Students with ADHD Making Tools to Focus

Alexandria K. Hansen, Eric R. Hansen, Taylor Hall, Mack Fixler, and Danielle Harlow.

Proceedings of the 7th Annual Conference on Creativity and Making in Education, Palo Alto, California USA, October 2017 (FabLearn’17), 4 pages.
DOI: https://doi.org/10.1145/3141798.3141812

ABSTRACT

This paper describes the design process of 5 middle school students diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD). Students were tasked with designing and fabricating a personalized fidget—a small hand-held object to use in a classroom with the goal of increasing focus—by following the process of engineering design described in the Next Generation Science Standards. Students teamed with a local science museum to access tools and expertise. Analysis of student interviews and recorded design sessions revealed that students accurately defined the problem and design constraints. Further, despite issues in measurement precision, students successfully optimized their design solution over time through multiple rounds of revision.