Physics, Dyslexia and Learning: A Collaboration for Disabled Students

BARBARA M. MOSKAL, LYNDSEY WRIGHT, P.C. TAYLOR, Colorado School of Mines — Researchers have found that children with dyslexia reason differently with respect to language from those who do not have dyslexia. Dyslexic students’ brains work differently than do students without dyslexia. Some researchers speculate that these differences provide dyslexic students with an advantage in science. The presentation will describe an outreach activity which developed and delivered instructional modules in physics to students in grades kindergarten through sixth. These modules were tested on thirty students who attended a summer camp designed for students who have been diagnosed with dyslexia. Eighty percent of students who have learning disabilities have dyslexia. Many of the students who attended this camp have experienced repeated failure in the traditional school system, which emphasizes literacy with little attention to science. A number of science and engineering professors collaborated with this camp to build instructional modules that were delivered one hour per day, during two weeks of this five week summer camp (ten hours of hands-on physics instruction). Both quantitative and qualitative data were collected with respect to the impact that this camp had on students’ understanding and interests in science. The results of these efforts will be presented.