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Reading boosts brain pathways, affects multiple disciplines

By Jenna Zwang, Assistant Editor, *eSchool News* (*http://www.eschoolnews.com*)

Pathways within the brain can be strengthened by reading and language exposure, researchers say…

Recent research shows that reading has a massive impact on brain function and can actually affect understanding in nearly all school subjects.

Neuroscientist Stanislaus Dehaene conducted research (http://www.sciencemag.org/content/330/6009/1359.abstract) on the brain function of Portuguese-speaking Brazilian adults, both those who had learned to read and those who were illiterate. Dehaene chose Brazil because of its lack of compulsory education laws. Some of the population voluntarily forewent education, while others lacked access. The adults were matched for socio-economic status (SES) so the results would not be biased by educational or income level.

Martha Burns, an associate professor at Northwestern University and a speech and language pathologist, recently examined Dehaene's studies in a blog post (http://www.scilearn.com/blog/learning-to-read-effect-on-the-brain.php).

"A person who is a reader actually listens better," said Burns. "They actually listen to speech and process speech faster and in more detail."

Dehaene then proceeded to teach the illiterate adults to read, and found astonishing results, which Burns expanded on in her blog.

"Lo and behold, their brains changed dramatically in the same way the literate adults who had read their whole lives changed. Their visual perceptual skills improved, their auditory listening skills improved, and their ability to drive this whole left hemisphere symbolic problem-solving way of syncing changed," Burns said.

This crux of the study has significant implications for educators.

(Note: There is more to this article, but it is available only to subscribers.)