

# The Multilingual Assessment Instrument for Narratives (MAIN): Adding Mandarin to MAIN

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This paper introduces the Mandarin version of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN) and describes the adaptation process. The Mandarin MAIN not only extends the empirical coverage of MAIN by including one of the most widely spoken languages in the world, but also offers an important tool to assess the narrative abilities of monolingual and bi-/ multi-lingual children acquiring Mandarin as a first, heritage, second, or additional language across the globe.

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## 1 Background

In this increasingly globalized world, more and more children grow up being surrounded by more than one language. To appropriately assess bilingual language development, the COST Action IS0804 “Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment” (see Armon-Lotem, de Jong, & Meir, 2015) was carried out (2009–2013). Through assessments of bilingual children within and beyond Europe, both typically-developing children and children with Specific Language Impairment (SLI; now referred to as Developmental Language Disorder, DLD), the roles of bilingualism and SLI/DLD in language development were investigated. The Language Impairment Testing in Multilingual Settings (LITMUS) battery (Armon-Lotem et al., 2015) consists of tools developed within the action

which cover a wide range of tasks in various domains, that are applicable to many different languages. It is therefore possible to use the battery with bilingual children for all the languages they speak, for the purpose of screening SLI/DLD.

## **2 The Multilingual Assessment Instrument for Narratives (MAIN)**

The Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012; 2015; 2019) is one of the tools in the LITMUS battery. It focuses on narrative comprehension and production skills in children from 3 to 12 years old and is based on pilot studies with more than 500 children. MAIN has been adapted to numerous languages and, though mainly used for young children in earlier stages of language development, it can also be used with adults (see Gagarina, Bohnacker & Lindgren, 2019). In each MAIN language version, there are four stories, each depicted by six pictures. The four stories are parallel in terms of cognitive and linguistic complexity, matching of macro and micro structures, cultural appropriateness and test robustness. The participant can tell and/or retell the story and answer comprehension questions for each story. Responses for telling or retelling the story are scored based on macrostructure dimensions such as story structure, structural complexity, and internal state terms and the narratives can also be evaluated on microstructural aspects. Comprehension questions are scored with correct or incorrect responses (see Gagarina et al., 2015 for details). The narrative competence of bilingual children can be assessed with MAIN versions in the languages they speak, and the scores are directly comparable cross-linguistically. Results from the MAIN assessment could reveal differences between bilinguals with and without SLI/DLD, as well as between the two languages within one speaker. With increasing global mobility and linguistic diversity, the more languages MAIN is available in, the larger bilingual population can be covered for assessment. As part of the European initiative, MAIN was initially available in languages spoken in Europe (e.g. German, Russian, Swedish), while languages spoken by big populations outside of Europe were not covered. Asia has the largest number of people in the world, but its languages often lack tools for assessing children with and without SLI/DLD, especially in the bilingual context. Here, we expand the MAIN repertoire by adapting the instrument into Mandarin Chinese, one of the most widely spoken languages in the world.

## **3 MAIN in Mandarin-Chinese**

Mandarin is a language of the Sino-Tibetan family, and the main variety among the Chinese languages. It is the official language of mainland China, Hong Kong, Macau, Taiwan and Singapore. It is also spoken in overseas Chinese communities in Malaysia, and it has attracted more and more second language learners due to the increasing influence of China. Out of all languages in the world, Mandarin has the highest number of native speakers, and the second biggest population combining native and second language speakers (Eberhard, Simons, & Fennig, 2019). It is an isolating SVO language with very different grammatical features from

Indo-European languages such as topic-prominence and argument ellipsis, while features such as tense inflections on verb, grammatical gender and cases are absent.

The Mandarin adaptation of MAIN followed the guidelines for adapting MAIN to new languages (Bohnacker & Gagarina, 2019). The instrument was first translated and adapted to Mandarin by the first author (Luo), a native speaker of Mandarin and a MSc degree holder in clinical linguistics, under the supervision of the third author (Chan) and the last author (Gagarina). It was then proofread and revised by the second author (Yang), a native speaker of Mandarin and PhD degree holder in linguistics; the third author (Chan), a fluent Mandarin speaker and associate professor in university working on developmental psycholinguistics and speech therapy, the fourth author (Cheng), a fluent Mandarin speaker who is a research assistant and master's degree holder in linguistics, and the fifth author (Kan), a fluent Mandarin speaker and postdoctoral researcher in developmental linguistics.

The Mandarin MAIN tool can be used to assess both monolingual and bilingual children for narrative comprehension and production (see e.g. Sheng et al., in press). Mandarin can either be the dominant language of the bilingual children, for example most children in northern China who might have learned English as a second language; or the weaker language, for example children in southern China who speak another Chinese language or dialect as the mother tongue, children of overseas Chinese migrants who have heritage fluency in Mandarin, or children who learned Mandarin as a second language for other purposes.

#### **4 Final Remarks**

Hereby we publish the MAIN assessment protocol in Mandarin, which contains instructions for administration, story scripts and scoring forms, together with this introductory paper. We hope to make this new tool available to the international community with open free access. Mandarin-MAIN can be used free of charge under a Creative Commons License (BY-NC-ND 3.0) for non-commercial purposes when the copyright and licensing rules are respected. Both the assessment protocol and this introductory article should be cited as shown below

- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives - Revised. Materials for use. *ZAS Papers in Linguistics*, 63. Mandarin version. Translated and adapted by Luo, J., Yang, W.C., Chan, A., Cheng, K., Kan, R. & Gagarina, N.
- Luo, J., Yang, W.C., Chan, A., Cheng, K., Kan, R. & Gagarina, N. (2020). The Multilingual Assessment Instrument for Narratives (MAIN): Adding Mandarin to MAIN. *ZAS Papers in Linguistics*, 64, 159–162.

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