



Researchers at INL and Mayo Clinic teamed to study whether vertical workstations affected the attention, activity and weight of sixth grade students. Here, a student's work station is adjusted for his height.

Study describes impact of vertical work stations on student attention, obesity

By Rebecca Jones, *INL Communications & Governmental Affairs*

We've all heard the reports: Childhood obesity is on the rise. Children aren't active enough. Maintaining attention in the classroom is harder and harder for teachers.

Now, thanks to findings from [a joint study conducted](#) by Idaho National Laboratory and Mayo Clinic, researchers can confidently assess how one classroom tool can potentially impact student activity and weight. The researchers used vertical work stations with sixth grade students and published their findings in [the April issue](#) of ICAN: Infant, Child, & Adolescent Nutrition, a peer-reviewed journal focused on the nutritional care of children from birth through adolescence.

The study began at Idaho Falls' [Hope Lutheran School](#) in early 2010 to study how vertical workstations impacted sixth-grade students in the classroom. Researchers wanted to understand how these tall desks, which allow students to either stand or sit in an ergonomically adjusted stool, could impact student activity, attentiveness and weight.

During the course of the study, researchers Brad Snedden from INL and Gabe Koepp and James Levine from [Mayo Clinic](#) frequently measured students' weight and activity gauged on pedometers. They also used records from the teacher to establish how these workstations impacted classroom dynamics.

"That teacher input became pretty critical," explained Snedden, the INL study lead. "We've spoken at two conferences as a result of the study. Almost all the questions coming in from teachers focused on classroom behavior. It became very clear that if there's any way these desks will distract students, teachers will not be interested in using them in their own classrooms."

The study showed that vertical workstations improved students' body mass index resulting in lower weights and improved physical activity. The workstations also provided more comfort in the classroom than traditional sit-down desks. However, due to the small size of the study pool (eight students), there wasn't enough data to make definitive conclusions on these impacts.



The study was a collaboration between INL, Mayo Clinic, and students and teachers at Hope Lutheran School in Idaho Falls.

Ultimately, one stream of data was clear: The vertical workstations did not cause additional distraction in the classroom environment.

"We really feel confident letting other researchers and teachers know that this is a field where they could bring these workstations into a classroom without compromising student attentiveness," Snedden explained. In short, the findings published in ICAN demonstrate that these desks can and should be evaluated with larger groups of students to understand their potential on weight and activity.

This study has led to other research opportunities for Snedden in the field of nontraditional workstations, including one study involving 60 INL employees and treadmill desks. The results from that study are expected to be published later this year.

This kind of research allows INL to be involved in outreach activities geared toward bettering its surrounding community.

"While INL is primarily an applied engineering laboratory focused on nuclear energy, there are pockets of other research taking place across the institution," Snedden explained. "A significant problem for employers and school administrators is the growing rate of obesity and the diseases attributed to weight that can reduce employee and student productivity. It's nice to be a part of the research that is looking for solutions to this problem."

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