

## **Data on *Readorium Scholar* and *Readorium Rising Reader* Field Testing**

***Readorium***® by Mtelegence Corporation, funded by a US Department of Education Small Business Innovative Research grant, is a "smart" web-based software program that teaches students how to construct deep meaning from science text. In 2010, Mtelegence was one of 14 companies nationally to receive a Phase 1 grant to develop and test the *Readorium Scholar* prototype. In 2011, Mtelegence was one of seven companies to receive the Phase 2 grant for full development of the program. In addition, the USDOE awarded a grant to Mtelegence to extend *Readorium Scholar* to upper elementary students by developing *Readorium Rising Reader* for grades 3-5. (In 2013, the USDOE awarded only 11 of these grants nationally.)

*Readorium Scholar* and *Readorium Rising Reader* are both research-based and aligned with the Next Generation Science Standards and Common Core's increased focus on informational text. Online guides lead students through interactive strategy lessons and content reading, helping them become self-reliant as they proceed. All text is written at 10-12 readability levels at half-year incremental gains. Leveling takes into account word familiarity, word/sentence complexity, and concept density. Each new chapter is automatically presented at a student's changing reading level. The level is based on the type of support needed to answer questions correctly in the previous chapter. The program content is rigorous for all students. Regardless of their level, they all receive the same information, content vocabulary, and answer the same main comprehension questions. Teachers can access three types of reports for whole classes and for individuals: overall reports, strategy reports, and content reports. They can also download classroom lessons in the system's Teacher Resource Center to target instruction to students with specific deficits.

*Readorium Scholar* was field-tested in 2010, 2012, and 2013 in demographically divergent districts in NJ and CT. The Mtelegence staff worked with research consultants from the University of Connecticut to conduct these field tests and analyze the results. A valid and reliable pre and post comprehension test, the Diagnostic Online Reading Assessment (DORA) by Let's Go Learn was administered to students just prior to and immediately after the 2012 and 2013 field tests. The results (in terms of reading comprehension gains) from these field tests were similar. This study was published in the September 2013 edition of the *Educational Research Quarterly*. Data from all three field tests were used to inform the continued development of both *Readorium Scholar* and *Readorium Rising Reader*.

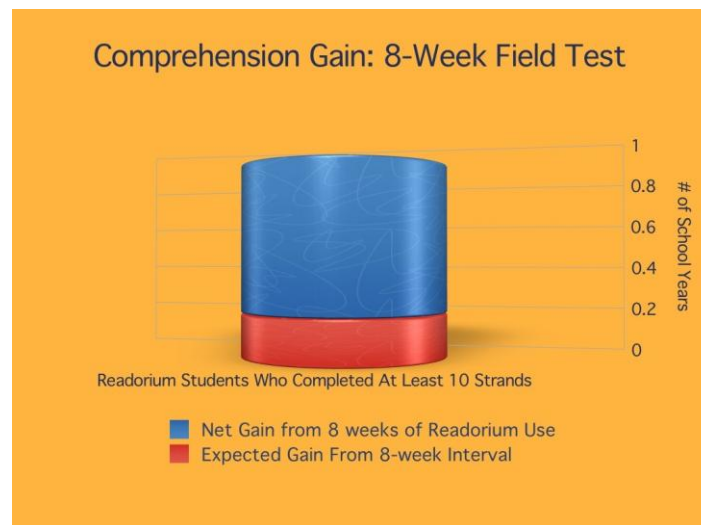
### **Results from the 2013 *Readorium* Field Test**

**2013 *Readorium Scholar* Field Testing:** *Readorium Scholar* was field-tested for 8 weeks, by 863 students, in 40 classrooms, in 9 diverse NJ districts in the spring of 2013. These districts were: Hackensack, Orange, Teaneck, Leonia, Hasbrouck Heights, Bridgewater-Raritan, Ridgfield Park, Passaic (Noble

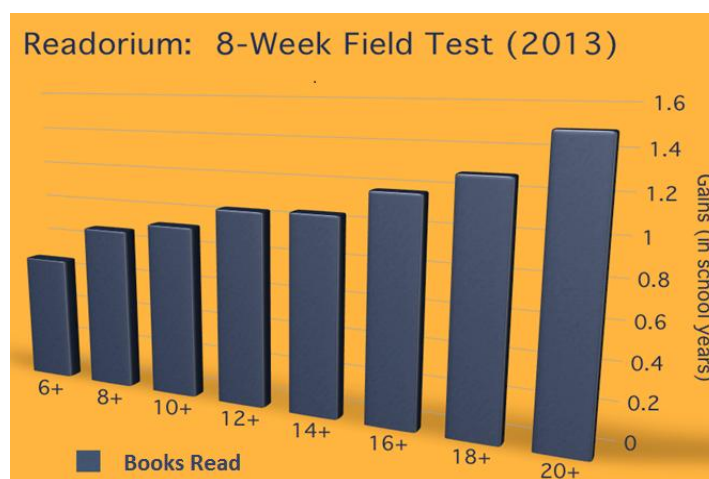
Academy), and Wood-Ridge. This field test was designed to determine the usability and feasibility of *Readorium* and the promise of the program to increase comprehension.

**Quantitative and Qualitative Results:** All field test students took an independent valid and reliable pre and post comprehension test, the Diagnostic Online Reading Assessment by Lets Go Learn. The following charts show the results.

### Field Test Results



This chart indicates the expected comprehension gains on DORA during the 8 week field test (in red) and the net gains from *Readorium* use (in blue). Students who completed at least 10 of the 40 topic series (books) gained almost a full year in comprehension in the 8-week field test period.



This chart indicates the gains students made based on the number of topic series they completed during the field test period. Students who read an average of 12 science books, or more, during the 8 week

field test averaged a full year or more gain in reading comprehension. There is a positive correlation between the number of series students read and their comprehension gains.



This chart indicates the comprehension gains students made depending on the number of hours they used the program. Students who used the program an average of 18 hours or more during the field test period averaged a full year or more gain in reading comprehension. There is a positive correlation between the number of hours students used the program and their comprehension gains.

### **Readorium Rising Reader**

A three-week field test of the *Readorium Rising Reader* (RRR) program was conducted with 200 students in schools in Hackensack, Teaneck, and Milburn in October 2013. Within this population there was a mix of special education, regular education, and gifted students. Once again, Mtelegence collaborated with research consultants at the University of CT. Qualitative and quantitative data about program use was collected from teachers, students, and from the program's engine. Teachers and students were interviewed and completed surveys. The program's engine also collected detailed data about the number and types of strategy lessons and books each student completed, the amount of support they needed to be successful, and their time on task. The system also collected open-ended feedback that students submitted through Reflection Sheets after each book and through the "Share an Idea" feature of the program.

The feedback was overwhelmingly positive. Both students and teachers reported that students were able to transfer the strategies learned in the program to understand outside text, and were more enthusiastic about nonfiction reading because of program use. Features such as strategy raps and animations, humor, games, challenges, and the reward system were highly motivating to students. Students spoke enthusiastically about the content they read. They found the program "fun" and felt that the level of the material was "just right." Virtually all students and teachers involved would recommend the program to others. (Filmed teacher and student interviews are available upon request.)