Supplementary Methods

Participants.

All deaf native ASL signers were recruited from the National Technical Institute for the Deaf and the University of Rochester (both in Rochester, NY) and from Gallaudet University (Washington, DC). All but one signer had two deaf parents (the remaining signer had one deaf and one hearing parent). Moreover, the majority of deaf signers (84%) were resident in Schools for the Deaf for most of their schooling. The remaining 16% of deaf signers spent their schooling in mixed environments (partly in residential schools for the deaf, and partly in mainstreamed schools). At the time of testing, 43 deaf signers were in college programs for deaf students, 6 deaf signers had graduated from a college program for deaf students, and one deaf signer had graduated from a mainstreamed college.

WORKING MEMORY SPAN

ASL stimuli: Eighty-one one-handed ASL noun signs were selected based on their frequency of use and their phonological complexity. First, 131 one-handed signs composed of a single cluster of hold and movement pattern were selected. Based on the model of syllabic structure of ASL signs developed by Liddell and Johnson¹, all such signs can be considered as monosyllabic signs. Four ASL native signers were asked to rank these signs based on their frequency of use. The 81 most frequent signs were organized by TS in six categories, based on the type of movement present in the items: local twist/shake (e.g. AIRPLANE), local brushing movement (e.g. CAT), open/close hand (e.g. BIRD), local contact (e.g. EAGLE), bend/wiggle movement (e.g. HORSE) and
circular movement (e.g. WINE). This categorization ensured an appropriate control of the phonological similarity within sequences of signs, since each list was made of a balanced mix of each category.

References