Title: American Sign Language Comprehension Test: A Tool for Sign Language Researchers

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Abstract: There has been a great need for sign language researchers to test the effects of sign language fluency on neuroplasticity, development, and bilingualism. The goal here was to develop a psychometrically sound brief ASL receptive test—the American Sign Language Comprehension Test (ASL-CT)—that can provide a score immediately upon completion without relying on raters. This paper describes how the ASL-CT items were developed and selected with a focus on current theoretical linguistics findings. This paper also reports the psychometric soundness (reliability and validity) of the test. The ASL-CT is a 30-item multiple-choice test administered through a website that was given to a sample of 80 college students including Deaf native signers, Hearing native signers, Deaf non-native signers, and Hearing non-native signers. The results indicated that the ASL-CT has good internal reliability (alpha = .834). Construct validity was established by demonstrating that age of ASL acquisition correlated with number of correct items on the ASL-CT (r = -361, p < .005), native signers performed better than non-native signers (p < .001) and Deaf signers performed better than Hearing signers (p < .005). Sign language researchers are able to use the ASL-CT to describe their participants’ ASL comprehension skills, to establish a minimal skill level as an inclusion criterion, to use ASL skills as a grouping or independent variable (proficient vs. non-proficient), or to use ASL skills as a dependent variable. We hope that such tool would enable more ASL researchers to consider the effects of sign language knowledge on different variables when conducting basic science, translational science, or applied science research. We wish to share the information about the development of this test with sign language researchers from other countries with the hope that they would develop similar tests.

Authors
Peter Hauser pchgss@rit.edu United States of America Rochester Institute of Technology
Raylene Paludneviciene, raylene.paludneviciene@gallaudet.edu United States of America Gallaudet University
Wanda Riddle wanda.riddle@gallaudet.edu United States of America Gallaudet University
Kim Kurz kbknss@rit.edu United States of America National Technical Institute for the Deaf