



ReadTheory.org Data Collection Study 2.0

A Preliminary Study Concerning the Effectiveness of an Online
Reading Comprehension and Writing Program

March 2016

Genevieve Romeo, Ph.D.

University of North Carolina at Chapel Hill

Tanner Hock B.A.

College of Charleston, South Carolina

Amanda Plante-Kropp B.A.

University of North Carolina at Chapel Hill

Abstract

ReadTheory.org is an interactive website designed to serve as a computer-based supplemental reading program for students in grades 1 through 12. The website provides a wide variety of reading comprehension exercises and follow-up essay options for writing practice. ReadTheory's unique features are its rejection of a paid licensing or fee-for-use model, its incorporation of game mechanics, and its responsive leveling algorithm, which allows students to be presented with best-fit material based on prior performance.

The purpose of this research was to investigate ReadTheory.org's impact on student grades, standardized test scores, and overall reading confidence and ability. Over 1100 professional educators were surveyed. Their responses provide strong evidence to suggest ReadTheory has had a positive effect on these three measures. Additionally, both student and teacher satisfaction with ReadTheory were found to be high.

Introduction

In the United States, tens of millions of unique users access online learning platforms every month, with continued exponential growth expected (Murphy et al., 2014). However, this technological revolution has not reached all students equally, with platform licensing costs providing a high entry barrier

to under-resourced schools. Providing low- and no-cost online learning platforms are an effective way to overcome this barrier. Furthermore, these platforms must be made lively and engaging. Instructional technology professor Karl M. Kapp writes, “Elements such as assigning points to activities, presenting corrective feedback, and encouraging collaboration have been the staples of many educational practitioners. The difference is that gamification provides another layer of interest and a new way of weaving together those elements into an engaging game space that both motivates and educates learners” (Kapp, 2012:12).

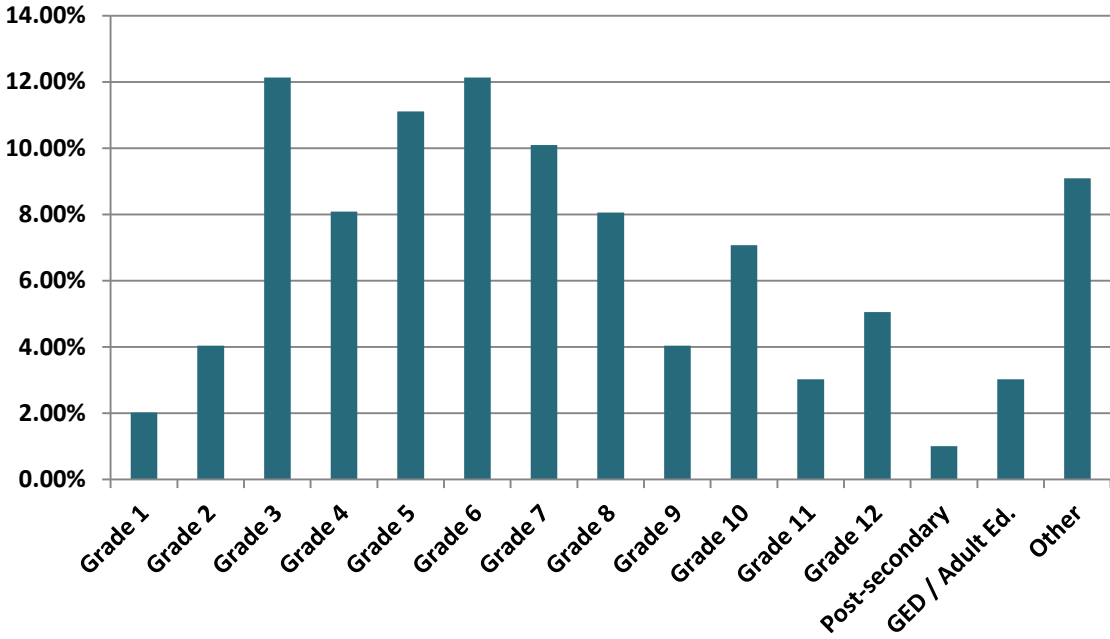
ReadTheory.org combines a no-cost, personalized online learning environment with increasing degrees of motivational gamified content. More importantly, all content on ReadTheory is in line with grade-specific Common Core State Standards on English Language Arts, ensuring that in-program progress translates to offline success on state standardized tests (Common Core, 2010). In keeping with the Common Core, ReadTheory activities are designed to foster critical thinking skills, enrich vocabulary, and prepare students for college- and career-relevant literacy.

Methods

ReadTheory collected data from 1100 professional educators who have used the program in their classrooms for a duration of 1-12 months since the program’s inception in 2014. Data was collected via a standardized questionnaire and in some cases validated via interpersonal communication. Data was collected during the month of February 2016. Responses to the questionnaire were submitted on a voluntary basis. This data has been used to draw conclusions regarding the effectiveness of the program.

Results

Respondents were distributed randomly across 15 categories with regard to the education level of the students with whom ReadTheory is being used. With respect to questionnaire respondents, the program is being used primary by teachers and students in grades 3 through 8. A significant number of responses pertaining to the “Other” category reflect data collected from school administrators, instructional facilitators, and auxiliary support staff.



Of teachers who have used the program long enough to note a sustained change in student standardized test scores, over 80% of respondents reported that ReadTheory has contributed to an increase in scores.* Students whose scores have remained the same comprised 11.34%. Students whose scores have increased slightly comprised 23.71%. Students whose scores have greatly increased comprised 4.12%.

Student Standardized Test Score Outcomes After Using ReadTheory

Weight	1	2	3	4	5		
Outcome	Student scores have greatly decreased	Student scores have slightly decreased	Student scores have remained the same	Student scores have slightly increased	Student scores have greatly increased	N/A	Weighted Average
Percentage	1.03%	0.00%	11.34%	23.71%	4.12%	59.79%	3.74

*Results based on survey respondents who reported being able to determine the effect ReadTheory had on their students' grades.

Similarly, over 70% of educators who noticed an effect of ReadTheory on student grades reported that ReadTheory had contributed to an increase in student grades.* Students whose grades have remained the same comprised 16.67%. Students whose grades have increased slightly comprised 42.71%. Students whose grades have greatly increased comprised 3.13%.

Student Grade Score Outcomes After Using ReadTheory

Weight	1	2	3	4	5		
Outcome	Student grades have greatly decreased	Student grades have slightly decreased	Student grades have remained the same	Student grades have slightly increased	Student grades have greatly increased	N/A	Weighted Average
Percentage	1.04%	1.04%	16.67%	42.71%	3.13%	35.42%	3.71

* Results based on survey respondents who reported being able to determine the effect ReadTheory had on their students' grades.

Nearly 70% of respondents reported that ReadTheory has increased their students' confidence in taking reading comprehension tests.* Students whose confidence levels have remained the same comprised 19.39%. Students whose confidence levels have increased slightly comprised 65.31%. Students whose confidence levels have greatly increased comprised 15.31%.

Student Confidence Level Outcomes After Using ReadTheory

Weight	1	2	3	4	5		
Outcome	Student confidence levels have greatly decreased	Student confidence levels have slightly decreased	Student confidence levels have remained the same	Student confidence levels have slightly increased	Student confidence levels have greatly increased	N/A	Weighted Average

Level (1=No Interest, 10=Extremely Interesting)											
Percentage	0.00%	0.00%	0.92%	1.14%	6.21%	8.23%	14.43%	16.49%	22.68%	29.90%	8.23

Optional Respondent Commentary

Respondents were asked to submit optional comments regarding the program. Comments were selected based on their ability to further document the effectiveness of ReadTheory as well as their ability to provide additional information about the program that could not adequately be captured via questionnaire. Their comments are as follows.

“I love it. I think it is a valuable tool for helping kids grow as readers. I am requiring it for all of my students this year.”

- Karen Conner, 10th Grade Teacher

“This program is new to me and my classes, but I am extremely excited to have found it. I love the way students can "track" their progress as they go, know a challenge question takes extra work (and they work at them so they can get the bonus points), and I can easily see many different reports as to their progress. I look forward to using it for years to come.”

- Dawn Varner, 3rd Grade Reading Teacher, Farmersburg, IN

“Thank you for providing this wonderful website. I use it for IEP progress monitoring--thanks to the awesome data it provides--and recommend to parents for students to use at home. I have changed districts and introduced a whole new group of teachers to ReadTheory. A powerful, powerful tool, especially since Common Core was added!”

- Rochelle Spicer, 9th grade Resource Teacher, Olathe, KS

“Thank you for giving teachers a free alternative to helping students become better readers. As you are aware, teachers spend a great deal of money out of our own pockets to enhance our programs. It is wonderful to have such a quality program that is offered to educators at no cost. Thank you!!”

- W. Bilinsky, Middle School Teacher, Thorold, Ontario, Canada

“ReadTheory is an outstanding tool in my classroom. I do not know what I would be using if I had not discovered it. Thank you.”

- C.H., 4th Grade Teacher, Lewiston, ID

“I LOVE ReadTheory for several reasons. First, I consistently see very high-quality passages that are varied in style, format, and genre, [and are] interesting to read. Second, I love the questions. They are spot on to the type of academic reading my students will have to do in high school. They are learning new words, new contexts for those words, and enjoying the reading that goes with it. In addition, the writing assignments are varied and thought-provoking. My students get a lot out of crafting their responses. Finally, I love how manageable the program is. I can assign students a certain number of readings a week, require a couple of writing assignments, and go from there.”

- J.D., Middle School ESOL Teacher, VA

“I teach special education students who are several grade levels behind. I find that this program is quite beneficial for them. It allows them to look back at the passage to verify their answers and has other beneficial features too I recently instituted a competition between my students to see how many 100%s they can get when they are on Read Theory. They love it and it is paying off! The data provided by the website shows that their Lexiles are rising!”

- Ms. P, High School Specialized Support Teacher, San Antonio, TX

“I think that ReadTheory is a great program, and it has been a great benefit to my students, enabling me to provide differentiated reading to my students who have struggled to pass our state exam and are largely English Language Learners.”

- Gabriel Cerda, ELA Teacher, Pharr, TX

References

Murphy, R., Gallagher, L., Krumm, A., Mislevy, J., & Hafter, A. (2014). Brief on “Research on the Use of Khan Academy in Schools.” Menlo Park, CA: SRI International.

Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects. (2010). Common Core State Standards Initiative. Accessed from <http://www.corestandards.org/ELA-Literacy/>

Kapp, K. (2012). *The Gamification of Learning and Instruction: Game-Based Methods and Strategies for Training and Education*. San Francisco, CA: Pfeiffer.