

Research reveals that some adolescents adept at media multitasking

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Telling youths who are juggling multiple electronic devices to "focus on the task at hand" may not always be good advice, according to research to be presented by two high school students on Saturday, Oct. 11 at the American Academy of Pediatrics (AAP) National Conference & Exhibition.

Sarayu Caulfield and Alexandra Ulmer, seniors at Oregon Episcopal School in Portland, Ore., will present their study "Capacity Limits of Working Memory: The Impact of Media Multitasking on Cognitive Control in the Adolescent Mind" from 1-1:30 p.m. in Marina Ballroom Salon E at the San Diego Marriott Marquis.

Contrary to popular belief that multitasking leads to poor performance, the young researchers found the opposite is true for adolescents who spend a lot of time switching between media devices and tasks.

"Maybe practice really does make perfect," Ms. Ulmer said.

"In our current multimedia environment, there are people who are multitasking at an exceedingly high rate, and the reality is that they may have become really good at it," Ms. Caulfield added.

To study how media multitasking affects adolescents' ability to process information, the young researchers recruited 196 females and 207 males ages 10-19. All participants answered questions about their daily media habits and completed the Stanford Multitasking Media Index, which

assesses how often a person multitasks (e.g., texts, instant messages and emails at the same time).

Participants then completed tests to assess their ability to switch between tasks and to focus on a single [task](#). They were randomly assigned to complete these tasks sequentially with no distractions (non-multitasking) or simultaneously with auditory, visual and cognitive distractions such as responding to emails (multitasking).

Results showed that those who scored low on the [media multitasking](#) index spent an average of about 20 minutes a day multitasking. They also averaged about 2.5 hours of homework per day and were multitasking 0.08% of this time. Meanwhile, those who scored high on the multitasking index averaged more than three hours per day of [multitasking](#). They did homework for about 3.5 hours a day and juggled multiple tasks for more than 50% of this time.

When asked to complete the study tasks, high media multitaskers were better at filtering out distractions but performed worse when made to focus on a single task. Low multitaskers were less able to filter out distractions but focused better on single tasks.

"We must emphasize that most people performed best when focused on just one task," Ms. Caulfield said. "However, there was a group that provided us with an exception to that finding—the high media multitaskers."

Added Ms. Ulmer: "This study suggests that digital natives (adolescents who grew up with exposure to multiple media) with high multiple media use may have developed an enhanced working memory and perform better in distracting environments than when focused on a single task with no distractions. This could have a significant impact on teaching styles and curriculum."

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