

Development of HKSL by deaf children in the SLCO Programme

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Children with exposure to natural sign languages from birth can successfully acquire them as first language (L1) without much effort. Early language acquisition studies show that native-signing deaf children can seamlessly approximate their developing grammar with that of the native deaf adults (cf. Chen Pichler (2010) on ASL; Morgan (2006) on BSL; Van den Borgaerde & Baker (2005) on NGT). In addition, their developmental milestones are similar to those of hearing children's spoken language (Anderson & Reilly, 2002; Lillo-Martin, 1999; Mayberry & Squires, 2006; Petitto, 2000; a.o.). However, when the majority of deaf children are born to hearing parents with little or no sign language experience during their early life, their onset age of sign language acquisition could be quite varied. In this paper, we examined the critical period effects on the acquisition in Hong Kong Sign Language (HKSL) by deaf children whose exposure to HKSL was delayed.

Four profoundly deaf children of hearing parents (DH) enrolled in the SLCO Programme participated in the current study. All were exposed to HKSL after 6 years old. Three of them started to use CI at 3;2-5;1, while the remaining one had been wearing HA since the age of 3;2. They all received both HKSL and Cantonese input at school. At the time of this study, they had a mean length of six years of exposure to HKSL. In addition, two deaf children of deaf parents (DD) who started to acquire HKSL at around 1;3-1;9 were recruited into the study. Their mean length of exposure to HKSL was around ten years. Three productive tasks were designed to test their grammatical development in HKSL: 1) picture description for classifier constructions and negation; 2) elicited production for wh-questions; and 3) story retelling for verb agreement and modals.

Generally speaking, these DH late learners underwent similar developmental process as the DDs despite of their delayed exposure to HKSL. This can be attributed to the rich linguistic environment they had been immersed for more than six years. In this environment, there was sustained HKSL input through interactions between other DH children and deaf teachers, as well as between DH children and DD classmates. Such kind of sign language input seems to be quantitatively and qualitatively

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conducive for DH late learners to acquire HKSL to some extent.

However, these DH late learners have not yet fully acquired all aspects of HKSL grammatical knowledge. Although their accuracy rates of the syntactic position of modals, wh-signs and classifier constructions were 97%, 75% and 72% respectively, they could only attain 35% for appropriate nonmanuals especially those are associated with the syntactic scope of wh-questions. Also, their performance in verb agreement was quite low (i.e.33%). Interestingly, the grammatical structures that DH children had displayed difficulty were also those that were acquired relatively late by the monolingual signing native DDs. Given the fact that both our DH and DD children are sign bilinguals, further investigation on their syntactic acquisition of nonmanuals and verb agreement is needed to show if they can ultimately achieve native-like performance as monolingual native deaf adults on HKSL.

Individual variation was also observed among our DH children. LKY had mastered most of the grammatical aspects of HKSL (with a mean accuracy rate of 90%, except for verb agreement), while TWK performed quite poorly on verb agreement, wh-questions, and classifier constructions (the mean accuracy rate was 33%, 42%, 43%, respectively). Taking these DH children's oral language abilities into consideration, TWK performed much better than LKY in terms of Cantonese speech perception (CANSWORT: TWK-56%; LKY-0%) and grammatical knowledge in Cantonese (HKCLOAS: TWK-77%; LKY-37%), implying that TWK could get linguistic input through both Cantonese and HKSL fairly readily. For LKY, HKSL was the only accessible language due to his extremely poor speech perception (i.e 0% CANSWORT). Hence, cross-linguistic influence may have an effect on the production of HKSL by TWK. This was confirmed by the error analysis in which TWK consistently adopted the Cantonese word order in his production of classifier construction (i.e. 0% for sign order in classifier constructions). Instead of using syntactic nonmanual markings for wh-questions, he mouthed Cantonese-equivalent wh-words 91% of the time. These findings suggest that spoken language-based signing can be derived internally by deaf children when they have knowledge of either spoken or natural signed languages.

These results offer some preliminary clues that immersing deaf children in a sign bilingual environment with sustained input in HKSL supports the development of this

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language to some extent. Some follow up study is necessary to verify the critical period effects, to find out if these DH children can eventually attain full knowledge of these grammatical constructions, despite late exposure to HKSL.

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