Neurodevelopmental disorders such as ADHD represent a major national problem. There are increasing numbers of students in schools requiring special education services as a result of ADHD, and each of these students costs the U.S. education system approximately $5,000 per year (Robb et al., 2011). There are additional societal costs associated with the disorder, and ADHD can be debilitating for individuals with the disorder and their families (i.e., Barkley & Murphy, 2010; Ginsberg, et al., 2013). The most common treatments are stimulant medication and behavioral training (i.e., Pelham & Fabiano, 2008), but recently neurofeedback (EEG biofeedback) has been receiving a lot of press. Both the American Academy of Pediatrics and the American Academy of Child and Adolescent Psychiatry have endorsed neurofeedback as a viable option for the treatment of ADHD (AAP, 2012; Lofthouse, et al., 2012). Methods: The current study is a randomized controlled study investigating the effects of LORETA neurofeedback on a college population with ADHD. The study used a pre-test, multiple post-test design with delayed treatment to provide stronger evidence of its effectiveness. Both qEEG and behavioral data were collected to determine if there were changes in brain activity, and if these changes were evident on popular measures of cognitive ability (i.e., Woodcock-Johnson III) and attention (CPT-II). Results: The results indicate that 25 sessions of LORETA neurofeedback were sufficient to demonstrate significant changes in qEEG coherence within the prefrontal cortex. These changes were also related to changes in performance on a verbal working memory measure, which approached significance.