

# Poor Working Memory Tied to Low School Scores

March 3 (HealthDay News) -- Poor working memory, rather than low intelligence, could be the reason why some children are underachievers at school, says a British study.

Working memory is the ability to retain and manipulate information. An example would be doing math without the aid of pen and paper or a calculator. Students need working memory for a variety of school-related tasks, such as following teachers' instructions or remembering sentences they've been asked to write down.

Using a new tool that they developed, a team at Durham University surveyed more than 3,000 children of different ages and found that 10 percent of them suffered from poor working memory, which seriously impairs their ability to learn.

The study authors also found that poor working memory in students is rarely identified by teachers, who often believe children with this problem are inattentive or have low intelligence.

If poor working memory -- believed to be genetic -- isn't identified and addressed in children, it can affect their long-term academic success and prevent them from achieving their potential, the researchers said.

The tool they developed and used in this study is a combination of a checklist and computer program that can be used in the classroom to assess memory capacity in children as young as 4 years old.

"From the various large-scale studies we have done, we believe the only way children with poor working memory can go onto achieving academic success is by teaching them how to learn despite their smaller capacity to store information mentally," lead researcher Dr. Tracy Alloway, of Durham University's School of Education, said in a prepared statement.

"Currently, children are not identified and assessed for working memory within a classroom setting. Early identification of these children will be a major step towards addressing underachievement. It will meant teachers can adapt their methods to help the children's learning before they fall too far behind their peers," Alloway said.

SOURCE: Durham University, news release, Feb. 27, 2008