differed from the FL less-active users in some key ways.

1) Whereas the FL less-active users were generally positive about their ability to engage students in using Newsela and about the ability of *all* of their students to grow in their reading abilities and make progress in topics and skills related to ELA, the CA less-active users seemed more resigned to the idea that some aspects of using Newsela would always be challenging for themselves and their students, and expressed less of a sense of efficacy around helping their students to improve their literacy skills and progress in their reading ability.

2) Unlike the FL less-active users, the CA less-active users reported using few or no "Pro" resources with their students, mostly due to time and trying to prioritize finding articles that students would find interesting and engaging, or feeling overwhelmed.

3) The CA less-active users reported more technological and logistical challenges than the FL less-active users (students getting locked out of their accounts and having to create new ones, adding groups, time spent getting out and putting away computers, etc.).

In general, the FL less-active users seemed more optimistic about their own abilities to use the program effectively, as well as students' abilities to both engage with and use the program productively and to improve their literacy skills with time and practice. Although the FL less-active users described some challenges to using Newsela, their comments for the most part seemed to reflect a belief that those challenges were surmountable, particularly as both teachers and students became more accustomed to using the program; the CA less-active users, in contrast, seemed more overwhelmed by the time and effort involved in learning to use a new tool and also

teaching students to use it, as well as the logistical factors involved.

In spite of some challenges, all teachers seemed to enjoy the opportunity to try out Newsela in their classrooms, and teachers in both districts and in both groups (active and less-active users) had many of the same positive things to say about the product. Aside from the ever-present challenge of device

> *"Whatever you guys are doing, it's a great thing. Keep giving teachers more opportunities to use it. If they use it they will want it, like me."* ~FL *Less-active User*

access and availability, for the most part they found the program easy to use and integrate into their lessons in a way that supported their learning goals around ELA, reading comprehension, and writing. They particularly appreciated the ability to adjust the Lexile level individually for each student and better address each students' learning needs. They found great value in the diversity of texts available and the rate at which new, up-to-date texts are added, and were easily able to find texts that they felt students would find interesting and relevant.

Although they offered suggestions for improving the usability of the program (printer-friendly student data, the ability to assign articles to individual students, the ability to look at two articles at once), all felt that they would like to continue using Newsela in their classrooms, cost-permitting. They cited a wide range of possible uses for the program and overall felt that it had contributed to increased student learning and engagement around informational text and nonfiction in their classrooms.

Summary

Based on the new Every Student Succeeds Act (ESSA, 2015) evidence standards, Newsela could be considered an "evidence-based" instructional platform with promising evidence. Newsela shows good promise as a literacy tool to improve reading comprehension and motivation to read. Overall, Treatment students showed greater growth in their reading comprehension and motivation-to-read than did students in the Control group. Specifically, when the treatment students used Newsela at the recommended dosage, the results of the impact of Newsela on student outcomes were consistently positive indicating that Newsela students saw larger growth than the control students in the 14-week study. This is particularly compelling given the brevity of the intervention and variability in expected dosage. Moreover, the positive outcomes are likely to improve with increased exposure to Newsela. Finally, qualitatively, researcher observations and notes indicated that teachers, regardless of their designation as a "active" or "less-active" user liked the Newsela program. Specifically, teachers valued the large catalog of diverse and leveled text that were relevant to their students and to their instructional content. Further, all teachers reported that they would like to continue to use Newsela.

Limitations

Although the Newsela study was well-designed, there were two problems with the study implementation: a) differential attrition and b) the variability of implementation among treatment teachers, particularly as it related to dosage. Despite these limitations, the study still demonstrated promising outcomes for reading comprehension and motivation to read. We consistently observed small to meaningful positive effects for those students who used Newsela at the recommend dosage suggesting higher growth for students who used Newsela. These positive effects were observed in both reading comprehension and motivation for reading. These consistent findings highlight the potential impact of Newsela when implemented as recommended in a classroom literacy rotation (i.e., consistent and increased dosage over a longer period of time).

Directions of Future Research

This preliminary study of promise demonstrates a rationale for ongoing efforts to examine the effects of Newsela when implemented under ideal conditions and for adequate duration. Not only was the current study limited in its recommended dosage of only 2 articles a week for 14 weeks, just over 50% of treatment students actually received the recommended dosage. When dosage was examined as part of student growth on the STAR Reading Comprehension measure, there was a clear benefit to the students who received the minimum recommended dose. In addition to increasing the length and dosage of future studies, it will be important to work more closely with treatment teachers under ideal conditions to adequately evaluate Newsela's potential impact. Additional qualitative data, including classroom observations, teacher interviews, and student surveys could also help to determine any potential barriers to implementation beyond issues with devices and/or connectivity.