

Researchers study the ideal physical, mental states for focusing attention and exercising self-control

November 11 2016



Catherine Spann, a researcher at UTA's Learning Innovation and Networked Knowledge or LINK Research Lab and principal investigator of the study.

Credit: UTA

Researchers at The University of Texas at Arlington are studying the ideal physical and mental states to help children and adults pay attention and practice self-control, by combining computer-game testing with a simultaneous ongoing analysis of heart-rate and skin activity.

"We know attention and self-regulation are critical for things like academic success, financial success, and general health and well-being," said Catherine Spann, a researcher at UTA's Learning Innovation and Networked Knowledge or LINK Research Lab and principal investigator of the study.

"We think that if we understand the different physical and emotional states related to attention and self-regulation, we could develop targeted interventions for children and adults to achieve greater well-being," she added.

Spann is currently conducting her Psychophysiology of Self-Regulation Study with volunteers age 7 and up, in collaboration with Research and Learning Center at the Fort Worth Museum of Science and History.

Participants complete a questionnaire about general levels of attention and self-regulation in everyday life, report how they are feeling, and then complete an attention and self-regulation task on an iPad. They wear a wristband to track their heart rate and skin activity, which indicate how calm and engaged they are.

"The wearable technology that we are using gives us information about their specific state and could tell us that they might not be ready to sit still and listen to a lecture or engage in certain learning activities," Spann

said.

Scores on the task are based on a combination of accuracy and reaction time. Spann is also examining how certain aspects of individuals such as gender, age and general self-regulation in daily life, impact how the body responds during a specific task requiring [attention](#) and self-regulation, especially when it comes to learning.

George Siemens, executive director of the LINK Research Lab, underlined the importance of this research in the context of ongoing changes in education models.

"In order to make wise investments in our school systems, we need to better understand the core of [learning](#)," Siemens said.

"We need to understand the conditions under which people optimally learn and the ways that educators can best support students."

"The work that Dr. Spann is doing at the museum gives us important insight into how the mindsets and self-regulation of students impacts their ability to learn," he added.

Spann plans to discuss the preliminary findings of her study at the 2016 aWEAR Conference later this month.

Provided by University of Texas at Arlington

Citation: Researchers study the ideal physical, mental states for focusing attention and exercising self-control (2016, November 11) retrieved 5 May 2024 from <https://medicalxpress.com/news/2016-11-ideal-physical-mental-states-focusing.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.