Systematic language sample analysis in French: normative data for conversation

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Abstract
There is a lack of standardized language assessment procedures and normative data on language development in French, which severely complicates accurate assessment of language level for research purposes as well as for clinical intervention. The present study is part of a larger project whose aim is to develop norm-referenced assessment tools for assessment of language impairment in French-speaking children and to investigate the prevalence of specific language impairment among 5-year old children in Quebec. Previous research on younger French-speaking children has revealed systematic differences in spontaneous language sample measures between French and English, such that French speaking children obtain higher MLUs and lower lexical diversity scores than English speaking children of the same age (Elin Thordardottir, in press). This difference, which reflects the different structures of the two languages, has important implications for cross-linguistic comparisons. In this study, language sample measures are reported for a cross-sectional sample of 5-year-old French speaking children. Results are discussed in relation to previously reported data for younger French-speaking children and English-speaking children.

PARTICIPANTS: Participants included 57 children, in 3 age groups spaced at 6-month intervals: 4-1/2- year- olds (n=14), 5-year-olds (n=33) and 5 1/2-year-olds (n= 10). All of the children were monolingual speakers of French or children from French-speaking homes having received only minor exposure to other languages, residing in the Montreal area. All children demonstrated normal language development (no developmental concerns or major illnesses as resported by parents). Nonverbal cognitive scores were within normal limits for all children (Leiter International, Roid & Miller, 1997).

	4 ½ years (n=14)	5 years (n=33)	5 ½ years (n=10)
Age in months	53.2 (1.6)	60.2 (2.2)	66.9 (2.8)
Nonverbal cognition	98.1 (18.0)	100.4 (19.4)	99.0 (17.6)

PROCEDURES: Spontaneous language samples were recorded in a conversational context in interaction with an examiner, following the guidelines of Leadholm & Miller (1992). Language samples were transcribed orthographically and coded for inflectional morphology using the procedure developed by Elin Thordardottir (in press). This analysis used the SALT computer program (Miller & Chapman, 1984-2002), and is a French adaptation of SALT conventions. Reliability of transcription and coding was verified by a second transcriber. Results are reported in terms of mean length of utterance in words (MLUw) and in morphemes (MLU), lexical diversity (Number of Words , NW, Number of Different Words, NDW), morphological diversity and error types. Analyses are based on a sample of 100 utterances for each child, excluding imitations.

RESULTS:

	4 ½ years (n=14)	5 years (n=33)	5 ½ years (n=10)
MLUw	4.6 (.96)	4.7 (1.1)	5.8 (2.0)
MLU (morphemes)	6.0 (1.3)	6.0 (1.4)	7.7 (3.0)
NW	514 (111)	509 (139)	499 (151)
NDW	134 (24)	131 (27)	127 (49)
Morpheme Diversity	14.7 (1.9)	14.1 (2.0)	14.6 (1.8)

Morphological Diversity and Errors: Detailed results will be presented on the types of inflectional morphology used by the children, including verb tenses, verb person agreement, and gender and number agreement on nouns, adjectives and pronouns, as a function of age and MLU level. Omissions of inflections in obligatory contexts were almost never observed. Error rates in the use of inflectional morphology were overall very low. Error types and frequencies will be discussed.

Comparison with previous results on younger children:

Two previous projects have provided language sample data for younger groups of French-speaking children from Quebec using the same analysis procedure. Together, previous and present results provide normative language sample data for children from age 2 to 5 years:

	MLU	NDW
24 months (Elin Thordardottir, in press)	2.3 (0.4)	33 (8)*
34 months (Elin Thordardottir, in press)	3.8 (1.3)	55 (14)*
46 months (Elin Thordardottir & Namazi, in prep)	4.5 (0.8)	142 (22)
53 months (present study)	6.0 (1.2)	134 (24)
60 months (present study)	6.0 (1.4)	131 (27)
67 months (present study)	7.7 (3.0)	127 (49)

* NDW based on 50 utterances rather than 100

DISCUSSION: Results of this study provide a normative reference base for systematic analysis of French language samples, using a reliable, systematic analysis procedure, permitting assessment of the language level of French-speaking children with reference to the performance of typically-developing children of the same age. Together with previously reported results using the same procedure, results confirm that MLU is a developmentally sensitive measure in French. As well, morphological diversity increases systematically with age. The data provide an account of the sequence of development of inflectional morphology by Quebec French-speaking children. However, results indicate that lexical diversity as indexed by NDW does not increase systematically with age. This may reflect the fact that French makes greater use of inflectional morphology than English to convey meaning. Compared to conversational sample norms for English (Leadholm & Miller, 1992), MLU for 5-year-old children is somewhat higher in French than in English (6.0 vs 5.7) and lexical

diversity somewhat lower (131 vs 181 words), as was reported previously for younger children (Elin Thordardottir, in press).

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