

## Smartphone beats paper for some with dyslexia

August 29 2014, by Miles O'brien

Matthew Schneps is a researcher at Harvard University with a doctorate in physics from the Massachusetts Institute of Technology (MIT). He also happens to have dyslexia, so reading has always been a challenge for him. That is, until he got a smartphone. Schneps soon found that for him, a smartphone was easier to read than a paper or a book. But, was it just him? Or, had he stumbled onto something that could help others with dyslexia?

Schneps was at the Harvard Smithsonian Center for Astrophysics at the time, specializing in how people learn science. With support from the National Science Foundation (NSF), he decided to put his smartphone theory to the test. The faculty and about 100 <u>students</u> at the Landmark School near Boston volunteered to take part. The <u>high school</u> specializes in helping students overcome learning disabilities, such as <u>dyslexia</u>.

Schneps and his team monitored students with dyslexia while the students read to see if reading off smartphones and tablets would improve the students' comprehension of STEM subjects—science, technology, education and math. He found that reading off an iPod benefitted those dyslexic students who exhibit signs of visual attention deficits. What helped was to show only two or three words on a line. Schneps says that in this age of electronic publishing, his research lends new hope to one out of every five people who currently struggles with reading. For many, simply reconfiguring the layout of the text on an electronic reader may make all the difference.



"NSF's investment in this educational research project reflects our commitment to advancing the learning and participation of students with disabilities in the STEM fields," says Mark Leddy, a program director, who manages NSF research on disabilities and STEM education within the agency's Directorate for Education and Human Resources.

**More information:** "E-Readers Are More Effective than Paper for Some with Dyslexia." Matthew H. Schneps mail. Jenny M. Thomson, et al. *PLOS One* Published: September 18, 2013DOI: 10.1371/journal.pone.0075634

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