

# Adapting the Multilingual Assessment Instrument for Narratives (MAIN) to Catalan

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The adaptation of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN; Gagarina, et al., 2019) to Catalan contributes to advancing our knowledge of the development of children's narrative skills in a diversity of languages using the same protocol, making it possible to evaluate narratives also in Catalan-speakers. The adaptation of MAIN will be very useful in Catalonia, because it is a region where two official languages (Catalan and Spanish) coexist, Catalan being the language of schooling, so that most of the population is bilingual. However, currently there is no instrument for assessing narrative skills that allows for parallel assessment of Catalan in bilingual children. For these reasons, this adaptation will be of great value to promote the study of narratives in the bilingual population considering Catalan within the possible language combinations. The present paper describes the process of adapting MAIN to Catalan and reports results from the first pilot study using the Catalan MAIN.

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## 1 Introduction

The number of bilingual/multilingual children has grown quickly worldwide (Westby, 2014). Current research establishes that around 50% of the population is bilingual, meaning that they live exposed to two or more languages (Grosjean, 2010). However, even though differences between monolingual and bilingual language development are observed, most studies on child language development are based on monolingual speakers (Nieva, 2015). In this regard, one of the challenges posed by the growth of bilingual child population is to assess linguistic competence in the different languages of the child. This assessment is especially important in order to avoid erroneous diagnosis of language disorders in this population (Gagarina, Klop et al., 2016).

The evaluation of the language skills of bilingual children is complex, since there are few standardized instruments – or even none in many languages – and because not all measures are comparable across languages (Gagarina et al., 2016). In this context, the evaluation of narrative discourse is a valuable tool to assess bilingual population, since producing a narrative requires the management of various grammatical and pragmatic aspects, as well as cognitive resources (Aparici, 2019). In this sense, the evaluation of narrative discourse is an ecologically valid measure of linguistic skills and a predictor of the future linguistic-cognitive performance of the child population (Acosta et al., 2013). Furthermore, narrative evaluation allows multiple linguistic aspects to be assessed, including narrative macrostructure and microstructure, through relatively short language samples (Heilmann et al., 2010).

Among the new assessment tools, the *Multilingual Assessment Instrument for Narratives* (MAIN) stands out (Gagarina, Klop et al., 2012, 2015, 2019). This instrument was developed by the Narrative and Discourse working group within COST Action IS0804 as part of the set of assessment tools *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment*. MAIN was designed with the purpose of evaluating the narrative skills in the different languages of bilingual children who acquire one or more languages from birth or from an early age, thus allowing to assess narrative comprehension and production in a variety of languages and language combinations. Although MAIN was initially developed for children from 3 to 10 years old, recent research has shown that it can also be used in older children, adolescents and even adults (Gagarina, Bohnacker et al., 2019).

Ever since the instrument became available, researchers from all over the world have been using MAIN to collect narrative data from a variety of languages and language combinations, with the aim of advancing knowledge about the development of children's narrative skills by using the same protocol and thus allowing comparability (Gagarina et al., 2015). In order to contribute to this initiative, the purpose of this work is to adapt the revised version of MAIN (Gagarina, Klop et al., 2019) to Catalan to enable the evaluation of narrative skills in the Catalan-speaking population and to promote the investigation of narratives in a language that has been understudied.

## **2 The context in which Catalan is spoken**

Catalonia is a region of Spain in which two official languages coexist: Catalan and Spanish. Although the language of schooling is Catalan, with Spanish being taught as a subject, both languages are used by the population (in fact, there is virtually no monolingual population in Catalan). Therefore, it is usual for children to have a simultaneous bilingualism profile, that is to say, having a native or native-like competence in both languages, where one of the languages may be dominant. However, finding children with a sequential bilingual profile is also common, which applies mainly to children whose home language is only Spanish (L1) and who learn Catalan upon entering the school system, developing Catalan as their L2.

Catalonia has a large immigrant population, first or second generation, who have various native languages. Therefore, many children have a different L1 than the official languages,

leading to a wide range of bilingual profiles. It is important to note that the rate of immigrants in Catalonia has increased in the last decades and this is reflected in school classrooms. Currently, Catalonia, along with the Balearic Islands, is the region in Spain with the highest percentage of students with immigrant background, reaching 13.2% of the total number of students. Their native languages are mainly Arabic, Romanian, Chinese and Spanish (Crispo et al., 2019). Other frequent languages include Amazigh (Berber), Italian and Urdu (Institut d'Estadística de Catalunya, 2019). Despite that these students will eventually have Catalan as one of their languages, the degree of competence they achieve in Catalan is variable and depends, among other factors, on how much input and use of Catalan they have outside school. As Catalonia is a clearly bilingual/multilingual context, tools should be available to assess children's narrative skills in their different languages. As discussed above, evaluating narrative discourse is an ecologically valid measure that allows us to measure various aspects of language and get a broad view of children's linguistic competence. The adaptation of MAIN to Catalan will be a useful tool to promote the study of narratives in the bilingual child population that has Catalan as one of their languages.

### **3 The process of adapting MAIN to Catalan**

MAIN was adapted to Catalan based on the revised version in English (Gagarina, Klop et al., 2019). Before translating it, the researchers familiarized themselves with the first part of the 2012's manual, which describes the theoretical framework and development process of MAIN. In order to adapt MAIN, the full text was first translated into Catalan, under the name of *Instrument Multilingüe per a l'Avaluació de Narracions* (IMAN). A careful adaptation of the four story scripts was made, keeping the macrostructure and microstructure as similar as possible to the revised English version of MAIN (Gagarina, Klop et al., 2019). Subsequently, two native Catalan linguists reviewed the adaptation and suggested some modifications which will be detailed later; finally, a reverse translation to English was done.

At the macrostructural level, the adaptation of the scoring system to Catalan maintained the number of episodes, as well as the number of Goal, Attempt, Outcome (*Objectiu, Intent, Resultat*) sequences, and the number of Internal State Terms (*Termes d'Estat Intern*) referred to initial event and reaction per episode. At the microstructural level, the scripts were adapted in order to be kept as similar as possible across the stories (Dog-Cat, Baby Birds-Baby Goats / *Gos-Gat, Ocellets-Cabretes*). The number of coordinate and subordinate sentences (+/- 1), direct speech sentences, clauses, words per story (+/- 8) and terms of internal state were maintained.

During the translation process of the stories and the scoring sheet, we found some lexical issues related to the fact that in the English version there are more adjectives that have a similar meaning, which it is not always the case for their Catalan counterparts. An example is *scared* and *afraid*, which were both translated into Catalan with a single term: *tenir por*. Another difficulty at the lexical level was that some adjectives listed in the English version have low frequency of use in Catalan. An example is *saborós/a* 'yummy'. In these cases, we replaced the

literal translations with words with a higher frequency of use in Catalan although the meaning may vary a little bit (in the example, *bo/bona* ‘good’ instead of *saborós/a* ‘yummy’), as the priority was to adapt the assessment to typically-developing children’s use of vocabulary in Catalan.

Regarding grammatical issues, the most relevant adaptations were those related to the verb forms used in the stories. Catalan has a morphologically rich tense/aspect system that makes some verb forms used in the original English version not appropriate in Catalan in particular contexts. For instance, the simple verb form ‘to eat’ in “the cat was very pleased to eat such a tasty fish” was translated into the compound verb form *haver-se menjat* ‘to have eaten’ instead of *menjar-se* ‘to eat’. Despite the fact that this is a more complex form, it bears more adequate tense and aspect information in this morphosyntactic context.

Finally, as for language use (pragmatics), the closing formula of the stories was adapted to the one often used in Catalonia *conte contat, ja s’ha acabat* ‘story counted, it is over’, since the use of the literal translation of the English version *així acaba el conte* ‘and that is the end’ is not pragmatically adequate in Catalan.

#### 4 Piloting the Catalan MAIN

The Catalan version of MAIN was piloted with bilingual typically-developing Catalan-Spanish children from preschool and primary school levels, aged between 4 and 7 years old (N = 24). Piloting was carried out with the stories *Gos* ‘Dog’ and *Gat* ‘Cat’. Narratives were elicited using the retelling mode and followed by the comprehension questions. The instructions, story scripts, and comprehension questions were found to be easily understood by children. It was feasible to elicit the production of the narratives and obtain answers to the comprehension questions across the age range.

The mean scores for narrative production (story structure score, maximum score = 17) and comprehension (maximum score = 10) for the Dog story in Catalan are shown in Table 1.

**Table 1:** Mean scores for narrative production (story structure score) and comprehension, Dog story, Catalan-Spanish bilingual children, by age group.

Age group	Age	N	Story structure score	Comprehension score
	(years; months)		(Retelling)	
	M (SD)		M (SD)	M (SD)
4 years	4;6 (0;4)	6	5.2 (2.2)	7.3 (2.1)
5 years	5;4 (0;4)	6	7.2 (1.5)	8.3 (2.3)
6 years	6;3 (0;4)	6	8.3 (1.5)	9.3 (0.8)
7 years	7;5 (0;5)	6	11.3 (2.5)	9.5 (0.5)

The results presented in Table 1 show that the mean scores increase with age both in production and comprehension of macrostructure. The increase in production scores reflect that participants included a larger number of macrostructural elements in their narratives as they grew older. Similarly, in comprehension, children improve their scores with age, in particular

for structural and evaluative elements. However, for comprehension, scores seem to peak in the 6-year-olds, whereas production scores continue to increase from age 6 to age 7. In fact, it is between these older age groups that the larger part of the increase in production scores takes place.

## **5 Conclusion**

The evaluation of narrative skills is an ecological measure of linguistic abilities, which allows a better assessment of a bilingual population as it reflects more accurately linguistic competence than a test that considers isolated aspects of the language (Botting, 2002). In fact, narrative is the context of use where difficulties more clearly emerge in children with language disorders (Aparici, 2019). Furthermore, having a tool that allows different languages to be evaluated in the same participant enables a better understanding of their language skills. Therefore, the presented adaptation of MAIN will be very useful in Catalonia, since it is a region in Spain characterized by the coexistence of two official languages (Catalan and Spanish) and the presence of a high population rate with other native languages in addition to Catalan, the language of schooling. However, until now there was no narrative evaluation instrument that would allow the simultaneous assessment of Catalan and another language, when virtually all the child population is bilingual. In this sense, this adaptation will be of great value to promote the evaluation and study of narratives in bilingual child population with Catalan as one of the languages. Additionally, we expect this work will encourage the adaptation of MAIN to other minority languages in Spain in order to enable the evaluation of different language combinations so that our understanding of the development of narrative and linguistic skills in bilingual child population improves. This would allow in turn the evaluation of possible language disorders in this population through a more ecological method than the ones usually available.

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