

# Cross-linguistic and cognitive factors in the acquisition of WH-questions in an Italian-Indonesian bilingual child

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This paper presents data on the acquisition of WH-questions in Guglielmo, a four and a half year old child exposed since birth to two typologically different languages, Italian and Indonesian. The study provides examples for atypical structures that can be explained through cross-linguistic influence. The observation of atypical structures can help to understand the cognitive process in the speaker's mind and his analytical skills in the languages he is acquiring simultaneously.

One hypothesis tested in this study is that the cross-linguistic influence is due to dominance (Schlyter 1993). In other words, while Indonesian, exhibits normal monolingual acquisition, Italian lags behind. Another possibility is that the structural properties of the languages involved play an important role in transfer (Lanza 2000). It is also possible that there is cognitive interaction between the two, and therefore the child's immature stage of structure building is affected by cross-language cue competition (see Dopke 2000).

In order to demonstrate why and where cross-linguistic structures occur, it is important to identify areas where the structures of the two languages display different patterns. One of these areas is the expression of WH-questions.

Indonesian is basically a WH- in situ language, although instances of sentence-initial WH may occur (Cole, Gil, Hermon, Tadmor 2001). By contrast, Italian has Subject Auxiliary inversion (SAI) (Guasti 1996) that has been analyzed by Rizzi (1990) as involving movement of I to C. In the acquisition of WH-questions, Italian children do not produce questions where there is no movement of I to C. This is an indication that Italian children consider these interrogative sentences as fixed structures reproducing a particular intonation pattern (Antelmi 1997).

Preliminary results showed that Guglielmo's development of WH-questions follows that of Indonesian-speaking children. At the age of 19 months, he is able to produce Indonesian WH-questions comparable to those of other Indonesian-speaking children, but his Italian WH-questions lag behind those of his Italian peers significantly.

The order of development of the WH-operators seems to be similar in the two languages the bilingual child is exposed to, but in different times. The acquisition order is based on universals of cognitive development (Clancy 1989) therefore WH-questions are acquired when the child has reached the stage of conceptual development when the notion is relevant. In the case of this bilingual child he must have reached the cognitive stage when the notion would be available but then he would use the Indonesian form first, just like any Indonesian peer would do and only later the one for Italian. An observation of acquisition data on Indonesian and Italian monolinguals will try to shed light on issues of cognitive aspects related to the WH-forms.

Analyzing some early WH-questions in the Italian context it is evident that he tends to apply Indonesian grammar when speaking Italian, and produces mixed utterances such as the following:

1. questa la casa **siapa**? (2;8)  
this the house who  
whose house is this?
2. i pesci mangiare che cos'è? (3;2)  
the fishes eat what thing=is  
what are the fish eating?

These kinds of WH-questions demonstrate that cross-linguistic influence applies in the area of inversion, which is apparently a vulnerable domain. From the analysis of Guglielmo's WH-questions in Italian, the language where is performance is lower, it is clear that he is unable to apply the movement of the WH-form from the in-situ position where it is normally found in Indonesian to the beginning of the sentence, as it would be expected in Italian. The mixed utterance in (1) shows that the Indonesian WH-operator *siapa* is maintained in the question, whereas in (2) it is replaced by the Italian *che cosa*.