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Natalia Gagarina & Josefin Lindgren (Eds.)

**New language versions of
MAIN: Multilingual Assessment Instrument for Narratives –
Revised**

Natalia Gagarina, Daleen Klop, Sari Kunnari, Koula Tantele, Taina
Välimaa, Ute Bohnacker & Joel Walters

Keywords

Narrative comprehension · narrative production · multi/bilingual · language acquisition · Multilingual Assessment Instrument for Narratives (MAIN) · COST Action IS0804 · Language Impairment Testing in Multilingual Settings (LITMUS) · internal state terms · macrostructure · telling · retelling · model story

Abstract

The Multilingual Assessment Instrument for Narratives (MAIN) is a theoretically grounded toolkit that employs parallel pictorial stimuli to explore and assess narrative skills in children in many different languages. It is part of the LITMUS (Language Impairment Testing in Multilingual Settings) battery of tests that were developed in connection with the COST Action IS0804 *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment* (2009–2013). MAIN has been designed to assess both narrative production and comprehension in children who acquire one or more languages from birth or from early age. Its design allows for the comparable assessment of narrative skills in several languages in the same child and in different elicitation modes: Telling, Retelling and Model Story. MAIN contains four parallel stories, each with a carefully designed six-picture sequence based on a theoretical model of multidimensional story organization. The stories are controlled for cognitive and linguistic complexity, parallelism in macrostructure and microstructure, as well as for cultural appropriateness and robustness. As a tool MAIN had been used to compare children's narrative skills across languages, and also to help differentiate between children with and without developmental language disorders, both monolinguals and bilinguals.

This volume consists of two parts. The main content of Part I consists of 33 papers describing the process of adapting and translating MAIN to a large number of languages from different parts of the world. Part II contains materials for use for about 80 languages, including pictorial stimuli, which are accessible after registration.

MAIN was first published in 2012/2013 (ZASPiL 56). Several years of theory development and material construction preceded this launch. In 2019 (ZASPiL 63), the revised English version (revised on the basis of over 2,500 transcribed MAIN narratives as well as ca 24,000 responses to MAIN comprehension questions, collected from around 700 monolingual and bilingual children in Germany, Russia and Sweden between 2013-2019) was published together with revised versions in German, Russian, Swedish, and Turkish for the bilingual Turkish-Swedish population in Sweden. The present 2020 (ZASPiL 64) volume contains new and revised language versions of MAIN.

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Part II. MAIN–Revised materials to be used for assessment

The available *MAIN–Revised* language versions can be downloaded after registration. **Here** is the link to registration and language versions.

Contributors

Qurbonidin Alamshoev
NGO Kuhhoi Pomir, Tajikistan
Email: akurbon@gmail.com

Kathleen Kay Amora
University of Groningen, the Netherlands;
University of Potsdam, Germany; University
of Eastern Finland, Finland
Email: kathleenamora@gmail.com

Maria Andreou
University of Cologne, Germany
Email: andreou3@gmail.com

Yulia Androsova
Research Institute of National Schools of the
Republic of Sakha, Russia
Email: androsova08@mail.ru

Stanislava Antonijevic
National University of Ireland, Ireland
Email: stanislava.antonijevic@nuigalway.ie

Melina Aparici
Universitat Autònoma de Barcelona, Spain
Email: Melina.Aparici@uab.cat

Reili Argus
Tallinn University, Estonia
Email: reili.argus@tlu.ee

Marta Białecka-Pikul
Jagiellonian University, Poland
Email: marta.bialecka-pikul@uj.edu.pl

Elma Blom
Utrecht University, the Netherlands
Email: W.B.T.Blom@uu.nl

Tessel Boerma
Utrecht University, the Netherlands
Email: T.D.Boerma@uu.nl

Ivana Bogavac
Life Activities Advancement Center, Institute
for Experimental Phonetics and Speech
Pathology, Serbia
Email: ivbogavac@gmail.com

Ute Bohnacker
Uppsala University, Sweden
Email: ute.bohnacker@lingfil.uu.se

Evelyn Bosma
Leiden University, Utrecht University, the
Netherlands
Email: e.bosma@uu.nl

Morna Butcher
NHS Greater Glasgow and Clyde, United
Kingdom
Email: morna.butcher@gmail.com

Alondra Camus
Universitat Autònoma de Barcelona, Spain
Email: Alondra.Camus@uab.cat

Angel Chan
Hong Kong Polytechnic University, Hong
Kong
Email: angel.ws.chan@polyu.edu.hk

Kelly Cheng
Hong Kong Polytechnic University, Hong
Kong
Email: kelly.cw.cheng@polyu.edu.hk

Timothy Cheng
Hong Kong Polytechnic University, Hong
Kong
Email: wailokhk@hotmail.com

Amelie Cheung
Hong Kong Polytechnic University, Hong
Kong
Email: ame.ccy@gmail.com

Uma Maheshwari Chimirala
NALSAR University of Law, Hyderabad,
India
Email: chimiralaumamaheshwari@gmail.com

Vasiliki Chondrogianni
University of Edinburgh, United Kingdom
Email: v.chondrogianni@ed.ac.uk

Barbie Chui
Hong Kong Polytechnic University, Hong
Kong
Email: st.barbiechui@gmail.com

Laís Vitória Cunha de Aguiar
University of Brasília (UnB), Brazil
Email: lahvitoria10@gmail.com

Jelske Dijkstra
Fryske Akademy, Mercator European
Research Centre on Multilingualism and
Language Learning, the Netherlands
Email: jdijkstra@fryske-akademy.nl

Maria José Ezeizabarrena
University of the Basque Country
(UPV/EHU), Spain
Email: mj.ezeizabarrena@ehu.eus

Roxana Fung
Hong Kong Polytechnic University, Hong
Kong
Email: roxana.fung@polyu.edu.hk

Natalia Gagarina
Leibniz-Zentrum Allgemeine
Sprachwissenschaft (ZAS), Germany
Email: gagarina@leibniz-zas.de

Isabel García del Real
Universidad Pública de Navarra, Spain
Email: isabel.garciadelreal@unavarra.es

Rowena Garcia
Max Planck Institute for Psycholinguistics, the
Netherlands
Email: Rowena.Garcia@mpi.nl

Yozna Gurung
English & Foreign Languages University,
Hyderabad, India
Email: yoznag@gmail.com

Rima Haddad
Uppsala University, Sweden
Email: rima.haddad@lingfil.uu.se

Ewa Haman
University of Warsaw, Poland
Email: ewa.haman@psych.uw.edu.pl

Saboor Hamdani
Hong Kong Polytechnic University, Hong
Kong
Email: 19076107R@connect.polyu.hk

Hien Hoang
Hanoi National College for Education,
Vietnam
Email: hth2210@gmail.com

Gordana Hržica
University of Zagreb, Croatia
Email: gordana.hrzica@erf.hr

Ljiljana Jeličić
Life Activities Advancement Center, Institute
for Experimental Phonetics and Speech
Pathology, Serbia
Email: lilijen@ymail.com

Kristine Jensen de López
Aalborg University, Denmark
Email: kristine@hum.aau.dk

Jan de Jong
University of Bergen, Norway
Email: Jan.Jong@uib.no

Rachel Kan
Hong Kong Polytechnic University, Hong
Kong
Email: rachel.kan@polyu.edu.hk

Svetlana Kapalková
Comenius University, Slovakia
Email: kapalkova@fedu.uniba.sk

Dorota Kiebzak-Mandera
Institute of Polish Language of Polish
Academy of Sciences, Poland
Email: dorota.kiebzak.mandera@gmail.com

Daleen Klop
Stellenbosch University, South Africa
Email: dk@sun.ac.za

Jelena Kuvač Kraljević
University of Zagreb, Croatia
Email: jelena.kuvac@erf.unizg.hr

Milena Kuehnast
Humboldt-Universität zu Berlin, Germany
Email: milena.kuehnast@hu-berlin.de

Andra Kütt
Tallinn University, Estonia
Email: andra.kytt@gmail.com

Chiara Levorato
University of Padova, Italy
Email: chiara.levorato@unipd.it

Josefin Lindgren
TU Dortmund; Leibniz-Zentrum Allgemeine
Sprachwissenschaft, Germany
Email: josefin.lindgren@tu-dortmund.de

Joyce Lo
Hong Kong Polytechnic University, Hong
Kong
Email: lowsjoyce@gmail.com

Jin Luo
Hong Kong Polytechnic University, Hong
Kong; University of Groningen, the
Netherlands
Email: luojinhey@gmail.com

Manish Madappa
English & Foreign Languages University,
Hyderabad, India
Email: manish.madappa@gmail.com

İlknur Maviş
Anadolu University, Turkey
Email: imavis@anadolu.edu.tr

Eva Meier
Humboldt-Universität zu Berlin, Germany
Email: eva.meier@hu-berlin.de

Karolina Mieszkowska
University of Warsaw, Poland
Email:
karolina.mieszkowska@psych.uw.edu.pl

Monika Nemcová
Comenius University, Slovakia
Email: nemcova70@uniba.sk

Micaela Nunes Martins dos Reis
University of Brasília (UnB), Brazil
Email: micealamartinss98@gmail.com

Mary-Pat O'Malley
National University of Ireland, Ireland
Email: marypat.omalley@nuigalway.ie

Marcin Opacki
University of Warsaw, Poland
Email: marcin.opacki@wn.uw.edu.pl

Agnieszka Otwinowska
University of Warsaw, Poland
Email: a.otwinowska@uw.edu.pl

Eleni Peristeri
University of Thessaly, Greece
Email: eleniperisteri@yahoo.gr

Alexandra Perovic
University College London, United Kingdom
Email: a.perovic@ucl.ac.uk

Ben Phạm
Hanoi National College for Education,
Vietnam
Email: ben.phamthi@hnue.edu.vn

Giang Pham
San Diego State University, USA
Email: gpham@sdsu.edu

Linh Pham
Hanoi National College for Education,
Vietnam
Email: thuylinhtw1@yahoo.com

Hrafnhildur Ragnarsdóttir
University of Iceland, Iceland
Email: hragnars@hi.is

Madhavi Gayathri Raman
English & Foreign Languages University,
Hyderabad, India
Email: gayathriraman@yahoo.com

Maja Roch
University of Padova, Italy
Email: maja.roch@unipd.it

Yulia Rodina
UiT Arctic University of Norway, Norway
Email: yulia.rodina@uit.no

Semra Selvi Balo
Anadolu University, Turkey
Email: smrselvi@gmail.com

Hanne B. Søndergaard Knudsen
Aalborg University, Denmark
Email: hannebsk@hum.aau.dk

Ianthi Maria Tsimpli
University of Cambridge, United Kingdom
Email: imt20@cam.ac.uk

Zubair Torwali
Idara Baraye Taleem-o-Taraqi (IBT), Institute
for Education and Development, Pakistan
Email: ztorwali@gmail.com

Aleksandra Trifonova
Universität Potsdam, Germany
Email: trifonova1@uni-potsdam.de

Tue Trinh
Leibniz-Zentrum Allgemeine
Sprachwissenschaft, Germany
Email: trinh@leibniz-zas.de

A. Müge Tunçer
Anadolu University, Turkey
Email: aylinmt@gmail.com

Wenchun Yang
Hong Kong Polytechnic University, Hong
Kong
Email: wenchunchun.yang@connect.polyu.hk

Karen Yuen
Hong Kong Polytechnic University, Hong
Kong
Email: karenyuencw@gmail.com

Monique Visser
Stellenbosch University, South Africa
Email: mputter@sun.ac.za

Cyril Wealer
University of Luxembourg, Luxembourg
Email: cyril.wealer@uni.lu

Constanze Weth
University of Luxembourg, Luxembourg
Email: constanze.weth@uni.lu

Anita M.-Y. Wong
University of Hong Kong, Hong Kong
Email: amywong@hku.hk

Janice Wong
Hong Kong Polytechnic University, Hong
Kong
Email: 13016161g@connect.polyu.hk

Preface: *New language versions of MAIN: Multilingual Assessment Instrument for Narratives – Revised*

Natalia Gagarina

Leibniz Zentrum Allgemeine Sprachwissenschaft

Josefin Lindgren

Leibniz Zentrum Allgemeine Sprachwissenschaft; TU Dortmund

26 November 2019, Uppsala.

At last. The Revised version of the Multilingual Assessment Instrument for Narratives (*MAIN–Revised*, part of the LITMUS¹ battery) is about to be launched. The content has been polished up to the very end. The formatting is almost perfect. Over the past few years, ZAS Papers in Linguistics (ZASPiL) 63 with its Background on *MAIN – Revised, how to use it and adapt it to other languages* and 5 revised language versions (English, German, Russian, Swedish, and Turkish for the bilingual Turkish-speaking population in Sweden) has been prepared to be published. Now, Ute Bohnacker and Natalia Gagarina are sitting at the Linguistics Department, Uppsala University and are having long telephone talks with Christina Beckmann at the Leibniz-ZAS in Berlin, who is responsible for the technical part. It is not easy to organize the volume as we think it would be best: We want to publish the Introduction online with immediate access for everyone, but also provide links to the respective language versions of MAIN, so that prospective users first take note of the rules of use, agree to them, and then can enjoy the selected language version. Last-minute technical glitches need to be solved. But now we are there: Late at night on 26 November 2019, the volume finally sees the light of day and is online (<https://zaspil.leibniz-zas.de/issue/view/53>).

The next ZASPiL volume, number 64, has already been planned for some time and is currently in the making. Now that the Revised version of MAIN (2019) has been launched, further language versions are being worked on in every corner of the world. ZASPiL 64 will contain revised and new language versions of MAIN and should appear in early March 2020. We know

¹ LITMUS (Language Impairment Testing in Multilingual Settings) is a battery of tests that have been developed in connection with the COST Action IS0804 *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment* (2009–2013). Financial support by COST is hereby gratefully acknowledged.

that this mammoth project will not be easy to realize, especially given the restricted resources that we have at our disposal, but we are driven by the common spirit of MAIN and its research network, by the desire of all contributors for this endeavour to see the light of day, and by a never-ending flow of researchers who are eager to contribute. And Josefin Lindgren has got a position at the Leibniz-ZAS in 2020 for several months to help Natalia finish the work.

Mid-January 2020, Berlin.

The coordination of the development of new and revised language versions of MAIN for ZASPiL 64 is continuing. A number of researchers express a wish to also contribute papers that describe the process of adapting MAIN to their respective language(s). Even though the final number of contributions for the volume has been set, new requests keep coming in and we have heated debates about whether to accept more new languages or not. Which language will we not accept? To whom we will first say: “It is too late” or “This is not good enough”? This is not an easy task. So, while we are writing these lines, we still do not know the exact number of language versions that are to be included in the volume, because we have decided to give the opportunity to everyone who has expressed a serious wish to adapt MAIN to their language(s).

27 March 2020, Berlin.

Since the beginning of March (actually even earlier) the world has changed. The Corona pandemic has struck. As of today, 27 March, when we are writing these lines, more than half a million people are infected with COVID-19 (according to the Johns Hopkins Institute in the US, 549,604, 11:49 AM; the Robert Koch Institute in Germany reports similar numbers). The numbers of infections are growing dramatically each day. It is not easy to concentrate, as people are dying, people are getting ill around us, life changes, and the universities and research institutes around the world are going into lock-down, but we must go on.

We now have to reconsider the timing of our initial publication plan. We decide to keep the main structure of the volume as originally planned but reconsider the ‘internal’ content. At the moment, we have around 70 new and revised language versions and around 25 chapters describing the adaptation processes, and we will start with them. Additional chapters and language versions will be added as soon as they are submitted.

For these working papers, each author is responsible for the content of their respective chapter. As editors of this ZASPiL volume, we are in contact with the authors during the process of adapting MAIN to a certain language and during their writing of the chapter. We check for general content and form and advise the authors how to present and shorten parts of their chapters that introduce the respective language and its cultural history. We also discuss contributors’ questions about potential revisions of the pictorial stimuli for MAIN, e.g. for Asia, Africa and, specifically, Iran. Throughout, we point out the strict rules for adapting MAIN, so that the authors of new and/or revised language versions can ensure that all necessary requirements for high-quality adaptation have been met. We also make sure that all MAIN language versions have the same basic layout, not an easy task when languages are written

using different writing systems (e.g. Arabic, Chinese, Cyrillic, Devanagari, Hebrew, Latin); Josefin does her best and communicates with the authors about all major discrepancies found. Some language versions are already done, many more to come. As volume editors we cannot be held responsible for the quality of the language adaptations; this responsibility lies with the authors of the individual language versions. The same also goes for the content of the chapters describing this process of adaptation. We make the decision to read all chapters, return them to the authors with comments and ask for revisions.² This process will take several months, and as this could become a never-ending process, at some point we need to stop, but the chapters will not undergo double blind peer-review.

We have to specify that the chapters are not peer-reviewed.

1 June 2020, Berlin and Groningen.

We are now behind the deadline (again), new requests for language adaptations are still coming in, and the COVID-19 situation is not becoming any better. What to do? We realize that we will not manage to publish the volume before the summer break. We need to revise our plan. We set a new deadline for the chapters outlining the adaptation process – at this point, there are almost 30 chapters and some of them have been done for a while, but others still need revision. We also take the decision to reserve time for finalizing the new language versions till the end of 2020. The language versions in the volume will appear as links anyway, and these links will be activated one after the other, as new versions will be coming in. As things stand now, there should be between 70 and 80 languages. Wow, is this really going to happen?!

31 August 2020, Berlin and Groningen.

At last. All the chapters are there. The content has been worked on as much as possible. The formatting is almost perfect. ZASPiL 64 with the Preface, an Introductory chapter “MAIN – Revised, how to use it and adapt it to other languages” and 33 chapters describing language adaptations have been prepared to be published. Josefin Lindgren has had long talks with Christina Beckmann and Nathalie Topaj, who are responsible for the technical parts. It is not easy to organize the volume as we think it would be best: We want to publish the Preface, the Introductory chapter, and all chapters describing the language versions online with immediate access, but also provide links to all 70 or 80 language versions of MAIN, so that everyone first takes note of the rules of use, agrees to them and then can enjoy the selected language version. But now we are there: finally, the volume sees the light of day and is online with 33 chapters. These chapters describe the processes of translating and adapting the Revised version of MAIN (2019) to languages belonging to different language families and spoken in various parts of the world (Arabic, Bulgarian, Cantonese (Chinese), Catalan, Croatian, Danish, Dutch, Estonian, (West) Frisian, Scottish-Gaelic, Gondi, Greek, Halbi, Hindi, Icelandic, Irish (Gaelic), Italian, Kam, Kannada, Luxembourgesch, Malayalam, Mandarin (Chinese), Polish, (Brazilian)

² Some authors revise their papers only once, others many times (e.g. Uma Chimirala revised her chapter on Gondi, Halbi and Hindi by Chimirala an impressive 14 times).

Portuguese, Serbian, Shughni, Slovak, Spanish, Tagalog/Filipino, Tajik, Torwali, Turkish, Urdu, Vietnamese, Yakut as well as chapters describing the use of MAIN in South Africa and with Norwegian-Russian bilinguals; MAIN-versions for these languages and many others are or will be available). Many of the chapters also give summaries of research that has been carried out with MAIN in the specific language(s) or present first results from pilot studies. Most chapters provide short descriptions of the grammar of the respective language(s) and/or detail the context in which they are spoken.

When you go through or read the volume, please note that for some of the MAIN language versions, there is no chapter on the adaptation process, e.g. Sangho. Note also that there are some chapters describing the process of language adaptation and some pilot results, but that no version of MAIN for this particular language is yet available. This is the case for e.g. Tajik and Shughni. MAIN versions for these languages do exist, however, although they have not been published as official versions, and the contact details of the authors can be found on the MAIN homepage, Subsection: ‘Worldwide Network’ (<https://main.leibniz-zas.de/en/worldwide-network/>). For other languages, both a chapter on the adaptation process and the language version are included in the present volume. So please carefully check the content.

Our work as editors of this volume has not always been easy, but we have managed it, hopefully not too badly. We are very happy to finally be able to publish this ZASPiL 64 volume and we would like to thank all the authors for having been our companions on this long and demanding, but very fruitful, journey.

Natalia Gagarina and Josefin Lindgren

Berlin and Groningen

P.S. The papers in this volume have not undergone a process of double-blind peer-review, and there is considerable variation in their quality. We want to emphasize that each author is responsible for the quality of the content of their respective paper. As editors we have read all contributions carefully and provided feedback and suggestions for improvements, both regarding the content and regarding coherence and clarity of the writing. The individual authors vouch for the quality of their MAIN language version described in the papers, as they were all required to follow the same rigorous criteria for translation and adaptation that were elaborated in Gagarina et al. (2012) and further revised in Bohnacker and Gagarina (2019). All existing language versions of *MAIN-Revised* can be accessed [here](#) (after registration). New language versions of MAIN will be added continuously throughout 2020, as they become ready.

Introduction to MAIN–Revised, how to use the instrument and adapt it to further languages

Ute Bohnacker*

Uppsala University

Natalia Gagarina*

Leibniz-Zentrum Allgemeine Sprachwissenschaft (ZAS)

1 Introduction

Since the launch of the *Multilingual Assessment Instrument for Narratives* (MAIN) in December 2012,¹ researchers around the world have been using MAIN to collect narrative data for a variety of languages and language combinations, analysed these data and thereby advanced our knowledge of children’s acquisition of narrative skills. This has led to a growing number of publications, including the *Applied Psycholinguistics* Special Issue on “Narrative abilities in bilingual children” (2016), the book volume *Developing narrative comprehension* (2020) in the *Studies in Bilingualism* Series, eds. U. Bohnacker & N. Gagarina, and the forthcoming *First Language* Special Issue on “Children’s acquisition of referentiality in narratives” (2021), eds. N. Gagarina & U. Bohnacker.

Over the years, our empirical database has greatly expanded, thanks to the never-ending creativity of how children tell and retell stories and how they answer the MAIN comprehension questions. Their creativity goes far beyond the anticipated responses that were included in the MAIN scoring in December 2012 (based on pilot studies prior to the launch of MAIN).

We therefore felt that the MAIN evaluation (i.e., the guidelines for assessment and scoring sheets) needed to be updated and expanded (see below). To do this we used our Uppsala and Berlin empirical databases of more than 2,500 transcribed MAIN narratives as well as ca

* Ute Bohnacker’s contribution to this work was partly supported by funding from the Swedish Research Council (VR), Grant 2013-1309, and from the Bank of Sweden Tercentenary Foundation (RJ), Grant P19-0644:1. The work of Natalia Gagarina was in part supported by the German Federal Ministry of Education and Research (BMBF) Grant No. 01UG1411 and a guest professorship at Uppsala University. An earlier version of this text was published in *ZASPiL* 63, pp. iv–xii.

¹ MAIN: Multilingual Assessment Instrument for Narratives is part of LITMUS (Language Impairment Testing in Multilingual Settings). LITMUS is a battery of tests that have been developed in connection with the COST Action IS0804 *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment* (2009–2013). Financial support by COST is hereby gratefully acknowledged.

24,000 responses to MAIN comprehension questions (collected between 2013–2019). The databases consist of cross-sectional and longitudinal data of 308 children in Germany, 50 children in Russia, and 286 children in Sweden. The children were growing up monolingually with Russian or Swedish, or bilingually with Russian/German, Turkish/German, English/Swedish, German/Swedish or Turkish/Swedish. First, we systematised the children’s responses across languages from English, German, Russian, Swedish and Turkish and extracted frequently-occurring correct and incorrect response types that were missing from the original MAIN scoring. We then revised the English scoring sheets, by updating and considerably expanding the list of correct and incorrect responses for production and comprehension of macrostructure, and corrected some (minor) inconsistencies in the scoring of the four MAIN stories (Cat, Dog, Baby Birds, Baby Goats). The guidelines for assessment were also amended slightly, while the protocols and story scripts remain the same. This is how the Revised version of MAIN in English (2019) (<https://zaspil.leibniz-zas.de/issue/view/53>) has come about.

At the same time, we also parallelised the German, Russian, Swedish and Turkish versions of MAIN with the Revised version in English (2019), and in doing so, incorporated authentic (correct and incorrect) responses from these languages. For example, frequently occurring response types found in Swedish or Russian were (in translated form) also included in the other language versions.

This work has resulted in the Revised versions of MAIN that we launched in November 2019 in ZASPiL 63. We hope that the Revised versions will help linguists, other researchers and practitioners to assess children’s narrative abilities more adequately. Note also that the Revised version in English serves as a base for any further language adaptations of MAIN. The present volume of ZASPiL 64 (2020) includes more than 70 such language adaptations. Additionally, 33 chapters describing the process of how MAIN has been adapted to individual languages are published in Part I of the present volume.

In order to access the language materials of the Revised version of MAIN in English, German, Russian, Swedish or Turkish for the bilingual Turkish-speaking population in Sweden (which are part of ZASPiL 63), you should click on “Materials to be used for assessment” at <https://zaspil.leibniz-zas.de/issue/view/53>. You will then be redirected to a registration site for MAIN. Once you have agreed to the copyright, citation and licensing rules and submitted your registration, you will be able to access the materials. The same holds for accessing the MAIN pictures.

In order to access the new and revised language versions of the present volume ZASPiL 64 (such as Afrikaans, Arabic, Bulgarian, Cantonese Chinese, Catalan, Croatian, Cypriot Greek, Danish, Dutch, Estonian, Farsi, Finnish, Frisian (West), Scottish Gaelic, Gondi, Halbi, Hebrew, Hindi, Greek, Icelandic, Irish (Gaeilge), Italian, Kam, Kurmanji (Kurdish), Luxembourgish, Mandarin Chinese, Polish, Brazilian Portuguese, Serbian, Slovak, Spanish, Tagalog, Torwali, Turkish in Turkey, Urdu, Vietnamese, Yakutian), you should go to Part II of this ZASPiL volume, 64 and click on the respective words “The available *MAIN–Revised* language versions can be downloaded after registration. **Here** is the link to registration and language versions.” You will then be redirected to a registration site for MAIN. Once you have

agreed to the copyright, citation and licensing rules and submitted your registration, you will be able to access the materials.

2 The MAIN pictures

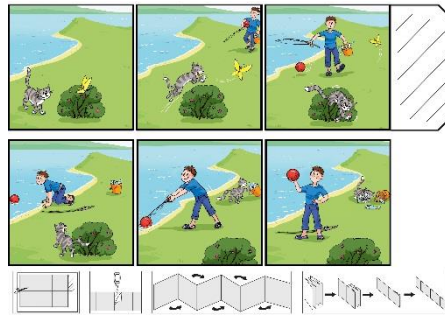
There are pictorial stimuli for all four MAIN stories (Cat, Dog, Baby Birds, Baby Goats), each consisting of six pictures in colour. When developing the story plots and the content and form of the pictures during 2009–2012, more than 200 revisions were made. (For more information on this developmental process, see ZASPiL 56, Part I, pp. 19–53.)

When the MAIN pictures were developed, the objects and characters depicted were carefully chosen and designed for a variety of cross-cultural environments and also piloted in different countries (2009–2013). Later on, with the ever-increasing popularity of MAIN, the pictorial stimuli have been used successfully also in other environments and regions of the world (2013–2019). In a few cases, some minor, cosmetic, picture adaptations have been done (e.g. adjusting the skin colour of the boy, or adjusting the colour of a particular animal so that it can be recognised by children in a particular geographical region or a cultural environment where the original animal is unknown, or replacing the sausages in the boy’s bag by chicken legs for cultural environments where sausages are less widespread). These pictorial stimuli have been successfully used with languages spoken in regions of Africa, e.g. Afrikaans, Akan, Luganda and South African English, as well as languages spoken in regions of the Middle East and Asia, such as different varieties of Arabic, Cantonese, Gondi, Halbi, Hindi, Indonesian, Kam, Kannada, Kazakh, Kurdish (Kurmanji), Malayalam, Mandarin, Persian, Tagalog, Urdu, Uyghur and Uzbek.

Some researchers have also requested that more substantial changes be made in the pictures to fit their particular cultural environment. However, such changes in the pictorial content may jeopardise the validity of the instrument and also jeopardise the comparability of results across studies. Note also that the content of the four picture stories has been thoroughly discussed with representatives of different cultures and languages, and numerous revisions and refinements were made when developing them, so that the MAIN pictures in their current form appear to be suitable for assessing macrostructural narrative abilities in diverse cultures and regions of the world. We have therefore been restrictive in responding to requests for more substantial changes in the pictures.

Note that you may not alter the pictures yourself, for copyright reasons.

In order to use the pictures, you may want to read the Guidelines for Assessment in the MAIN Revised version in English (and other languages). You should print the pictures in colour on a good-quality printer on white A4 paper, each picture in original size (9 x 9 cm), cut and paste them together into a 6-picture strip, and fold them twice (pic 1, pic 2, fold, pic 3, pic 4, fold, pic 5, pic 6), as illustrated below.



The default serial order of our picture sequences is from left to right. For languages with a right-to-left reading direction, the pictures may be pasted together and presented from right to left instead (6-5-4-3-2-1). You can also download the pictures in right-to-left direction.

In order to access the pictures, visit <https://main.leibniz-zas.de/en/main-materials/main-materials/>, where you will be directed to a registration site for MAIN. Once you have agreed to the copyright, citation and licensing rules and submitted your registration, you will be able to access the materials.

3 Do's and don'ts for working with MAIN

MAIN has been adapted to and is being used in a large number of languages. The MAIN community is growing, since it is a good instrument for measuring macrostructural narrative abilities across different languages. MAIN has been in the public domain and is accessible via the website at the Leibniz-ZAS in Berlin. We would like to ensure that research with MAIN is done in a comparable manner and that the results can eventually be published together, as this will advance our knowledge of children's developing narrative abilities across the world. Please be part of our endeavor and help us safeguard that the instrument is being used in a comparable and reliable way across languages, countries, research groups and labs.

Here are some recommendations for use.

How to access and share the MAIN materials

- Make sure that you use the latest version of MAIN. We recommend that you only use versions which you download yourself from the (Leibniz-ZAS) MAIN-website (<https://main.leibniz-zas.de/>).
- Do not circulate MAIN materials to others in ways that bypass the web registration; instead direct interested colleagues, students, friends etc. to the website to take note of the copyright, citation and licensing rules for MAIN

How to use the MAIN pictures

- When administering MAIN, use the pictures in agreement with the Guidelines for Assessment (which can be found in every language version)

- Do not alter the size, colour or content of the MAIN pictures
- The pictures are part and parcel of the MAIN assessment, so don't use them unless you are administering MAIN for evaluation, intervention and/or research purposes

How to use the MAIN stories

- When testing bilinguals in their two languages, avoid using the Cat and/or Dog story for one language and the Baby Birds and/or Baby Goats story for another language
- Avoid using the Cat and/or Dog stories at one testing point and comparing them with Baby Birds and/or Baby Goats at another testing point
- Why? The MAIN stories cannot straightforwardly be compared in every way. As recent results have shown, there are some nuances for which the four stories differ, especially with regard to the comprehension questions. Baby Birds and Baby Goats are roughly parallel; Cat and Dog are also parallel but differ from Baby Birds and Baby Goats in some respects, e.g. plotline, number of characters and some of the comprehension questions. (For more information, see the book volume *Developing narrative comprehension* (2020), eds. U. Bohnacker & N. Gagarina, in the *Studies in Bilingualism* Series, Amsterdam/Philadelphia: John Benjamins.)

How to administer MAIN

- Please follow the Guidelines for Assessment and the Instructions in the protocols found in every language version

How to cite

If you present or publish results based on the Revised version of MAIN in English, cite:

- Gagarina, Natalia, Klop, Daleen, Kunnari, Sari, Tantele, Koula, Välimaa, Taina, Bohnacker, Ute & Walters, Joel (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics* 63.

If you use a language version other than English, cite this language version according to the title page of the version you are using. Here, there are two possibilities:

If your language version is not accompanied by a chapter on adaptation (Part I, ZASPiL 64), cite this language version as illustrated here for the Sangho version:

- 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. Sangho version. Translated and adapted by Diki-Kidiri, M.

If your language version is accompanied by a chapter on its adaptation (in Part I, ZASPiL 64), cite this language version as illustrated here for the Estonian version:

- Argus, R. & Kütt, A. (2020). The adaptation of MAIN to Estonian. *ZAS Papers in Linguistics*, 64, 57–62.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised version. Materials for use. *ZAS Papers in Linguistics*, 63. Estonian version. Translated and adapted by Argus, R. and Kütt, A.

4 Helpful information about scoring

Scoring in MAIN is done according to scoring sheets that include correct and incorrect responses. Scoring MAIN macrostructure includes both production (storytelling and/or retelling) and comprehension and is divided into four sections, A, B, C and D. These sections cover quantitative and qualitative aspects of evaluating narrative performance.

Quantitative scoring in Section A (“Story structure”) calculates the number of story components produced by the child, with a maximum score of 17. This maximum score consists of 1 point each for reference to time and place at the beginning of the story (so-called setting), and 1 point each for mentioning the 5 components of an episode (internal state as initiating event, goal, attempt, outcome, internal state as reaction). As there are 3 episodes in each story, this means 15 points (plus 2 points for setting), yielding a maximum of 17 points. Since every MAIN story includes 3 episodes, there are several opportunities for the child to produce story structure components. In our experience, very few children produce them all, and most adults do not reach 17 points either. A score below 17 does not necessarily indicate poor narrative ability (cf. Gagarina, Bohnacker & Lindgren 2019 in ZASPiL 62, pp. 190–208).

The quality of a narrative also depends on the combination of story components in an episode. This is assessed in Section B (“Structural complexity”), which is derived from Section A. In Section B, combinations of story components are classified in terms of complexity (episodic structure: sequences, incomplete vs complete episodes), as shown in the scoring sheets. There are different ways of scoring structural complexity. In our experience, a promising way of evaluating structural complexity is by analysing whether a child is able to produce sequences at all, and whether the child is able to produce at least one goal-attempt-outcome sequence, i.e. a full episode.

Section C counts the total number (i.e. tokens) of internal state terms in the child’s narrative. Internal state terms are words and expressions that denote the inner (or mental) states of story characters. It should be acknowledged that internal state term tokens are not strictly part of macrostructure, but more of a lexical measure. Internal state terms are also language-specific and their production depends on lexical proficiency. No maximum score can be specified for internal state term tokens.

In Section D (Comprehension), 10 questions are asked and a maximum score of 10 points can be obtained (each correctly answered question scores 1 point). The questions target

understanding of those aspects of macrostructure that must be inferred from the pictures, namely goals and internal states of protagonists. The questions were designed to have different levels of difficulty in terms of abstraction and inferencing, so a child is not expected to answer them all equally well. In our experience, many typically developing children above the age of 4, even those with relatively low language exposure and proficiency, can reach relatively high comprehension scores in Section D.

There are other aspects of narrative ability that are not directly assessed with the MAIN scoring, but which can also be investigated in stories elicited with MAIN. For the so-called microstructure, Gagarina et al. (2012, *ZASPiL* 56, Part I, pp. 15–17, 55–58) suggest investigating the following aspects of microstructure: narrative length and lexis, syntactic complexity and discourse cohesion, and/or code-switching. Since narratives as semi-spontaneous data are a rich source of linguistic material, other aspects, such as referent introduction and maintenance, temporality, causality etc., also lend themselves to analysis.

5 For researchers: Helpful information for reporting MAIN results

MAIN provides a uniform methodology of collecting narrative data and thereby makes it possible to investigate children’s narrative abilities across languages and populations in a truly comparable way. However, MAIN also provides different options to elicit these data. When we collect semi-spontaneous narratives across countries and teams, real life ‘intervenes’ and perfect uniformity cannot always be achieved; some variation in method naturally occurs. It is therefore important that you explain the methodology of your study in detail when reporting results.

You should always specify the following concerning mode, materials and administration:

- which story or stories were used (Cat, Dog, Baby Birds or Baby Goats),
- in which elicitation mode the data were collected from the children (tell, retell or model story),
- how the experimenter(s) administered MAIN to the children (non-shared visual attention, fold-out presentation mode), and in the case of retell, how the stories were read to the children (live by experimenter or pre-recorded via earphones), and who the children retold the stories to,
- who administered MAIN (e.g. trained experimenter, native speaker, monolingual or bilingual experimenter, number of experimenters in the study and per language),
- setting (e.g. quiet room at school or preschool, home, lab),
- time lapse between testings,
- counterbalancing procedures,
- recording method (audio or video).

Regarding transcriptions, you should specify how transcriptions were done, i.e. by whom, how they were checked, and how transcription reliability was achieved.

Concerning MAIN scoring, you should specify your scoring procedure. We recommend that you use the scoring sheets of the Revised version (2019) for English, German, Russian, Swedish or Turkish for the bilingual Turkish-speaking population in Sweden (ZASiL 63). Alternatively, for the new language versions and revised language versions included in the present 2020 volume (ZASPiL 64), use the scoring sheets included here, as they are based on the Revised version of MAIN in English. Researchers who have worked with MAIN using older versions should specify which older versions these were. Any deviations from the MAIN scoring protocol should be reported. Specify how problematic cases were resolved and how scoring reliability was ensured.

When presenting or publishing your results, please cite MAIN as specified in Section 3 (“Do’s and don’ts for working with MAIN”).

6 Guidelines for adapting MAIN to other languages

If MAIN does not yet exist for your language, here are some recommendations for adapting it to your language.

Adaptation steps

1. Start the adaptation only after you have read the MAIN Manual and familiarised yourself with the whole instrument. The Manual was published in 2012 and describes the theoretical background and the process of developing MAIN. It can be downloaded from the ZAS Papers in Linguistics website: <https://zaspil.leibniz-zas.de/issue/view/46> (Gagarina et al. 2012. MAIN: Multilingual Assessment Instrument for Narratives [Part I] ZAS Papers in Linguistics 56).
2. Use the *Revised version in English* (2019) as a base for all language adaptations. You should contact costmain@leibniz-zas.de for further information and if you have questions about adaptation.
3. Translate the whole text into your language.
4. Ask two native-speaker linguists to carefully check the translation of the entire text and adjust. Your translation should closely correspond in meaning to the Revised version in English, but be worded in a way that is authentic and idiomatic in your language.

Special requirements for adapting the story scripts to your language

5. Translate all four story scripts into your language.
6. When adapting macrostructure note the following:
The number of GAO sequences and internal states for each protagonist must remain constant across languages. Adaptations of the scripts to different languages must therefore keep the following similar to the English version:
 - The number and sequence of G, A, O
 - The number of internal state terms as initiating events and as reactions

- The logical sequence of clauses/utterances
7. When adapting microstructure note the following:
Script adaptations to different languages should keep microstructure as similar as possible across stories.
- All scripts should be similar to the English scripts concerning:
 - The number of coordinating and subordinating constructions (+/- 2)
 - The number of internal state terms overall
 - The number of direct speech sentences
 - The number of clauses per story may differ from English (+/- 2), but should be kept identical across the two parallel story scripts (Cat and Dog, Baby Birds and Baby Goats) within a language.
 - The number of words per story may differ from English (+/- 3 words or more depending on the language) but should be kept similar across the two parallel story scripts (Cat and Dog, Baby Birds and Baby Goats) within a language.
 - Lexicon: If you have the choice of different lexemes, use basic-level terms (so for instance, rather than choosing a noun compound use the simplex form, such as ‘worm’ and not ‘earthworm’). If possible, choose a frequently used lexeme that is acquired early by children.
 - Do not use idioms, as children may not be familiar with them.
8. Note any grammatical and lexical difficulties that occurred during the adaptation as well as any changes that were made because of language-specific requirements concerning the structure and/or lexical inventory (this information may come in useful for future publications).
9. Translate your language version back into English and closely compare your back translation with the original English version. Note the differences, if any.
10. Ask two native-speaker linguists to carefully check the translation of the story scripts. Discuss alternatives and via consensus arrive at the best possible final version.

Piloting your language version

Try out your language version on children of different ages including preschoolers before you start collecting data. This is to make sure that the wording of your prompts and comprehension questions is easily understood by children and elicits relevant responses. Adjust the wording accordingly, if necessary.

If you have any questions regarding MAIN, please write to costmain@leibniz-zas.de

Adapting MAIN to Arabic

Ute Bohnacker*

Uppsala University

Rima Haddad

Uppsala University

This paper provides some brief background information on the Arabic language and describes how MAIN (Multilingual Assessment Instrument for Narratives) was adapted to several varieties of Arabic.

1 Introduction

This chapter first provides some background information on Arabic, and then describes the process of how the Arabic versions of the Multilingual Assessment Instrument for Narratives (MAIN)¹ were developed and how they have been used. There are few other standardised language elicitation and assessment instruments that can be used with Arabic-speaking children, and, as far as we know, none in the domain of narratives.

2 A very short description of the Arabic language

Arabic is a Semitic language and is thus related to Aramaic and Hebrew (Semitic languages belong to the Afro-Asiatic language family). Arabic is spoken in large parts of the world, particularly in the Middle East and Northern Africa. Due to a history of migration, Arabic is nowadays also spoken by a considerable number of immigrants and their descendants in Europe and other regions of the world.

* Acknowledgment: Ute Bohnacker's contribution to this work was partly supported by funding from the Swedish Research Council (Grant VR 421-2013-1309).

¹ MAIN is part of Language Impairment Testing in Multilingual Settings (LITMUS). LITMUS is a battery of tests that have been developed in connection with the COST Action IS0804 *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment* (2009–2013).

Arabic has the status of an official language in more than twenty countries, including Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Mauritania, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates and Yemen. Arabic is also used as a semi- or second official language in countries such as Chad, Comoros, Djibouti, Eritrea, Israel, Tanzania and Western Sahara. Moreover, Classical Arabic is the language of the Koran and the liturgical language of Islam.

Arabic comprises many different vernaculars, i.e. spoken varieties or 'dialects', as well as the standard written variety, Modern Standard Arabic (MSA, *fushḥa*). These Arabic varieties differ considerably from each other, and they are not always mutually intelligible, especially those that are geographically and/or historically distant. Major dialect groups include Egyptian, Gulf Arabic, Iraqi, Levantine, Maghrebi, Sudanese and Yemeni Arabic. The spoken varieties do not only differ from each other, but also diverge considerably from MSA; this holds for all domains of language (phonology, morphology, syntax, the lexicon, and discourse pragmatics). Diglossia is commonplace, i.e. the existence of two or more different varieties side by side that are used for different functions and situations (Ferguson 1959:232–234; Altoma 1969; Bassiouney 2009:10). Speakers of Arabic generally use their dialect for oral communication, and MSA for reading and writing. There may also be a continuum from the colloquial local dialect to a regional variety and to more formal MSA (Badawi 1973).

Children growing up with Arabic are first exposed to and acquire their local or regional Arabic variety ('dialect') from their parents, family and community. This variety is used in daily oral communication and activities. By contrast, MSA is generally taught through formal education at school. MSA is considered to have high status and is mainly used in literary contexts and formal situations, e.g. news broadcasts on radio and television, public authorities, newspapers, journals, books, street signs, advertisements, and formal written communication, but not so much in daily informal communication. MSA is therefore not considered to be the mother tongue of Arabic-speaking children, but rather a second language. Native speakers of Arabic are speakers of one of the Arabic varieties that they were exposed to and that they acquired first in childhood (Holes 2004:3). It should be said, however, that many Arabic-speaking children nowadays are not only exposed to one local or regional variety of Arabic. Due to the influence of television and other media as well as the effects of globalisation and migration, children may come in contact with other dialects and MSA from an early age. If such contact is extensive, they may blend words and features from other dialects or MSA into their mother-tongue dialect. This of course also occurs in adult speakers of Arabic. They are often able to adapt their spoken variety of Arabic to the circumstances, e.g. by temporarily or more permanently eliminating local dialectal features in favour of more regional or MSA ones, in order to help communication with Arabic speakers of other varieties, or for reasons of prestige. Conversely, colloquial dialectal features are sometimes mixed into MSA to achieve certain effects, such as authenticity or group identification.

MSA is written with the Arabic alphabet. For the dialects, there are no standardised writing conventions. The Latin alphabet is used for writing when the Arabic alphabet is unavailable or difficult to use for technical reasons, such as in emails or mobile text messages. Such Latin spelling (ASCII) of Arabic is used without any standardised orthography.

Arabic is a richly inflectional language. Here we can only give a bare-bones summary; for a comprehensive description of the structure of the Arabic language, we refer the reader to Arabic reference grammars, including those of the Arabic dialects (e.g. Erwin 1963; Wallace 1963; Cowell 2005; Rice & Sa'id 2005; Badawi, Carter & Gully 2016).

Arabic words generally consist of a consonantal root which carries meaning (similarly to a lexical root in Indo-European languages, for instance), combined with a vowel pattern for word formation. The consonantal root is a number of consonants, often three or four (the so-called radicals). The vowel pattern is a combination of short and/or long vowels that are interspersed with the consonantal root. Arabic vowel patterns function similarly to derivational morphemes in Indo-European languages. Grammatical information in the verbal and the nominal domain is mainly encoded via inflectional affixes (e.g. for person, number or verbal aspect). There are two genders (masculine and feminine), and three numbers (singular, dual, and plural). Definiteness is marked by an enclitic article. Case marking as found in MSA is generally not realised in the Arabic dialects. Verbs have two aspectual base forms, imperfective and perfective. Prepositions are used. The construct state, or constructed genitive (*idāfa*), a juxtaposition of two nouns (or noun phrases), is frequently used to encode possession and related semantic functions. Pro-drop is widespread; subject features are encoded on the verb. The basic word order of verbal clauses in MSA and a number of Arabic dialects is considered to be VSO (verb-subject-object), though SVO (subject-verb-object) is also common (Dryer 2013), and nominal clauses tend to be subject-initial. Certain dialects, such as Iraqi and Egyptian varieties, may be considered to have SVO as the default word order (Barth Magnus & Tawaefi 1989).

3 Adapting MAIN to Arabic

3.1 *Early developments and Standard Arabic*

The Multilingual Assessment Instrument for Narratives, MAIN (Gagarina, Klop, Kunnari, Tantele, Välimaa, Balčiūnienė, Bohnacker & Walters 2012) was first launched in June 2013, after several years of intensive theory development and material construction by Working Group 2 “Narrative and Discourse” of the EU COST Action IS0804 (2009–2013). The instrument was at first developed and piloted for 15 languages, but during the last few months of the Action, some more language versions were added.

One of the versions that was created at this late stage, i.e. without previous piloting, was the Standard Arabic version. Hadil Karawani, a linguist and native speaker of Palestinian Arabic, translated the English version of the MAIN into Standard Arabic in May 2013, and it was included in *ZASPiL* 56 (Gagarina et al. 2012) for the launch of MAIN for 26 language versions in June 2013. Karawani’s Standard Arabic version was not piloted, but simply translated. Due to the diglossic situation of Arabic, as outlined in the previous section, it would in fact have been difficult, if not futile, to try out the translated Standard Arabic version on Arabic-speaking children, since they do not grow up with Standard Arabic, but with

Arabic dialects as their mother tongue. Unsurprisingly, there was little demand for the Standard Arabic version of MAIN in the years following the end of the Action. No Arabic-speaking member or researcher working with Arabic-speaking populations had been active in the “Narrative and Discourse” working group during the COST Action.

3.2 *Piloting MAIN for spoken Arabic varieties, starting with Baghdadi Iraqi Arabic*

A few years later, in 2014, interest increased concerning MAIN and Arabic, but this time Arabic vernaculars were in focus. As part of a large-scale research project, BiLI-TAS,² on the language development of Arabic-speaking and Turkish-speaking bilingual children growing up in Sweden, Ute Bohnacker at the Department of Linguistics and Philology at Uppsala University oversaw the development and piloting of MAIN for several varieties of Arabic commonly spoken in Sweden. Due to Sweden’s particular history of migration, Iraqi and Levantine varieties (e.g. Lebanese, Syrian, Palestinian) predominate in adult and child speakers of Arabic in Sweden today. We therefore focused on these varieties.

First off was the development of a pilot version for (Baghdadi) Iraqi Arabic. As part of an M.A. thesis project, Mohaned Ridha translated MAIN into Baghdadi Iraqi Arabic in 2014/2015, on the basis of Karawani’s (2012/2013) Standard Arabic version and the English and Swedish versions. Ridha is a native speaker of Baghdadi Iraqi Arabic and an interpreter; his translation was checked by Anette Månsson (senior lecturer in Semitic languages, Uppsala University), and changes were made after discussions with Ute Bohnacker. As there is diglossia in Arabic, where commonly only MSA is used for writing, a diglossic document was created: Those parts of MAIN that involved direct language use of the experimenter to the child (i.e. giving instructions, prompting, asking comprehension questions, and story scripts) or language by the child (i.e. story production, answers to comprehension questions) were rendered in the Iraqi dialect. All other parts of the MAIN text (e.g. headings, protocols, explanations, background information) were kept in MSA.

Care had to be taken to choose words and phrases that felt and sounded natural in colloquial Iraqi Arabic, rather than a strict direct translation of an English term. This particularly concerned the dialectal rendering of internal state terms in the MAIN comprehension questions, such as translations of adjectives like ‘disappointed’ or ‘fine/good’. Sometimes there was no good direct translation, or only a low-frequency, literary, formal or stilted one; in such cases, a paraphrase or circumlocution had to be chosen. For best effect, we translated and back-translated not only between English and Arabic, but also between Arabic and Swedish. This involved several rounds of discussion. When Ridha tried out his translation with a few Iraqi Arabic-speaking children, some problems were noticed. For instance, in the Baby Goats story, the translation of the English basic-level term *bird* (to refer to the black crow) as an Iraqi Arabic basic-level term *asfor* ‘bird’ or *ter* ‘bird’ did not always work. Some children preferred a more specific term for this character, such as *gharab/ghorab* ‘raven’ or

² BiLI-TAS is an acronym for Bilingualism, Language Impairment, Turkish, Arabic, Swedish, a project funded by the Swedish Research Council (Grant VR 421-2013-1309).

niser/nisre ‘eagle, eagle-type predator’. Attempts were made to be inclusive and allow for a number of different lexical choices by the children, since they may have been exposed to other Arabic dialects as well, Iraqi or otherwise.

In March and April 2015, Ridha used the Iraqi Arabic version of MAIN to collect audio- and video recorded data from 12 L1-Iraqi Arabic/L2-Swedish children age 5;3–8;2 growing up in Malmö (Southern Sweden). Every child told two MAIN stories in Arabic and answered comprehension questions. Ridha did not investigate narrative macrostructure or comprehension in the children; he simply used MAIN to elicit comparable language production data from 12 children. This worked well.

A potential problem was the default orientation of the MAIN pictures from left to right. 10 of the 12 bilingual Iraqi Arabic children started to fold out and tell the stories from left to right, probably because they were accustomed to this orientation from Swedish picture books. However, two of the children wanted to begin from right to left, which corresponds to the reading direction in Arabic. Thus, the direction in which the MAIN pictures are administered might require some further thought.

For his M.A. thesis (Ridha 2015, unpublished), Ridha analysed the recordings with regard to code-mixing and transfer phenomena, and transcribed some extracts of the narratives in Arabic script. As dialectal transcriptions with the Arabic script proved unsatisfactory, the data of all 12 Iraqi Arabic children was later (in 2016) carefully transcribed anew by Zeinab Shareef, a speech-language pathologist and native speaker of Iraqi Arabic, but this time using the Latin alphabet. All utterances were translated. The transcripts were studied for a number of aspects, including how well the prompting and comprehension questions had worked, children’s use of progressive aspect marking, as well as referent introduction and maintenance.

3.3 Adapting MAIN to Lebanese, Palestinian, Syrian and Iraqi Arabic

In 2016 and early 2017, in preparation of large-scale data collection from bilingual children speaking Iraqi and Levantine dialects in Sweden, Arabic versions of MAIN were developed for Lebanese, Palestinian, Syrian and Iraqi by Rima Haddad, a member of the Uppsala University BiLITAS research team. For each of the dialects, the adaptation was carried out in consultation with several native-speaker informants, including Semitic dialectology experts. Due to the diglossic situation, only those parts of MAIN that involved direct language by the experimenter to the child (i.e. giving instructions, prompting, asking comprehension questions) were rendered in the dialect; other parts of the MAIN text were again kept in MSA.

First, a Lebanese pilot version was developed. Rima Haddad, a native speaker of Lebanese Arabic, translated it from the English and Swedish versions. Three native speakers of Lebanese Arabic made separate translations of the English and MSA versions. Having compared, discussed and back-translated these versions, a consensus was reached. In order to find the best wording for certain MAIN comprehension questions (e.g. D8, D9, D10) that were particularly tricky to translate, ten native speakers of Lebanese Arabic were consulted.

For the Syrian, Palestinian and Iraqi versions, informants separately studied the MAIN picture sequences and then translated the comprehension questions from the English, Swedish and MSA versions into their variety of Arabic. The informants also had the possibility to look at the Lebanese translation as an example. Care was taken to recruit native-speaker informants from different regions, e.g. for Syrian Arabic, they came from different regions in Syria (Damascus and Aleppo). As a result, they gave us, at rare times, two possible correct versions of the translation. Such differences were noted and discussed with the informants in person. A typical response then was: “Yes, that can also be said, but I usually say it *this* way.” Informants were also consulted on how best to word the instructions and prompts for 4- to 8-year-old children. (These wordings were later piloted with children, see below.) For the Palestinian version, Rima Haddad worked closely with two informants: Sara Kohail, a guest PhD student at the Uppsala Department of Linguistics and Philology and native speaker of the Gaza dialect, and Hadil Karawani at the Leibniz-ZAS, who speaks a northern Palestinian dialect.

A particular challenge were the Iraqi dialects, which differ considerably from the Levantine varieties, and moreover exhibit much regional variation in themselves. It was decided to create two Iraqi Arabic versions, one for the northern Iraqi Mosul dialect, and one geared to the central dialects spoken around Baghdad and Najaf. Ridha’s 2015 Baghdadi Iraqi Arabic version was developed further with the help of Zeinab Shareef, a bilingual speech-language pathologist who speaks the Najaf dialect (which is different but still comparatively close to Baghdadi). Alternative wordings of questions and prompts were added, and the tense/aspect marking of certain verbs was amended. Overall, these changes were relatively minor. Shareef also recorded audio files in her dialect with instructions and prompts for the child to train experimenters whose native dialect was not Iraqi Arabic. Ridha and Shareef’s version was then used with Iraqi Arabic children in Sweden, but during piloting we observed that it worked less well with children speaking *northern* Iraqi varieties, such as the Mosul dialect. Rima Haddad therefore developed a separate Mosul dialect version, where the lexicon and syntax were amended based on her speaker observations. (At the time, Rima Haddad was in close contact with native-speaker informants from Mosul, as she was developing a dialectal version of a vocabulary task.)

Since we had encountered some problems with using the default left-to-right fold-out and reading direction of the MAIN pictures with Iraqi Arabic children (Ridha 2015), Haddad reoriented the pictures for all four MAIN stories right-to-left. This way, they conformed to the reading and writing direction for Arabic and the way books and Arabic children’s picture books are printed. We have since used the right-to-left orientation in all subsequent work with Arabic-speaking children and MAIN. Since we work with children growing up in Sweden who are also exposed to Swedish (picture) books with a left-to-right reading direction, we sometimes add when instructing the child: “The story starts from here [point to the picture on the right] from right to left, since the story is in Arabic”.

Then, in early 2017, Haddad piloted the Arabic dialect versions with children in several cities in Southern Sweden (Malmö and Landskrona) and Central Sweden (Uppsala and Stockholm).

Some of the prompts and comprehension questions did not work satisfactorily at first. For instance, many children failed to understand the Arabic renderings of the MAIN comprehension questions that targeted internal states and queried feelings of story characters. Our first renderings of these questions had been direct translations from English (e.g. *How does the X feel? Why do you think that the X is feeling bad/scared/hungry/disappointed etc.?*). However, in Arabic these questions did not seem to work well. We experimented quite a bit with alternative Arabic wordings for comprehension questions that would still be equivalent to the English questions – and elicit the desired answers. For instance, the D8 question in the Cat story *Imagine that the boy sees the cat. >> How would the boy feel? was in the end rendered as follows in Lebanese Arabic: txeyal ennu eṣ-ṣabi šef el-bsayne, šu ken ḥass eṣ-ṣabi? << تخيل انو الصبي شاف البسينة، شو كان حس الصبي؟* (literally: imagine that the boy saw the cat, what was felt the boy?). The Arabic word *šūʿūr* (شعور ‘feeling, emotion’) appears not to be easily understood by young children, and some of our adult informants also considered it to be a more literary word or more typical of MSA (informants were not in full agreement here though). We then replaced *šūʿūr* with *iḥses* (إحساس ‘feeling’), which by many (but not all) informants was considered to be a synonym, more dialectal, more frequent and/or easier for children.

Care had to be taken to choose words and phrases that felt natural in the Arabic dialects and were understood by the children. Here we translated and back-translated between the English and Swedish versions of MAIN and Arabic, as well as between Arabic dialects, and continually consulted with native-speaker informants. We also profited from Ute Bohnacker’s experience in having been involved in the development of MAIN and the adaptation and piloting of a number of other language versions. Rima Haddad drew up lists of alternative prompts and question wordings. For instance, in the Cat story, comprehension question D2 *How does the cat feel?* is rendered in four different ways in the four dialect versions, see Table 1.

Table 1: Dialectal variation in the wording of MAIN comprehension question D2 (Cat story).

Lebanese	كيف حاسة البسينة؟ <i>kif ḥessa el-bsayne?</i>
Palestinian (Gaza)	كيف حاسة حالها القطة؟ (شو حاسه البسة؟) <i>kif ḥassa ḥala el-ḡitta? (šu ḥassa el-bissa?)</i>
Syrian (Damaskus)	كيف حاسة القطة؟ (شو اش) بتحس البسة؟ <i>kif ḥasse el-ḡitta? (šu (aš) ḥasse el-bisse?)</i>
Iraqi (Najaf)	شلون دا تحس نفسها البزونه؟ <i>šlon da ḥiss nafisha elbazzuna?</i>
	‘How does the cat feel?’

Due to the complex diglossic situation where children may have been exposed to different Arabic dialects, attention needed not only to be paid to the wording of instructions, prompts and comprehension questions, but also to the child’s lexical choice when referring to a story character. For instance, children referred to the cat in the Baby Birds and the Cat stories with

many different Arabic terms, all denoting ‘cat’, e.g. *bezzone, bisse, bsayne, qitta, hirra*. The child’s choice of term should then also be used by the experimenter when asking questions about the cat. (Recall that similar issues also had arisen in Ridha’s piloting of his 2015 Baghdadi Iraqi Arabic version concerning the word ‘bird’, see previous section.)

In 2017–2019, MAIN data were collected with Haddad’s amended Lebanese, Palestinian, Syrian and Iraqi versions of MAIN from more than 125 Arabic-speaking children growing up in Eastern Central Sweden. Children told two stories each in Arabic and answered the comprehension questions. MAIN was administered by Rima Haddad and three trained Arabic native-speaker research assistants. Experimenters accommodated to the child and worded their instructions, prompts and comprehension questions to match the dialectal variety of the child as much as possible (the children spoke Syrian, Palestinian, Iraqi and Lebanese dialects). When the child showed signs of not understanding, synonyms from other dialects were used. This generally worked well.

We also administered our existing MAIN versions to a handful of children speaking other Arabic varieties (other than Levantine and Iraqi dialects), such as Egyptian, Sudanese or Maghrebi. For Egyptian, this worked relatively well, as the experimenter could accommodate to the child during testing, so that the child understood the prompts, performed the narrative tasks and answered the comprehension questions. However, for children speaking Sudanese and Maghrebi, this worked badly. Despite the experimenter’s best efforts, child and experimenter misunderstood each other, and the resulting data cannot be taken to be representative of the narrative abilities of the child. We had to exclude such data from our dataset. Thus, we do *not* recommend that our Lebanese, Palestinian, Syrian and Iraqi versions of MAIN be used with children of other dialects of Arabic, especially dialects that are very different (such as Sudanese, Maghrebi, Yemeni etc.); rather, versions for these other dialects would need to be developed and piloted before use.

Our MAIN data from more than 100 Arabic-speaking children in Sweden (Syrian, Palestinian, Iraqi, Lebanese, Egyptian dialects) have recently been transcribed by Rima Haddad and Pascale Wehbe, using the Latin alphabet and a transliteration system that unifies word identification procedures and word counts regardless of the Arabic variety that the children speak. The Arabic narrative production and comprehension data are currently being analysed for a number of aspects, including macrostructure and referent introduction, as part of the BiLI-TAS research project at Uppsala University.

The Lebanese, Palestinian, Syrian and Iraqi Arabic versions of MAIN developed at Uppsala University during 2015–2017 have not been made publicly available earlier. It was agreed that any such publication should not precede but rather follow the launch of the Revised version of MAIN (Gagarina, Klop, Kunnari, Tantele, Välimaa, Bohnacker & Walters 2019). Whilst work on the Revised version was ongoing, a number of researchers working on Arabic got in touch with us about MAIN. They asked about Arabic dialects, and asked about the existing Standard Arabic version (Karawani 2015) and how it could be used with Arabic-speaking children (our answer was that it cannot). Researchers also wanted to get access to our dialect versions or were planning to create Arabic dialect versions of their own. We tried

to bundle these efforts and steer them towards cooperation, in order to stem the proliferation of alternative versions.

Instead of new and different unofficial Arabic versions of MAIN continuously being translated ‘on the fly’, we feel that it is important that dialectal versions are carefully constructed and piloted before use, following the *Guidelines for adapting MAIN to other languages* (Bohnacker & Gagarina 2019). Preferably, this should be done in cooperation with experienced MAIN researchers, such as a core author of the Revised version of MAIN. Otherwise there is, in our experience, a risk that children may be unduly advantaged or disadvantaged over others, depending on which version is used, which jeopardises the comparability of results.

We have shared our Arabic MAIN versions with research groups in Beirut (Lebanon), Oldenburg and Flensburg (Germany) and entered into cooperation with them. For instance, concerning the Lebanese Arabic version, in 2017 we worked with Rachel Fiani from Saint Joseph University (USJ, Beirut) who was developing a Lebanese version for the Baby Birds story and piloted it with 18 bilingual children in Lebanon. We cooperated to harmonise the wording of instructions and comprehension questions with our Uppsala Lebanese Arabic version. Another example of cooperation concerns the Palestinian and Syrian Arabic versions of MAIN. Here we worked with Lina Abed Ibrahim at Oldenburg University in 2017, who, amongst other things, had translated the materials for the Cat story into Palestinian, on the basis of the English and German versions. When Abed Ibrahim piloted her translation with Arabic-speaking children in Germany, she ran into similar problems as we had done in Sweden, regarding the wording of internal-state comprehension questions that queried the feelings of story characters. Abed Ibrahim found that some children did not understand the Arabic word for ‘feeling’ (شعور). Having compared her translation with our Uppsala versions, particularly the Lebanese one, it was decided to paraphrase ‘feeling’ in Palestinian as we had done for Lebanese. Abed Ibrahim also used our Syrian Arabic version in Germany. Abed Ibrahim and Haddad cooperated in 2019, discussed dialectal formulations, and met to harmonise some of the scoring of narrative macrostructure and answers to comprehension questions in our Arabic MAIN data in Sweden and Germany.

In November 2019, the Revised version of MAIN was published for English, German, Russian, Swedish, and Turkish for the bilingual population in Sweden (*ZASPiL* 63, Gagarina et al. 2019). These revisions were the result of intensive collaboration between Ute Bohnacker’s research group at Uppsala University and Research Area 2 at the Leibniz-ZAS, led by Natalia Gagarina. They include improved guidelines, elicitation and scoring procedures for MAIN.

Rima Haddad and the Uppsala research team have adapted the Lebanese, Palestinian, Syrian and Iraqi versions to this Revised version of MAIN (2019). The revised Arabic versions are part of the present issue, *ZASPiL* 64.

4 References

- Altoma, S. (1969). *The problem of diglossia in Arabic: A comparative study of classical Arabic and Iraqi Arabic*. Cambridge, MA: Harvard University Press.
- Badawi, E. (1973). *Mustawayāt al-‘arabiyya al-mu‘āšira fī Miṣr: baḥṯ fī ‘alāqat al-lughah bi-al-ḥaḍārah*. Cairo: Dār al-ma‘ārif.
- Badawi, E., Carter, M. G., & Gully, A. (2016). *Modern written Arabic: A comprehensive grammar*. New York: Routledge.
- Barth Magnus, G., & Tawaefi, L. (1989). *Arabiska: En kontrastiv beskrivning*. Stockholm: Skriptor.
- Bassiouney, R. (2009). *Arabic sociolinguistics: Topics in diglossia, gender, identity, and politics*. Edinburgh: Edinburgh University Press.
- Bohnacker, U., & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63, iv-xii.
- Campbell, G., & King, G. (2012). *Compendium of the world's languages*. 3rd ed. London & New York: Routledge.
- Cowell, M. W. (2005). *A reference grammar of Syrian Arabic*. Washington, DC: Georgetown University Press.
- Dryer, M. (2013). Order of subject, object and verb. In: M. S. Dryer & M. Haspelmath (Eds.), *The world atlas of language structures online*. <http://wals.info/chapter/81>.
- Erwin, W. (1963). *A short reference grammar of Iraqi Arabic*. Washington, DC: Georgetown University Press.
- Ferguson, C. (1959). Diglossia. *Word* 15, 325–340.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). Multilingual Assessment Instrument for Narratives (MAIN). *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Holes, C. (2004). *Modern Arabic: Structures, functions, and varieties*. Washington, DC: Georgetown University Press.
- Rice, F. A., & Sa'id, M. F. (2005). *Eastern Arabic: An introduction to Palestinian Arabic*. Washington, DC: Georgetown University Press.
- Ridha, M. (2015). *Crosslinguistic influence in the Arabic of Iraqi Arabic-Swedish bilingual children (5-7) in Sweden*. Unpublished M.A. thesis, Dept. of Linguistics and Philology, Uppsala University.
- Ryding, K. (2005). *A reference grammar of Modern Standard Arabic*. Cambridge: Cambridge University Press.
- Wallace, E. (1963). *A short reference grammar of Iraqi Arabic*. Washington, DC: Georgetown University Press.

Storytelling and retelling in Bulgarian: a contrastive perspective on the Bulgarian adaptation of MAIN

Eva Meier

Humboldt-Universität zu Berlin

Milena Kuehnast

Humboldt-Universität zu Berlin

Bulgarian belongs to the South Slavic language group but exhibits specific linguistic features shared with the non-Slavic languages of the Balkan Sprachbund. In this paper, we discuss linguistic and cultural aspects relevant for the Bulgarian adaptation of the revised English version of The Multilingual Assessment Instrument for Narratives (LITMUS-MAIN). We address typological properties of the verbal system pertaining to a differentiated aspectual system and to a paradigm of verbal forms for narratives grammaticalized as renarrative mood in Bulgarian. Further, we consider lexical, derivational and discourse cohesive means in contrast to the English markers of involvement and perspective taking in the MAIN stories.

1 Introduction

The Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN) as a tool for the assessment of the comprehension and production of narratives was first developed by a multinational team in 2012 (Gagarina et al., 2012). MAIN offers four picture stories controlled for cognitive and linguistic complexity, parallelism in micro- and macrostructure, and cultural appropriateness. The instrument can be used to assess listening comprehension, storytelling and retelling skills of children aged three or older. In the following years MAIN has been adapted to languages of different language families and successfully applied in studies investigating the development of narratives skills in mono- und bilingual children (Gagarina et al., 2015; Pesco & Kay-Raining Bird, 2016). The revised version of MAIN (Gagarina et al., 2019) implements insights from the manifold practical experience with the tool presenting a manual improved in terms of handling and clarity.

In this paper, we discuss the adaptation of the revised English version of MAIN to Bulgarian. Bulgarian is an Indo-European language, which belongs to the South Slavic group.

It is the official language of the Republic of Bulgaria, and since 2008 an official language of the European Union. It is spoken by approximately seven million Bulgarians and some minorities in Turkey, Ukraine, Macedonia and Rumania (Szucsich, 2014). Bulgarian uses a Cyrillic writing system. As a member of the Balkan *Sprachbund*,¹ Bulgarian has developed some features such as the loss of the infinitive and the development of a postposed definite article, which distinguish it from the other Slavic languages (Tomić, 2006). A further typological property is the analytical organization of the language system comparable to the English one, especially concerning the nominal system.

In the following, we offer a contrastive English-Bulgarian perspective on the linguistic aspects of the MAIN stories and their interpretation. We address some grammatical properties of Bulgarian and their reflections in the culturally established narrative practice. We also provide some examples to illustrate how the relevant linguistic and cultural aspects were incorporated into the Bulgarian adaptation of the revised English MAIN version (Gagarina et al., 2019).

2 Contrastive analysis of specific issues considered in the revised version

2.1 *Typological properties of the Bulgarian verbal system in contrast to English*

Bulgarian exhibits a rich verb morphology with verbs forms being inflected for person, number, tense and mode. Besides indicative, subjunctive and imperative, Bulgarian features a special mood expressing evidentiality which is traditionally referred to as the *renarrative* mood. In their paradigmatic opposition to the indicative forms, renarrative verb forms encode the epistemic distance of the speaker with respect to the source of information and the degree of commitment to his/her statement (Hauge, 1999; Smirnova, 2011). The choice of indicative or renarrative mood primarily depends on the distinction between giving information about a witnessed real situation and reporting non-witnessed, inferred or unreliable information.

In Bulgarian, narrative registers like fairy tales, myths and legends use the reportative meaning of the renarrative forms to mark the degree of speaker's epistemic commitment. In the renarrative mood, the discourse structuring functions of tenses are the same as in indicative: aorist² is the preferred tense to encode the main events and action chains driving the story plot; imperfect is appropriate for the setting activities, accompanied by pluperfect or future in the past (Nicolova, 2017). However, the temporal distinction between 'orientation towards the moment of speech' and 'orientation towards a past moment' denoted by the temporal opposition

¹ The Balkan Sprachbund, also called the Balkan linguistic area, consists of a group of genetically not related languages spoken on the Balkan Peninsula which nonetheless exhibit similarities on the lexical level and in the encoding of morpho-syntactic features. The following Balkan languages belong to the Balkan Sprachbund – the Slavic Languages Macedonian, Bulgarian and Serbo-Croatian; the Romance languages Romanian, Aromanian and Megleno-Romanian; Albanian; and Modern Greek (Tomić, 2006).

² Aorist is a past tense marking that a singular action is terminated in the past. Bulgarian aorist is similar to this tense form in Ancient Greek.

between present and imperfect, perfect and pluperfect, and future and future in the past does not hold in the renarrative mood since, in this mood, all of them are situated in the past (Hauge, 1999). These tense pairs share the same morphological paradigm, the aorist being the only tense with a morphologically distinct renarrative forms. Both indicative and renarrative verbal forms are very frequent in contemporary Bulgarian and could even be combined in the same complex sentence, thus constantly providing information about the source of evidence and the epistemic commitment of the speaker to the particular assertions.

Bulgarian children traditionally grow up listening to folk tales and fiction stories told in renarrative mood as a main linguistic feature of these genres (Nicolova, 2017). Primary-school children also freely employ renarrative mood to render the content of stories in different narrative tasks. For that reason, we decided to use renarrative mood for the Bulgarian adaptation of the MAIN stories. However, in the manual, we point out that the use of indicative forms in the story telling task is equally appropriate, as children may conceive of the pictures as witnessed evidence.

A further feature of the verbal system relevant for the adaptation process pertains to the similarities and differences in the encoding of aspect in both languages. Like in English, the main distinction between perfective and imperfective aspect concerns the view point of the speaker (Bertinetto & Delfitto, 2000). Very roughly, when an eventuality is represented in its duration without reference to its temporal boundaries, the verb form is morphologically encoded as imperfective or progressive. A holistic perspective to the eventuality or focus on the temporal boundaries is encoded by perfective aspect. In Bulgarian, aspectual differences are expressed on the lexical and on the grammatical level. On the lexical level, aspect is a complex, morphologically-encoded lexico-grammatical category concerning the internal temporal structure of eventualities. It encodes information about telicity, path and manner of motion, quantity or intensity of events and processes (Nicolova, 2017; Slobin, 2004). Every Bulgarian verb is lexically specified as perfective or imperfective, the aspectual property being transparently encoded in the derivational and inflectional structure of the verb (Maslov, 1981). Besides a small number of simplex forms, perfective verbs are derived by means of derivational affixes, while secondary imperfective forms are derived by means of inflectional suffixes (for an extended discussion of the derivation-inflection divide see Kuehnast (2003)). Lexically perfective and imperfective verbs can be used in all tenses, except for perfective verbs in present tense.

English does not systematically encode lexical aspect but grammaticalizes aspectual differences in the opposition of simple and progressive tense forms. Bulgarian encodes this aspectual features in the temporal opposition between aorist and imperfect as past tenses marking an action that started in the past as terminated or ongoing, respectively (Bertinetto & Delfitto, 2000; Bojadžiev, Kucarov, & Penčev, 1999). In sum, every Bulgarian predicate expresses aspectual differences both on the lexical and grammatical level. The following examples of verbs³ used in the MAIN stories illustrate the contribution of aspectual and

³ Glosses and abbreviations: AOR = Aorist (past terminative tense); DEF = definite; FEM = feminine gender; IMP = Imperfect; INDEF = indefinite; IPFV = imperfective aspect; IST = internal state term; MASC = masculine

temporal morphology to the construal of aspectual features of predicates in renarrative mood: *подскочил/подскочил⁴* _{3SG AOR REN PFV} ‘jumped’ (a singular action terminated in the past, perfective aspect) vs. *подскачал/подскачал* _{3SG IMF REN IPFV} ‘was jumping’ (a repetitive action in the past without reference to its end, imperfective aspect); *загледал/загледал* _{3SG AOR REN PFV} ‘started to look at’ (an inchoative action, perfective aspect) vs. *заглеждал/заглеждал* _{3SG IMF REN IPFV} ‘every time he was starting to look at’ (habitual inchoative action, imperfective aspect); *наял се/наял се* _{3SG AOR REN PFV} ‘he ate his fill’ (a resultative state after a singular action, perfective aspect) vs. *наяждал се/наяждал се* _{3SG IMF REN IPFV} ‘he was eating his fill’ (habitually induced change of state, imperfective aspect).

For the adaptation of the story scripts, we considered the semantic and pragmatic properties of the events described in the English version with respect to whether an action or activity occurred once and was completed, or whether it was repetitive, habitual. For example, the beginning of the *Baby Birds* story suggested that there was a certain regularity in the behavior of the mother bird, namely that she was looking for food every day. The correct Bulgarian equivalent here is the imperfect renarrative form of the imperfective verb, illustrated in (1).

- (1) *Всяка сутрин тя отлитала* _{3SG IMF REN IPFV FEM} *да търси храна за гладните си дечица.*
Vsjaka sutrin tja otlitala da tǎrsi chrana za gladnite si dečica.
 Every morning she was flying away to find food for her hungry babies.

The next event described in this story was a singular action completed in the past. This temporal and aspectual configuration requires a perfective verb in aorist as in (2).

- (2) *Една сутрин оттам минала* _{3SG AOR REN PFV FEM} *една гладна котка...*
Edna sutrin ottam minala edna gladna kotka
 One morning a hungry cat came along...’

We regard the production of aspectually and temporally correct predicates as an important indicator of narrative achievement. Apart from logically correct motivation, action-and-result chains, and the use of emotion terms, the use of aspectually appropriate and morphologically diversified verb forms provides insights into the development of perspective taking skills in pre-school children.

gender; NEUT = neutral gender; PART = particle; PFV = perfective aspect, PL = plural; REN = renarrative mood; SG = singular.

⁴ Transliteration according to the European norm DIN 1460.

2.2 Typological properties of the Bulgarian nominal system in contrast to English

2.2.1 Inflectional properties

Bulgarian nouns are marked for the grammatical categories gender, number and definiteness. Like English, Bulgarian does not possess case declension (with the exception of vocative).⁵ In contrast to English, which does not feature grammatical gender distinctions, each Bulgarian noun belongs to one of three grammatical genders: masculine, feminine or neuter. The gender of a noun is in many cases predictable from its ending, e.g. nouns ending in *-a* (or *-я*) are typically feminine, cf. *птица/ptica* ‘bird’, *котка/kotka* ‘cat’, or *лисица/lisica* ‘fox’. Nouns ending on a consonant are mostly masculine, cf. *балон/balon* ‘balloon’, or *храст/chrast* ‘bush’. Nouns ending in *-o* or *-e* are generally neuter, cf. *дърво/dǎrvo* ‘tree’, *куче/kuče* ‘dog’, or *момче/momče* ‘boy’. As the last two examples show, for nouns denoting animate beings, the grammatical gender does not necessarily follow biological sex. In Bulgarian, as in English, plural is expressed by inflectional means, e.g. *козле/kozle* ‘baby goat’ – *козлета/kozleta* ‘baby goats’.

Bulgarian expresses nominal definiteness morphologically by means of a definite article, a nominal category developed through the influence of the non-Slavic Balkan languages. Like in English, the definite article originated from the anaphoric demonstrative pronoun, but through the contact with agglutinative languages it obtained the form of a postposed suffix (Nicolova, 2017).

The definite article *-m/-t* also inflects for gender and number, marking nominal agreement as illustrated by the following examples: *балон/balon* MASC SG INDEF ‘a balloon’ – *балонът/balonǎt* MASC SG DEF ‘the balloon’; *котка/kotka* FEM SG INDEF ‘a cat’ – *котката/kotkata* FEM SG DEF ‘the cat’; *момче/momče* NEUT SG INDEF ‘a boy’ – *момчето/momčeto* NEUT SG DEF ‘the boy’. The article encodes the definiteness of the entire nominal phrase by attaching to its first element, be it an adjective or a possessive pronoun: *лошата/lošata* FEM SG DEF *гладна котка/gladna kotka* ‘the mean hungry cat’; *вашата/vašata* FEM SG DEF *лоша гладна котка/loša gladna kotka* ‘your mean hungry cat’ (Hauge, 1999; Nicolova, 2017; Radeva, 2003).

Syntactically, the definitive article is used primarily to mark anaphoric or deictic reference. From a semantic point of view, in both languages the definite article can denote individual specificity and quantitative definiteness. In contrast to English, the Bulgarian definite article also expresses generic meaning, as in (3).

- (3) *Птиците/pticite* FEM PL DEF *не обичат лисици/lisici* FEM PL INDEF.
Pticite *ne običat* *lisici*
the birds not like foxes
Birds do not like foxes.

If a generic meaning of countable nouns is intended, as is the case in (3), English employs bare plurals like *birds* (Cohen, 2007), whereas in Bulgarian a generic meaning cannot be expressed

⁵ Case declension is a typical grammar category in Slavic languages, cf. Russian, Slovenian or Czech. The loss of case declension distinguishes Bulgarian (and Macedonian) from the other members of the language group.

by bare nouns **птици*/*ptici* ‘birds’. The use of a definite phrase *птиците*/*pticite* ‘the birds’ in the subject position is mandatory, since a bare noun would violate well-formedness requirements of topical constituents in Bulgarian (Nicolova, 2017; Tomić, 2006). Indefiniteness can be expressed either by bare nouns (zero article) or an indefinite article in the meaning of *one*: *един*/*edin* MASC SG ‘a/one’, *една*/*edna* FEM SG, *едно*/*edno* NEUT SG, *едни*/*edni* PL ‘some’, which is a preposed function word. Due to his lexical properties and its functions as a specificity marker, the indefinite article occupies the initial position in the noun phrase, *една гладна котка*/*edna gladna kotka* ‘a/one hungry cat’. The specific function of both zero and indefinite article is to introduce a new referent in the discourse. However, the semantic make up of both differ in one aspect. While bare noun phrases are primarily used to introduce generic referents in rhematic position (3), the indefinite article is a marker of specific indefinite reference. It introduces a referent who has an individual property in addition to the generic properties of the class he belongs to (Nicolova, 2017).

Further, when introducing a new referent, the attributive use of emotional terms in an indefinite noun phrase is infelicitous in Bulgarian, *едно *доволно* IST *момченце* NEUT SG INDEF *минало*/*edno *dovolno momčence minalo* ‘a cheerful boy was coming back’. Instead, such terms are usually used predicatively in a subsequent clause, as in (4).

(4) *В това време оттам минало момченце* NEUT SG INDEF, *което се връщало от магазина.*

V това време ottam minalo momčence, koeto se vrštalо ot magazina.

Meanwhile a boy passed by who was coming back from shopping.

То anaphoric pronoun *носело пълна торбичка с наденички и било много доволно,*

To noselo pālna torbička s nadenički i bilo mnogo dovolno

He was carrying a bag full of sausages and was very happy

че си е купило и един балон.

če si e kupilo i edin balon

that he also bought a balloon.

In our Bulgarian adaptation of the MAIN, we solved this issue by means of a separate sentence that asserts and explains the affective state of the boy already introduced as a referent in the first sentence (4).

2.2.2 Derivational properties

The high frequency of diminutives in the spoken varieties of Bulgarian and the productivity of their derivational patterns represent another typological difference that influenced the adaptation of the English MAIN version. Some English terms of endearment such as *sweetie* may be morphologically derived, but such terms are mostly expressed analytically by means of pre-posed words like *small*, *little* or *baby*, e.g. *baby birds/goats*, *little boy*. Bulgarian diminutives are derived by means of suffixes, e.g. *момче*/*momče* ‘boy’ – *момченце*/*momčence* ‘little cute boy’, *коза*/*koza* ‘mother goat’ – *козле*/*kozle* ‘kid’, *пиле*/*pile* ‘bird, chick’ – *пиленце*/*pilence* ‘small or young bird’ (Radeva, 2003). Moreover, the derivational process can apply additively, thus yielding double diminutives – nouns featuring two diminutive suffixes as

illustrated by the morphological pattern: *коза/koza* ‘female goat’ – *козле/kozle* ‘kid’ – *козленце/kozlence* ‘baby goat’. This is the case because in Bulgarian, like in the most Slavic languages, diminutive suffixes are mainly used as a sign of affection and politeness apart from their basic semantic function of expressing a slighter degree of the root meaning. Besides to nouns, the highly productive process also applies to proper names (*Ева/Eva* – *Евче/Evce*), verbs (*тичам/tičam* ‘run’ – *тичкам/tičkam*), adjectives (*бърз/bǎrz* ‘fast’ – *бързичък/bǎrzičǎk*) and adverbs (*повече/poveče* ‘more’ – *повечко/povečko*) marking a positive evaluation of the processes or the properties expressed by those word classes (Nicolova, 2017).

Diminutives are frequently used in colloquial Bulgarian, in fairytales and specifically in child-directed speech. For these reasons, during the adaptation of the stories we used diminutives where they sound appropriate for the given context, e. g. *неперудка/peperudka* ‘butterfly’, *момченце/момченце* ‘boy’, *наденица/nadenica* ‘sausage’ – *наденичка/nadenička*. We expect children to use diminutive forms even more frequently when telling and retelling the stories as these lexical involvement markers are acquired in early childhood.

2.3 Use of discourse markers

Connectives are important signals of discourse coherence in oral and written communication. The speaker’s correct use of connectives enhances the hearer’s construal of meaning relations during comprehension by guiding the inferential processes and discourse expectations (Evers-Vermeul & Sanders, 2009).

The MAIN story scripts are designed as stimuli for Model Story and/or Retelling and aim at structuring the stories along temporally and causally logical chains of events. Therefore, they contain mostly additive (*and*), sequential (*and then*) and causal connectives (*because*). Relevant for the adaptation process was a typological difference concerning the functions of the basic additive connective *and* in the English and in the Bulgarian system. The English additive connective *and* may mark additive, consecutive and adversative meaning relations depending on the concrete syntactic properties of the conjoined elements. In Bulgarian, this broad conceptual space is divided between the coordinating connectives *u/i* ‘and’ and *a/a* ‘but’.⁶

The additive connective *u/i* ‘and’ marks additive ‘and/also’ and temporal-consecutive relations ‘and then/therefore’. The construal of an additive meaning relation requires syntactically parallel clauses with semantically identical predicates. If the conjoined clauses are not syntactically parallel, the connective indicates a temporal or a consecutive relation of the events denoted by the conjuncts (Kuehnast, 2014). Example (5) represents a case of a consecutive relation between the first two clauses. It also exemplifies the general function of *u/i* ‘and’ as a means of referential coherence. The additive connective *u/i* ‘and’ signals referential continuity by upholding the topic referent of the anaphoric clause.

⁶ Similar distinction in the conceptualization of additive connectives and the way they function in discourse is found between Russian, an East Slavic Language, and English (Jasinskaja & Zeevat, 2009), and between Russian and German (Tribushinina, Valcheva, & Gagarina, 2017).

- (5) *Птицата прогонила лисицата и/*а много се зарадвала, че успяла да спаси*
*Pticata progonila lisicata i/*a mnogo se zaradvala, че успяла да спаси*
 The bird chased the fox **and** was very happy that he could save
*козлето, а/*и лисицата си останала гладна.*
*kozleto, а/*i lisicata si ostanala gladna.*
 the baby goat, **and** the fox was still hungry.

The adversative connective *a/a* ‘but’ primarily marks a semantic opposition between assertions expressed in coordinated clauses. The basic instantiation of semantic opposition in Bulgarian is the juxtaposition of syntactically parallel clauses with different subjects. The perceived contrast must be overtly marked by the contrastive connective *a/a* ‘but’, the use of the additive connective yielding an ungrammatical coordination in such cases. This rule is contingent on the fact that the plain juxtaposition of two subjects and their properties or activities always results in the construal of a contrast relation in Bulgarian, if a temporal or causal relation between the two predications is not intended. As a means of referential coherence, the adversative connective *a/a* ‘but’ is strongly associated with a topic shift and thus contrasts with the use of *u/i* ‘and’ associated with topic continuation (Kuehnast, Bittner, & Roeper, 2009). This is illustrated in example (5). The mention of another subject referent, the fox, in the third clause necessitated the use of the adversative connective *a/a* ‘but’.

Similarly, the English contrast marker *but* has two counterparts in Bulgarian – *a/a* and *но/но*, the latter used to express epistemic contrasts such as denial of expectation or preventive meanings. We always considered the meaning relations intended in the texts of the English stories in order to select the appropriate connective in Bulgarian. We followed this procedure when selecting appropriate means to render the temporal relations in Bulgarian. As the system of Bulgarian verbal categories allows and requires a precise aspectual and temporal location of the events, the choice of the appropriate lexical and morpho-syntactic means had a direct impact on the narrative coherence of the stories.

2.4 Cultural appropriateness

Generally, the story scripts correspond to prototypical narrative structures and character stereotypes well-known by both children and adults in the Bulgarian context. In Bulgarian folk stories, animal protagonists are associated with specific features and behavioural patterns that may be positively or negatively connotated. Bulgarian children acquire such stereotypes from early on. They know, for instance, that the fox called in Bulgarian *Кума Лука/Kuma Lissa* ‘Godmother Fox’ is a cunning female figure, appreciated for her wit. Likewise, Bulgarian folk stories conceptualise the bear as the female figure *Баба Меца/Baba Meca* ‘Granny Bear’ being both fierce and protective. For Bulgarian children, the culturally established prototype of the fox as a rather non-aggressive and clever figure might interfere to some extent with the representation of the fox in the *Baby Goats* story. On the other hand, dogs are perceived as brave and helpful protectors and loyal friends in both cultures.

With respect to the evaluation of the responses to the comprehension questions, we take a cautious stance. In the revised English version of MAIN (Gagarina et al., 2019), question D8 requires the representation of a future, in other words unreal, situation, followed by the estimation of the emotional state of the protagonist. Keeping in mind the linguistic and conceptual complexity of the task, the evaluation of children's responses of D8 calls for a differentiated approach that takes into account individual factors such as age and levels of linguistic development.

Our next remark concerns the comprehension of question D8 posited in both *Cat* and *Dog story* and the possible interpretation of the scene at hand. To us, there will be two culturally appropriate alternatives to the question, how the boy would feel, if he saw the cat stealing his fish (*Cat story*) or the dog stealing his sausages (*Dog story*). The examples mentioned as correct responses in the manual pertain to one possible reaction. However, it is also very likely that the boy finds the situation funny. In this case, the examples describing incorrect responses in the Comprehension Section need to be re-evaluated as valid and consistent. Regarding this option, we included this possible interpretation as an appropriate response in our adaptation and modified the examples of wrong responses accordingly.

Occasionally, for more naturalness, we added some deictic and modal particles like *я/ја* or *май/мај* in the direct speech of the characters. *Я/ја* is a hortative particle (Hauge, 1999; Nicolova, 2017) and can be used in optative sentences where it encodes a wish, e.g. *Я PART да си хапна малко рибка!!Ja da si chapna malko ribka* 'I want to grab a fish'. According to Nicolova (2017), *май/мај* 'it seems/perhaps' is a modal particle denoting the hope of the speaker that a certain desired situation will happen, i.e. *Май PART днес ще закуся с едно козленце!!Maj dnes šte zakusja s edno kozlence* 'It seems that I'm having a baby goat for breakfast', roughly corresponding to the meaning intended in the English version. Such particles are frequently used in colloquial speech and represent the oral nature of narrative forms. In the Bulgarian adaptation of the MAIN stories, they are meant to support the vivid representation of the events and their participants by employing less formal epistemic terms.

3 Summary and concluding remarks

In this paper, we addressed structural and lexical properties of Bulgarian that were directly related to the adaptation of the English MAIN version. We exemplified the close relation of language-specific nominal and verbal categories with the culturally established narrative practice by commenting on the use of diminutives and the renarrative mood as markers of involvement and perspective taking. We discussed the double encoding of aspectual features in Bulgarian to illustrate how the precise information about the internal constituency and temporal location of events imposed by the system influenced the lexical and grammatical choices of the predicates used in the stories. Therefore, we believe that besides information about the development of micro- and macro-structuring narrative skills, the instrument will provide data indicative of the acquisition of TAM categories in Bulgarian.

4 References

- Bertinetto, P. M., & Delfitto, D. (2000). Aspect vs. actionality: Why they should be kept apart. In Ö. Dahl (Ed.), *Tense and aspect in the languages of Europe* (pp. 189–225). Berlin, New York: de Gruyter.
- Bojadžiev, T., Kucarov, I., & Penčev, J. (1999). *Sävremeneni bälgarski ezik* [Contemporary Bulgarian Language] Sofia: Peter Beron.
- Cohen, A. (2007). Between kinds and properties: Bare plurals across languages. In F. Friedman & M. Gibson (Eds.), *Semantics and Linguistic Theory* (pp. 53–70). Ithaca, NY: Cornell University.
- Evers-Vermeul, J., & Sanders, T. (2009). The emergence of Dutch connectives; how cumulative cognitive complexity explains the order of acquisition. *Journal of Child Language*, 36(4), 829–854.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., & Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of narrative abilities in bilingual children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children: Disentangling bilingualism from language impairment* (pp. 243–276). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives. Revised version. *ZAS Papers in Linguistics*, 63.
- Hauge, K. R. (1999). *A short grammar of contemporary Bulgarian*. Bloomington, IN: Slavica Publ.
- Jasinskaja, K., & Zeevat, H. (2009). Explaining conjunction systems: Russian, English, German. *Proceedings of Sinn und Bedeutung*, 13(1).
- Kuehnast, M. (2003). Processing negation and aspect in Bulgarian. Evidence from normal and agrammatic sentence comprehension. In P. Kosta, J. Blaszczak, J. Frasek, & L. Geist (Eds.), *Investigations into Formal Slavic Linguistics* (Vol. II, pp. 419–440). Frankfurt am Main: Peter Lang.
- Kuehnast, M. (2014). Acquisition of Bulgarian *i* ‘and’ in negative contexts – experimental evidence. In S. Massalova & V. Poljakov (Eds.), *Proceedings of the 15th international conference ‘Cognitive modeling in linguistics’* (CML 2014) (pp. 75–81). Rostov on Don: Science and Studies Foundation.
- Kuehnast, M., Bittner, D., & Roeper, T. (2009). What is the acquisition path of topic-shift? In S. L. Devi, A. Branco, & R. Mitkov (Eds.), *Proceedings of the 7th discourse anaphora and anaphora resolution colloquium* (DAARC 2009) (pp. 37–47). Chennai: AU-KBC Research Centre.
- Maslov, J. (1981). *Grammatika bolgarskogo jazyka* [Grammar of the Bulgarian language]. Moskva: Vysshaja shkola.
- Nicolova, R. (2017). *Bulgarian grammar*. Berlin: Frank & Timme.
- Pesco, D., & Kay-Raining Bird, E. (2016). Perspectives on bilingual children’s narratives elicited with the Multilingual Assessment Instrument for Narratives. *Applied Psycholinguistics* 37(1), 1–9.
- Radeva, V. (2003). *Bulgarische Grammatik: morphologisch-syntaktische Grundzüge*. Hamburg: Buske.
- Slobin, D. (2004). The many ways to search for a frog: Linguistic typology and the expression of motion events. In S. Strömquist (Ed.), *Relating events in narrative* (pp. 219–257). Mahwah, NJ: LEA.
- Smirnova, A. (2011). The meaning of the Bulgarian evidential and why it cannot express inferences about the future. *Semantics and Linguistic Theory*, 21, 275–294.

- Szucsich, L. (2014). Das Bosnische/ Kroatische/Serbische und das Bulgarische. In M. Krifka, J. Błaszczak, A. Leßmöllmann, A. Meinunger, B. Stiebels, R. Tracy, & H. Truckenbrodt (Eds.), *Das mehrsprachige Klassenzimmer: Über die Muttersprachen unserer Schüler* (pp. 197–217). Berlin, Heidelberg: Springer.
- Tomić, O. M. e. (2006). *Balkan Sprachbund morpho-syntactic features*. Dordrecht: Springer.
- Tribushinina, E., Valcheva, E., & Gagarina, N. (2017). Acquisition of additive connectives by Russian-German bilinguals: A usage-based approach. In J. Evers-Vermeul & E. Tribushinina (Eds.), *Usage-based approaches to language acquisition and language teaching* (Vol. 55). Berlin, Boston: de Gruyter.

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

Angel Chan

The Hong Kong Polytechnic University

Timothy Cheng

The Hong Kong Polytechnic University

Kelly Cheng

The Hong Kong Polytechnic University

Amelie Cheung

The Hong Kong Polytechnic University

Rachel Kan

The Hong Kong Polytechnic University

Karen Yuen

The Hong Kong Polytechnic University

Anita M.-Y. Wong

The University of Hong Kong

Barbie Chui

The Hong Kong Polytechnic University

Roxana Fung

The Hong Kong Polytechnic University

Joyce Lo

The Hong Kong Polytechnic University

Janice Wong

The Hong Kong Polytechnic University

Natalia Gagarina

Leibniz-Zentrum Allgemeine
Sprachwissenschaft (ZAS)

This paper gives an introduction to the Cantonese adaptation of Multilingual Assessment Instrument for Narratives (MAIN), which is part of the Language Impairment Testing in Multilingual Settings (LITMUS) battery. We here discuss the motivation for adapting this assessment instrument into Cantonese, the adaptation process itself and potential contexts for use of the Cantonese MAIN.

1 Introduction

Funded by the European Cooperation in Science and Technology, within the COST Action IS0804 “Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment” (see Armon-Lotem, de Jong, & Meir, 2015), a group of researchers from over 20 countries in Europe and beyond collaborated on a project to examine challenges that they shared in the diagnosis and assessment of multilingual children with specific language impairment (SLI; more recently Developmental Language Disorder (DLD), see Bishop, Snowling, Thompson, Greenhalgh, & CATALISE Consortium, 2016). Specifically, the goals of this project were 1) to develop culturally-appropriate tools to assess the linguistic and cognitive abilities of bilingual children who are learning different pairs of languages, 2) to examine how bilingualism and SLI/DLD affect bilingual language development, and 3) to distinguish typically developing bilingual children from those with SLI/DLD. Major progress for the first goal was made with the development of the Language Impairment Testing in Multilingual Settings (LITMUS) battery (see Armon-Lotem, de Jong & Meir, 2015). LITMUS includes a range of tasks examining bilingual children’s development in different linguistic domains (e.g., syntax, lexicon, narrative discourse), linguistic modalities (comprehension and production), and psycholinguistic processing (e.g., nonword repetition and sentence repetition). Since the tasks took into account typological differences between languages, they were applicable for bilingual children learning a variety of languages. An example is the task for eliciting subject-verb agreement from children learning inflectional languages (de Jong, 2016). These tasks laid the foundation for achieving the second and third goals of the Action IS0804.

The *Language Impairment Testing in Multilingual Settings – Multilingual Assessment Instrument for Narratives* (LITMUS-MAIN, hereafter MAIN) was developed by an international team of scholars (Gagarina et al. 2012, 2015; 2019). MAIN is available in a large number of languages and is used predominantly with children aged between 3 and 12, although it has also been successfully used with teenagers up to 17 years as well as with adults (Gagarina, Bohnacker & Lindgren, 2019). MAIN can be seen as an improvement over other existing narrative assessment tools because its design was carefully thought-out. MAIN contains four stories in two sets, with each story consisting of six pictures. Each story, as illustrated in the pictures, is grounded in the story grammar framework (Stein & Glenn, 1979) and causal framework analysis (Trabasso & Nickels, 1992). The two stories in each set are parallel in content and structure, allowing reliable comparison of children’s narrative abilities over time, or in the two languages they speak. The stories can be elicited in two modes: story-telling and retelling. In these production tasks, the macrostructure as well as the microstructure of the children’s stories can be assessed. In addition to production, comprehension of the same stories is also examined. MAIN allows researchers and speech therapy practitioners to examine, in a comprehensive fashion, the narrative competence of monolingual children as well as children who speak two or more languages, and to perform dynamic assessment. This paper describes the development and use of the Cantonese-Chinese version of MAIN.

2 Developing MAIN for Cantonese-Chinese

Until now, MAIN was primarily available in Indo-European languages. There is a need to extend the coverage of MAIN to Sino-Tibetan languages, including Cantonese-Chinese. Once available, researchers can use the Cantonese-Chinese MAIN to track the development of bilingualism in typical developing children and to identify clinical markers of SLI/DLD in bilingual children who are learning Cantonese-Chinese as one of their languages. Speech-therapy practitioners can use the Cantonese-Chinese MAIN as a criterion-referenced task to document progress in treatment for children with SLI/DLD.

This section documents our efforts in developing a Cantonese-Chinese version of MAIN. Cantonese-Chinese is a member of the Yue Chinese dialect group (of the Sino-Tibetan family) and is spoken as the lingua franca in Hong Kong, Macau, and certain places in the provinces of Guangdong (such as Guangzhou) and Guangxi in mainland China. It is also spoken by ethnic Chinese around the world including in Malaysia and Vietnam, Australia, the UK, and North America. In Hong Kong alone, more than 6 million people speak Cantonese-Chinese as their daily language (89% of population, Census and Statistics Department, HKSAR), and worldwide there are more than 73 million speakers of Cantonese as their first language (Eberhard, Simons, & Fennig, (eds.), 2019). Spoken Cantonese-Chinese is different from the written form (Standard Modern Chinese) that is taught in schools and used in formal contexts (Matthews & Yip, 2011). In MAIN, the instructions for administering the narrative tasks are written in Modern Standard Chinese, but the story scripts for the story-retelling models and examples of utterances that the experimenter could use when assessing the child with Cantonese-MAIN are presented in written Cantonese as they are spoken.

Cantonese is an isolating language with the canonical word order of Subject-Verb-Object (SVO). Other typological features that are particularly relevant to narratives include, for instance, topic-prominence and argument ellipsis. For a more detailed description of linguistic characteristics unique to the Chinese language, particularly those related to language difficulties that have been examined in studies on language disorders in speakers of Chinese, readers are encouraged to read Fung (2009).

MAIN was adapted into Cantonese-Chinese following the guidelines given in Bohnacker and Gagarina (2019). These guidelines clearly describe (i) the steps involved during the adaptation process; (ii) features at the macrostructural level (e.g. the number and sequence of the story components Goal, Attempt, Outcome, and Internal States for each protagonist) that must remain the same across languages; and (iii) features at the microstructural level (e.g. number of coordinating and subordinating constructions, internal state terms overall, number of direct speech sentences) that must be consistent across the stories. The adaption to Cantonese involved the concerted efforts of a team of researchers, speech-language therapists, and a research assistant led by the first author (Chan) and the final author (Gagarina), all of whom except the final author are native speakers of Cantonese residing in Hong Kong. All team members are duly recognized as co-authors. In the first phase, six student speech-language therapists studying for a Master's degree in Speech Therapy (currently all have graduated and are practicing as community speech-language therapists; sixth to eleventh authors) together

with a research assistant (second author, Cheng)) performed the first translation of different parts of the MAIN assessment protocol into Cantonese-Chinese under the supervision of the first author (Chan) and the final author (Gagarina). The assessment protocol consists of the four-story scripts, the scoring forms, and the instructions for administration and scoring, based on the latest version of MAIN for English (Gagarina et al., 2019). The first author also interviewed about 30 L1 Cantonese student speech therapists, and no participants reported any cultural inappropriateness in the MAIN stories and pictures for Cantonese-speakers in Hong Kong. In the second phase, the entire or parts of the manuscript was proof-read by five expert members for accuracy and consistency. Two are developmental psycholinguists with professional qualification as speech-language therapists, currently holding a professorial position in a speech therapy training programme in two universities in Hong Kong (first author Chan and fourth author Wong). One is a Cantonese-Chinese linguist who has been working with researchers in communication disorders and holding also a professorial position at a university in Hong Kong (fifth author Fung). A postdoctoral researcher in developmental linguistics (third author Kan), and a research assistant holding a Master Degree in Linguistics (second author Cheng) are the other team members. This team effort ensures quality in the adaptation process and is needed in the dissemination of the Cantonese-Chinese MAIN to researchers who study language acquisition, Chinese linguistics or speech-language therapy and to speech-language therapists who work with bilingual children in Hong Kong and overseas.

3 Using Cantonese-Chinese MAIN with bilingual children from South Asian backgrounds

The Cantonese-Chinese MAIN can be used to assess competence in narrative comprehension and production in monolingual and bilingual Cantonese-Chinese children. One dominant group of non-Chinese children who acquire Cantonese-Chinese as an additional language in Hong Kong are those from South Asian ethnic backgrounds. These children usually acquire their heritage language (e.g. Urdu, Hindi, Nepali, Tagalog) as the first and family language, and Cantonese-Chinese as their second/additional, school and community language when they start attending local schools. Due to the later age at which learning of Cantonese-Chinese starts and the reduced input in this language, these bilingual children might show insufficiencies in their linguistic development which can be mistakenly diagnosed as SLI/DLD. If so, it is important to highlight the importance of assessment in both languages, to identify the direction of support in clinical decision making (see e.g. Anaya, Peña & Bedore, 2016). Generally, there is a growing need for speech-language therapists and educators to take multilingualism and multiculturalism into account in their professional practice, as these bilingual ethnic minority children are increasingly encountered in their caseloads in recent years. Yet, there is scant research on how these bilingual Cantonese-Chinese children's speech and language develop in the Hong Kong context. Consequently, there are no tools for speech-language therapists to distinguish language difference from language impairment in bilingual Cantonese-Chinese

children. As part of the initiative to document the language abilities of South Asian bilingual minority children in Hong Kong, and to pave the way to improve the diagnosis of SLI/DLD in these bilingual children, we assessed the narrative abilities of 24 typically-developing Urdu-Cantonese bilinguals (M_{age} : 9.17 years, $SD = 1.68$ year) using MAIN in their two languages (Chan et al., 2018). Specifically, we asked each child to tell a story from the set of 6 pictures, then listen to the same story told according to the standard story script, and then retell that model story. Such a design allowed us to gather information about the child's responsiveness to modelling by comparing performance between the telling and the retelling conditions. The sequence of storytelling, listening to a story model, and then retelling the same story embodies the test-teach-retest paradigm of a dynamic assessment. These typically-developing bilingual children demonstrated evidence of significant improvement in the retelling condition relative to the telling condition. Such an improvement demonstrated what is called "modifiability" in dynamic assessment research. The findings are suggestive of the following: 1) evaluating a bilingual child's modifiability (improvement) upon modelling/scaffolding is important, 2) assessing modifiability is sensitive to cultural and linguistic bias against bilingual ethnic minority children, and 3) data from these typically-developing children can be used as a reference in the assessment of bilingual minority children suspected of language impairment. Future studies are needed to test the hypothesis that children with language impairment will demonstrate limited modifiability (improvement) between story-telling and retelling, relative to their typically developing peers, and children with language problems due to insufficient exposure will demonstrate comparable performance as their typically developing peers.

4 Final remarks

The Cantonese MAIN can be used free-of-charge for non-commercial purposes under a Creative Commons License (BY-NC-ND 3.0) provided that the copyright and licensing rules are respected. Studies that make use of this tool should cite both the assessment protocol and this introductory article as follows.

- 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. Cantonese version. Translated and adapted by Chan, A., Cheng, K., Kan, R., Wong, A. M-Y., Fung, R., Wong, J., Cheng, T., Cheung, A., Yuen, K., Chui, B., Lo, J. & Gagarina, N.
- Chan, A., Cheng, K., Kan, R., Wong, A. M-Y., Fung, R., Wong, J., Cheng, T., Cheung, A., Yuen, K., Chui, B., Lo, J. & Gagarina, N. (2020). The Multilingual Assessment Instrument for Narratives (MAIN): Adding Cantonese to MAIN. *ZAS Papers in Linguistics*, 64, 23–29.

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6 References

- Anaya, J. B., Peña, E. D., & Bedore, L. M. (2016). Where Spanish and English come together: A two-dimensional bilingual approach to clinical decision making. *Perspectives of the ASHA Special Interest Groups*, 1(14), 3–16.
- Armon-Lotem S., de Jong J., & Meir N. (2015). *Assessing multilingual children: disentangling bilingualism from language impairment*. Multilingual Matters. Bristol, UK.
- Bishop, D. V. M., Snowling, M. J., Thompson, P. A., Greenhalgh, T., & CATALISE Consortium (2016). CATALISE: A multinational and multidisciplinary delphi consensus study. Identifying language impairments in children. *PLoS ONE*, 11(7), e0158753.
- Bohnacker, U., & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63, iv–xii.
- Census and Statistics Department, HKSAR (2018). *Main table A107, 2016 Population By-census*.
- Chan, A., Chui, B., Lo, J., Luk, P., & Gagarina, N. (2018). Narrative abilities of bilingual Urdu-Cantonese ethnic minority children in Hong Kong. Poster presented at the Child Language Symposium, Reading, UK, June 2018.
- Eberhard, D. M., Simons, G. F., & Fennig, C. D. (eds.). 2019. *Ethnologue: languages of the world*. Twenty-second edition. Dallas, Texas: SIL International. Online version: <http://www.ethnologue.com>.
- Fung, R. S.-Y. (2009). Characteristics of Chinese in relation to language disorders. In S. P. Law, B. S. Weekes, & A. M.-Y. Wong (Eds.). *Language disorders in speakers of Chinese* (pp. 1–18). Bristol, UK: Multilingual Matters.
- Gagarina, N., Bohnacker, U., & Lindgren, J. (2019). Macrostructural organization of adults' oral narrative texts. Narrative texts by children and adults: insights into their organization through a prism of language system and environmental factors. *ZAS Papers in Linguistics*, 62, 190–208.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of narrative abilities in bilingual children. In Armon-Lotem, S., Jong, J. d. & Meir, N. (Eds.), *Assessing multilingual children: disentangling bilingualism from language impairment* (pp. 243–276). Bristol, UK: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives. Revised version. *ZAS Papers in Linguistics*, 63.
- Matthews, S., & Yip, V. (2001). *Cantonese: A Comprehensive Grammar* (2nd ed.). London: Routledge.

- Stein, N. L., & Glenn, C. G. (1979). An analysis of story comprehension in elementary school children. In R. O. Freedle (Ed.), *New directions in discourse processing* (pp. 53–120). Norwood, NJ: Ablex.
- Trabasso, T., & Nickels, M. (1992). The development of goal plans of action in the narration of a picture story. *Discourse Processes, 15*, 249–275.

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

Alondra Camus

Universitat Autònoma de Barcelona

Melina Aparici

Universitat Autònoma de Barcelona

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.

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.

6 References

- Acosta, V., Moreno, A., & Axpe, M. (2013). Análisis de las dificultades en el discurso narrativo en alumnado con Trastorno Específico del Lenguaje. *Revista de logopedia, foniatría y audiología*, 33(4), 165–171.
- Aparici, M. (2019). Desarrollo del discurso. In M. Aparici, & A. Igualada (Eds.), *El desarrollo del lenguaje y la comunicación en la infancia* (pp. 167–190). Barcelona: UOC.
- Botting, N. (2002). Narrative as a tool for the assessment of linguistic and pragmatic impairments. *Child Language Teaching and Therapy*, 18(1), 1–21.
- Crispo, R., Aparici, M., & Soler, O. (2019). La educación intercultural en la educación obligatoria: el caso de Cataluña. Technical report, EU Project *Connecting People for a Europe of Diversities* (Hostis-Hospes).
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.

- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Tsimpli, I., & Walters, J. (2016). Narrative abilities in bilingual children. *Applied Psycholinguistics*, 37(1), 11–17.
- Gagarina, N., Bohnacker, U., & Lindgren, J. (2019). Macrostructural organization of adults' oral narrative texts. Narrative texts by children and adults: insights into their organization through a prism of language system and environmental factors. *ZAS Papers in Linguistics*, 62, 190–208.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Grosjean, F. (2010). *Bilingual. Life and reality*. Cambridge, MA, and London: Harvard University Press.
- Heilmann, J., Miller, J., Nockerts, A., & Dunaway, C. (2010). Properties of the narrative scoring scheme using narrative retells in young school-age children. *American Journal of Speech-Language Pathology*, 19(2), 154–166.
- Institut d'Estadística de Catalunya. (2019). Població estrangera per països 2019. Retrieved from <https://www.idescat.cat/poblacioestrangera/?b=12>
- Rodina, Y. (2016). Narrative abilities of preschool bilingual Norwegian-Russian children. *International Journal of Bilingualism*, 21(5), 617–635.
- Nieva, S. (2018). Orientaciones para la intervención logopédica con niños bilingües. *Revista de Investigación en Logopedia*, 5(2), 71–111.
- Westby, C. (2014). Narrative Assessment for Bilingual Students. *Word of Mouth*, 26(2), 11–14.

The Croatian adaptation of the Multilingual Assessment Instrument for Narratives*

Gordana Hržica

University of Zagreb

Jelena Kuvač Kraljević

University of Zagreb

This paper presents the Croatian version of the Multilingual Assessment tool for Narratives (MAIN), outlines its development and describes the research that has used it to assess narrative skills in monolingual and bilingual speakers. The Croatian version of MAIN has so far been used in three research projects and results have been presented in five peer-reviewed articles (published or in press) covering a total of 175 children in the age range from 5;0 to 9;0 (20 with developmental language disorder) and 60 adults, age range from 22 to 76. The accumulated results indicate that MAIN can differentiate narrative skills of speakers in distinct age groups and can distinguish children with language disorders from children with typical language development.

1 Introduction: the importance of narrative assessment as a part of language assessment in Croatia

Language assessment is a comprehensive process of collecting information about a speaker's language ability to enable speech and language pathologists and other experts to assess his or her language knowledge and competencies. Language assessment should be able to identify deficits in language acquisition and processing in monolingual and bilingual speakers, meaning that it must be based on standardized, validated procedures.

Since 2000, extensive efforts have been aimed at developing objective, validated tools for Croatian language assessment. Croatian versions of widely used tests of language comprehension, such as the Test of Receptive Grammar in Croatian (TROG-2:HR; Bishop et., al., 2013), and of language production, such as the New Reynell Developmental Language

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Scales in Croatian (NRDLS-HR; Edwards et al., 2019), have been developed. These tests assess the grammar and lexicon of monolingual Croatian speakers. In Croatian, there are no validated tools to assess discourse skills and pragmatic skills.

Narration is a higher-level language skill and a key pragmatic ability. Narrative assessment should thus be a crucial part of language and communication assessment in research and the clinic (Botting, 2002). Narrative assessments can be compared with results on standardized tests across age groups; it can contribute to differentiation between children without language disorders and children with different types of disorders, such as developmental language disorder, language disorders involving primarily pragmatic difficulties, and social communication disorder; and it can provide insights into writing skills. Therefore, appropriate narrative tools are needed for monolingual and bilingual Croatian speakers.

The Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al. 2012, 2015, 2019), has shown to be effective and sensitive in distinguishing children with developmental language disorder from children with typical language development (Boerma et al., 2016; Tsimpli et al., 2016). It has also proven powerful for gaining linguistic and cognitive insights into narrative ability in English and in other languages by enabling analyses on microstructure and macrostructure (e.g. Gagarina et al. 2015, Bohnacker, 2015, Altman et al. 2015, Lindgren 2019).

2 Developing MAIN for Croatian

MAIN was developed within the Narrative and Discourse Working Group (WG2) of the COST Action IS0804 *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment*. It is part of a battery of tests known as the Language Impairment Testing in Multilingual Settings (LITMUS), all developed within the same COST Action. We were members of the Working Group during and after the COST Action. We worked with other members under the leadership of a core group to develop materials and pilot MAIN versions in other languages. When MAIN was first published, it was released in 26 language versions, including Croatian (Gagarina et al., 2012).

The Croatian version of MAIN is not a direct translation of the English instrument but an adaptation in the true sense of the word, because it tries to take into consideration the linguistic properties of instructions, story scripts, questions, and answers. The Croatian team in WG2 worked together on the adaptation, continuously assessing the alignment between the original and Croatian versions in terms of the following four areas (Borsa et al., 2012, p. 425): (1) semantic equivalence, which involves assessing whether the words have the same meaning, whether items have more than one meaning, and whether the translation contains grammatical errors; (2) idiomatic equivalence, which involves assessing whether the translation of the items altered their cultural meaning; (3) experiential equivalence, which involves assessing whether a particular item is applicable in the new culture and, if not, replacing it with an equivalent item;

and (4) conceptual equivalence, which involves assessing whether a given term or expression, even if properly translated, assesses the same aspect in different cultures.

The Croatian team spent additional time coming up with appropriate, common nouns for characters in the stories, since they could not be directly translated, and for translating the instructions for each of the four stories. Multiple examples of possible responses of respondents were included.

The first MAIN manual (Gagarina et al. 2012) included preliminary results for 40 monolingual children, half with typical language development and half with developmental language disorder. These results were reported at COST meetings and workshops. An updated version of MAIN and the English version of the manual was released in 2019 (Gagarina et al. 2019). It incorporated various changes, correction of minor errors and clarifications in some instructions and tables. This was the base for a new revised Croatian version (2020).

3 Using the Croatian MAIN

Since the release of the original Croatian version of MAIN in 2012, it has been used in several studies involving monolingual children with or without developmental language disorder and typically-developing bilingual children, carried out within the following three projects: “Adult Language Processing”, funded by the Croatian Science Foundation (HRZZ-UIP-2013-11-2421) and lasting from 2014 to 2017; “Language Dominance of Bilingual Speakers Perceived as Balanced” (LADOBI), co-funded by the Marie Curie Action “Piscopia” and Framework 7 and lasting from 2014 to 2015; and the ongoing “Multilevel Approach to Spoken Discourse in Language Development”, funded since 2018 by the Croatian Science Foundation (HRZZ-UIP-2017-05-6603). Results from some studies within these projects have been published, others have been accepted by journals, while others are being drafted for submission.

3.1 Projects in which the Croatian MAIN is part of the test battery

3.1.1 Adult Language Processing

The “Adult Language Processing” project addressed psycholinguistic and neurolinguistic aspects of adults and elderly in Croatia. The project enrolled speakers with typical language status and patients with aphasia, dementia and dyslexia. This project showed that the narrative abilities of adult speakers with typical language status do not reach the maximum score (max = 17 points) on the MAIN tasks, and that they scored similarly on both stories (Figure 1).

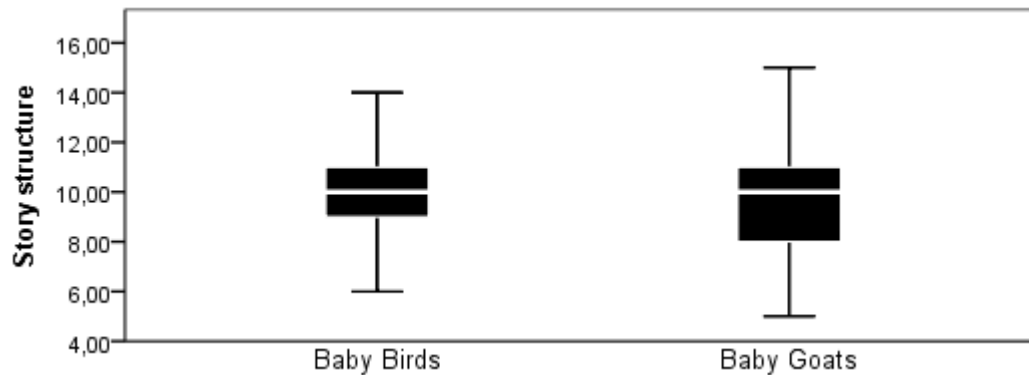


Figure 1: Median scores on the MAIN stories “Baby Goats” (N=30) and “Baby Birds” (N=30) for adult speakers of Croatian with typical language status.

3.1.2 Language Dominance of Bilingual Speakers Perceived as Balanced

Measuring and controlling for language dominance is crucial in research, but also holds psychological and societal importance because of its connections with language attrition and language loss (for an overview, see Köpke and Genevska-Hanke 2018). This project aimed to (1) measure language dominance in bilingual speakers of Italian and Croatian who were perceived as balanced, and (2) identify psychological and sociological factors relevant for determining language dominance. To build a complete linguistic profile of each speaker, their language production and comprehension were assessed using a range of linguistic tools, including MAIN. The results were compared to those obtained on standardized language tests of the two languages. When comparing two languages of the child (Figure 2), there is no significant difference between two groups, although median scores are better for the narratives in Croatian ($U = 744,5$, $p = 0.69$).

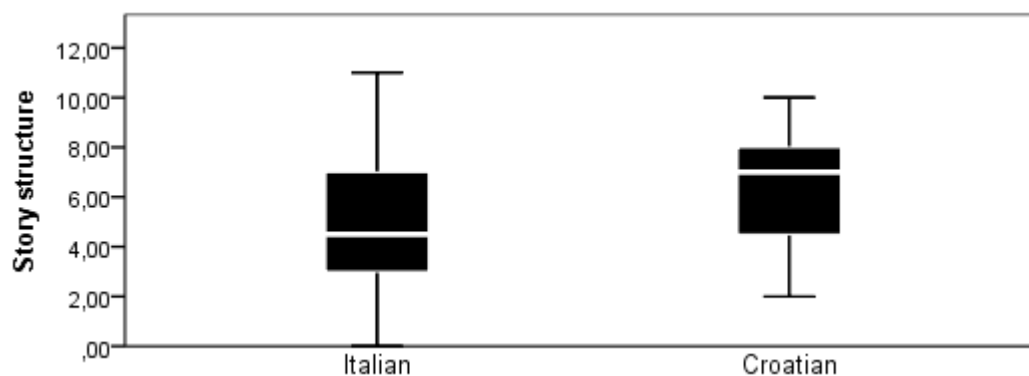


Figure 2: Median macrostructure scores for bilingual speakers of Croatian and Italian (N=30) when generating narratives in each of their languages.

3.1.3 Multilevel Approach to Spoken Discourse in Language Development

Discourse analysis is useful for assessing language knowledge (Botting, 2002), especially in bilingual speakers and speakers with language impairment (e.g. Hržica, Košutar & Kramarić, 2019). Theories and approaches to understanding the structure of narrative discourse and its changes during language development have been primarily based on English, so they must be

validated in typologically different languages. Studies of Croatian narrative discourse suggest that measures of microstructure have to be re-examined before being used in another language and that relevant discourse elements have to be observed within the perspective of Croatian language (Arapović et al., 2010; Gabaj & Kuvač Kraljević, 2019; Hržica & Lice, 2012; Kelić et al., 2012; Kuvač, 2004; Trtanj & Kuvač Kraljević, 2017; Trtanj 2019). This project aims to (1) provide reliable insights into the cognitive and linguistic aspects of discourse formation, and (2) contribute to theoretical approaches to narrative discourse from a cross-linguistic perspective. MAIN was used to compare narrative abilities of monolingual speakers of different ages, for preschool age children, early school age children and adults. Scores were significantly different among all three groups ($p < .01$) (Figure 3).



Figure 3: Story structure (macrostructure) results for Croatian preschool children (N=50), school children (N=55) and adults (N=60).

3.2 Studies in which the Croatian version of MAIN is the primary assessment tool

The first study conducted with the Croatian version of MAIN compared the story structure in the narratives generated by 20 typically developing monolingual children with those of 20 monolingual children with developmental language disorder (Kuvač Kraljević, Hržica & Vdović Gorup, 2020). Children, whose age ranged from 5;6 to 7;6, were asked to produce two narratives, one elicited by a sequence of six pictures (“telling” – either Baby Goats or Baby Birds) and the other elicited by an oral model of the story and the sequence of six pictures (“retelling” – either Cat or Dog). The typically-developing children performed significantly better than their counterparts with language disorder on the MAIN story structure in both narrative tasks. The typically-developing children performed similarly when telling and retelling, while those with developmental language disorder were significantly better at retelling than telling.

The second study investigated the ability of monolingual children to refer to story characters in narratives elicited using the Croatian version of MAIN (Gabaj & Kuvač Kraljević, 2019). There were three groups of participants: 23 preschool children, 23 early school-age children and 23 adults. Children differed from adults in reintroduction and in maintenance. When reintroducing a character, they use NPs less often than adults, but no difference was found between two groups of children. When maintaining characters, preschool children used

pronouns significantly less often than adults, and both groups of children used null anaphors significantly less often than adults. Preschool children were the group that least often referred adequately to characters. These results point to age-related developmental changes in character referencing.

A third study explored the referential forms chosen by 50 monolingual children (6;0-6;11) and 50 adults in two MAIN stories, “Baby Birds” and “Baby Goats” (Hržica & Kuvač Kraljević, in press). The participants had to construct a “Baby Goats” narrative based on pictures showing characters of different grammatical gender, and a “Baby Birds” narrative based on pictures in which all characters had the same grammatical gender. The adults produced more referential expressions in their narratives, while both groups used lexical NPs (nominals) more often to introduce and reintroduce characters than in maintenance. When maintaining characters, children and adults used more nouns and fewer pronouns for the “Baby Birds” story, while the converse was true for the “Baby Goats” story. These results suggest that nominals are used more often to refer to same gender characters in multi-character stories, which supports the discourse-oriented approach.

A fourth study examined whether vocabulary diversity measures can be used across languages when assessing bilingual preschool children. The research examined 30 sequential bilingual children (5 – 7 years old) speaking Croatian and Italian, together with age-matched monolingual peers in each language (Hržica & Roch, in press). MAIN was used to elicit narrative samples and calculate lexical diversity measures, which were assessed for their agreement with performance on the Peabody Picture Vocabulary Test (PPVT). While the two lexical diversity measures type-token ratio (TTR) and the measure known as Maas index, proposed by Maas (1972) did not differentiate between bilinguals and monolinguals, several others did: total number of words, number of different words, D, moving average type-token ratio and hypergeometric diversity of D. These last five measures predicted PPVT results for monolinguals, and three (total number of words, number of different words, D) predicted PPVT results for bilinguals. These results suggest that language diversity measures can reliably measure bilinguals’ vocabulary knowledge and can align with PPVT results in languages other than English.

Finally, a fifth study involving the same sample as the fourth one examined to what extent receptive vocabulary and receptive grammar (sentence comprehension) can predict narrative comprehension skills in both languages of bilingual speakers (5–7 years old) speaking Croatian and Italian (Roch & Hržica, in press). Regression analyses showed that sentence comprehension contributed significantly to narrative comprehension in both L1 and L2, while receptive vocabulary contributed significantly only in L1.

4 Conclusion

As has been shown in the summary of previous research presented above (Section 3), the Croatian adaptation of MAIN has proven to be a valuable tool for assessing narrative abilities of Croatian speakers from preschool age to adults. Participants enjoy the tasks because the

stories have interesting content and children can easily relate to characters. Although the stories are presented on only 6 pictures, they show rich and dynamic events which is very motivating for children. The pictures that are appealing and colourful additionally encourage production. The tests are easy to administer and scoring is transparent. These features make MAIN attractive and practical for micro- and macro-level analyses. To conclude, MAIN has shown to be a useful research tool and we hope this new version will serve us and other researchers and clinicians to evaluate narrative skills of children and to help identify children with atypical development.

5 References

- Altman, C., Armon-Lotem, S., Fichman, S., & Walters, J. (2016). Macrostructure, microstructure, and mental state terms in the narratives of English-Hebrew bilingual preschool children with and without specific language impairment. *Applied Psycholinguistics*, 37(1), 165–193.
- Arapović, D., Grobler, M., & Jakubin, M. (2010). Narativni diskurs predškolske djece s posebnim jezičnim teškoćama. *Logopedija*, 2(1), 1–6.
- Bishop, D. V., Kuvač Kraljević, J., Hržica, G., Kovačević, M., & Kologranić Belić, L. (2014). *Test razumijevanje gramatike (TROG-2:HR)*. Zagreb/Jastrebarsko: Naklada Slap.
- Boerma, T., Leseman, P., Timmermeister, M., Wijnen, F. and Blom, E. (2016) Narrative abilities of monolingual and bilingual children with and without language impairment: implications for clinical practice. *International Journal of Language & Communication Disorders*, 51(6), 626–638.
- Bohnacker, U. (2016). Tell me a story in English or Swedish: Narrative production and comprehension in bilingual preschoolers and first graders. *Applied Psycholinguistics*, 37(1), 19–48.
- Botting, N. (2002). Narrative as a tool for the assessment of linguistic and pragmatic impairments. *Child Language Teaching and Therapy*, 18(1), 1–21.
- Borsa, J. C., Damásio, B. F., & Bandeira, D. R. (2012). Cross-cultural adaptation and validation of psychological instruments: some considerations. *Paidéia* (Ribeirão Preto), 22(53), 423–432.
- Edwards, S., Letts, C., Sinka, I., Kuvač Kraljević, J., Kologranić, Belić, L., Hržica, G., & Kovačević, M. (2019). *Nove Reynell razvojne jezične ljestvice (NRDLS-HR)*. Zagreb/Jastrebarsko: Naklada Slap
- Gabaj, M., & Kuvač Kraljević, J. (2019). Označavanje likova u dječjem pripovjednom diskursu. *Logopedija*, 9(2), 40–49.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual: children disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.

- Gagarina, N., Klop, D., Tsimpli, I., & Walters, J. (2016). Narrative abilities in bilingual children. *Applied Psycholinguistics*, 37(1), 11–17.
- Hržica, G., & Lice, K. (2012). Morfološke pogreške u uzorcima govornog jezika. *Hrvatska revija za rehabilitacijska istraživanja*, 49(1), 65–77.
- Hržica, G., & Kuvač Kraljević, J. (in press). Referential choice in ambiguous narrative discourse. *First Language*.
- Hržica, G., & Roch, M. (in press). Lexical diversity in bilingual speakers of Croatian and Italian. In: Armon-Lotem, Sharon & Grohmann, Kleanthes (ed.), *LITMUS in Action: Cross comparison studies across Europe*. Amsterdam: John Benjamins.
- Hržica, G., Košutar, S., & Kramarić, M. (2019). Rječnička raznolikost pisanih tekstova osoba s razvojnim jezičnim poremećajem. *Hrvatska revija za rehabilitacijska istraživanja*, 55(2), 14–30.
- Kelić, M., Hržica, G., & Kuvač Kraljević, J. (2012). Mjere jezičnog razvoja kao klinički pokazatelji posebnih jezičnih teškoća. *Hrvatska revija za rehabilitacijska istraživanja*, 48(2), 23–40.
- Köpke, B., & Genevska-Hanke, D. (2018). First Language Attrition and Dominance: Same Same or Different? *Frontiers in Psychology*, 9, 1963.
- Kuvač Kraljević, J., Hržica, G., & Vdović Gorup, I. (2020) A comparative macrostructural analysis of narrative discourse in children with typical language development and children with developmental language disorder. *Društvena istraživanja*.
- Kuvač, J. (2004). Jezik i spoznaja u ranom dječjem pripovijedanju. Magistarski rad. Zagreb: Filozofski fakultet.
- Lindgren, J. (2019). Comprehension and production of narrative macrostructure in Swedish: A longitudinal study from age 4 to 7. *First Language*, 39(4), 412–432.
- Maas, H.D. (1972). Zusammenhang zwischen Wortschatzumfang und Länge eines Textes. *Zeitschrift für Literaturwissenschaft und Linguistik*, 8, 73–79.
- Roch, M., & Hržica, G. (in press). Narrative comprehension by Croatian-Italian bilingual children 5-7 years old: the role of receptive vocabulary and sentence comprehension. In: U. Bohnacker & N. Gagarina (Eds.), *Developing narrative comprehension: Multilingual Assessment Instrument for Narratives*. Amsterdam: John Benjamins.
- Trtanj, I., & Kuvač Kraljević, J. (2017). Jezična i govorna obilježja dječjega pripovjednog diskursa: analiza na mikrostrukturnoj razini. *Govor: časopis za fonetiku*, 34(1), 53–69.
- Trtanj, I. (2019). Organizacija pripovjednoga diskursa: anafora i kohezija u dječjem pripovijedanju. *Jezikoslovlje*, 20(3), 583–601.
- Tsimpli, I. M., Peristeri, E and Andreou, M. (2016) Narrative production in monolingual and bilingual children with specific language impairment. *Applied Psycholinguistics*, 37, 195–216.

The adaptation of MAIN to Danish

Kristine Jensen de López

Aalborg University

Hanne B. Søndergaard Knudsen

Aalborg University

This paper describes the process of adapting the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN) to Danish and the use of MAIN in a Danish context. First, there is a brief description of the Danish language followed by details of the process of translating and adapting the MAIN manual to Danish. Finally, we briefly describe some of the research contexts in which the current and previous MAIN materials have been piloted and applied.

1 Introduction

The Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012, 2015, 2019) was developed by members of COST Action IS0804, *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment*. The instrument aims to measure narrative skills among multilingual children, aged 3 to 10 years, who grow up with two or more languages, and also has older children and adults, as a target group. Since 2012, MAIN has been used in several languages and is also available in Danish, a Germanic language. MAIN is not yet norm-referenced, but can be used for evaluation and e.g. in a dynamic assessment context, as will be explained below. In this paper, we give a short description of the Danish language, the translation and adaptation process, and of how MAIN has been used in intervention and research in Denmark.

2 Brief description of the Danish language

Danish belongs to the group of Indo-European languages, more specifically the group of Germanic languages, and has many similarities with Swedish and Norwegian. The preferred

word order in Danish main clause declarative statements is the SVO (subject-verb-object) structure, and Danish is furthermore a verb second (V2) language, which means that the finite verb has to appear as the second element in a sentence. There is no overt agreement between the subject and the verb, and Danish does not allow pro-drop. Danish verbs are marked for tense (finiteness), but not for person or number. Being a Germanic language, some grammatical similarities are shared with e.g. English, however there are also several differences, for example regarding tense and aspect. For example, Danish has one absolute present tense form *hopper* ‘jumps’ whereas English has two *jumps* (present tense) and *is jumping* (progressive). This difference is also seen in the Danish past tense: e.g. simple past tense form *hoppede* ‘jumped/was jumping’ and pluperfect form *havde hoppet* ‘had jumped’. Finally, Danish has a future tense marking which is constructed by use of an auxiliary marker, as in *vil/skal hoppe* ‘will jump/is going to jump’. Aspect can be expressed through the use of e.g. locatives in conjunction with finite verbs, such as in *geden er ved at hoppe* ‘the goat is jumping’ (lit. ‘the goat is by to jump’). Questions are constructed with *wh*-words (*hv*-words), but the word order is different from English, e.g. *hvorfor hopper hunden?* ‘why does the dog jump?’ (lit. ‘why jumps the dog?’) (Allan, Holmes & Lundskær-Nielsen, 2000). Compared to English, Danish has a more complex inflectional system for nouns and articles. Nouns have arbitrary gender, common gender or neuter gender, and are inflected for gender and definiteness, e.g. *ged-en* ‘goat-COMMON.DEF’ and *hus-et* ‘house-NEUTER.DEF’. There are several linguistic devices for creating cohesion (connectives) and in Danish narratives are often initiated with a connective, such as a temporal adverb, e.g. *så* ‘then’, additives *og/og så* ‘and/and then’, causal *men* ‘but’ etc. When an adverb or a topicalized object initiates a main clause, the word order is inverted to VS, such as in *så hopper han over geden* ‘then jumps he over the goat’, i.e. ‘then he jumps over the goat’, or *så hopper han ikke over geden* ‘then jumps he not over the goat’, i.e. ‘then he does not jump over the goat’.

Turning to the semantics of Danish, it has a large variation of mental state words and, compared to English, several Danish mental state words have a more restricted meaning, e.g. ‘want’, which can be translated into Danish as *vil*, *gide* and *bede om*, and ‘think’, which can be translated as *tro*, *synes*, *mene* and *tænke*. (Knüppel, Steengaard & Jensen de López, 2007). In the Knüppel, Steengaard and Jensen de López (2007) study they showed that Danish preschool children use this variety of mental state terms in spontaneous dialogues with their parents.

3 Translation and adaptation of MAIN to Danish

The translation and adaptation of the Danish version of MAIN manual took place in two phases. In the first phase, it was adapted from the original English version of MAIN (Gagarina et al., 2012) and here its guidelines for adapting MAIN story scripts to other languages were followed. The second phase of adaptation was carried out in 2020, and for this, the revised English version (Gagarina et al., 2019) was used. A native Danish-speaking Masters student in psychology at Aalborg University’s Clinic for Developmental Language disorders, who was also familiar with preliminary versions of the materials, translated MAIN from English to Danish. The final

translation was then carried out and checked for consistency and adequate concepts by Kristine Jensen de López. The 2020 revision was also carried out by Kristine Jensen de López, and, in this revision, all changes in the English revised version were included and the full MAIN document was revised for overall consistency in descriptions and in use of concepts. This final version was then commented on by Hanne B. Søndergaard Knudsen, who also participated in some of the piloting of the previous version of the materials.

There were several challenges, particularly in the adaptation of English concepts into Danish, and in the sections regarding the description of MAIN and how to use it. For example, the English concept of a narrative does not easily translate directly to Danish, especially in a way that makes sense in the context of assessment, research and practice and for the actual children that are assessed. In Danish, the word ‘narrative’ can be translated as *narrativ*, *fortælling*, or *historie*. Applied to these Danish words, Google Translate proposes that *fortælling* is equivalent to the English word ‘story’, with ‘narration’ and ‘tale’ as further options. *Historie* is the common Danish word used by children in reference to reading a book or telling a story. It is clear that we cannot rely on Google Translate in the adaptation of MAIN, as one needs to carefully consider the meaning that the different concepts have in their everyday usage.

In the first adaptation of MAIN to Danish (2012), the decision was made to keep as close to the English version as possible. All instances of the word ‘narrative’, including in the title of MAIN, were translated as ‘*fortælling*’. In the 2020 revision of MAIN, ‘narrative’ was translated as *fortælling* or *historie* depending on the specific context: for instance, *fortælling* is used in the title, but *historie* is often used in descriptions of usage and in the materials. This decision was an attempt to make the material more accessible to practitioners and to bring it into line with Danish children’s understanding of the concepts. The Danish word *historie* is acquired by children very early in development, it is frequently used by parents and adults in child-directed speech, and it is the word applied for a book reading activity, so it is more consistent with the everyday language usage and the meaning expressed in MAIN.

The concept of ‘assessment’, which also appears in the title of MAIN, is also not straightforwardly translated into Danish. Among the suggestions for the translation of the English word assessment were *vurdering*. However, *vurdering* can also convey additional and sometimes negative meanings, such as to give an understanding, critical appraisal or estimate of something. The Danish words commonly used by professionals (psychologist, SLTs, doctors) when carrying out an assessment are *undersøgelse* or *udredning*. Again, the lack of clear translation equivalence made it difficult to select the most appropriate Danish word for ‘assessment’; and ultimately the word *undersøgelse* was chosen, as it is the most commonly used term for procedures including language testing and/or testing for cognitive abilities.

4 Piloting of MAIN in Danish

The piloting and use of the materials forming part of the Danish MAIN manual started already in 2009 and were in many senses premature with regard to fully integrating the final versions of MAIN. This work mainly took place within psychology student projects, PhD projects, and

other ongoing research projects with children with SLI and typically developing children, and were supervised by Kristine Jensen de López. In order to maintain procedural consistency within ongoing projects, the majority of the data that has been collected up to date has continued to rely on the very preliminary version of the Fox, Bird and Fish story used in the Gülzow & Gagarina (2007) study (the picture materials appear in Gagarina et al., 2012, figure 17: BG-3. (08-02-2011), p. 33) as well as previous versions of the stories in the MAIN, e.g. Baby Goat (telling and comprehension). The story plot in the Baby Goat story was adapted from the original Fox, Bird and Fish story, so these plots can to a certain extent be compared. Within the PhD projects (Sundahl Olsen, 2013, Clasen, 2014), school-age children with SLI and control groups of typically developing children have been assessed with the Fox story, as well as a large group of preschool monolingual and bilingual children (Jensen de López, 2012, Jensen de López & Clasen, 2013). All children were tested in Danish only. Finally, a pilot project has been carried out with bilingual Danish-Faroese children, as discussed later in this paper.

In summer 2011, the Aalborg University Children's Clinic for Developmental Language Disorders was initiated by the first author, and parts of the MAIN assessment battery are used in the clinic. At this early stage, the MAIN manual had not yet been developed. The Children's Clinic also offers dynamic assessment, which includes narrative assessment, and for these assessments the final materials from MAIN are used. Assessments have so far mostly included monolingual children; however, a few bilingual children have also occasionally been referred. All children at the clinic are school-aged and supervision is carried out by both authors, who also participated in the COST Action IS0804.

The instructions used for the clinical assessment are the following: the child is shown all the pictures in a vertical line, then the child looks at the pictures and is provided time to identify what happens in the story, the pictures are gathered in one pile and then laid down on the table one at a time, and the child is asked to tell the story. Finally, the child is asked the 10 comprehension questions in MAIN. For the purpose of scoring, the narratives are transcribed, story structure, internal state terms, comprehension and Mean Length of Communication Units (MLCU) are calculated and evaluated (Gagarina et al., 2012, 2019). As mentioned earlier, the narrative materials from MAIN, e.g. the Baby Goat and Cat narrative, are occasionally used in a dynamic assessment setting.

Generally, the MAIN narratives are important in daily assessment. The scores are integrated and compared with other test scores, such as standardised and dynamic results, in order to plan intervention and pedagogical recommendations for a specific child. In conjunction with other tests, the narratives can also provide an impression of whether a given child has skills in theory of mind such as understanding intentions and perspectives and therefore possess a basic foundation for mutual communication (Gagarina et al., 2012). The narratives inform us of the extent to which a child can express ideas and messages in social settings, which is considered essential to well-being and academic achievement in school.

Danish piloting of the narratives in a context more consistent with the original purpose of MAIN, namely to test bilingual/monolingual children in both (all) languages, was carried out as part of a Masters' thesis in psychology (Hansen, 2014), supervised by the first author. For this small study, the 2012 version of the Danish MAIN was used. Fifteen Danish-Faroese

bilingual children living in Denmark, aged 4 to 8 years (eight boys and seven girls), participated in the study (Hansen, 2014). The MAIN materials that were used consisted of the telling and retelling materials. For telling, the Baby Bird and Baby Goat stories were used in both languages and for retelling, and the Cat and Dog stories were used in both languages. The children also responded to the comprehension questions. The results have only been analysed preliminarily; however, it seems that the children performed slightly better in Faroese than in Danish for both telling and retelling. Interestingly, the children did not produce references to goals or to inner states in any language or in any of the story formats. There was also some individual variation in the responses to the comprehension questions. Since these results are very preliminary, we are not able to draw conclusions from them yet. We hope to obtain future research funding in order to pilot the latest version of MAIN with Danish-speaking bilingual children.

To summarize, MAIN has been adapted to Danish through two processes, in 2012 and in 2020. However, the piloting and usage of a previous version of one of the stories (the Fox story) that motivated the development of the MAIN materials started already in 2009, and has formed the bases of Danish Bachelor, Masters and PhD projects. Since 2011, the MAIN narratives have played an important role in assessments with children with developmental language disorders, hearing-loss, autism and attention deficits at Aalborg University Children's Clinic for Developmental Language Disorders. The clinic's assessments are standardised as well as dynamic, and results from the narratives are integrated with results of standardised tests to form the basis of pedagogical recommendations for the children referred to the clinic.

5 References

- Allan, R., Holmes, P., & Lundskaer-Nielsen, T. (2000). *Danish: An Essential Grammar*. London/New York: Routledge.
- Clasen, L. E. (2014). *Supporting Danish early educators' professionalism and children's language development – BookFun as a pathway to improved inclusion*. Unp. Ph.D. Dissertation. Center for Developmental & Applied Psychological Science, Institut for Kommunikation og Psykologi, Det Humanistiske Fakultet, Aalborg Universitet, Denmark.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56, 1–115.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing Multilingual Children: Disentangling Bilingualism from Language Impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63, 1–36.
- Gülzow, I. & Gagarina, N. (2007). Noun phrases, pronouns and anaphoric reference in young children's narratives. *ZAS Papers in Linguistics*, 48, 203–223.

- Hansen, R. G. (2014). *Sproglig vurdering af tosprogede Færøsk-Dansk talende børn*. Master's thesis in Psychology, Institute of Communication & Psychology, Aalborg University, Denmark.
- Jensen de López, K. (2012). *LæseLeg: Følgeforskning i tilknytning til implementeringen af LæseLeg (pilotfasen)*. Center for Developmental & Applied Psychological Science, NASDU, Institut for Kommunikation og Psykologi, Det Humanistiske Fakultet, Aalborg Universitet, Denmark.
- Jensen de López, K. & Clasen, L. (2013). Effects of dialogical reading in Danish monolingual, bilingual and language impaired preschool children. Poster presented at *Child Language Seminar*, Manchester, UK, June 24–25.
- Knüppel, A, Steensgaard, R., & Jensen de López, K. (2007). Mental state talk by Danish preschool children. In M. Andersen, M. & M. R. Westergaard, Proceedings of the Workshop on Language Acquisition, SCL 22. CASTL, Tromsø. *Nordlyd*, 34(3), 110–130.
- Olsen Sundahl, L. (2013). *Danske børn med sprogforstyrrelser: En undersøgelse af sprog og cognition hos danske børn med Specific Language Impairment (SLI)*. Unp. Ph.D. Dissertation. Center for Developmental & Applied Psychological Science, NASUD, Institut for Kommunikation og Psykologi, Det Humanistiske Fakultet, Aalborg Universitet, Denmark.

Multilingual Assessment Instrument for Narratives (MAIN) adapted for use in Dutch

Elma Blom

Utrecht University

Tessel Boerma

Utrecht University

Jan de Jong

University of Bergen

This contribution provides an overview of the current state of affairs with respect to the Dutch version of the Multilingual Assessment Instrument for Narratives (MAIN). We describe properties of the Dutch MAIN, the creation of the Dutch MAIN, and the results of recent research with this new instrument to measure narrative competence.

1 Introduction

Narratives are an ecologically valid way to measure communicative competence in clinical and non-clinical populations (Botting, 2002). Narratives provide rich data that can be analyzed at different levels. At the macro level, they can vary in complexity which is reflected in the details of place and time that children include to describe the setting of a story, their use of goal-attempt-outcome sequences to structure an event, and their use of terms to describe the internal states of the protagonists in the story. Comprehension questions after a narration can be used to determine whether or not a child is able to make inferences. At the micro level, narratives provide information about a child's vocabulary and grammar.

Within the Cost Action IS0804 *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment*, a new narrative instrument has been developed for use in multilingual settings, the Multilingual Assessment Instrument for Narratives, abbreviated as MAIN (Gagarina et al., 2012, 2015), which has been revised in 2019 (Gagarina et al., 2019). In this contribution, we describe the creation of the Dutch MAIN (revised in 2020),

and give an overview of research with this new instrument. Prior to this, we explain some basic characteristics of Dutch.

2 Dutch

Dutch is a West Germanic language that resembles German and English. It is the official language in the Kingdom of the Netherlands, which consists of four constituent countries: the Netherlands, and the Caribbean countries Aruba, Curacao, and Sint Maarten. In the Caribbean countries, Dutch is spoken by a small minority of the population, despite its official status. In the Netherlands, Dutch is the sole official language. In the bilingual province of Fryslân, situated in the north of the Netherlands, it is one of two official languages (Dutch, Frisian). Outside of the Kingdom of the Netherlands, Dutch is an official language in Belgium, in addition to French and German, and in Surinam, where it is the only official language. Dutch is a fusional inflectional language. It does not have pro-drop. The basic word order is SOV, which is the word order in subordinate clauses. Main clauses show Verb Second, which is reflected in an SVO order and subject-verb inversion in case a constituent other than the subject is in first sentence position. Dutch attributive adjectives are placed in front of the noun and after the article.

3 Creating a Dutch MAIN version

Norm-referenced Dutch narrative instruments are part of standardized language test batteries, such as the *Taaltoets Alle Kinderen* (Language Assessment All Children; Verhoeven & Vermeer, 2001) or the *Renfrew Taalschalen Nederlandse Aanpassing* (Renfrew-Language scales Dutch Adaption; Van den Heuvel, Borgers, Ketelaars, & Jansonius, 2016). There are no norm-referenced multilingual narrative instruments in which children can be tested in Dutch as well as in their other language. MAIN has the potential to fill this gap.

In 2012, we created the first version of the Dutch MAIN which was a translation of the English version developed by Gagarina and colleagues (2012). In 2020, we adapted this version, following the revised protocol specified for the English MAIN. The Dutch MAIN, like all MAIN language versions, consists of four parallel stories (*Cat, Dog, Baby Birds, Baby Goats*) that have the same episodic structure but differ in protagonists and events. Each story is depicted by six full-colour picture sequences that represent the three-episode-structure of the story. For each story, ten comprehension questions address goals, internal states, and inferences. A production scoring sheet enables scoring 1) overall story structure based on 17 variables that measure specification of the setting, goals, attempts, outcomes, and internal state terms at initiating the event and as a reaction to the outcome, 2) goal-attempt-outcome sequences as a measure of the story's structural complexity, and 3) total number of internal state terms.

The instrument can be administered using three different procedures: model story, telling, or retelling. Model story refers to a procedure where the experimenter or clinician first

tells a story (e.g. *Cat*). After this model, a child is asked to tell a different story (e.g. *Baby Birds*). Telling refers to a procedure where a child tells a story without a model for that story, while retelling refers to a procedure where a child tells a story it has just heard from someone else. Each procedure can be combined with the comprehension questions. In case multilingual children are tested, different stories should be used for their different languages. For example, in our research, using the model story procedure, we tested a bilingual Turkish-Dutch child in Turkish with a combination of *Cat* and *Baby Birds* and in Dutch with a combination of *Dog* and *Baby Goats*.

4 Summary of research with the Dutch MAIN

The Dutch MAIN has been used in research, and by speech-language therapists to support their diagnosis. In this section, we summarize the results of our research in the Netherlands for which we tested children at three points in time with one year in between each wave of data collection. We used the model story procedure and targeted narrative macrostructure. It is relevant to note that the Dutch version of MAIN together with a Frisian equivalent were also administered as part of the longitudinal research by Bosma (2017). In Bosma et al. (2017), MAIN narrative comprehension and production scores in Dutch and Frisian are included in a measure of language dominance, together with vocabulary and morphology measures.

4.1 Clinical validity in bilinguals and monolinguals

An important question that we investigated using the Dutch MAIN concerns the clinical validity of the instrument in both monolingual and bilingual populations: To what extent is MAIN sensitive to effects linked to bilingualism, such as limited exposure to the language in which the instrument is administered, and to effects of an inborn language impairment? To determine the clinical validity of MAIN, we used a four-group design with a monolingual TD (Typical Development), monolingual DLD (Developmental Language Disorder), bilingual TD, and bilingual DLD group. A study with children aged 5-6 years demonstrated that narrative macrostructure measured with a combination of MAIN production and comprehension is sensitive to DLD and not biased against bilingual children (Boerma, Leseman, Timmermeister, Wijnen, & Blom, 2016). Clinical accuracy improved when we restructured MAIN and distinguished between elements about internal states and elements related to basic episode structure. Internal state elements turned out to be more effective in differentiating between TD and DLD than basic episode structure elements. The overall classification accuracy was over 80%, and could be considered adequate. However, specificity in the monolingual group and sensitivity in the bilingual group only reached 79%. After restructuring MAIN, sensitivity and specificity reached levels above 80% in both the monolingual and bilingual group.

In a follow-up study, we investigated the clinical validity of MAIN in combination with two other instruments developed within the COST Action (Boerma & Blom, 2017), a Cross-Linguistic Nonword Repetition Task (also referred to as Quasi-Universal Nonword Repetition

Task or Q-U NWRT; Boerma, Chiat, Leseman, Timmermeister, Wijnen, & Blom, 2015), and a risk index based on parental report of early milestones and parental concern using the Questionnaire for Parents of Bilingual Children (PaBiQ; Tuller, 2015). The combination of these three instruments resulted in excellent diagnostic accuracy in monolingual and bilingual contexts. Another follow-up study examined the clinical validity of MAIN and nonword repetition at older ages (Boerma & Blom, in press). Clinical accuracy was the highest at age 5-6 years (wave 1), but it was still acceptable at age 6-7 (wave 2) and 7-8 year (wave 3). MAIN contributed to the classification at all three waves.

4.2 Comprehension of stories versus words in bilingual and monolingual children

Other questions that we addressed with the Dutch MAIN in a study by Blom and Boerma (in press) are: To what extent do bilingualism and input factors related to bilingualism impact on narrative comprehension? Is there a difference between children's understanding of stories and words in this respect? Larger gaps between monolinguals and bilinguals emerged for lexical compared to narrative comprehension, suggesting that narrative comprehension draws less on experience with a specific language than lexical comprehension does. Hardly any significant relations emerged between home input measured with the PaBiQ and narrative comprehension outcomes in the bilingual sample, except for language richness which was positively correlated with narrative comprehension in the Berber-Dutch subsample (but not in the Turkish-Dutch subsample). We replicated the observation that children performed better on questions after the story told by someone else (experimenter) than the story they told themselves (e.g. Maviş, Tunçer, & Gagarina, 2016; Otwinowska, Mieszkowska, Białecka-Pikul, Opacki, & Haman, 2018). In general, the comprehension questions were relatively easy for 5- to 8-year-old children, in particular for the monolinguals at all three waves, and for the bilinguals from wave 2 onwards (age 6-7 years). Similar high accuracies are reported for other MAIN versions (Bohnacker, 2016; Roch, Flores, & Levorato, 2016; Rodina, 2017; Otwinowska et al., 2018).

4.3 Predictors and outcomes in monolingual children with and without DLD

A third line of research that we have pursued (Blom & Boerma, 2016) concerns the following question: Is narrative macrostructure impacted by DLD and are differences between DLD and TD on narrative macrostructure related to linguistic factors, cognitive factors, or both? To answer this question, we analyzed wave 1 and wave 2 MAIN data from monolingual children with and without DLD. At wave 1, performance of the DLD group was at a lower level than performance of the TD group on both comprehension questions and overall story structure. At wave 2, the groups performed accurately and similarly on narrative comprehension. On story structure in narrative production, the TD group still outperformed the DLD at wave 2. Sustained attention ability mediated the relationship between group (TD, DLD) and narrative structure. Measures of vocabulary, grammar and verbal memory were not related to DLD children's lower performance on story structure.

5 Concluding remarks

The Dutch MAIN is a promising instrument for use in clinical settings with bilingual and monolingual children. From age 6-7 years, children are highly accurate at the comprehension questions, regardless of language status or impairment. For the age range we investigated, which spans from 5 to 8 years, narrative production measures show sufficient variation to distinguish between TD and DLD. For future use in clinical practice, it is important to provide transparent and easy-to-use scoring guidelines, as well as norm data.

6 References

- Blom, E. & Boerma, T. (2016). Why do children with language impairment have difficulties with narrative macrostructure?. *Research in Developmental Disabilities*, 55, 301–311.
- Blom, E. & Boerma, T. (in press). Bilingual children's lexical and narrative comprehension in Dutch as the majority language. In U. Bohnacker & N. Gagarina (Eds.), *Narrative Comprehension*. Amsterdam/Philadelphia: John Benjamins.
- Boerma, T. & Blom, E. (2017). Assessment of bilingual children: What if testing both languages is not possible?. *Journal of Communication Disorders*, 66, 65–76.
- Boerma, T., Chiat, S., Leseman, P., Timmermeister, M., Wijnen, F. & Blom, E. (2015). A Quasi-Universal Nonword Repetition Task as a diagnostic tool for bilingual children learning Dutch as a second language. *Journal of Speech, Language, and Hearing Research*, 58(6), 1747–1760.
- Boerma, E., Leseman, P., Timmermeister, M., Wijnen, F. & Blom, E. (2016). Narrative abilities of monolingual and bilingual children with and without language impairment: implications for clinical practice. *International Journal of Language and Communication Disorders*, 51(6), 626–638.
- Boerma, T. & Blom, E. (in press). Quasi-universal nonword repetition and narrative performance over time: A longitudinal study on 5- to 8-year-old children with diverse language skills. In S. Armon-Lotem, & K. Grohmann (Eds.), *LiTMUS in Action - Comparative Studies across Europe*. Amsterdam/Philadelphia: John Benjamins.
- Bohnacker, U. (2016). Tell me a story in English or Swedish: Narrative production and comprehension in bilingual preschoolers and first graders. *Applied Psycholinguistics*, 37(1), 19–48.
- Bosma, E. (2017). *Bilingualism and cognition: The acquisition of Frisian and Dutch*. Doctoral Dissertation, University of Amsterdam. <https://pure.uva.nl/ws/files/16854241/Thesis.pdf>
- Bosma, E., Blom, E. & Versloot, A. (2017). Language balance and cognitive advantages in Frisian-Dutch bilingual children. In F. Lauchlan & M.C Parafita Couta (Eds.) *Bilingualism and Minority Languages in Europe: Current trends and developments* (pp. 141–158). Cambridge: Cambridge Scholars Publishing.
- Botting, N. (2002). Narrative as a tool for the assessment of linguistic and pragmatic impairments. *Child Language Teaching and Therapy*, 18(1), 1–21.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.

- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children: disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Maviş, I, Tunçer, M., & Gagarina, N. (2016). Macrostructure components in narrations of Turkish–German bilingual children. *Applied Psycholinguistics*, 37(1), 69–89.
- Otwinowska, A., Mieszkowska, K., Białocka-Pikul, M., Opacki, M., & Haman, E. (2018). Retelling a model story improves the narratives of Polish-English bilingual children. *International Journal of Bilingual Education and Bilingualism*. Published online 2 February 2018. DOI: 10.1080/13670050.2018.1434124
- Roch, M., Florit, E., & Levorato, C. (2016). Narrative competence of Italian–English bilingual children between 5 and 7 years. *Applied Psycholinguistics*, 37(1), 49–67.
- Rodina, Y. (2017). Narrative abilities of preschool bilingual Norwegian-Russian children. *International Journal of Bilingualism*, 21(5), 617–635.
- Tuller, L. (2015). Clinical use of parental questionnaires in multilingual contexts. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing Multilingual Children: Disentangling Bilingualism from Language Impairment* (pp. 301–330). Bristol: Multilingual Matters.
- Van den Heuvel, E., Borgers, M., Ketelaars, M., Jansonius, K. (2016). *Renfrew Taalschalen Nederlandse Aanpassing* [Renfrew Language Scales Dutch Adaption]. Antwerpen/Apeldoorn: Garant.
- Verhoeven, L. & Vermeer, A (2001). *Taaltoets Alle Kinderen* [Language Assessment All Children]. Arnhem: Citogroep.

The adaptation of MAIN to Estonian

Reili Argus

Tallinn University

Andra Kütt

Tallinn University

This paper describes Estonian version of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN) to Estonian. A short description of Estonian, some challenges in the adapting MAIN to Estonian, the first experiences of using the Estonian MAIN and a summary of the first results are presented.

1 Introduction

This chapter briefly introduces the addition of Estonian to the existing language versions of the Language Impairment Testing in Multilingual Settings – Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012, 2015, 2019). It describes the process of adapting MAIN to Estonian as well as how it has been used in research. So far, MAIN has mainly been adapted to Indo-European languages. Adding Estonian, a Finno-Ugric language, which is significantly different typologically, will widen the empirical coverage of MAIN.

2 A short description of the Estonian language

Estonian, as a Finnic language of the Finno-Ugric language family, is a language with a rich morphology. It has a case system of 14 cases and verbs that are inflected for tense, number and person, but lacks an article system and grammatical gender (Erelt, 2007). With regard to morphological typology, Estonian exhibits both agglutinative and fusional features. Phonological changes in stems are principally of two kinds: gradation changes (affecting the root and medial sounds) and other changes (omission, addition and ordering changes of final phonemes). When the stem is subject to gradation it will occur in strong or weak forms in

different grades (Erelt et al., 1995, p. 130), e.g. *vatti* ‘cottonwool.PARTIT’ and *vati* ‘cottonwool.GEN’. There are more postpositions than prepositions in Estonian and several spatial relations can be expressed both with case forms and spatial postpositions, e.g. *lauale* ‘table.ALLAT’ or *laua peale* ‘table.GEN onto’ for ‘onto the table’.

The Estonian verbal agreement morphology (person and number) allows for both subject and object ellipsis and therefore the reference to a person or an object can be expressed only with a verb form consisting of a relevant suffix (e.g. *läheb majja* ‘go.PRES.3SG house.ILL’,¹ i.e. ‘she/he goes into the house’). The Estonian word order is statistically characterized mainly by the V2 principle (Tael, 1988, p. 40), i.e. that the verb usually comes second in the clause, and Estonian is most often considered an SVO language (Ehala, 2006, p. 49). Although the neutral word order of a standard sentence is SVX in main clauses, SVX and XVS are equally frequent (Lindström 2000). At the same time, in marked sentence types (possessor and experiencer constructions, existential sentences, resultative sentences) the Estonian word order can also be XSV and it has been argued that at the sentential level, the discourse configurational rules (the needs of organizing known and new information, e.g. usually placing new information into the end on the sentence) are more important than the grammatical principles (e.g. V2) of ordering constituents and several other word order patterns (e.g. OSV, VSX) are also possible in Estonian (Ehala, 2006, p. 84).

Thus, Estonian has several typological features that are different from most Indo-European languages. Even compared to the closely related language Finnish, Estonian has some special features, e.g. the inflectional morphology in Estonian is more fusional and not as regular as in Finnish. Therefore, the use of MAIN an empirical basis for comparisons between not only typologically different languages as Finno-Ugric and Indo-European languages, but also for closely related language like Estonian and Finnish.

There are approximately 1.08 million native speakers of Estonian. The majority of them, 883,707 speakers, lives in the Republic of Estonia,² where Estonian is the official language. Outside of Estonia, there are roughly 160,000 native Estonian speakers, found primarily in Finland, Russia, the USA, Canada, and Sweden. There are also 170,000 speakers of Estonian as a second language (Erelt, 2003, p. 7; Kilgi, 2012, PHC, 2011). Russian-speaking people form the biggest minority language group in Estonia. At the same time, this group is quite heterogeneous: among the speakers of Russian, there are so called old-settlers and 2nd–3rd generation immigrants and their descendants as well recent immigrants; linguistically this group consists of Russian monolinguals, Estonian-Russian bilinguals, and people speaking Russian and some other language, e.g. Ukrainian. The majority of the younger generation of Russian-speaking people in Estonia nowadays speaks Russian, Estonian and English or some other foreign language.

The Estonian educational system is in the transition towards an educational system where Estonian is the primary language of instruction. Earlier, next to schools with Estonian as the language of instructions, there have also been schools with Russian as the sole language

¹ Illative is one of the locative cases with the basic meaning of ‘into (the inside of)’.

² Data from 2016 (Blog of Statistics <https://blog.stat.ee/2017/03/13/kui-palju-raagitakse-estis-estti-keelt/>)

of instruction, but it is now compulsory in all schools to teach at least 60% of all subjects in Estonian. Therefore, the use of Estonian MAIN to evaluate narrative skills not only in monolingual but also in bilingual children might be useful.

3 Adapting MAIN to Estonian

An Estonian version of MAIN was created in 2012. The new revised Estonian MAIN, published as part of this issue was adapted from the revised English version (Gagarina et al., 2019), following the guidelines provided in Bohnacker & Gagarina (2019).

In the first phase, Reili Argus, the first author of this paper, adapted the MAIN protocols to Estonian based on the 2012 version of the Estonian MAIN. The 2012 version had been piloted by the second author, Andra Kütt, a PhD-student in linguistics with 18 children. Additionally, several students of linguistics and speech-language pathology piloted it as well and suggested changes concerning the wording and word order in some stories. Finally, the authors revised the Estonian MAIN further based on the revised English version and incorporated the suggestions for minor language changes from the piloting.

The MAIN picture sequences and the story scripts did not require any cultural adaptations because the stories, characters and contexts were already suitable for children growing up in the Estonian context. The difficulties in the translation process concerned three issues: finding suitable translation equivalents for some adjectives and verbs, the sentence structure, and the usage of pronouns in Estonian.

With respect to the first issue, the most difficult adjectives to adapt were *playful* and *cheerful*. The first mentioned adjective was translated using a compound *mänguhimuline* ‘lit. play.GEN-eagerness-adjectival suffix’, which is not completely equivalent to the original adjective and is a somewhat long word, but is transparent in the structure and meaning of its components. It is also the most suitable word considering the sentence context. The adjective *cheerful* has at least two translation equivalents in Estonian, *rõõsameelne* ‘cheerful, hearty’ and *rõõmus* ‘glad, happy, cheerful’. The word *rõõmus* was chosen as it was both more frequent and more appropriate for children. The verb *to grab* had to be translated differently in different contexts: in the context of a dog or a cat taking a fish or a sausage from the bucket, the verb *näppama* ‘snatch, pilfer’ was used, in other contexts, the verbs *sikutama* ‘tug, pluck’ or *haarama* ‘grab, grasp’ were used.

Concerning the second issue, the adaptation of the structure of the sentences, they did not cause any larger difficulties. Still, not all structural characteristics of the original sentences were retained. For example, the original sentence *...a cheerful boy was coming back from fishing with a bucket and a ball in his hands* has the verb *olema* ‘to be’ in its Estonian translation (*tal oli kott ühes ja õhupall teises käes* ‘he had a bag in one and a balloon in other hand’). Some sentences were translated using a subordinate clause instead of a non-finite structure. For example, the sentence *He looked at the dog chasing the mouse* became *Ta vaatas, kuidas koer hiirt taga ajab* ‘he looked, how the dog is chasing the mouse’ and *She was happy about the juicy worm for her babies* was expressed as *Ta oli õnnelik selle mahlase ussikese üle, mis ta*

oma poegadele tõi ‘She was happy for the juicy worm that she brought for her babies’. Although non-finite clauses are possible in Estonian and could have been used in all above mentioned examples, subordinate clauses were selected as more frequent in colloquial Estonian as well in child-directed speech.

As mentioned above, Estonian has no grammatical gender and the 3rd person singular pronoun *tema* ‘he/she’ is used for both male and female referents. To avoid misunderstanding, in the second sentence in *One day there was a mother goat who saw that her baby goat had fallen into the water and that it was scared. She jumped into the water...* the personal pronoun *she* was substituted with the proper noun *kitseema* ‘mother goat’ in the translation (*Kitseema hüppas vette* ‘mother goat jumped into the water’). Possessive pronouns are also used with lesser frequency in Estonian and, in some sentences, some of them were just omitted in the translation. For example, the sentence *...the boy began pulling his ball out of the water with his fishing rod.* became *...hakkas poiss õngega oma palli veest välja tõmbama* ‘the boy began to pull out his (own) ball from the water with the fishing rod’.

4 The use of MAIN in Estonian

Until now, the Estonian MAIN (the story Baby Goat in the telling mode) has been used with 50 children (30 of them bilingual) and all these children’s narratives have been added to the CHILDES Estonian MAIN database.³ However, only one study using the Estonian MAIN has been published (Kütt, 2018). Kütt (2018) reports the results from a pilot study using MAIN story Baby Goats in the telling mode with 18 monolingual Estonian children aged 4–8 years. Here, we give a brief summary of the results of this study.

With respect to the general procedure of the narrative tasks, Estonian children liked the pictures of MAIN and they also enjoyed telling the stories. Some children were not familiar with the term “to tell the story”. Naming the characters of the story was not difficult for the children but many children asked who the characters in the pictures were or how to name them. Some children also added self-invented characters (e.g. a farmer) to the story.

However, the pilot study showed that certain aspects of the storytelling was quite difficult for Estonian children. For example, when producing a narrative, it was not natural for Estonian children to indicate a setting (time or place), but rather they began their stories with attempts and goals. Attempts and goals were also the most frequent components of children’s stories. There was little complexity in the children’s narratives and most children presented only goals or attempts but no outcomes. Least common was the production of all three macrostructural components (goal-attempt-outcome) within the same episode.

In the Estonian children’s narratives, there were few words referring to a story characters’ inner feelings or reactions. This results thus showed that Estonian children find it difficult to use emotion words, which is evidenced by their limited use of IST words (including

³ See <https://chilides.talkbank.org/browser/index.php?url=Other/Estonian/MAIN/>.

emotion words) as well as their null-rated understanding of the internal reactions and states of individuals (Kütt, 2018, p. 104).

No connection was found between producing a more complex narrative and the child's narrative comprehension. The generally high scores on the MAIN comprehension questions demonstrate that the test stimulus, a series of pictures, were understood and that the test was generally appropriate for the children.

However, some links were found between the size of the vocabulary used in the narratives and the complexity of the story. The two children with the highest story structure scores had the richest vocabulary in their narratives and the child whose score was the lowest in the group used the smallest vocabulary.

To conclude, using MAIN for researching language acquisition can provide different insights into the acquisition of story-telling as well into several other more specific topics like the use of referential devices, different syntactic structures and the acquisition of lexicon, e.g. IST-words or adjectives. More data also needs to be collected from Estonian-Russian bilingual children. Such data would contribute substantially to the research on early bilingual acquisition in an Estonian context; so far little such research has been carried out in Estonia.

5 References

- Bohnacker, U. & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63, iv–xii.
- Ehala, M. (2006). The Word Order of Estonian: Implications to Universal Language. *Journal of Universal Language*, 7, 49–89.
- Erelt, M. (2007). Estonian Language. In Mati Erelt (ed.) *Linguistica Uralica*, Supplementary Series, 1. Second edition (pp. 1–7). Tallinn: Estonian Academy Publishers.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children: disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63, 1–36.
- Kilgi, A. (2012). *Tõlkekeele dünaamika piibli esmaeestinduse käigus: verbi morfosüntaksi areng ja lõplik toimetamisfaas* [Dynamics of translated language during the first translation of the Bible into Estonian: the development of morphosyntax of verb and the phase of final editing]. Doctoral dissertations of Tallinn University 27. Tallinn: Tallinna Ülikooli Kirjastus.
- Kütt, A. (2018). MAIN-testi kasutamine eesti laste jutustamisoskuse hindamiseks. [Using the Multilingual Assessment Instrument for Narratives test for the assessment of Estonian children's narrative skills]. *Eesti Rakenduslingvistika Ühingu aastaraamat*, 14, 95–115.
- Lindström, L. (2000). Narratiiv ja selle sõnajärg [Narrative and its word order]. *Keel ja Kirjandus*, 3, 190–200.

PHC 2011 = PHC 2011: 157 native languages spoken in Estonia. (Population and Housing Census.) Accessed July 4, 2018. http://www.stat.ee/64629?parent_id=39113

Statistikablogi [Blog of Statistics]. Eesti Statistika. <https://blog.stat.ee/2017/03/13/kui-palju-raagitakse-eestis-eesti-keelt/> (Accessed 12 March 2020).

Tael, K. (1988). *Sõnajärjemallid eesti keeles (võrrelduna soome keelega)* [Estonian word order patterns compared with Finnish]. Tallinn: Eesti NSV Teaduste Akadeemia Keele ja Kirjanduse Instituut. Preprint KKI-56.

Multilingual Assessment Instrument for Narratives (MAIN) adapted for use in West Frisian

Evelyn Bosma

Leiden University, Utrecht University

Jelske Dijkstra

Fryske Akademy, Mercator European Research Centre on Multilingualism and Language Learning

This paper describes the current state of affairs concerning the West Frisian adaptation of the Multilingual Assessment Instrument for Narratives (MAIN). We provide a short description of the West Frisian language, the process of adapting MAIN into West Frisian and the results of recent research using this adaptation.

1 Introduction

As most children have experience with storytelling and are used to storytelling across different contexts, both at home and in the classroom, narrative-based assessment provides an ecologically valid (Botting, 2002; Justice, Bowles, Pence, & Gosse, 2010) and culturally sensitive (Price, Roberts, & Jackson, 2006) way to examine children's language skills. Since narratives require the integration of language skills at various levels, including vocabulary, grammar, pragmatics and story processing (Bowles, Justice, Khan, Piasta, Skibbe, & Foster, 2020), they can be analyzed in terms of both micro- and macrostructure. While microstructure refers to language use at word and sentence level, which is reflected in measures such as lexical diversity and mean length of utterance, macrostructure goes beyond this level and entails the global organization of the whole story, which is reflected in elements such as setting, character, and plot (Justice et al., 2010). As narratives, and especially macrostructure features, tap into language-general skills that can be compared across languages, narrative macrostructure is especially suited for bilingual language assessment (Gagarina, Klop, Tsimpli, & Walters, 2016).

In this paper, we describe the creation of the West Frisian adaptation (revised in 2020) of a new narrative instrument that has been developed for language assessment in multilingual settings, the Multilingual Assessment Instrument for Narratives (MAIN; Gagarina et al., 2012,

2015). MAIN is part of the Language Impairment Testing in Multilingual Settings (LITMUS) test battery (Armon-Lotem, de Jong, & Meir, 2015) and has been revised in 2019 (Gagarina et al., 2019). This assessment instrument consists of four parallel stories (*Cat*, *Dog*, *Baby Birds*, *Baby Goats*) with three episodes that are displayed on a set of six pictures. Each story has its own protagonists and events, but the episodic structure is similar across the four stories. MAIN allows for three different ways of assessment: telling a story without the use of a model story (Telling), retelling the exact same story that the child has just listened to (Retelling), and telling a new story after the child has listened to a different, but structurally similar model story (Model story). For bilingual assessment, different stories should be used for the different languages that a child speaks, e.g. *Cat* and *Baby Birds* for language A and *Dog* and *Baby Goats* for language B. To examine children's narrative comprehension, each story has ten comprehension questions about goals and internal states. To examine children's narrative production, overall story structure, structural complexity and the total number of internal states are taken into account.

Like all of the MAIN versions, the West Frisian adaptation of MAIN consists of four parallel stories with the same ways of assessment and the same standardized procedures for scoring. In what follows, we first provide a short description of the West Frisian language, followed by a description of the process of adapting MAIN into West Frisian. Finally, we give a summary of the research that has so far been carried out with this adaptation.

2 West Frisian

West Frisian is a West Germanic language that is spoken as a regional minority language in the Dutch province of Fryslân, where it is recognized as an official language next to the national majority language Dutch. It is, however, much stronger in rural than in urban areas and it is predominantly used in informal domains (Breuker, 2001). All speakers of West Frisian also speak Dutch and Dutch is clearly the dominant language in education and the media (De Haan, 1997).

Three mutually intelligible main dialects are distinguished: 'Forest Frisian' (*Wâldfrysk*) in the east of the province, 'Clay Frisian' (*Klaaifrysk*) in the west, and 'Southwest Quarter' (*Súdwesthoeks*) in the southwest (De Jong & Hoekstra, 2020; Hof, 1933; Tiersma, 1999). The first two are the main dialects on which the grammatical and lexical properties of written Standard West Frisian are based. As we will explain below, however, this written standard is hardly used within the Frisian speech community.

Although the West Frisian dialects are historically more closely related to English than to Dutch, extensive language contact with Dutch has resulted in convergence towards Dutch, both at the lexical and the structural level (Gooskens & Heeringa, 2004). This has led to the situation that Standard West Frisian is different from the West Frisian language that its speakers use on a daily basis (De Haan, 1997). In fact, there is no general knowledge of the written standard: as the most recent sociolinguistic survey shows, most of the inhabitants of Fryslân are able to speak West Frisian well (69%), but only few can write it well (18%) (Klinkenberg, Jonkman, & Stefan, 2018). This lack of knowledge of the standard creates a high tolerance of

(dialect) variation and Dutch interference, which occurs at all linguistic levels: at the lexical level, the morphological level, the syntactical level and even the phonological level (Breuker, 2001; De Haan, 1997).

Linguistically, there are many parallels, but also differences, between West Frisian and Dutch. For example, like Dutch, West Frisian is a fusional language with Verb-Second (SVO) word order in main clauses and SOV word order in subordinate clauses. As in Dutch, attributive adjectives are placed before the noun. A contrast between Dutch and West Frisian is that West Frisian has pro-drop, which is only attested in the second person singular, e.g. *-sto* as a clitic in the subordinate clause *omdatsto de fyts hast* ‘because you have the bike’. Furthermore, while Dutch only has one inflectional paradigm for regular verbs, West Frisian has two: Dutch regular verbs only have infinitives ending in *-en* (e.g. *bakken* ‘to bake’ and *wonen* ‘to live’), while West Frisian regular verbs either have an infinitive ending in *-e* (*bakke* ‘to bake’) or in *-je* (*wenje* ‘to live’). Both West-Frisian regular verb paradigms have their own inflections (for more information, see www.taalportaal.org).

3 Creating a West Frisian MAIN version

While there are several norm-referenced narrative instruments for Dutch, which are part of standardized language test batteries (e.g. *Schlichting Test voor Taalproductie-II: Verhaaltest*; “Schlichting Test for Language Production-II: Story Test”; Schlichting & Spelberg, 2010; *Renfrew Taalschalen Nederlandse Aanpassing*; “Renfrew Language Scales Dutch Adaptation”; Van den Heuvel, Borgers, Ketelaars, & Jansonius, 2016; *Taaltoets Alle Kinderen*; “Language Assessment All Children”; Verhoeven & Vermeer, 2001), no such instruments exist for Frisian. MAIN could fill this gap. As MAIN is also available in Dutch (Blom, Boerman, & De Jong, 2020) and comprises different stories with the same basic structure, it is suitable for Frisian-Dutch bilingual assessment and other combinations of languages.

MAIN was translated and adapted to West Frisian by two linguists, a near-native speaker (first author) and a native speaker (second author) of West Frisian, who both grew up in the West Frisian speech community. The first author created the first version of the West Frisian MAIN in 2013, which was a translation based on the English (Gagarina et al., 2012) and Dutch (Blom & De Jong, 2013) versions of MAIN. Both authors adapted the West Frisian version in 2020, based on the revisions of the English (Gagarina et al., 2019) and Dutch (Blom, Boerma, & De Jong, 2020) versions, following the guidelines for adapting MAIN to other languages (Bohnacker & Gagarina, 2019).

The biggest challenge in the creation of the West Frisian version of MAIN was to bridge the gap between the West Frisian language as used in the speech community and the Standard West Frisian language as described in dictionaries and grammars. A translation of MAIN that completely follows the standard would sound unnatural and unacceptable, if not incomprehensible, to most West Frisian-speaking children. The West Frisian language used by the speech community contains Dutch interferences and loanwords due to close language contact, whereas the standard is more conservative and often prescriptive by nature. Therefore,

we decided to adapt MAIN in such a way that it only contains (Standard) West Frisian vocabulary and grammar that is used in the speech community. For this reason, we predominantly used the *Frysk Hânwurdboek* ('Frisian Concise Dictionary', available at taalweb.frl) throughout the adaptation process and only included words that could be found in this dictionary. The *Frysk Hânwurdboek* comprises approximately 70,000 lemmas and, in contrast to other West Frisian dictionaries, also contains words from the last two decades. Consequently, both Standard West Frisian lemmas and lemmas of loanwords from Dutch that have already been adopted within colloquial West Frisian are included (Duijff & Van der Kuip, 2008).

4 Summary of research with the West Frisian MAIN

To this date, the West Frisian version of MAIN has only been used in one published study. To classify 5- and 6-year-old Frisian-Dutch bilingual children ($N = 122$) as balanced or unbalanced bilinguals, Bosma, Blom and Versloot (2017) used Frisian and Dutch MAIN comprehension and production scores, together with Frisian and Dutch expressive morphology (Blom & Bosma, 2016; Verhoeven & Vermeer, 2001) and receptive vocabulary measures (Bosma, Blom, Hoekstra, & Versloot, 2019; Schlichting, 2005). The production parts of the Dutch and Frisian MAIN were used to select children who could tell a story in Dutch, but not in Frisian. Subsequently, 30 children were selected from this group who performed better on Dutch morphology than on Frisian morphology. These 30 Dutch-dominant bilingual children were matched to 30 balanced bilingual children who produced a narrative in both languages and who performed similarly on Frisian and Dutch morphology. Statistical analyses showed that the two groups significantly differed from one another on all Frisian language measures, that is, narrative production, narrative comprehension, expressive morphology and receptive vocabulary, but that they performed similarly on all Dutch language measures.

Correlational analyses (not reported in Bosma et al., 2017) showed that Frisian narrative comprehension and production scores correlated significantly with other Frisian language measures. Frisian narrative comprehension correlated significantly with exposure to Frisian at home ($r(119) = .45, p < .001$), Frisian narrative production ($r(120) = .47, p < .001$), Frisian receptive vocabulary ($r(120) = .57, p < .001$) and Frisian expressive morphology ($r(120) = .48, p < .001$). Frisian narrative production also correlated significantly with intensity of exposure to Frisian at home ($r(119) = .72, p < .001$), Frisian receptive vocabulary ($r(120) = .42, p < .001$) and Frisian expressive morphology ($r(120) = .66, p < .001$). (Note that children who were unable to produce a Frisian narrative obtained a score of 0 for Frisian narrative production.)

5 Concluding remarks

In combination with the Dutch MAIN, the Frisian MAIN is a promising measure for narrative assessment in Frisian-Dutch bilingual children. Previous research (Bosma et al., 2017) has

shown that narrative comprehension and production scores show sufficient variation to assess (bilingual) language proficiency and that they significantly correlate with exposure and other language measures. The Frisian MAIN is thus a suitable measure to examine children's Frisian language skills.

6 References

- Armon-Lotem, S., de Jong, J., & Meir, N. (Eds.) (2015). *Assessing multilingual children: Disentangling bilingualism from language impairment*. Bristol: Multilingual Matters.
- Blom, E., Boerma, T., & De Jong, J. (2020). Multilingual Assessment Instrument for Narratives (MAIN) adapted for use in Dutch. *ZAS Papers in Linguistics*, 64, 51–56.
- Blom, E., & Bosma, E. (2016). The sooner the better? An investigation into the role of age of onset and its relation with transfer and exposure in bilingual Frisian–Dutch children. *Journal of Child Language*, 43(3), 581–607.
- Bohnacker, U., & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63.
- Bosma, E., Blom, E., & Versloot, A. (2017). Language balance and cognitive advantages in Frisian-Dutch bilingual children. In F. Lauchlan & M.C. Parafita Couta (Eds.), *Bilingualism and Minority Languages in Europe: Current trends and developments* (pp. 141–158). Cambridge: Cambridge Scholars Publishing.
- Bosma, E., Blom, E., Hoekstra, E., & Versloot, A. (2019). A longitudinal study on the gradual cognate facilitation effect in bilingual children's Frisian receptive vocabulary. *International Journal of Bilingual Education and Bilingualism*, 22(4), 371–385.
- Botting, N. (2002). Narrative as a tool for the assessment of linguistic and pragmatic impairments. *Child Language Teaching and Therapy*, 18(1), 1–21.
- Bowles, R. P., Justice, L. M., Khan, K. S., Piasta, S. B., Skibbe, L. E., & Foster, T. D. (2020). Development of the Narrative Assessment Protocol-2: A Tool for Examining Young Children's Narrative Skill. *Language, Speech, and Hearing Services in Schools*, 51(2), 390–404.
- Breuker, P. (2001). West Frisian in language contact. In H. H. Munske, N. Århammar, V. F. Faltings, J. F. Hoekstra, O. Vries, A. G. H. Walker, & O. Wilts (Eds.), *Handbook of Frisian studies* (pp. 121–129). Tübingen: Max Niemeyer.
- De Haan, G. J. (1997). Contact-induced changes in modern West Frisian. *Us Wurk*, 46(1–4), 61–89.
- De Jong, G., & Hoekstra, E. (2020). A general introduction to Frisian. *Taalportaal*. Retrieved from <https://taalportaal.org/taalportaal/topic/pid/topic-14225224491227143> (accessed 14 May 2020).
- Duijff, P. & Van der Kuip, F. (Eds.) (2008). *Frysk Hânwurdboek*. Leeuwarden: Fryske Akademy.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.

- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Gagarina, N., Klop, D., Tsimpli, I. M., & Walters, J. (2016). Narrative abilities in bilingual children. *Applied Psycholinguistics*, 37(1), 11–17.
- Gooskens, C., & Heeringa, W. (2004). The position of Frisian in the Germanic language area. In D. Gilbers, M. Schreuder, & N. Knevel (Eds.), *On the Boundaries of Phonology and Phonetics* (pp. 61–87). Groningen: University of Groningen.
- Hof, J. J. (1933). *Friesche dialectgeographie*. 's Gravenhage: Nijhoff.
- Justice, L. M., Bowles, R., Pence, K., & Gosse, C. (2010). A scalable tool for assessing children's language abilities within a narrative context: The NAP (Narrative Assessment Protocol). *Early Childhood Research Quarterly*, 25(2), 218–234.
- Klinkenberg, E., Jonkman, R., & Stefan, N. (2018). *Taal yn Fryslân: de folgjende generaasje*. Leeuwarden: Fryske Akademy.
- Price, J. R., Roberts, J. E., & Jackson, S. C. (2006). Structural development of the fictional narratives of African American preschoolers. *Language, Speech, and Hearing Services in Schools*, 37(3), 178–190.
- Schlichting, L. (2005). *Peabody Picture Vocabulary Test-III-NL*. Amsterdam: Harcourt Test.
- Schlichting, J. E. P. T., & Spelberg, H. C. L. (2010). *Schlichting Test voor Taalproductie-II*. Houten: Bohn Stafleu van Loghum.
- Tiersma, P. M. (1999). *Frisian Reference Grammar*. Leeuwarden: Fryske Akademy.
- Van den Heuvel, E., Borgers, M., Ketelaars, M., & Jansonius, K. (2016). *Renfrew Taalschalen Nederlandse Aanpassing*. Antwerpen/Apeldoorn: Garant.
- Verhoeven, L., & Vermeer, A. (2001). *Taaltoets Alle Kinderen*. Arnhem: Citogroep.

Adapting the Multilingual Assessment Instrument for Narratives (MAIN) to Scottish Gaelic

Vasiliki Chondrogianni

University of Edinburgh

Morna Butcher

NHS Greater Glasgow and Clyde

This paper describes the rationale for the adaptation of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN) (Gagarina et al., 2012, 2015, 2019) to Scottish Gaelic (Gaelic) and presents some preliminary results from the macrostructure measures. Gaelic is a heritage minority language in Scotland being revitalised through immersion education, which spans across all levels of compulsory education (preschool, primary and secondary level). MAIN was adapted to Gaelic for two reasons: (i) to gauge the language abilities of children attending Gaelic immersion schools using an ecologically valid test, and (ii) to help identify areas of language impairment in children with Developmental Language Disorders within a broader battery of language tasks. Preliminary results from the macrostructure component indicate a wider range of Gaelic language abilities in six- to eight-year-old typically developing children in Gaelic-medium education. These results set the stage for future use of the tool within this context.

1 The Multilingual Assessment Instrument for Narratives in Scottish Gaelic

The Language Impairment Testing in Multilingual Settings – Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012, 2015, 2019) is a narrative task that comprises four similarly structured picture-based stories that children are asked to tell or retell. It was developed during the COST Action IS0804 *Language impairment in a multilingual society: Linguistic patterns and the road to assessment* (Armon-Lotem, de Jong, & Meir, 2015) with an aim to provide an ecological way of gauging grammatical and higher level of discourse organisation abilities in typically developing bilingual children and in bilingual children with Developmental Language Disorder (DLD).

Scottish Gaelic (hence Gaelic) is a heritage minority language in Scotland, currently being revitalised through immersion education. Despite the increase of the number of pupils in

Gaelic medium education (GME), there is lack of language assessments in Gaelic that can inform us about the language development of children in GME: both typically developing and language impaired. In this context, the addition of MAIN to the offers a promising tool for developmental, educational and clinical study.

The present chapter is organised as follows. In section 2, we discuss the revitalisation of Scottish Gaelic through Gaelic-medium immersion education (GME) in Scotland, and section 3 presents why the adaptation of MAIN is important for GME. Sections 4 and 5 present the properties of Gaelic and the steps taken and obstacles faced when adapting the tool to Gaelic, respectively. Section 6 describes the first phase of the study in supporting children in GME and presents some preliminary results on macrostructure. We conclude with some future directions in Section 7.

2 Scottish Gaelic and its revitalisation through Gaelic-medium education in Scotland

Gaelic, despite its minority status, is one of the official languages of Scotland since the Gaelic Language (Scotland) Act 2005 was passed. In the 2011 Census, the total number of people in Scotland recorded as being able to speak and/or read and/or understand Gaelic was 87,056. Of these, 58,000 people (1.1% of the population) aged three and over in Scotland were able to speak Gaelic. Within this group, the number of people who could speak, read, understand and write Gaelic in 2011 was 32,000, 0.6% of the population aged three and over. Apart from Gaelic being spoken in the Highlands and Western Isles, there is also a high degree of urbanisation within the Gaelic speaking community, with large numbers of Gaelic speakers living in Aberdeen, Edinburgh, Greater Glasgow and Inverness.

Gaelic-medium education (GME) is an immersion model distinct to Scotland that spans across preschool, primary and secondary education. By targeting the acquisition of both Gaelic and English, it intends to make children fully bilingual by the time they enter secondary education at the age of 12 years. In Gaelic-medium primary education (GMPE), Gaelic is prioritised in the first three years. English is slowly introduced, although Gaelic remains the main medium of instruction in lessons (O’Hanlon, Paterson, & McLeod, 2012). Pupils entering GMPE come from a variety of backgrounds. Many pupils come from families with no Gaelic at home and are immersed in Gaelic at school only (Stephen, McPake, McLeod, Pollock, & Carroll, 2010) with approximately 18% of parents being native speakers of Gaelic (O’Hanlon et al., 2012). Given that nursery provision may or may not be attached to school(s) in regions that offer GMPE, pupils may enter primary schools with mixed former experience of formal instruction in Gaelic. In 2018-19 there were 56 preschools, 60 primary schools offering Gaelic-medium education. A further 34 secondary schools were also offering subjects through the medium of Gaelic (including Gaelic itself) (Bòrd na Gàidhlig, 2019).

The expansion of minority language use among young learners through immersion education, such as the case of Gaelic in Scotland, relies on the provision of equitable and inclusive services that can cater for children of all abilities. To achieve this goal, it is important that GME supports and strengthens the potential of pupils of different abilities, including pupils

with developmental language impairments. According to the MacLulich (2013: 29) audit on additional support needs (ASN) in GMPE, language or speech disorders represented 18% of the ASN school population. However, to date there are no tools to assess GMPE pupils' abilities in Gaelic grammar, beyond the level of basic vocabulary, phonology or reading (Lyon & MacQuarrie, 2014; MacQuarrie & Lyon, 2019). This can have a long-term impact on whether GME and GMPE are perceived as inclusive and competitive educational choices for children with compromised language abilities and their families.

3 Why MAIN is important for Scottish Gaelic and GME

In the context of Gaelic and GME and given the lack of standardised assessments or comprehensive developmental studies on the language, the adaptation of MAIN (Gagarina et al., 2012, 2015, 2019) to this minority language was deemed fruitful and desirable for a number of reasons.

First, narratives have long been used as an ecologically valid assessment tool to gauge language development in children of different language backgrounds (monolingual, bi-/multilingual) and ability (typically development, language impaired) (Gagarina et al., 2015). Second, narratives offer a comprehensive overview of the child's ability both at the level of grammar, e.g. morphosyntax, syntactic complexity, lexical diversity, what is commonly referred to as *microstructure*, as well as at the higher level of discourse organisation and structure, more commonly named *macrostructure*.

In terms of MAIN specifically, there are various advantages for using this tool in the GME context over other existing narratives. First, the tool allows us to collect semi-naturalistic data in a consistent way from a school population sample that ranges across different ages and school years. Given the lack of (standardised) assessments for Gaelic that go beyond the phonological or lexical level, MAIN offers a naturalistic way of capturing language development more globally. Second, its rigorous design and method allow for a systematic and methodologically sound way of assessing both macrostructure and microstructure offering thus a comprehensive picture of the child's linguistic and communication skills. In addition to this, given the crosslinguistic nature of the COST Action within which it was developed (Armon-Lotem, de Jong, & Meir, 2015), the tool is available across both languages of the bilingual children, in this case English and Gaelic. This allows us to test narrative skills at the level of macro- and micro-structure across both languages of the bilingual individual and to capture developmental trends across both languages. Finally, given the potential for clinical diagnosis of narratives, MAIN constitutes a child-friendly and ecological way of gathering language data from vulnerable populations, such as children with DLD in a language, for which no such data currently exists.

All-in-all, MAIN has the potential of filling an important gap in our current knowledge about the development of Gaelic in GME. As such, it could inform researchers and educators regarding the development of Gaelic as well as the areas of Gaelic that are problematic for children with developmental language disorders.

4 Properties of Scottish Gaelic

Scottish Gaelic belongs to the Celtic family of the Indo-European languages. It is an inflectionally rich language with morphologically intricate verbal and nominal paradigms. Gaelic shares a number of morphosyntactic properties found in other Celtic languages, e.g. Welsh. Nouns mark a two-way gender system (masculine, feminine), and definite articles are marked for gender, number and case. Verbal paradigms carry both inflectional and suppletive morphology with distinctive inflections for all persons and numbers. Furthermore, tense formation is facilitated by the present of auxiliaries giving rise to both periphrastic and concatenating tense forms. Gaelic also has postnominal modification and feminine nouns give rise to consonant initial mutation, e.g. *gille beag* ‘lit. boy small’ for ‘small boy’, as opposed to *nighean bheag* ‘lit. girl small’ for ‘small girl’ with mutation on the feminine adjective. Gaelic has a VSO word order, which means that the inflected verb, be it an auxiliary or a lexical verb, is placed before the subject and the object. The richer inflection on nouns and verbs gives rise to inflectionally richer information at the level of microstructure compared to the English narratives, and this was reflected in the Gaelic adaptation of the MAIN. The inflectionally richer character of Gaelic compared to English has the potential of unravelling whether or not Gaelic-English bilingual children with DLD will make more such errors in Gaelic as opposed to English at the level of morphology, as well as whether word order differences, e.g. VSO in Gaelic vs. SVO in English, impact on the rate and trajectory of acquisition of the two languages within the same individual.

5 Adapting MAIN to Scottish Gaelic

The Gaelic version of MAIN was developed as part of a Bòrd na Gàidhlig - (Gaelic Language Board) funded project (2017-18) aiming at (i) capturing language development in Gaelic and English across different domains (vocabulary, morphosyntax, narratives) in children attending GMPE, and (ii) identifying areas of difficulty in Gaelic in children with DLD in this immersion education. MAIN was adapted into Gaelic from the English version following the very clear and detailed instructions and guidelines provided in Gagarina et al., 2012 and 2015, and by taking the specific properties of Gaelic into consideration. One of the main challenges with adapting MAIN to a minority language surrounded the lack of (standardised) terminology in Gaelic that would be directly comparable at the level of register or frequency of use to English. For example, even the word ‘narrative’ is not as commonly used in Gaelic as it is in English. In Gaelic, the words *sgeulachd* ‘story’ or *naidheachd* ‘news’ may be more comparable in terms of frequency of use. However, narratives are more than just news or a story, so finding an appropriate term was a challenge. In the end, we opted for the term *dòigh-aithris/modh-aithris* ‘method/way/form of reporting/telling.’ Making sure that appropriate and transparent terms were chosen in the instructions and scoring sheets posed similar challenges. Finding a way of phrasing more technical vocabulary in a way that could be easily understood was quite difficult and required discussions with speakers of the community to make sure that the adopted

terminology would not be opaque. For example, the phrase “Internal State Terms” (ISTs) cannot be straightforwardly translated to Gaelic in the way it works for English. Although, a way was found, it was actually easier to give a translation for the types of ISTs (e.g. perceptual, physiological, emotion, mental verbs etc.) than finding an overarching term. To ensure the clarity of the terminology used in the manual, the instructions and scoring sheets, various decisions were discussed with Gaelic-speaking scholars and practitioners and were also proofread by a professional Gaelic-speaking proofreader.

6 First phase of the project on supporting children in GME

MAIN was administered as part of a wider battery of COST Action IS0804 tasks developed for Gaelic within the context of a larger project entitled *Supporting children with typical development and Developmental Language Disorder in Gaelic-medium primary education*. This project was funded by Bòrd na Gàidhlig (project number: 1718/29), the Gaelic Language Board, whose role is to promote the learning and use of Gaelic in schools and the wider community across Scotland. The first phase of the project was conducted from September 2017 to August 2018 and aimed at investigating the language abilities in Gaelic and in English of primary school children with and without language impairment in GME. Testing took place between February and June 2018. At the time of testing, children aged between six and eight years of age attending Primary 2 and Primary 3 were chosen for the study to ensure that all children who participated in the study had a minimum of a year and a half of exposure to Gaelic. The tasks were piloted in four schools which offer GME. Three schools were stand-alone Gaelic schools, and one was a school where Gaelic Immersion is available alongside English education. Three schools were in urban settings and one in a rural setting. Permission was first sought to contact the schools via each Local Authority, then headteachers were contacted. Headteachers were provided with, and asked to distribute, parental permission forms to Primary 2 and Primary 3 classes prior to the researchers arriving in the school.

A total of 56 children participated in the study (mean age: 7;2, range: 62–98 months). To ascertain whether or not any of the children had suspected DLD, we used the Clinical Evaluation of Language Fundamentals screener (Semel & Wiig, 2017), which is one of the standardised tools used widely in the UK to identify children with language impairment. We also collected information about parental and teacher concerns on language development and familial history of language impairment. An extensive parental questionnaire (Tuller, 2015) was also used to gather information about children’s exposure to Gaelic and English. Using these tools, five children from the sample were suspected of having DLD. In terms of exposure to Gaelic, all children in the sample were exposed to English from birth, but their exposure to Gaelic varied. Twenty-four children were exposed to Gaelic before their third birthday, with the remaining children being exposed to Gaelic after that age, predominantly in a school setting, with large variation in age of onset and frequency of exposure to Gaelic outside the school setting.

Testing took place in a quiet area of the children's schools. All children completed a retell (Cat/Dog) and a telling task (Baby Birds/Baby Goats) in both Gaelic and English. Counterbalancing was ensured across languages. A minimum of a week was given in-between testing the different languages. The retell story scripts were recorded, and the recordings were added to PowerPoint files, along with the corresponding story-pictures, similarly to the English version. For the retelling tasks, the children were presented with the pre-prepared PowerPoint and they listened to the stories using headphones. They were then prompted to tell the researcher the story and the comprehension questions were asked. For the telling tasks, children were presented with three envelopes containing the same picture-based story and were asked to choose one. After looking at the pictures, they were prompted to tell the researcher the story. Once finished, the comprehension questions were asked. All stories were recorded using the Audacity audio software. Stories were later transcribed and scored. In each session, the language being tested (Gaelic/English) was used from the start of the experimental session. Overall, children engaged with the task well. Some of the younger children, however, opted to retell/tell the stories in English, despite being told the session was to be in Gaelic, the researcher speaking only Gaelic and the comprehension questions being delivered in Gaelic. This could possibly be due to their limited length of exposure to Gaelic when tested.

6.1 Analysis and preliminary results

At the time of writing this report, all Gaelic and English narratives had been transcribed following the MAIN protocol. The Gaelic narratives have also been scored, whereas the English narratives are in the process of being scored. To ensure the validity of transcription and scoring, a subset of the Gaelic and English data (approximately 10%) will also be checked by a Gaelic-English bilingual speaker.

Preliminary results from the narrative macrostructure in Gaelic for the typically developing children demonstrate a wide range of abilities, with children obtaining scores on the Total Story Structure (TSS) between 2 and 12 points (average: 8 out of 17 points overall). A wide range of abilities was also observed in the comprehension questions, although, overall, children had high accuracy on these (mean: 6.9, range: 1–9 out of 9 points in total) compared to the TTS. Responses to the comprehension questions were taken as correct even when children responded to them in English.

7 Conclusions and future directions

This short paper described the rationale for the adaptation of MAIN to Scottish Gaelic and presented some preliminary descriptive results on macrostructure from the first phase of testing of six- to eight-year-old children attending Primary 2 and Primary 3 in Gaelic-medium education. The adaptation of the tool to a minority language highlighted the challenges that come with the lack of standardisation or the difference in the context of use of certain minority language words, an issue not really encountered in English. Given that the majority of children

included in this report came from non-Gaelic-speaking homes, preliminary results showed a wide range of ability in Gaelic at the level of macrostructure. There are two next steps in this process. The first step involves analysing existing data further, including the microstructure properties, and understanding how child-level background variables (e.g. age and degree of exposure to Gaelic) influence narrative abilities in this language. The second step entails the comparison of the children with DLD to those with typical development to better understand how Gaelic-speaking children with DLD perform on this task and which aspects of the Gaelic adaptation may be challenging for this group. Since the project has also been given further funding by Bòrd na Gàidhlig to continue into a second phase in 2020-21, we are hopeful that, by collecting data from a larger school population that includes a wider age range of children with typical development and DLD in GMPE, we will be able to collate a more comprehensive picture of language development and language impairment in Gaelic-speaking children attending this type of immersion education in Scotland.

8 References

- Bòrd na Gàidhlig. (2019). *Data Foghlaim Ghàidhlig. Gaelic Education Data 2018-2019*. Retrieved from the Bòrd na Gàidhlig website on 25 June 2020. (<https://www.gaidhlig.scot/wp-content/uploads/2019/10/Dàta-Foghlaim-AM-FOLLAIS-2018-19-egn-3-PUBLIC-Education-Data-8.pdf>)
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children: Disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Lyon, F., & MacQuarrie, S. (2014). Assessment of reading skills in Gaelic-medium education: Exploring teachers' perceptions and present practice. *Educational & Child Psychology*, 31(2), 21–32.
- MacLulich, A. (2013). Audit on additional support needs in Gaelic-medium education and staff training needs analysis. Inverness.
- MacQuarrie, S., & Lyon, F. (2019). A consideration of the inequalities apparent in Gaelic medium education linked to appropriate language assessment: an outline of the field and potential future directions. *Educational Review*, 71(3), 350–361.
- O'Hanlon, F., Paterson, L., & McLeod, W. (2012). *Language Models in Gaelic Medium Pre-School, Primary and Secondary Education*. Edinburgh: The University of Edinburgh.
- Semel, E., & Wiig, E. H. (2017). *Clinical Evaluation for Language Fundamentals 5 (CELF-5)*. London: Pearson Assessment.
- Stephen, C., McPake, J., McLeod, W., Pollock, I., & Carroll, T. (2010). Review of Gaelic medium early education and childcare. Retrieved from <http://strathprints.strath.ac.uk/26270/1/0100403.pdf>

Tuller, L. (2015). Clinical use of parental questionnaires in multilingual contexts. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children: Disentangling bilingualism from language impairment* (pp. 301–330). Bristol: Multilingual Matters.

Towards a convivial tool for narrative assessment: Adapting MAIN to Gondi (Dantewada, India), Halbi and Hindi for Gondi- and Halbi-Hindi speaking bilinguals

Uma Maheshwari Chimirala

NALSAR University of Law, Hyderabad

This paper presents the adaptation of MAIN to Gondi (Dantewada), Halbi and Hindi for Gondi-Hindi and Halbi-Hindi bilinguals. The Gondi and Halbi communities and the context in which Gondi-Hindi and Halbi-Hindi bilingual children are growing up are described, and the adaptation process is outlined together with its theoretical underpinnings. Finally, results from a study of 54 Halbi-Hindi bilinguals from Grade 3 (Mean age = 8.5 years), Grade 5 (Mean age = 10.9 years) and Grade 7 (Mean age = 12.9 years) are presented. The results showed that, for the macrostructure of Grade 3 and Grade 5, L1 retelling was significantly better than L2 retelling, though this pattern was not found in Grade 7 where the performance was at the same level across languages for retelling. Narrative macrostructure was consistently higher in tellings than in the retellings regardless of languages and grades.

1 Introduction

The *Language Impairment Testing in Multilingual Settings-Multilingual Assessment Instrument for Narratives* (LITMUS-MAIN, henceforth MAIN; Gagarina et al., 2012, 2019) was initially developed for children aged 4 to 10 in order to differentiate and assess narrative production and comprehension trajectories of two distinct but overlapping groups of children: bilingual children and children with Developmental Language Disorder (DLD). In recent studies, MAIN has also been used with older children, adolescents and adults. Such expansions indicate the robustness of the tool across contexts, participants and research interests. Research on narratives acknowledges the complex nexus of variables that impact narrative production (and comprehension). Previous studies have investigated the impact of several variables such as age (Aldrich et al., 2011), exposure (Pearson, 2002), formal learning opportunities (Severing & Verhoeven, 2001; Schwartz & Shaul, 2013), language-specific communicational opportunities, language learning and language-based learning in school (Schwartz and Shaul, 2013) on monolingual and bilingual narration. Yet, not enough attention has been paid to the effects of language policy-planning and management initiatives which perpetuate the dominant

language (in L2; at the cost of L1) in the clinical and pedagogic spaces (Laakso, Sahimaa, Akermark, & Toivanen, 2016). Consequently, two primary concerns necessitate the adaptation of MAIN to Gondi and Halbi (two indigenous languages) and Hindi (the official language of India) spoken in the district of Dantewada in the State of Chhattisgarh, India (see Figure 1 below in Section 2). First, the specific context of the district of Dantewada operationalizes a residential education planning that aspires to early exposure to the L2 Hindi as the medium of instruction from Grade 1 onwards. The residential arrangement, where the child lives in the school except for during vacation and school-breaks, impacts the child's community engagement and familial interactions which means that child's home language development is not supported at school and through family interactions. It is possible that the child's L1 and L2 development may not be age appropriate. As a result, typically-developing bilingual children run the risk of being diagnosed with DLD. Second, while in the literature (e.g. Armon-Lotem, De Jong & Meir, 2015), there are intensive discussions on over-diagnoses and under-diagnosis of DLD in bilingual and atypically developing monolingual and bilingual children, there is little discussion or even awareness of DLD specifically with indigenous children. Exacerbating the situation is the general lack of culturally-appropriate and monolingually unbiased instruments (Mohanty & Perragaux, 1996) especially in the case of Gondi and Halbi children. This attempt to adapt MAIN to these languages begins to address these issues.

This paper is organized as follows. Section 2 introduces the Gond and the Halaba communities, speaking Gondi and Halbi, respectively. Section 3 describes the educational context of children belonging to these communities. Section 4 discusses the theoretical considerations that guided the work with the adaptations. Section 5 gives an overview of the adaptation process. Section 6 presents the results for macrostructure in narratives elicited in both language from Halbi-Hindi bilinguals. Finally, Section 7 contains the conclusions.

2 Knowing the two communities

Chhattisgarh, located in the central-east of India (see Figure 1) is known for its rich natural resources (coal, iron ore mines, rives, forest and fertile lands) as well as its ITM¹ population, culture and languages. As the meeting point of two big language families (Indo-Aryan and Dravidian), Chhattisgarh has a rich linguistic tradition with Hindi and Chhattisgarhi as the official languages of the State in addition to several tribal languages like Parji, Dorli, Dandami, Maria, Jhoria, Raj Gondi, and Dhurvi. In the district of Dantewada, which is to the south of the State (see Figure 1), Gondi (Dantewada) and Halbi are predominantly spoken.

¹ ITM stands for Indigenous, Tribal, Minority and Minoritized communities. In this study, we adopt the understanding of ITM as conceptualized by Tove Skutnabb-Kangas, Robert Phillipson and Robert Dunbar in their writings but specifically in the Nunavut Report (2019). The authors argue that naming, recognizing and perpetuating a community as ITM in itself involves violence and is a manifestation of power-wielding institutional structures of the supra-national organizations and nations. In this paper, we are working with the Gond (Dantewada) and Halaba tribes of Chhattisgarh, India.

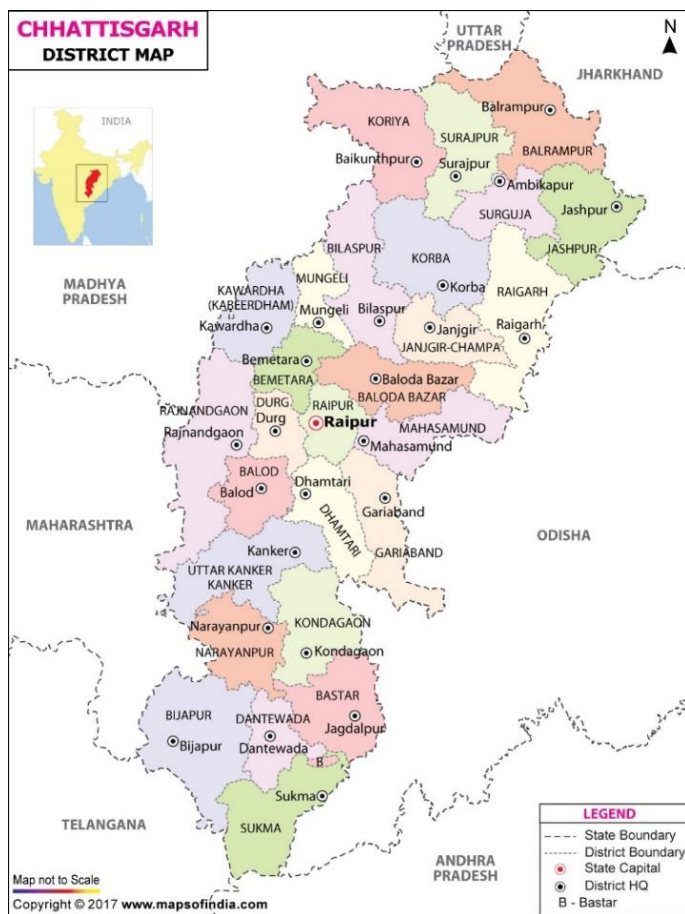


Figure 1. Map of the districts of the State Chhattisgarh including its location in India. ©2017, www.mapsofindia.com. Reprinted with permission.

2.1 The Gond Community

Though a precise history of the Gond tribe prior to 890 AD is elusive, several scholars make connections between the Gond and their mentions in texts as old as the Rig Veda (Guruge, 1991). Anthropological, sociological and historical documentation traces Gond tribes back to pre-Mughal periods, i.e. 1300 AD, when large stretches of Central India were ruled by the Gonds, the Gondwana territory, according to historian Deogaonkar (2007). Gonds reside in Central India, across the states of Madhya Pradesh, Gujarat, Telangana, Maharashtra, Chhattisgarh and Andhra Pradesh, West Bengal, Odisha, Jharkhand, Uttaranchal and Bihar amounting to 11,333,469 in population (Census 2011; though chiefly in the first six state), forming 13.6% of the total scheduled tribes population of India. This also explains the occurrence of several dialects of Gondi (six according to Ethnologue). Census (2011) documents about 2,233,649 speakers of Gondi of which 65.31% are bilingual and 7.6% are trilingual. Given that the Gonds live in different States and are the subjects of the States’ ideological policies, many of them are in a process of language shift (Guha & Gadgil, 1997), a fact that cannot be missed if one compares the number of Gonds with the number of Gondi speakers.

2.2 The Halaba Community

The Halaba tribe lives in one of the most linguistically and ethnically diverse junctions in India where the two largest language families of India, the Indo-Aryan and the Dravidian, meet in the district of Bastar. In this district, 53% of the population speaks Halbi (Natarajan, 2001). The Halabas take pride in their history as soldiers and bodyguards to the Bastar Kings (from about 13th century AD) as documented by the historian Shukla (1982: 79). They enjoyed special land rights and thus a reasonable dominance in the area amongst other tribes. However, contemporary Halaba, like the other indigenous communities in the area, are grappling with a rapid language shift (Mohanty, 2018). Census (2011) documents 766,706 speakers of Halbi across four states with the largest being in Chhattisgarh. As a tribe, the Halaba are spread across different districts of Chhattisgarh such as Bastar, Dantewada and Bijapur and thus has dialectical variations. Within the State of Chhattisgarh, the Halbi language is claimed to be largely intelligible across the districts of Dantewada and its neighbouring district, Bastar.

3 The educational context of ITM children in Dantewada

Exclusive residential schools for the ITM children are called *Potacabin* schools.² Children from the ITM communities are admitted into Grade 1 of these fully-residential schools when they are as young as 5–6 years old and visit their families during school-breaks and vacations. Hindi is the medium of instruction in these schools and the curriculum prioritizes literacy development in Hindi for which the L1 is seen as a ‘gloss’ (John, 2017). Within this educational space, the State has adopted the following initiatives which aim to ensure the child’s comfort by promoting the ITM languages (John, 2017):

- 1) Multilingual textbooks for Grades 3–5 with lessons in Hindi, Gondi, and Sanskrit (with glossaries in Halbi, Chhattisgarhi, Surgujia, Kudukh, Gondi of Kanker district and Gondi of Dantewada district); most of the units are in Hindi,³ as are concept-based subjects like math.
- 2) Provisions of two teachers, a Hindi and an ITM speaker, for Grades 1 and 2 (not mandatory).
- 3) The appointment of hostel/dormitory caretakers who speak the ITM languages.

The above listed initiatives, while progressive, may not necessarily translate to linguistic advantages or enhance the participative and communicative comfort within the classroom spaces for the ITM child (Rubio-Marin, 2007). A close examination of the structuring and functioning of ITM schools shows that several key theoretical principles can be found in these educational spaces. The *principle of separation (but equal)* formulated within discourses of affirmative action, legitimizes the establishment of special residential schools for ITM children.

² For a more detailed description, the reader is referred to this document on the NITI AYOOGs website: <https://niti.gov.in/writereaddata/files/bestpractices/Porta%20Cabins%20Residential%20schools%20for%20children%20in%20LWE-affected%20areas%20of%20Chhattisgarh.pdf>.

³ For e.g. Grade 4, the textbook has 16 units in Hindi, 2 in Gondi (Dantewada), 1 in Sanskrit and 1 in English.

This implies that opportunities for home language (HL) development and the period for parent-child bonding are drastically reduced triggering serious consequences for cultural awareness, and home language development (Skutnabb-Kangas, 2020; Cummins, 2017). The development of context-reduced and cognitively-demanding language proficiency which is pivotal for academic literacy could be affected (Francis, 2000; Cummins, 2011; Chimirala, 2017). Principle of *monolingualism* as Clyne (2008) explains, recognizes, represents and places one language as *the* language of socio-economic mobility, e.g. Hindi. The *principle of language parity* which provides for the right to communicative comprehension for the ITM child (point 3 above) is not obligatorily implemented. Such educational context restricts HL-exposure and impedes/delays HL development (Cummins, 2017), restricts the availability of HL as a scaffold during cognitively-demanding and context-reduced tasks (Setati et al., 2002) and thus a creates a possibility for conditions that lead to a higher likelihood of the child exhibiting characteristics similar to DLD (Fenemma-Bloom, 2010) since neither the HL nor the school language (SL) may be age-appropriate.

4 Some theoretical considerations that inform the adaptation (and the study)

4.1 Processing modes of the child

“For us [in the developing world], many languages are facts of existence, three languages a compromise, two languages are a tolerable restriction, one language is absurd.”
(Pattanayak, 1986: 143)

The quote above by Pattanayak (1986) succinctly captures the linguistic way of life in India which theoretically can be analysed in terms of Grosjean’s ‘Complementarity Principle’. Grosjean (1997: 175) defines the principle as: “bilinguals acquire and use their languages for different purpose, in different domains of life, with different people. Different aspects of life normally require different languages” and so he uses this logic to underscore the fact that bilinguals develop a level of fluency that is directly proportional to the need for that language and the domain-specificity of the need. This understanding of a bilingual’s language repertoire necessarily begs our engagement as researchers with literature pertaining to bilingualism since bilingual language repertoire involves varying degrees of interconnectedness, interrelationship and interdependence among the linguistic faculties, the general cognition and the mechanisms involving the interaction of the two (Francis, 2000: 196; Hall et al., 2006; Jessner, 2008).

According to Grosjean (1989: 6) “a bilingual *is not a sum* of two complete or incomplete monolinguals; rather, has a unique and a specific linguistic configuration that cannot be reduced to two monolingual systems” and who controls the *language mode* and hence activates those language systems that the communicative requirement demands. A mode as a “state of activation of the bilingual’s languages and language processing mechanisms” (Grosjean, 1998: 25) conceives of bilingual ability as adaptive and dynamic in response to new challenges posed by processing demands of tasks, interlocutors and so on. Building further on these ideas, Cook (2003: 10–13) proposes an *integration continuum* where three possibilities of how languages

could be psycho-linguistically related are hypothesized: *complete separation* of languages on one end, *partial overlap* of language systems in the middle and *complete integration*. Hall et al. (2006: 223) succinctly explains a bilingual's cognition as "a super-mental system containing components of each language system in addition to components that are not specific to either system", a constantly evolving, dynamic and fluid super-system that is 'activated' by the nature of the task and within the boundaries of which a possibility of 'transfer' across languages can be conceptualized. Hence the processing mode in which the child is as a task is being performed becomes a *mediating variable* and a *methodological challenge* (Diaz, 1985).

4.2 Exposure enables performative ability and conceptual knowledge

Exposure is often 'objectively' operationalized as a temporal variable that correlates with language competence, i.e. knowledge of lexical, syntactic aspects (Hammer, Lawrence & Miccio, 2008). I argue that in working with bilingual children from ITM communities, performative ability would be a more realistic estimate of the child's language capability than a documentation of 'competence' (Daller & Ongun, 2017). By performative ability, I refer to the extent to which exposure nurtures the child's ability to *control* intra-language domains (Squires et al., 2014; lexical and syntactical components of a language) to code one's communication. In the case of an ITM child, the child's relative performative ability is the outcome of exposure. Pertinent at this juncture is Cummins concept of threshold level of language ability that bilingual children *should* reach: the lower one, which is also chronologically the first one, should guard them from negative effect on their cognition, but the attainment of "a second, higher-level of bilingual competence might be necessary to lead to accelerated cognitive growth" (Cummins, 1979: 245), i.e. a positive effect and transfer for both the languages especially at the conceptual problem-solving level. Further, research finds that vocabulary knowledge is closely linked to exposure, bilingual cognition and intelligence (Hammer et al., 2008). However, studies that investigate vocabulary knowledge in bilinguals report a 'bilingual gap', i.e. a deficit in vocabulary knowledge is found in bilinguals when comparing their performance in one language with monolingual control groups (see Thordardottir, 2011). These comparisons that indicate a 'bilingual gap' do so without taking into account that a bilingual uses his/her languages for different domains and different purposes (Grosjean, 1998). For example, vocabulary pertaining to emotional words and conversational strategies for friendly conversations could be well developed in Gondi/Halbi, but not in Hindi. Similarly, cognitive verbs and discourse markers could be available in Hindi but not in Gondi/Halbi, since these are literacy-based discourse features (in line with the complementary principle; Grosjean, 1998). Consequently, bilinguals develop differential domain-specific vocabularies in the two languages. Pearson et al. (1993) propose the notion of total conceptual vocabulary (TCV), where vocabulary knowledge is counted regardless of the language in which it is expressed or understood. In short, as De Houwer, Bornstein and Putnick (2014) explain, instead of counting the words in each language, the child needs to be credited for knowing the concept. This understanding regarding bilingual vocabulary becomes important

while adapting MAIN and in evaluating their narratives, especially with respect to Internal State Terms (IST).

4.3 Bruner's landscape of indexical-actions and consciousness

Bruner (1986) pointed out that stories are positioned at the interface of two distinct landscapes: the landscape of the indexical-visual-actions and the landscape of consciousness (i.e. characters' inner worlds). A child needs to traverse the two and make a quantum leap in connecting the visible-action-sequence with the complex consciousness within the contours of the thematic specificities of the events and time-frames of the story in which the characters act (i.e. Theory on Mind). Therefore, availability of the mental language is an absolute requirement if the child is expected to not just comprehend, but also talk about the characters motivations or even speculate on what the character is trying to do. Therefore, according to Bruner, narratives tap into the cognitive-linguistic resource pools. As Hudson and Saphiro (1991) point out a strong interdependence between cognitive and linguistic discourse levels and that further is linked to the acquisition of an articulated mental language, which allows for reference to feelings, emotions, and thoughts.

The added complexity in academic settings of the potacabin schools is that the nature of exposure to the two languages is not identical and hence while receptive vocabulary/language might exist, expressive vocabulary might lag behind since vocabulary is dependent on input (Pearson, 2002; 1993), vocabulary development is proportional to the amount of exposure (Hammer, Lawrence, & Miccio, 2008) and the rate of development of receptive and expressive vocabulary varies with expressive vocabulary trailing behind receptive vocabulary and the development of both are bound to 'meaningful' input (Thordardottir, 2011). Therefore, the need for community engagement as well as the school's help in estimating the linguistic repertoire of the child was an absolute requirement for adapting MAIN, if MAIN was to document the child's communicative (performative) ability as sensitively as possible (Sarangi, 2017).

5 Adapting MAIN for use with the Gondi- and Halbi-Hindi speaking populations

Four specific concerns guided the adaptation and translation of MAIN to the two ITM languages, Gondi and Halbi. The first being the need to ensure that MAIN would *leverage* (Michales, 2005) the ITM child's cultural, cognitive and linguistic resources without triggering negative affective responses. The second concern was whether MAIN was culturally-appropriate and valid for the Gondi and Halbi children. The third concern, which arised in the wake of the fact that practically no research exists with children attending the potacabins schools regarding their linguistic repertoires. Finally, the fourth concern was that the modifications/adaptations should not alter the episodic logic of the stories in MAIN. In order to culturally validate the MAIN story content, we sought the help of the community members of both the communities throughout the adaptation process. We requested the village headman

to help us in the adaptation process. We asked for the following community members to be a part of the team: a teacher, an *anganwadi* ‘early childhood and nutrition center’ employee and a parent who had experienced the potacabin system. Several rounds of Focus Group Discussions (FDG) were held with each community separately in order to develop a culturally-sensitive and linguistically representative version of MAIN. The processes of adapting MAIN to Gondi and Halbi are presented in Table 1 and 2. The process of adapting MAIN to Hindi for use with these populations is described separately in Section 4.3.

Table 1. Adaptation process: Gondi MAIN.

Focus Group Discussions (FGD)	FGD 1	FGD 2	FGD 3	FGD 4
	<p>Objective: To understand storytelling as a cultural practice. To compare the components of home story-telling with the macrostructural framework used in MAIN.⁴</p> <p>Purpose: To understand the structure, themes, animation, personification and intention behind storytelling as a cultural and home practice.</p> <p>To estimate similarities and differences between the components of the story structure.</p>	<p>Objective: To gauge the cultural appropriacy of the four MAIN stories.</p> <p>Purpose: To ensure that neither unknown/unfamiliar props nor actions in the MAIN picture-sequences restrict the child's storytelling or trigger silence or reticence or confusion in storytelling</p>	<p>Objective: To reevaluate the cultural-appropriacy of the four MAIN stories after necessary changes were made.</p> <p>To engage the community in estimating whether children in potacabins would possess the linguistic competence needed to narrate the stories.</p> <p>Purpose: To ensure that the linguistic tokens required for uttering the ideas are part of the community languaging.</p> <p>To discuss the script to use for writing the Gondi MAIN.⁵</p>	<p>Objective: To scrutinize the scoring sheets and be aware of possible concerns the community might raise.</p> <p>Purpose: To be aware of dialectical variation in and the occurrence of possible alternative constructions.</p>
Concerns indicated	NONE (because this phase was exploring the community practice of story-telling).	The human characters were 'foreign.' Sausage was unfamiliar; replacement with fish in the traditional way of carrying fish suggested.	More child-sensitive alternative constructions should be included.	Not sure if the expectations of macrostructural complexity would be found in children's performances. Alternate formulations owing to three aspects (discussed in 4.1)
Changes made	NONE.	Adapting the human characters by darkening the complexion and hair. Replacing sausage with fish.	NO changes made until after FGD 4 and piloting.	Adopted the Devnagari script for writing the Gondi MAIN. Alternatives included after piloting and main study.

⁴ The communities were requested to record any story telling occasion. We received 8 such recordings from the Gond community, 5 in Gondi and 3 in Halbi. Stories were narrated by grandparents and grandaunts. Intercommunity marriages are common and so multilingualism between Gondi and Halbi and Chattisgarhi is a normal languaging reality. All the macrostructural components were reflected in the stories. Additionally, stories mostly ended in a moral.

⁵ Gondi has its own script, the Gunjala Gondi script, which is not used in general. Thus, which script that should be used for writing the Gondi MAIN had to be discussed.

Table 2. Adaptation process: Halbi MAIN.

Focus Group Discussions (FGD)	FGD 1	FGD 2	FGD 3
	<p>Objective: To understand story and storytelling as a cultural practice and whether the macrostructure aspects are reflected in community story-telling.⁶</p> <p>Purpose: To ensure that neither unknown/unfamiliar props nor actions in the MAIN picture-series restrict the child's storytelling nor trigger silence or reticence or confusion in storytelling.</p>	<p>Objective: To evaluate if the MAIN modifications as recommended by the Gond community was culturally-appropriate for the Halbi child.</p> <p>To engage the community in estimating whether children in potacabins would possess the linguistic competence to narrate the stories.</p> <p>Purpose: To ensure that linguistic token required to utter the idea is a part of the community languaging.</p> <p>To discuss the script in which to write the Halbi MAIN.</p>	<p>Objective: To scrutinize the scoring sheets and be aware of possible concerns the community might raise.</p> <p>Purpose: To be aware of dialectical variations and occurrence of possible alternative constructions</p>
Concerns indicated	NONE (because this phase explored the community practice of story-telling).	Alternative constructions to be included so that children's utterances are not invalidated (and thus negatively scored).	Highlighted a 'visual-bias' in responses the scoring sheets. Apprehensions about whether macrostructural complexity (as designed in MAIN) would be evidenced in children' narratives. Alternate formulations owing to auditory stimulus (discussed in detail in 4.1)
Modifications made	NONE.	NO changes made until after pilot study.	Adopted the Devnagari script for writing the Halbi MAIN. Alternatives included after piloting and main study.

⁶ Like with the Gond community, the Halaba Community was asked to record any story-telling events in their homes. No recordings were handed in, but the community members mentioned that stories in Halbi were a part of children's everyday lives until they start attending the Potacabin schools.

5.1 Adaptations included

This section describes the changes that were made to the Halbi and Gondi MAIN-versions (compared to the original MAIN) as a result of the adaptation process (see Tables 1 and 2).

5.1.1 Changing sausages to fish

Figure 2 shows the difference between the original MAIN Dog story pictures and the adapted ones: the sausages were replaced with fish that were held in the way the community usually carries it. As shown in Figure 2, the human character was modified so that both hair and complexion were darkened (the same was done for the human character in the Cat story as well). These adaptations were carried out in agreement with the MAIN authors.



Figure 2. Picture 2, *Dog*: original MAIN stimuli (left) and adapted version for use with Gondi- and Halbi-speaking children (right). Copyright 2020 by ZAS Papers in Linguistics.

5.1.2 Concerns with alternative lexical items

The community members (and the native-speaker field assistants) highlighted possible alternative names for common lexical items based on three factors: the geographical location of the community, access to Hindi and the availability of intergenerational communication (in Gondi and Halbi) for the child. For example, a common word like ‘cat’ had three different geo-locational (dialect) representatives in Gondi: *bhilai* (/bhillai/), *poosaal* (/pu:sa:l/) and *verkood* (/verkod/). What word would the child use for ‘cat’ (in the Cat Story)? That would depend on who the child has grown up with (+/- Inter-generational communication), where the child grew up (geo-locational factor and the amount of Hindi exposure the child has had (+/- exposure to Hindi). If the child grew up with the grandparents, the chances of the child using *verkood* were extremely high. This was the term used by the older/elder generations. If the child grew up in the rural areas around Dantewada, chances of using *poosaal* were high. If the child was an urban dweller and exposed to Hindi, then given the rare cognate possibility between Hindi (/bili:/ ‘cat’) and Gondi, *bhilai* was likely to be used. Based on a combination of the three factors, one or more of the words could be used. Therefore, all three were included in the scoring sheet for the Cat story (although not in the story scripts).

In the case of Halbi, the ubiquitous language shift that the community has been experiencing was an added factor. For example, a common word like ‘good’ as in ‘feel good’

or even ‘good child’ had three different alternatives in Halbi: *nangath* (/nang^hat^h/), *niko* (/nik^ho/) and the Hindi loan word *achaa* (/aʃa/). If the child grew up with the grandparent generation living in Bastar (not Dantewada), then the chances of the child using *niko* were extremely high since this was the term the older ITM generation used. If the child grew up in the rural areas around Dantewada, *nangath* was frequently used in the input. If the child was an urban dweller and exposed to Hindi, *achaa* was likely to be frequently used.

5.1.3 Inclusion of auditory perceptions in the scoring sheets

The Halbi community members expressed the opinion that the correct responses in the scoring sheets were ‘visually’ biased and neglected ‘auditory’ responses. They explained that living in forest and wilderness necessitates survival traits which require more attention to sounds than to vision. They explained that the rustle of the leaves, the breaking of a twig, the falling of a fruit, the screech of a monkey, and similar signs take on an indexical relationship with a lurking danger or hunt. For question D3 in the Baby Birds story which asks why the child thinks that the baby birds are hungry, the community members pointed out that the child could respond by saying *caw caw gaggese* ‘crying/doing caw caw’, i.e. the baby birds are cawing, instead of saying that ‘the baby bird’s mouth/beak is open’. The community members pointed out that a possibility that the child will interpret the ‘open mouth’ not as a visual input but as an auditory stimulus should not be ruled out. This option was included in the options of correct responses in scoring sheets (and we did get this response from 3 of the children in our pilot study; we included this in the Gondi version too).

5.2 Validation of the scoring sheets and protocols in Gondi and Halbi

Our search for a trained *linguist* who had studied Gondi (as suggested in the guidelines by Gagarina et al., 2019) did not yield any result despite the fact that Gondi has been ‘documented’ and ‘dictionarised’ as a part of its project on Endangered Languages by Central Institute of Indian Languages (CIIL). For this reason, we worked together with a Gondi textbook writer from the State Education Board. The first round of evaluation was internal with the author, the translators and the Gondi textbook writer. In this round, the purpose was to check whether the translations were appropriate, whether alternative ways of representing the same semantic idea existed and to suggest such alternatives. The textbook writer suggested that we again cross-check with the ITM community on the contents of the protocols and scoring sheets, to revise the scoring sheets based on actual child’s response to the narratives after the pilot study and again after the main study. All three suggestions were implemented.

The Halbi scoring sheets and protocols were validated by a PhD student in a public university. He checked for content appropriacy across the stories and for possible syntactic and lexical errors as well. Additionally, three Halbi community participants were invited to check the linguistic appropriacy of the protocols, investigate the possibility of inclusion of alternative lexical items, evaluate the scoring sheets from the perspective of a child’s repertoire (the community participants were also parents). The one change they suggested was to include loan words from Hindi and to be sensitive to the context in which the child is growing up.

5.3 Adaptation of MAIN to Hindi

The work on adapting MAIN to Hindi for use with the two ITM-speaking school children populations was taken up twice. The first time, in May 2018, at the university, we (the author and 8 English-Hindi-L1¹ multilingual Masters student-interns) translated the English MAIN (Gagarina et al., 2012). Far from the reality of Dantewada potacabin school system and equipped with the realization that our work with the ITM community and field research assistants cannot be carried out with the English MAIN, the first Hindi adaptation was a translated version of the English version (in fact, it can be called a ‘Hindi replica’ of the English version). The need for the first translated version of MAIN Hindi was to start engaging our field research assistants (RAs) and the members of the two ITM communities (Gondi and Halbi).

The second time when we began to adapt MAIN to Hindi was after the community interactions (FGDs) and the validation (by experts and community) and the piloting of Gondi and the Halbi versions (with children) had been carried out. The purpose of the second round of translation of MAIN was to Hindi incorporated the modifications from the Halbi and Gondi versions and the revised MAIN (Gagarina et al., 2019). Additionally, this time round, we were conscious of the variations that exist in Hindi and Chhattisgarhi. Census India estimates Hindi to be spoken by about 41% of the Indian population as a mother tongue. A total of 43 dialects (languages) are classified as dialects of Hindi under the broad category of ‘Hindi-speaking-belt’ or Hindi continua. Chhattisgarhi, which is the official language of the State of Chhattisgarh, is included as a dialect of Hindi; therefore, the decision as to whether the ‘Chhattisgarhi’ variations had to be included in the scoring sheets had to be taken. We constructed a word list (with nouns, verbs, adjectives and IST) in Hindi and Chhattisgarhi and noticed differences like the following: goat in Hindi is ‘*bakari*’ /b^hakari/ (female: singular), but in Chhattisgarhi the word would be /b^hok^hari:/ (male: singular) and ‘*cheri*’ /t^ʃeri:/ (female: singular). We decided to consult teachers in schools and also the pilot data for any inclusions in the scoring sheets. We requested help from three primary school teachers who teach from Grade 1 to Grade 5 in different schools. The process of adapting MAIN to Hindi is presented in Table 3.

Table 3. Adaptation process: Hindi MAIN for use with Gondi- and Halbi-Hindi bilinguals.

		Teacher 1 response	Teacher 2 response	Teacher 3 response
Teacher validation of the MAIN version based on changes and inclusions suggested by the ITM communities	<p>Objective: To estimate whether children in the potacabin schools would possess the linguistic <i>competence</i> to narrate the stories in Hindi.</p> <p>Purpose: to ensure the linguistic tokens</p>	<p>No comments made.</p> <p>Found the text simple.</p>	<p>No comments made.</p> <p>Found the text simple.</p>	<p>Expressed concern regarding internal state terms (IST), especially the emotional and cognitive categories.</p> <p>She highlighted that the child may be aware of the intentions and</p>

¹ The interns’ L1s were Telugu, Malayalam, Hindi, Bangla and Urdu.

	required to utter the ideas are part of the child's language environment.			mental states, but that words in Hindi may not be available, especially for cognitive verbs like 'observe, stare, plan, notice', etc.
Cross-checking	Two RAs listed all the content words (nouns, verbs, adjectives and adverbs) from language books used in Grades 1–3. Two RAs engaged in classroom observations of children in Grade 2 on how the story 'the lion and the rat' was taught. The teachers' interactions with the children contained words like think, plan, and notice and so on.			
Action taken	Retain the category of words as such on the scoring sheets and proceed with the piloting. Following the pilot study, no Chhattisgarhi words were included in the scoring sheets.			

5.4 Adapting the background questionnaire to Gondi and Halbi

In order to be able to use the MAIN background questionnaire to gather information about the backgrounds of the children from these populations, a number of changes were made to the questionnaire. Question 4 asking about to the child's country of birth was changed to 'State', to collect information about which of the 29 Indian states the child was born in. Question 22 was found problematic as it to presume that the child lives in an urban setting, has access to technology (e.g. TV) and lives with literate parents. So, instead of modifying the question, we included the option of 'family and community participation' in the form of two different items: 1) participating in cultural activities at home and school and 2) whether the child was taking care of a younger sibling/cousin/another child at school or at home. Both these items were meant to help gain an estimate of the extent of home language (L1) use, at least for basic interpersonal communication purposes. We also added the option of 'radio' to item 3 of question 22 in addition to TV and computer games. We were aware that language activist groups in this district air radio programmes in Gondi and Halbi and it was possible that the child had access to a radio. Therefore, it is possible that the child had access to a radio. We also added an addition question (Question 23) to supplement the exposure component as 'language use' in Gondi/Halbi, as shown in Table 4. This question could be administered verbally by native-speaking RAs in consultation with the child.

Table 4. Question 23 in the Gondi and Halbi background questionnaires.

S. No	Descriptors	Exposure
1	less than 15 minutes of conversation with peers in Gondi/Halbi.	0%
2	30 minutes of: conversation, play with peers and hostel caretakers in Gondi/Halbi.	5%
3	60 minutes of conversation, play with peers, discussion with peers and juniors along with hostel caretakers in Gondi/Halbi.	10%
4	90 minutes of conversation, discussion with peers and juniors along with hostel caretakers + explaining math or some difficult concept to a peer in Gondi/Halbi in hostel spaces.	20%
5	90 minutes of conversation, discussion with peers and juniors along with hostel caretakers + explaining math or some difficult concept to a peer in Gondi/Halbi in hostel spaces and CLASSROOM space.	25%

6 The Halbi-Hindi Study

6.1 Method

6.1.1 Participants and Recruitment

Access to children in Grades 1 and 2 was denied citing security, shyness/reticence and age as reasons in all the five potacabin schools in Dantewada that we approached for the study. However, the school authorities allowed us access to children in Grades 3, 5 and 7 for the study. In this paper, we report on data collected from two schools. All children in grades 3, 5 and 7 were invited to an introduction which was in Halbi/Gondi. We adopted a two-part recruitment procedure. The first part of the criteria was physiological: no hearing loss or speech issues, living in the potacabin school since Grade 1, and the ability to speak both Halbi/Gondi and Hindi. The second part of the criteria was based on results from a three-component screening test to identify language dominance and whether a *threshold bilingual ability* was available, i.e. whether performative ability on cognitively demanding tasks in SL and HL was sufficiently developed to process and perform in that language. The tests assessed picture comprehension (component 1), vocabulary (receptive, productive and analogy, component 2) and mathematical word problems (component 3).² The mathematics component was added to identify the language dominance and whether a threshold bilingual ability was available.

Instructions for administrating MAIN guided the administration of the three-component test. Hindi-speaking RAs conducted the tests individually with each child on a computer. For all three components, the failed items were re-administered by a Halbi-Speaking RA and any correct responses were added to the score (Pearson et al., 1993; Muñoz-Sandoval, Cummins, Alvarado, & Ruef, 1998; see also Section 4.3). Time was set at 60 minutes for Grade 5 and Grade 7 but no time-limit was set for Grade 3 (to avoid test anxiety). Availability of a threshold bilingual ability and processing modes was based on component 3. Children, who scored lesser than one standard deviation lower than the mean score on any of the three components were not included in the study. The three age groups differed in their ‘performative’ language dominance, as shown in Table 5. Table 5 also gives an overview of the children’s scores on the three components, by grade.

Table 5. Mean (SD) on the recruitment test for Language Dominance and TBA.

Grades	N	Component 1: picture comprehension Mean (SD)	Component 2: Vocabulary Mean (SD)	Component 3: Mathematics Mean (SD)	Language Dominance	TBA
Grade 3	18	7.2 (1.6)	18.1 (3.2)	5.1 (1.3)	Halbi	No
Grade 5	18	7.8 (1.3)	20.2 (3.2)	5.6 (1.2)	Halbi-Hindi	Evolving
Grade 7	18	7.6 (.8)	24.4 (2.6)	5.5 (1.5)	Hindi	Yes

Note. TBA = threshold bilingual ability.

² The mathematical word problems were adopted from the National Achievement Survey, India, 2017 and 2018.

Grade 3: 18 children in Grade 3 were included. All of them responded to the math and pictorial analogies in Halbi indicating *performative dominance in Halbi* on cognitively demanding tasks and showing an absence of available threshold bilingual ability, i.e. the performative ability on cognitively demanding tasks in L2 Hindi is not sufficiently developed to process and perform in that language.

Grade 5: 18 children in Grade 5 were included. 13 out of 18 children successfully completed a portion of the math in Halbi, which indicates that in Grade 5, performative dominance is available in L2 Hindi for visually and contextually-supported components while for the operationally demanding components such as in math performative dominance is in L1 Halbi. Therefore, an evolving threshold bilingual ability is noticed.

Grade 7: 18 children were included from Grade 7. Only 2 (out of 18 and on 3 problems) attempted the math task in L1 Halbi, thus indicating a performative dominance on cognitively demanding tasks for a majority in L2 Hindi and a possibly readily available threshold bilingual ability in place.

6.1.2 Procedure

All 54 children narrated one story each in both the *telling* and the *retelling* mode in L1 Halbi and L2 Hindi, i.e. a total of 4 stories were elicited from each child. The order of eliciting narratives was counter-balanced for languages and stories. Native speaking RAs elicited the narratives with an interval of 25 days between the two languages. All narratives were audio recorded and transcribed by RAs who were meticulously trained to transcribe. Each audio file underwent two stages of cross-checking before being transcribed: whether the entire session was recorded and whether any white noise distorted the quality of the recording. In the latter case, the audio file was transcribed with the help of a native-speaker teacher (who also helped in adapting and translating MAIN to Halbi). Once transcribed, each of the transcripts was cross-checked word-to-word with the audio file by a different RA before the transcript was scored. The transcribed narratives were first marked for the story elements i.e. setting, time and three episodes, after which the goal, action, outcome and internal states terms for each episode were identified and scored. Every scored transcript was then checked by another RA and disagreements were resolved through discussion. The Cohen's k between the raters for Halbi and Hindi were .94 and .91, respectively. Additionally, 15% of the Hindi transcripts were rescored by the author.

6.1.3 Measures investigated

The narratives were coded for two measures of narrative macrostructure: Story Structure (SS) and Structural Complexity (SC).

Story Structure: The narratives were scored for story structure following the MAIN scoring protocol, where the 3 episodes are scored for 5 components each (15 points) along with the setting and time scores (2 points) which gives a maximum of 17 points for the story structure score.

Structural Complexity: We coded each episode of the narratives for structural complexity as follows: AO (1 point), G or GA/GO (2 points) and complete episodes of GAO

(3 points). Hence, the maximum score is 9 points, which is given if the child produces a GAO-sequence in all three episodes.

6.2 Results

Table 6 shows the means and standard deviations for the story structure score (SS) and story complexity (SC) by grade, elicitation mode (retelling, telling) and language (8Habli, Hindi). A repeated-measures ANOVA was first performed for each grade separately, followed by an ANOVA which compared the bilinguals' narratives between three Grades (Grade 3, Grade 5 and Grade 7), while taking language and elicitation mode into account.

Table 6. Mean (Standard Deviation) for story structure (SS) and story complexity (SC) in the L1 Halbi and L2 Hindi narratives of Halbi-Hindi bilingual children, by grade and elicitation mode (retelling, telling).

	Grade 3 (2 years Hindi exposure; Halbi dominant), N=18				Grade 5 (4 years Hindi exposure; evolving threshold bilingual ability), N=18				Grade 7 (6 years Hindi exposure; Hindi dominant), N=18			
	Retelling		Telling		Retelling		Telling		Retelling		Telling	
	Halbi	Hindi	Halbi	Hindi	Halbi	Hindi	Halbi	Hindi	Halbi	Hindi	Halbi	Hindi
SS	9.00 (2.16)	7.60 (2.67)	10.23 (1.78)	8.93 (2.51)	8.60 (2.17)	7.68 (1.97)	10.50 (1.7)	9.45 (1.95)	8.13 (1.20)	8.72 (1.72)	9.08 (2.10)	9.94 (2.60)
SC	4.52 (.92)	3.75 (.75)	5.72 (.93)	4.56 (1.05)	4.39 (.97)	3.72 (1.05)	5.75 (.57)	4.14 (1.13)	4.44 (.85)	3.97 (.82)	5.31 (.58)	6.40 (1.40)

For *SS in Grade 3*, a significant main effect of mode ($F(1, 68) = 10.34, p < .001$) and a significant language effect of ($F(1, 68) = 26.23, p < .001$) was found. A significant language x mode interaction was found ($F(2, 136) = 9.03, p = .03$). Post-hoc test showed that L1 retelling was significantly higher than L2 retelling ($F(1, 34) = 11.78, p = .0023$), L1 telling was significantly higher than L1 retelling ($F(1, 34) = 9.42, p < .001$), L1 telling was significantly higher than L2 telling ($F(1, 34) = 5.86, p = .03$) and L2 telling was significantly higher than L2 retelling ($F(1, 34) = 8.23, p < .001$).

For *SC in Grade 3*, a significant effect for language was found ($F(1, 68) = 13.89, p < .001$) and a significant effect of mode was found ($F(1, 68) = 11.31, p = .021$). A significant language x mode interaction was found ($F(2, 136) = 4.60, p < .01$). Post-hoc comparisons showed that L1 telling was significantly higher than L2 telling ($F(1, 34) = 3.94, p < .001$); L1 retelling was significantly higher than L2 retelling ($F(1, 34) = 15.22, p = .02$). L1 telling was significantly higher than L1 retelling ($F(1, 34) = 5.106, p = .0242$).

For *SS in Grade 5*, a significant mode effect was observed ($F(1, 68) = 10.64, p < .002$) and a significant language effect was also found ($F(1, 68) = 26.23, p < .000$). A significant language x mode interaction effect was found ($F(2, 136) = 12.69, p < .031$). Post-hoc comparisons showed that L1 telling was significantly higher than L2 telling ($F(1, 34) = 4.68, p < .001$). Additionally, L1 telling was significantly higher than L1 retelling ($F(1, 34) = 13.38, p < .000$) and L2 telling was significantly higher than L2 retelling ($F(1, 34) = 4.68, p < .001$).

For *SC in Grade 5*, the effect of mode was not significant ($F(1, 68) = 2.06, p = .156$), but a significant language effect was found ($F(1, 68) = 13.89, p < .02$), with higher scores in L1 Halbi. The language x mode interaction effect was not significant.

For *SS in Grade 7*, there was a significant mode effect of ($F(1, 68) = 10.64, p = .002$), with higher scores in telling, and a significant language effect ($F(1, 68) = 26.28, p < .000$), with higher scores in L2 Hindi. The language x mode interaction was not significant.

For *SC in Grade 7*, the mode effect was not significant ($F(1, 68) = 2.06, p = .154$), but the effect of language was significant language ($F(1, 68) = 13.89, p = .014$), with higher scores in L2 Hindi. A significant language x mode effect was not observed.

Finally, the ANOVAs with Grade as between-subjects factor and Language and Mode as within-subjects factors showed a significant overall language effect both for SS ($F(1, 204) = 6.87, p = .009$) and for SC ($F(1, 204) = 4.781, p = .03$), with significantly higher scores in L1 Halbi. The effect of mode was significant for SS ($F(1, 204) = 8.08, p = .005$), with higher scores in telling, but not for SC. There was a significant effect of Grade both for SS ($F(2, 204) = 32.315, p < .001$) and for SC ($F(2, 204) = 14.458, p < .000$). Post-hoc analyses for Grade showed that there was a significant difference between all three grades for both SS and SC. For SS, a significant difference was found between grade 3 and grade 5 ($-1.35, p < .001$), between Grade 3 and Grade 7 ($-2.49, p = .002$) and between Grade 5 and Grade 7 ($-1.15, p < .01$). On SC, Grade 5 performed significantly higher than Grade 3 ($0.51, p = .031$), Grade 7 performed significantly better than Grade 3 ($0.90, p < .006$), and Grade 7 performed significantly better than Grade 5 ($-0.31, p = .036$). No significant interaction effect of grade x language x mode was found.

6.3 Discussion

Previous studies using MAIN have reported that performance on narrative macrostructural aspects (i.e. story structure and story complexity) consistently increased with age (Bohnacker (2016), that performance on *retelling* was invariant across languages and across ages (Kunnari et al. 2016), and that performance on *retelling* was significantly better than *telling* (Otwinowska et al., 2018; Kunnari et al., 2016). Our study supports the first finding that narrative performance increases with age. Additionally, our study finds different patterns of narrative performance on SS and SC between the grades. In Grade 3 and Grade 5, the children generally performed higher in L1 Halbi; however, in Grade 7, scores were significantly higher in L2 Hindi for both telling and retelling. This is likely because by this age, performative ability in L2 Hindi may be more enabled than in L1 Halbi (given the educational and residential context of the potacabin schools). Across the three grades and regardless of language significantly higher performance was found for telling compared to retelling. What can explain our findings?

One plausible explanation is that language dominance, i.e. performative ability on a task in a particular language and availability of a threshold level bilingual ability, could be significant mediating variables in bilingual narratives. Narrative performances, as Bruner (1986) explains, require a synergistic blend of two distinct landscapes, the landscape of the visual-indexical-actions and the landscape of the consciousness, implying that availability of the required language is a necessary condition for performance. It is possible that, in Grades 3

and 5, the necessary language skills are available in L1 but not in L2, which explains why a higher level of episodic complexity was found for both retelling and telling in L1 compared to L2 in these groups (e.g. Severing & Verhoeven, 2001 on Papiamento and Dutch languages). This pattern is different for the children in Grade 7, where performance in L2 is higher.

A second explanation, which is in tandem with the first one, is that a bilinguals' language performance on a task is contingent upon an interaction between (and among) learner-specific variables (such as bilingual proficiency, task familiarity and so on), and task-specific and elicitation-specific variables (such as task-inherent complexities, interlocutor and conditions of task elicitation). The results of this study can be interpreted as support for the claim that narrative macrostructure, and especially story complexity, which is closely linked to the cognitive maturation of an individual, is not completely independent of language capability. This seems to be the case to an even higher degree when the task is more cognitively complex as in *telling* which involves construction of causal and intentional elements as opposed to *retelling* which involves a reconstruction of the model story and so demands memory resources. In conclusion, the patterns reported here necessitates the need to examine the interaction between task-internal characteristics, task modes, language demands and the child's performative ability (Gutierrez-Clellen, 2002; Simon-Cereijido & Gutierrez-Clellen, 2009).

7 Conclusion

This paper has described the process of translating and adapting MAIN from English, a language that enjoys the highest *vehicular power* globally, to Hindi, a language that is constitutionally designated as the official language of India, and Halbi and Gondi (Dantewada), two languages that have relatively low ethnolinguistic vitality. In working with such minority/indigenous languages, this paper suggests that the following aspects be attended to while adapting and translating MAIN: know your 'sample/children' beyond the 'knowable-demographic-clinical' aspects by knowing the community to which the child belongs, factor in the nature of parenting and languaging the child is socialized into and constantly engages in, engage the community and other primary stakeholders involved, be conscious (and cautious) to whether the translations and adaptations have alternative linguistic constructions, and finally, be aware of how the assessment procedure could impact the child (and the community as well). For me as the researcher, the processes of interacting with ITM Community members, the teachers in the schools, the field researchers and the children has been a journey of revelation of my implicit social biases and of how the intricate and inextricable relationship between the social factors impacts (one can even say manipulates) the child's linguistic environment and the development of the child's language repertoire as a whole (Spolsky, 2019; and not just in task performance).

We have also reported the results from the first study of study Halbi-Hindi children who attend potacabin schools. While our data corroborates the general finding that macrostructure (story structure and structural complexity of the episodic events) increase with age, our data does not support two other findings: that macrostructure is 'invariant' across languages within

an age group and that narrative performance is better on retelling. This study highlights the need for a finetuned analysis of the interaction between task-specific characteristics of the story prompt, the modality of narration (retelling/telling) and bilingual language profiles. The study highlights the need for more carefully-designed studies with the Halbi-Hindi speaking population in potacabin schools specifically and indigenous/minority contexts in general.

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9 References

- Aldrich, N. J., Tenenbaum, H. R., Brooks, P. J., Harrison, K. & Sines, J. (2011). Perspective taking in children's narratives about jealousy. *British Journal of Developmental Psychology*, 29, 86–109.
- Armon-Lotem, S., De Jong, J., & Meir, N. (Eds.) (2015). *Assessing Multilingual Children: Disentangling Bilingualism from Language Impairment*. Bristol, UK: Multilingual Matters.
- Bohnacker, U. (2016). Tell me a story in English or Swedish: Narrative production and comprehension in bilingual preschoolers and first graders. *Applied Psycholinguistics*, 37(1), 19–48.
- Bruner, J. (1986). *Actual minds: Possible worlds*. Cambridge, MA: Harvard University Press.
- Chimirala, U. M. (2017). Teacher's 'other' language preference: A study of Monolingual mindset in the classroom space. In H. Coleman (Ed.) *Multilingualisms and Development* (pp. 236–248). New Delhi: British Council.
- Clyne, M. (2008). The monolingual mindset as an impediment to the development of plurilingual potential. *Sociolinguistic Studies*, 2(3), 347–366.
- Cook, V. (2003). *Effect of the Second Language on the First*. Clevedon: Multilingual Matters.
- Cummins, J. (1979). Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research*, 49, 222–251.

- Cummins, J. (2011). Literacy engagement: Fueling academic growth for language learners. *The Reading Teacher*, 65(2), 142–146.
- Cummins, J. (2017). BICS and CALP: Empirical and Theoretical Status of the Distinction. In: B. Street & S. May (Eds.), *Literacies and Language Education. Encyclopedia of Language and Education* (3rd ed.). Springer, Cham.
- Daller, M. & Ongun, Z. (2017). The Threshold Hypothesis revisited: Bilingual lexical knowledge and nonverbal IQ development. *International journal of bilingualism*, 19(2), 1–20.
- De Houwer, A., Bornstein, M., & Putnick, D. (2014). A bilingual–monolingual comparison of young children’s vocabulary size: Evidence from comprehension and production. *Applied Psycholinguistics*, 35, 1189–1211.
- Deogaonkar, S.G. (2007). *The Gonds of Vidarbha*. New Delhi: Concept Publishing House.
- Diaz, R. (1985). Bilingual cognitive development: Addressing three gaps in current research. *Child Development*, 56, 1376–1388.
- Francis, N. (2000). The Shared Conceptual System and Language Processing in bilingual Children: Findings from Literacy Assessment in Spanish and Nahuatl. *Applied Linguistics*, 21(2), 170–204.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U. & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56, 1–140.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63, 1–36.
- Grosjean, F. (1989). Neurolinguists, beware! The bilingual is not two monolinguals in one person. *Brain and Language* 36(1), 3-15.
- Grosjean, F. (1997). The bilingual individual. *Interpreting*, 2(1/2), 163–187.
- Grosjean, F. (1998). Transfer and language mode. *Bilingualism: Language and Cognition*, 1(3), 175–176.
- Gutierrez-Clellen, V.F. (2002). Narratives in two languages: Assessing performance of bilingual children. *Linguistics and Education*, 13(2), 175–197.
- Guruge, A. W. P. (1991). *The Society of the Ramayana*. Abhinav Publications, India.
- Hall, J. K., Cheung, A & Carlsson, M. T. (2006). Conceptualizing Multicompetence as a Theory of Language. *Applied Linguistics*, 27(2), 220–240.
- Hammer, C., Lawrence, F., & Miccio, A. (2008). Exposure to English before and after entry into Head Start: Bilingual children’s receptive language growth in Spanish and English. *The International Journal of Bilingual Education and Bilingualism*, 11, 30–56.
- Hudson, J. A., & Shapiro, L. R. (1991). Children’s scripts, stories and personal narratives. In A. McCabe, & C. Peterson (Eds.), *Developing narrative structure* (pp. 89–136). Hillsdale, NJ: Erlbaum.
- Jessner, U. (2008). A DST-model of multilingualism and the role of metalinguistic awareness. Second language development as a dynamic process. *Modern Language Journal*, 92(2), 270–283.
- John, S. (2017). Unleashing potential in multilingual classrooms: The case of Bastar in Chhattisgarh State, India. In H. Coleman (Ed.), *Multilingualisms and Development* (pp. 181–189). New Delhi: British Council.
- Kunnari, S., Välimaa, T., & Laukkanen-Nevala, P. (2016). Macrostructure in the narratives of monolingual Finnish and bilingual Finnish-Swedish children. *Applied Psycholinguistics*, 37(1), 123–144.

- Laakso, J., Sarhimaa, A., Spiliopoulou Å. S., & Toivanen, R. J. (2016). *Towards openly multilingual policies and practices: Assessing minority language maintenance across Europe*. Bristol: Multilingual matters.
- Maviş, İ., Müge, T., & Gagarina, N. (2016). Macrostructure Components in Narrations of Turkish–German Bilingual Children. *Applied Psycholinguistics*, 37(1), 69–89.
- Mohanty, A. K. (2018). *The Multilingual Reality Living with Languages*. Multilingual Matters, Bristol.
- Mohanty, A.K. & Perragaux, C. (1996). Language Acquisition and Bilingualism. In J.W. Berry, P.D. Dasen & T.S. Saraswathi (Eds.), *Handbook of Cross-cultural Psychology: Basic Processes and Human Development* (pp. 217–253). Needham Heights, MA: Allyn & Bacon.
- Muñoz-Sandoval, A. F., Cummins, J., Alvarado, C. G., & Ruef, M. L. (1998). *Bilingual Verbal Ability Tests, Comprehensive Manual*. Itasca, IL: Riverside Publishing.
- Natarajan, G. V. (2001). What Happens in a Linguistic Junction: *Masala Chai* of Multi-Ethnicity and Communication in Bastar? *Languages in India*, 1(3).
- Otwinowska, A., Mieszkowska, K., Białecka-Pikul, M., Opacki, M., & Haman, E. (2018). Retelling a model story improves the narratives of Polish-English bilingual children. *International Journal of Bilingual Education and Bilingualism*, 1–25.
- Pattanayak, D.P. (1986). *Study of Languages - A Report*. New Delhi: NCERT.
- Pearson, B. Z. (2002). Narrative Competence among Monolingual and Bilingual School Children in Miami. In D. K. Oller & R. E. Eilers (Eds.), *Language and Literacy in Bilingual Children* (pp. 135–174). Clevedon: Multilingual Matters.
- Pearson, B., Fernandez, S., & Oller, K. (1993). Lexical development in bilingual infants and toddlers: Comparison to monolingual norms. *Language Learning*, 43, 93–120.
- Rubio-Marin, R. (2007). Language Rights: Exploring the Competing Rights. In Will Kymlicka and Alan Patten (Ed) *Language Rights and Political Theory* (pp. 289–322). Oxford: Oxford University Press.
- Sarangi, S. K. (2017). Mind the gap: ‘Communicative vulnerability’ and the mediation of linguistic/cultural diversity in healthcare settings. In H. Coleman (Ed.) *Multilingualisms and Development*. London: British Council Publications.
- Schwartz, M., & Shaul, Y. (2013). Narrative development among language-minority children: the role of bilingual versus monolingual preschool education. *Language, Culture and Curriculum*, 26(1), 36–51.
- Setati, M., Adler, J, Reed, Y & Bapoo, A. (2002). Incomplete journeys: Code-switching and other language practices in mathematics, science and English language classrooms in South Africa. *Language and Education*, 16(2), 128–149.
- Severing, R., & Verhoveen, L. (2001). Bilingual narrative development in Papiamentu and Dutch. In L. Verhoeven. & S. Strömquist (Eds.), *Narrative Development in a Multilingual Context* (pp. 255–276). Amsterdam: John Benjamins.
- Shukla, H. L. (1992). *The History of the people of Bastar: A study of tribal insurgency*. Delhi: Sharada Publishing House.
- Simon-Cerejido G., & Gutierrez-Clellen, V.F. (2009). A cross-linguistic and bilingual evaluation of the interdependence between lexical and grammatical domains. *Applied Psycholinguistics*, 30, 315–337.
- Skutnabb-Kangas, T. (2020). Linguistic genocide. A Global Crime. In M. Göçek & F. Greenland (Eds.), *Cultural Violence and Destruction of Communities: New theoretical perspectives*. Routledge.

- Spolsky, B. (2019). Endangered Languages and the Evolution of Linguistic Repertoires. Radhbai Katre Memorial Lecture, delivered at ICOLSI-41, Amarkantak, Nov 13-15, 2019.
- Squires, K. E., Lugo-Neris, M. J., Peña, E. D., Bedore, L. M., Bohman, T. M., & Gillam, R. B. (2014). Story retelling by bilingual children with language impairments and typically developing controls. *International journal of language & communication disorders*, 49(1), 60–74
- Thordardottir, E. (2011). The relationship between bilingual exposure and vocabulary development. *International Journal of Bilingualism*, 15(4), 426–445.
- Verhoeven, L. T. (1994). Transfer of Bilingual Development: the Linguistic Interdependence Hypothesis Revisited. *Language Learning*, 44(3), 381–415.

The Multilingual Assessment Instrument for Narratives: Greek

Ianthi Maria Tsimpli

University of Cambridge

Maria Andreou

University of Cologne

Eleni Peristeri

University of Thessaly

This paper presents an overview of the adaptation of the Multilingual Assessment Instrument for Narratives in Greek, focusing on its use in Greek academic and diagnostic settings. A summary of the properties of the Greek language and the concomitant challenges these language-specific properties posed to MAIN adaptation are presented along with a summary of published studies with monolingual Greek-speaking children and bilingual children with Greek as L2, with and without Developmental Language Disorder.

1 Introduction

Children's story telling is a social and educational practice that is common in the Greek society especially during the preschool and early school years. The Greek curriculum treats narration and story-telling as a child-centered activity, principally aimed at boosting children's literacy and social development (Beazidou, Botsoglou, & Vlachou, 2013). Furthermore, in the last decade, the Greek Ministry of Education has highlighted the importance of using narratives for the clinical diagnosis of children with neurodevelopmental disorders, including Developmental Language Disorder (DLD) and Autism Spectrum Disorder (Botsas, 2017). Though the need to include narrative tests in the assessment of Greek-speaking children with language delays and design large-scale training courses for professionals, who work in the field of special education, has been emphasized by both governmental and private authorities, narrative assessment tools

specifically designed to assess the language performance of children who are native or non-native speakers of Greek, are currently lacking. Within this context, the Multilingual Assessment Instrument for Narratives (Language Impairment Testing in Multilingual Settings LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012, 2015, 2019) and its Greek version represents a notable exception of a valid and reliable narrative assessment measure that can be used to elicit telling and retelling data, and also involves a comprehension element. So far, the MAIN has been used to test the narrative abilities of Greek-speaking monolingual children, as well as bilingual children speaking Greek as a second language (L2), with or without DLD. The first Greek adaptation of MAIN was carried out at the Language Development Lab of the Department of Theoretical and Applied Linguistics at the Aristotle University of Thessaloniki by the authors of this paper, Ianthi Tsimpli (Director of the Lab), Maria Andreou and Eleni Peristeri (research associates).

2 An overview of Greek

Greek is a typical null-subject language with rich person and number agreement marking on verbs. As a null subject language, null subjects are the preferred option when topic continuity of a referent is established. Overt DP subjects can appear in preverbal or postverbal position with word-order variations including VSO and VOS in addition to SVO. Greek verbs are also inflected for tense (+/-past), aspect (+/-perfective) and voice marking (active/non-active). The nominal domain is also highly inflectional. Nouns, adjectives, determiners and pronouns all exhibit morphological marking for several inflectional features. Specifically, Greek nouns inflect for number (+/-plural), gender (masculine, feminine and neuter) and case (nominative, genitive, accusative) marked on the noun's ending. Gender, number and case are also marked on determiners and adjectives as well as pronouns. Predicate adjectives are expected to agree with the subject or the object DP they modify in gender, number and case. In terms of finiteness marking, Greek lacks infinitives. Non-finite verb forms include participles, the gerund and the imperative. Finite clauses can be indicative or subjunctive, either of which can serve as complement clauses of verb or noun predicates. Usually, infinitival complements in English are translated into subjunctive clauses in Greek. Further distinctions among subordinate clauses include relatives (subject, object, adjunct), adverbial clauses introduced by connectives (temporal, causal etc.) and complement clauses which include indicative, subjunctive and factive complements, introduced by distinct complementisers (*oti*, *na* and *pu*) respectively (Holton, Mackridge, Philippaki-Warbuton & Spyropoulos, 2012).

3 Challenges of adapting MAIN to Greek

The adaptation into Greek began in 2009 during the COST Action IS0804 *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment* which aimed to profile bilingual specific language impairment (biSLI) by establishing a network that

would coordinate research on the linguistic and cognitive abilities of bilingual children with SLI across different migrant communities (<http://bi-sli.org/>). Ianthi Tsimpli was one of the two Greek representatives in the Action, while Eleni Peristeri and Maria Andreou were members of the Greek research team. Being part of WG2 which was responsible for developing MAIN under the guidance of Natalia Gagarina and Joel Walters, the Greek adaptation took place in parallel with the design of the original English MAIN (Gagarina et al., 2012) and was piloted several times with monolingual and bilingual typically developing children as well as with monolingual and bilingual children with DLD. This process of developing the narrative texts in different languages in parallel, reduced the challenges of adaptation as phrasing of the text but also of the scoring sheet and the protocol were negotiated across languages. Some challenges were identified in the use and choice of Internal State Terms and the part of speech they belonged to in Greek vs. English. For instance, ‘happy’, ‘angry’, ‘upset’ are participial forms in Greek which include different inflection from adjectives like ‘crazy’ and ‘proud’ which are not participles. Physiological terms ‘be hungry, thirsty’ can be expressed in Greek by a single verb or periphrastically, as in English, through the use of a participle.

Matching syntactic complexity in the Greek and English texts was an objective that required several discussions during the development of the tool. The types of subordination in Greek (specifically the absence of infinitival clauses) and the length of the narrative texts are issues discussed during adaptation. The Greek text was inevitably longer than the English text for reasons to do with richer morphology and longer words as well as syntactic differences such as the obligatorily overt status of complementisers and connectives introducing subordinate clauses in Greek. Finally, the choice of DP, null subject, overt pronoun or object clitic in the narrative text had to be dictated by strategies of reference assignment and appropriateness that are different from English, a language that lacks the null subject option. Presentation of the Greek MAIN included presenting a recorded version, with the whole process of presenting pictures and listening to the stories computerized. This was to ensure that all participants listened to the same prosodic pattern in the story, for the retelling mode. Using a computerized method not only ensured uniformity of presentation but facilitated the *assumption of non-shared knowledge* of the story between the experimenter and the participant. During the preliminary analysis of the pilot data the comparison between telling and retelling modes in narrative length and microstructure properties revealed better performance for most participants in the retelling mode. This has led to a higher number of retellings published by the Greek researchers as the aim has mainly been to balance the richness of data for both microstructure and macrostructure analyses.

In the next section, an overview of the studies that have been conducted so far with the Greek MAIN is presented.

4 Using the Greek MAIN for research

All published studies using the Greek MAIN come from the same research team that also undertook the task of tool adaptation (i.e. Ianthi Tsimpli, Maria Andreou, and Eleni Peristeri).

Narrative elicitation was carried out in both the telling and the retelling mode, while one recent study (Peristeri, Andreou, Tsimpli, & Durrleman, in press) also addressed children's comprehension performance in the MAIN. We should note that a computerized version of the Greek MAIN (rather than manually unfolding the pictures in pairs of two) was systematically employed across all studies and modes of elicitation.

The first published study to use the LITMUS-MAIN in Greek was conducted by Tsimpli, Peristeri, and Andreou (2016). In this study, 5- to 11-year-old monolingual Greek-speaking and bilingual Albanian-Greek children with and without DLD were tested on both telling and retelling. The study's general objective was to investigate whether bilingualism would confer an advantage in the microstructure and macrostructure of the narrative performance of children with DLD, and also explore story-telling vs. retelling effects on their narrative performance. The pattern of results revealed significant bilingualism effects for DLD children in retelling only. More specifically, both groups with DLD exhibited considerably lower narrative length than TD groups in both telling and retelling, yet, bilingual children with DLD produced higher rates of subordinate clauses and function words than their monolingual peers with DLD in retelling. Regarding macrostructure, retelling was found to boost the use of emotion and mental state terms for bilingual children with DLD relative to monolingual children with DLD, while both bilingual groups with and without DLD obtained higher story structure complexity and comprehension scores than their monolingual peers in retelling. Furthermore, the same study found strong correlations between DLD children's performance in narrative microstructure and macrostructure, and their performance in two language screening tests, namely, expressive vocabulary and sentence repetition.

Andreou, Tsimpli, Kananaj, and Kapia (2016) have also examined narrative mode (telling vs retelling) effects on the use of reference, as well as the microstructure and macrostructure of the narrative production in 6- to 7-year-old TD monolingual Greek-speaking children, age-matched TD monolingual Albanian-speaking children, and a group of TD Greek-Albanian children, who were tested on both languages using MAIN. Retelling was found to improve both micro- and macrostructure in all groups. Specifically, narrative length and numbers of content and function words increased in retelling (vs telling), while structural complexity as a measure of macrostructure was also higher in retelling. Regarding reference use, bilingual children were found to use higher rates of definite NPs to maintain a character in both Greek and Albanian narratives, while both monolingual groups showed a preference for null pronouns for the same function. According to the authors, a possible explanation for this pattern of results might have been Greek-Albanian children's tendency to avoid the production of ambiguous referential expressions by using referentially explicit forms, such as definite DPs.

In a following study, Tsimpli, Peristeri, and Andreou (2017) tested the narrative performance of 7- to 9-year-old Russian-Greek bilingual children with typical development and with DLD. The main objective of the study was to detect language impairment effects in the use of articles and clitics when introducing, reintroducing and maintaining characters, as well as investigate whether the error pattern in article use would be related to the syntactic position of the Determiner Phrases (DP) in the children's narrative production. Children's narratives were elicited in the telling mode using the two stories (i.e. *Baby goats* and *Baby birds*) of the

LITMUS-MAIN. According to the results, both bilingual groups tended to use referentially appropriate forms in Reintroduction. However, the group with DLD exhibited significantly higher rates of article omissions in the Introduction and more inappropriately marked pronominal clitics in Maintenance relative to the TD bilingual group. Also, the syntactic position of the DP appeared to play an important role in the distribution of errors, with subject (vs. object) DPs being more error-prone for both groups of children.

In a recent study, Andreou, Peristeri, and Tsimpli (in press) examined L1 effects in the use of referential expressions to maintain reference to characters in the narratives of 5- to 11-year-old Albanian-Greek and Russian-Greek children with DLD, along with TD bilingual groups speaking the same language pairs. The overall results reflect the joint contribution of language impairment and L1-specific typological properties.

In another recent study, Peristeri, Andreou, Tsimpli, and Durreleman (in press) investigated bilingualism effects in the listening comprehension of 6- to 8-year-old monolingual Greek and Albanian-Greek bilingual children with DLD, along with two groups of age-matched TD monolingual Greek and Albanian-Greek bilingual children. Children's narrative comprehension was assessed through retelling, using the *Cat* and *Dog* stories of MAIN. Besides narrative comprehension, the children's language ability, updating and Theory-of-Mind/false-belief attribution skills were also investigated and were entered in the analyses as potential predictors of children's comprehension performance. Bilingual children with and without DLD scored higher in narrative comprehension than their TD and DLD monolingual peers. Similarly, bilingual children with DLD outperformed their monolingual peers with DLD on the Theory of Mind task, though no difference between the two groups was observed in the updating, executive function task. Typically-developing children's narrative comprehension was predicted by their language and executive function performance, while bilingual DLD children's narrative comprehension was predicted by performance on the Theory of Mind task and their dominance in L2/Greek. The overall results of the study indicate advantages for bilingual children with DLD in narrative comprehension and Theory of Mind, suggesting a link between these the two domains.

5 Concluding remarks

Though the evidence drawn so far from studies using the Greek version of the LITMUS-MAIN suggests that the specific tool represents a promising marker for the clinical features of both monolingual and bilingual children with DLD, its use still remains limited in the Greek academic community. This is probably due to the limited number of norm-referenced tests for the diagnosis of DLD in Greek-speaking children, particularly in the preschool and early school years, as well as the critical gap in standardized testing tools to assess the language abilities of bilingual children in their second language like Albanian, which is the most widely spoken heritage language in Greece. This problem is well known among scientists who conduct research in the field of neurodevelopmental disorders in Greece, as well as public and private clinical services. Future research should attempt to incorporate the Greek version of the MAIN

tool and disseminate its validity in both the academia and various research settings that take interest in the narrative abilities of children with and without a disorder. To this end, it would be essential to create a digitized version for testing in clinical and non-clinical contexts.

6 References

- Andreou, M., Peristeri, E., & Tsimpli, I. M. (in press). Reference maintenance in the narratives of Albanian-Greek and Russian-Greek children with Developmental Language Disorder: a study on crosslinguistic effects. *First Language* (Special Issue: Referentiality in narratives, edited by N. Gagarina & U. Bohnacker).
- Andreou, M., Tsimpli, I. M., Kananaj, A., & Kapia, E. (2016). Narrative insights from 6-7-year-old Greek-Albanian children. In M. Mattheoudakis and K. Nicolaidis (Eds.), *Selected Papers of the 21st International Symposium of Theoretical and Applied Linguistics* (pp. 67–82). Thessaloniki: Prothiki Open Access Journals, Aristotle University of Thessaloniki.
- Beazidou, E., Botsoglou, K., & Vlachou, M. (2013). Promoting emotional knowledge: strategies that Greek preschool teachers employ during book reading. *Early Child Development and Care*, 183(5), 613–626.
- Botsas, G. (2017). Differences in Strategy Use in the Reading Comprehension of Narrative and Science Texts among Students with and without Learning Disabilities. *ERIC*, 15(1), 139–162.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children: disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Holton, D., Mackridge, P., Philippaki-Warbuton, I., & Spyropoulos, V. (2012). *Greek: A Comprehensive Grammar of the Language*. 2nd Edition. Routledge Comprehensive Grammars.
- Peristeri, E., Andreou, M., Tsimpli, I. M., & Durrleman, S. (in press). Bilingualism effects in the listening comprehension skills of children with Developmental Language Disorder: Associations with formal language, executive functions and Theory of Mind. In U. Bohnacker & N. Gagarina (Eds.), *Developing narrative comprehension: Multilingual Assessment Instrument for Narratives*. Amsterdam: John Benjamins.
- Tsimpli, I. M., Peristeri, E., & Andreou, M. (2016). Narrative production in monolingual and bilingual children with Specific Language Impairment. *Applied Psycholinguistics*, 37(1), 195–216.
- Tsimpli, I. M., Peristeri, E., & Andreou, M. (2017). Cross-linguistic influence meets language impairment: Determiners and Object clitics in bilingual children with typical development and with Specific Language Impairment. In L. Cornips, E. Blom, & Z. Schaeffer (Eds.), *Cross-linguistic influence in bilingualism in Bilingualism: A Festschrift for Aafke Hulk* (pp. 331–353). Amsterdam: John Benjamins.

Spinning a yarn across languages: Adapting MAIN for India

Manish Madappa

The English & Foreign Languages University, Hyderabad

Yozna Gurung

The English & Foreign Languages University, Hyderabad

Madhavi Gayathri Raman

The English & Foreign Languages University, Hyderabad

The Multilingual Assessment Instrument for Narratives (LITMUS-MAIN) was developed to assess the narrative abilities of bi- and multilingual children in the various languages that they speak. This paper presents the details of the adaptation of MAIN to three Indian languages, Kannada, Hindi and Malayalam. We describe some typological features of these languages and discuss the challenges faced during the process of adaptation. Finally, we give an overview of results for narrative comprehension and production from Kannada-English and Hindi-English bilinguals aged 7 to 9.

1 Introduction

The linguistic landscape of India is a complex one given the pluri-lingual and pluri-ethnic nature of the country. The Constitution of India recognizes Hindi and English as official languages of the country. The 2011 Census of India lists a total of 121 languages of which 22 are Scheduled languages, meaning that they are included in the Eighth Schedule of the Indian Constitution and given official status, and 99 are Non-Scheduled languages. Each State and Union Territory has its own official language. English plays an important role in India due to its colonial past. Used initially for administrative purposes, over time, English has become the *lingua franca* that links people of different linguistic communities for social, educational, political, and economic purposes.

The 2011 Census of India reports that 250 million Indians speak at least two languages and more than 85 million speak three or more languages. Thus, it is evident that in India bilingualism or multilingualism is the norm. One of the greatest challenges facing researchers and educators in such a context is assessing the linguistic proficiency of bilingual children in all of the languages that they speak. This has been particularly difficult because there have been very few assessment tools that have been developed specifically for bilinguals. Given the wide number of languages that exist and the differences between languages, it is difficult to arrive at comparable measures across the various components of a language using a single assessment tool. The use of narratives and the universality of narrative abilities across languages allows for the assessment of multiple features of language in all of the languages of bi- or multi-linguals.

The *Language Impairment Testing in Multilingual Settings – Multilingual Assessment Instrument for Narratives* (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012; 2015; 2019) is a tool that has been developed to assess the narrative skills of young bilingual and multilingual children between the ages of 3 and 10 years, but has also been used to assess narrative skills of older bilinguals and adults as a control group (e.g. Gagarina, Bohnacker & Lindgren, 2019). MAIN consists of four picture stories each consisting of the six sequences of pictures. These stories have been carefully matched such that they are comparable in terms of the components of Macrostructure, Microstructure and Internal State Terms. The instrument assesses both comprehension and production of narratives in all the languages that a child speaks. Since it has been developed specifically for bilinguals it is less biased towards bilingual populations with diverse language and cultural backgrounds than other assessment tools norm referenced for monolingual populations. This provides the rationale for adapting MAIN to Indian languages. This paper describes the adaption of MAIN to Hindi, Kannada and Malayalam.

2 Brief descriptions of the three languages

This section provides brief descriptions of the three Indian languages, Hindi, Kannada and Malayalam, to which MAIN has been adapted by the authors of this paper.

2.1 Hindi

Hindi, a language spoken in the northern part of India, belongs to the Indo-Aryan group of languages within the Indo-Iranian branch of the Indo-European language family. There are approximately 420 million speakers of Hindi in the world. In India, Hindi is spoken primarily in the states of Bihar, Chattisgarh, Delhi, Haryana, Himachal Pradesh, Jharkhand, Madhya Pradesh, Rajasthan, Uttarakhand, and Uttar Pradesh. Along with English, Hindi is also the official language of India. Hindi is written using the Devnagari script and each alphabet has a one to one correlation with the phoneme inventory (high level of sound-symbol correspondence). Though Hindi is essentially a verb-final, SOV, language, as shown in (1), it permits other word orders as well (Kidwai, 2008).

- (1) mēne patr likha:
I-ERG letter wrote-PAST
'I wrote a letter.'

Nouns in Hindi are inflected for gender, number, and case. The gender of the words for inanimate objects cannot be predicted from their form or meaning. Pronouns are inflected for number and case. In contrast to English prepositions, Hindi uses postpositions which follow the words they govern. They are written as separate words with nouns but are tagged to pronouns (Koul, 2008). Verbs are inflected for person, number, gender, tense, mood, and aspect. The negation is placed before the verb. The verb agrees with the subject for number and gender, as in (2) and (3).

- (2) larka ghar ja:ta: hε.
the boy home go-VB-MASC is/be
'The boy goes home.'
- (3) larki: ghar ja:ti: hε.
the girl home go-VB-FEM is/be
'The girl goes home.'

Hindi uses a number of light verb constructions as well and these "light verbs have been assumed to be responsible for hosting tense and aspect features, licensing arguments, and functioning as auxiliaries/s" (Suleman, 2015, p. 3). An example is given in (4).

- (4) vah kha:na: kha: chuka: hε.
he food eat PERF-MSC is/be.
'He has eaten his food (completion).'

2.2 Kannada

Kannada is a Dravidian language. Dravidian languages are spoken mainly in southern India and south Asia and are divided into four main groups: South, South-Central, Central, and North. Of the 26 languages that belong to these groups, Tamil, Telugu, Kannada, and Malayalam belong to the South Dravidian group (Amritavalli, 2017). They have a history of literary traditions. According to the 2011 census, there are more than 215 million speakers of Dravidian languages in India (Census, 2011). Kannada is spoken mainly in the state of Karnataka and by linguistic minorities in the neighbouring states of Maharashtra, Andhra Pradesh, Tamil Nadu and Kerala. It has approximately 44 million native speakers (Census, 2011) and is considered the third oldest Indian language after Sanskrit and Tamil. Roughly 12.9 million speakers in Karnataka use Kannada as a second or third language. It is the official language as well as the language of administration of Karnataka. Kannada, written using the Kannada script is an alphasyllabic language, i.e., it represents language at roughly the level of the syllable, but its symbols or

‘akshara’ can be segmented visually to reveal the consonant and vowel segments within (Nag, Treiman & Snowling, 2010).

Though the preferred word order is verb-final, SOV, other word orders are also permitted so that the word order of Kannada can be said to be relatively free. Being an agglutinative language, Kannada forms words by the addition of suffixes onto the root word. Nouns and pronouns in Kannada are marked for gender, case and number. There are two natural genders, masculine and feminine; all inanimate objects belong to the neuter gender. Like Hindi, Kannada uses postpositions that are added to nouns phrases after the case marker, as in (5).

- (5) mane hinde
house behind
‘behind the house’

Kannada verbs are either finite or non-finite with finite verbs placed at the end of a sentence, as shown in (6).

- (6) avrig erD makL iddaare
to him two children exist
‘He has two children.’

2.3 Malayalam

Malayalam, a member of the South Dravidian subgroup of the Dravidian language family, is the official language of the southern-most state of India, Kerala, as well as the union territories of Lakshadweep and Puducherry (Pondicherry). Malayalam is also spoken by a significant number of linguistic minorities in the neighbouring states of Karnataka and Tamil Nadu. It is also widely spoken in Gulf countries due to the presence of a large number of Malayali expatriates. It is one of the 22 official languages of India and is spoken by nearly 37 million people as a first language and by about 700,000 as a second language. Malayalam is written using a Brahmic script which is an alphasyllabary (or *abugida*, a writing system where the consonant letters represent syllables with a default vowel and other vowels are denoted by diacritics) like the Kannada script. The most common word order is verb-final, SOV but other word orders are also possible. Malayalam is an agglutinative language and suffixes are added to noun and verb stems to mark grammatical categories. Since there is no fixed limit on the number of suffixes that can be added, it often leads to the formation of long words, as shown in (7).

- (7) sundar-an-maar-ey-um sundar-i-maar-ey-um
beauty-M-PL-ACC-CORD beauty-F-PL-ACC-CORD
‘Handsome men and beautiful women.’
(Gayathri, 2019)

The verb in Malayalam is not marked for either gender or number, as in (8). Malayalam verbs do not exhibit concord with noun phrases that are their arguments. Neither subject, direct object, nor indirect object are coded on the verb (Asher & Kumari, 1997, p. 348). On nouns, the suffix –an marks masculine gender and the suffix –i, feminine gender, as in (9).

- (8) *avaḷ nalla kuṭṭi aaṇə*
 she good child be-PRES
 ‘She is a good girl.’ (Asher & Kumari, 1997)

- (9) *kallaṅ - kaḷli* ‘Thief’ (Nair, 2012)
miṭukkaṅ - miṭukka ‘Smart person’

It is possible to delete the verb in some types of copula constructions where a time reference is not required. Unlike Hindi and Kannada, gender in Malayalam is indicated in the form of a noun that expresses natural gender or is marked on 3rd person and demonstrative pronouns. Like Kannada and Hindi, Malayalam is a postpositional language, as shown in Table 1.

Table 1. Comparison between Hindi, Kannada and Malayalam

Language	Example			
Hindi	pahar	se	nadi:	tak
Kannada	parvata	dinda	nadiya	varege
Malayalam	mala	mutal	puza	vare
	mountain	from	river	up to
‘from the mountain up to the river’ (Asher & Kumari, 1997)				

3 Challenges during the adaptation of MAIN to Kannada, Hindi and Malayalam

The process of adapting MAIN into the three Indian languages described above was a complex one. Since these languages belong to language families that are typologically different from English, the task of matching the various elements of macrostructure (story grammar, structural complexity, and internal state terms), and microstructure (total number of words used) was challenging. For instance, the realization of complete sentences in English contained either fewer or more arguments (in terms of the number of words and clausal constituents) in these languages. Consider for example, the sentence in Kannada in (10).

- (10) *taayiyu nodi-tu marigalu hasivu-agigdd-annu*
 mother see-PAST children hunger-ACC-PAST
 ‘The mother saw that the baby birds were hungry.’

Given the syntax of Kannada, it was not always possible to translate the story scripts from English into Kannada by the use of the same syntactic structure and maintain the same order of events within one sentence. In a number of cases, the English sentence has to be split into two.

For example, the *Baby Birds* story begins with ‘One day there was a mother bird who saw that...’ This, when translated into Indian languages has to be split into two sentences to sound natural. Alternatively, a change in the order of events becomes inevitable. This is the case with the other stories as well. The agglutinative nature of Kannada and Malayalam which are morphologically rich languages posed challenges since different word forms are formed by inserting different morphemes to the root word serially. For example, as in (11) and (12):

- (11) apāya-dallida-dannu (Kannada)
danger-PAST-in
‘were in danger’
- (12) viśakkunn-uṅṭāy-irunnu (Malayalam)
hungry-PROG-be-PAST
‘was hungry’

In all three languages, the choice of vocabulary proved to be a problematic aspect. Several words or phrases which do exist in these languages are seldom used in speech. For example, in Kannada, equivalents semantically close to English like *dhavisu* ‘leaped’ or *negeyithu* ‘jumped’ are hardly used in spoken discourse. Instead, words like *dikkihodi* or *guddiko* ‘bumped’ are used in the same context. There is a slight difference in meaning; *gikkihodi* suggests that the person or thing intentionally or deliberately bumped into something. Since most of the participants (see Section 4) used these words in the narratives, they were included in the scoring sheets.

As a result of the ubiquitous presence of English in the environment,¹ many words in Indian languages have been replaced by their English equivalents in text and in speech. For example, the Kannada words, *chendu* and *pantu* have been replaced by *ballu*, i.e., the English word *ball* with the addition of the *-u* suffix. The pictures in the *Dog* story depicted an unfamiliar food item ‘sausage’ which is culturally alien and does not have an equivalent in Indian languages. These were replaced with more familiar images of *mansa* ‘meat’. Later, after having tested a number of children (see Section 4), these images were modified further and a special version of the *Dog* story was created for India in which the food in the *Dog* story is popular vegetarian snack. The scoring protocols were also modified to include these changes.

In order to ensure that the vocabulary and the structures used in the story scripts were age appropriate, school textbooks were used as a resource. The opening sentence of each of the stories ‘Once upon a time...’ can be realized in at least three different ways in the Indian story telling tradition. For example, in Hindi, it is possible to begin the story with *ek baar ki baat hain* ‘once upon a time’ (lit. ‘once time talk is’), *bahut pehele ki baat hain* ‘a long time ago’ (lit. ‘very long before talk is’) or *ek din ek...* ‘once there was’ (lit. one day, one...). All of these are equally valid and acceptable ways of beginning a story and all of them were accepted in the narratives produced by the children.

¹ English is a second language in India and is used throughout the country for a variety of purposes. It is the medium of instruction in many schools. In schools where instruction is imparted in the mother tongue, English is taught as a subject either from primary or middle school. It is the main medium of instruction in higher education.

The adaptation of the instrument into Kannada was led by the first author, a native-speaker of the language, while the second author carried out the Hindi adaptation under the guidance of the third author. The Malayalam adaptation was carried out by the third author, a native-speaker of that language. Each of the three language versions were then sent to two linguists each who are native speakers of those languages. Back translation was done and checked. Finally, three adult native speakers with college-level education also proof-read the instrument.

The Kannada MAIN version was then piloted with 10 Kannada-English middle-income SES bilinguals studying in an English-medium school in Mysore, Karnataka. They were aged 7;5 to 9 years and were fluent speakers of Kannada. The Hindi version of MAIN was piloted with seven children aged 7;8 to 9 years who were enrolled in Kendriya Vidyalaya (one of many nation-wide schools set up for the children of officers of the Central Government including Defence and Para-military personnel), an English-medium school. All students were fluent speakers of their home language, Hindi and their families belonged to the middle-income socio-economic group. The Malayalam version has not yet been piloted.

The initial adaptation of the scripts and protocols used language that was formal and literary and attempted to be a close translation of the English version. After the piloting, we found that the stories sounded more natural when we used spoken language equivalents for words like 'ball' and 'balloon' which was more colloquial and closer to the oral discourse of storytelling. The scripts and protocols were modified so that they reflected everyday child speech.

4 The use of the Hindi and Kannada MAIN

The Kannada and Hindi MAIN-versions and the original English instrument were administered to 31 Kannada-English and 31 Hindi-English bilinguals in Grade 3. The Kannada-English group was between 7;5 and 9 years old (mean age = 8;1) and the Hindi-English group was between 7;8 and 9 years old (mean age = 8;3). The children were recruited from the same schools where the pilot studies were conducted.

The idea of telling stories based on pictures appealed to the children and they performed the task enthusiastically. However, the *Dog* story proved particularly difficult for the children in both languages in two respects: (1) they had difficulties expressing the concept 'bumped into the tree'; and (2) the replacement of sausages with meat in the pictures did not make it easier for the children as we had expected. For this reason, the version of the MAIN pictures to use with these groups now contains a popular vegetarian snack instead of sausages or meat.

The results from the *Hindi-English bilinguals* revealed that the scores obtained on story structure in Hindi and English were comparable. The Hindi-English bilinguals included on average 44.78% of the 17 MAIN story structure (macrostructural) components ($M = 7.61$, $SD = 2.7$) in Hindi and 43.83% in English ($M = 7.45$, $SD = 3.73$). A t-test showed no significant difference ($p = .84$) lending support to the findings in the literature that narrative Macrostructure is invariant across languages (e.g., Berman, 2001; Fiestas & Pena, 2004; Iluz-Cohen & Walters,

2012). GAO-sequences (complete episodes) were produced in 11.82% and 10.75% out of all episodes for Hindi and English, respectively; this difference is not statistically significant ($p = .82$). Attempts (A) and Outcomes (O) were most frequently included in both languages, though there was a considerable difference across the two languages for how often these components were produced in an episode: 81.72% (A) and 67.74% (O) out of all episodes in Hindi and 66.66% (A) and 48.38% (O) out of all episodes in English. Goals (G) were produced in approximately 20% of the episodes in both languages. The percentage of correct responses to the comprehension questions in Hindi was 82.25% while in English it was 70.32%. Comprehension was thus much better than production in both languages with an advantage for the first language, Hindi in comprehension. The children's comprehension of Goals was considerably higher in than in their production in both Hindi (87.09%) and English (66.66%).

The results from the *Kannada-English bilinguals* show a difference in the production of narrative macrostructure in Kannada and English. Kannada-English bilinguals included 58.06% ($M = 9.87$, $SD = 2.47$) of the 17 MAIN story structure components in Hindi and 50.8% ($M = 8.64$, $SD = 1.85$) in English. A t-test showed that this difference was significant ($p = .03$), contradicting the largely accepted findings in the literature that macrostructure is invariant across languages. GAO-sequences were produced in 26.34 % out of all episodes in Kannada and in only 14.24% out of all episodes in English and this difference was also statistically significant ($p < .01$). Attempts and Outcomes were produced most frequently in both Kannada and English; 70.43% (A) and 86.02% (O) in Kannada and 69.25% (A) and 79.03% (O) in English. Goals were produced less frequently, in 45.43% out of all episodes in Kannada and in 31.72% out of all episodes in English. The percentage of correct responses to the comprehension questions was 77.74% in Kannada and 74.67% in English. Once again, we find that comprehension is better than production in both languages. Goals were comprehended almost at ceiling in both Kannada (96.24 %) and English (95.16%).

Our results reveal certain similarities and differences between the two groups of bilinguals. The results indicate that while macrostructure production is similar across languages in the Hindi-English group, this was not the case for the Kannada-English group. For both groups and across languages, Attempts and Outcomes are produced at much higher rates than Goals. Overall, comprehension is far ahead of production and comprehension of Goals is better than its production in the narratives.

5 Future plans for MAIN in India

India presents a unique opportunity to expand the scope of MAIN as a tool for the assessment of bilingual and multilingual populations because of the sheer number of languages spoken in the country. The adaptation of MAIN to further Indian languages will address the lack of a standardised assessment tool developed specifically for and norm-referenced with bilinguals. Currently, a team of researchers led by the third author is working towards extending the adaptation of MAIN to the following languages:

- Punjabi: Lillotama Vallecha
- Telugu: Noel Anurag Prashant
- Tamil: Madhavi Gayathri Raman
- Bangla: Tariq Anwar, Rhiddhi Saha, Somak Mandal
- Odia: Jayanta Kumar Das, Subashish Nanda
- Bagri: Radhika
- Konkani: Gautham R Anand, Nagarathna Raveesha
- Nepali: Yozna Gurung

6 Conclusion

The ability to narrate stories is closely linked to later literacy and academic outcomes. MAIN could help teachers develop instructional programmes suited to the needs of their students and would serve as the first step in benchmarking typical bilingual and multilingual language development in languages where such information is not yet available. The process of adaptation and scoring MAIN narratives in Hindi, Kannada and Malayalam brought to the fore certain features of storytelling in the Indian tradition (e.g., concept of time, cyclic progression of events) which are different from the Western narrative tradition suggesting that there might be a need to develop a narrative assessment instrument, or a way of scoring narratives, that is more adapted to the Indian tradition in the future.

7 References

- Amritavalli, R. (2017). Morphosyntax of Dravidian Languages. *Oxford Research Encyclopedia, Linguistics*. DOI: 10.1093/acrefore/9780199384655.013.272
- Asher, R. E. & Kumari, T. C. (1997). *Malayalam*. New York: Routledge.
- Berman, R. A. (2001). Narrative development in multilingual contexts: A cross-linguistic perspective. In L. Verhoeven & S. Strömquist (Eds.), *Narrative development in a multilingual context* (pp. 419–428). Amsterdam: John Benjamins.
- Census (2011). *Languages by state*. Retrieved on 5th May 2019 from censusindia.gov.in.
- Fiestas, C. E., & Pena, E. D. (2004). Narrative discourse in bilingual children: Language and task effects. *Language, Speech, and Hearing Services in Schools*, 35, 155–168.
- Gagarina, N., Bohnacker, U., & Lindgren, J. (2019). Macrostructural organization of adults' oral narrative texts. *ZAS Papers in Linguistics*, 62, 190–208.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56, 1–115.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.),

- Assessing multilingual children disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Vålmaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63, 1–36.
- Gayathri, G. (2019). *Malayalam Morphosyntax: Inflectional Features and their Acquisition*. Unpublished PhD dissertation. IIT: Bombay.
- Iluz-Cohen, P., & Walters, J. (2012). Telling stories in two languages: Narratives of bilingual preschool children with typical and impaired language. *Bilingualism: Language and Cognition*, 15, 58–74.
- Kidwai, A. (2008). *XP-adjunction in universal grammar: scrambling in Hindi-Urdu*. Oxford: Oxford University Press.
- Koul, O. N. (2008). *Modern Hindi Grammar*. Virginia: Dunwoody Press.
- Nag, S., Treiman, R., & Snowling, M. J. (2010). Learning to spell in an alphasyllabary: The case of Kannada. *Writing Systems Research*, 2(1), 41–52.
- Nair, R. S. (2012). *A Grammar of Malayalam*. Retrieved on January 5th from www.languageinindia.com
- Suleman, F. (2015). *Light verbs in Hindi*. Master of Social Science dissertation, University of KwaZulu-Natal, Durban.

The adaptation of MAIN to Icelandic

Hrafnhildur Ragnarsdóttir

University of Iceland

Immigration in Iceland has a short history and so does the Icelandic language as an L2. This paper gives a brief introductory overview of this history and of some characteristics of the Icelandic language that constitute a challenge for L2 learners but also make it an interesting testing ground for cross-linguistic comparisons of L1 and L2 language acquisition. It then describes the adaptation process of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN) to Icelandic. The Icelandic MAIN is expected to fill a gap in available assessment tools for multilingual Icelandic speaking children.

1 Introduction

Iceland is an island in The North Atlantic, with a population of a 364,000¹ and an area of 103,000 km², making it the most sparsely populated country in Europe. Two thirds of the population live in the greater capital area while the remaining one third are more dispersed and live in small towns, villages and farms along the coastline, the center of the country consisting of uninhabitable lava fields, glaciers and mountains. The official language is Icelandic, a Germanic language closely related to the other Nordic languages, Danish, Faroese, Norwegian and Swedish. The compulsory school age is from six to 16 years, but virtually all children attend municipal preschools from age two.

Until the turn of the Millennium, the population of Iceland was very homogeneous with few immigrants, few second language speakers of Icelandic and very few non-native children in Icelandic schools. Since then, the situation has changed radically with a rapid increase in number of immigrants with diverse cultural and linguistic backgrounds and an explosion in the number of children with other mother tongues than Icelandic in Icelandic schools, creating an important challenge for the educational system.

In this paper, I first briefly describe the Icelandic language, focusing on a few characteristics that may present a challenge for second language learners (Section 1.1). The second subsection is concerned with the history of immigration in Iceland (Section 1.2) and of

¹¹ Statistics Iceland, retrieved 16 March 2020.

the short history of Icelandic as a second language (Section 1.3), after which the adaptation process of the Language Impairment Testing in Multilingual Settings-Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012, 2019) to Icelandic is described (Section 2). Finally, some concluding remarks are presented (Section 3).

1.1 The Icelandic language

Icelandic is a Germanic language like English, for example. It is closely related to Danish, Faroese, Norwegian and Swedish with which it shares etymological roots and many cognate words. On the other hand, Icelandic differs from these languages in its morphological richness and complexity. Whereas English has a relatively simple inflectional morphology and the three Mainland Scandinavian languages are only slightly more complex, Icelandic (and for the most part also Faroese) has a rich and complex inflectional morphology involving a great variety of suffixes, stem changes and irregularities which tend to constitute a challenge for second language learners, especially those who have morphologically simple mother tongues. The following is a list of some of those characteristics:

- Nouns, adjectives, pronouns, the definite article (Icelandic does not have an indefinite article) and the numbers zero to four are all inflected in four cases: nominative, accusative, dative, genitive.
- Nouns, adjectives, pronouns and articles have singular and plural inflections,
- Adjectives, pronouns, articles and numbers (0 to 4) have a three-partite grammatical gender marking: masculine, feminine and neuter.
- Adjectives have inflection for comparison.
- Verbs are inflected for person, number, mood, tense and voice, yielding a minimum of 18 (weak verbs) and a maximum of over 40 (strong verbs) different forms of each verb. In comparison, English has a maximum of four different forms per verb and Danish, Norwegian and Swedish have seven.

Due to general morphophonological processes, vowel changes are common in all these paradigms. For instance, /a/ changes to /ø/ when the inflectional ending in the following syllable starts with an /y/. As a result, in Icelandic, inflections change most words systematically all the time. For illustrative purposes, Table 1 shows the case inflection of the plural forms for the noun *köttur* ‘cat’ (plural *kettir*), the adjective *svartur* ‘black’ (plural *svartir*) and number *þrír* ‘three’ in Icelandic as compared to English.

Table 1. The inflection of *three black cats* in Icelandic vs/ English.

	Icelandic (masculine, plural)		English (plural)
Nominative	<i>þrír svartir kettir</i>	(Here are)	<i>three black cats</i>
Accusative	<i>þrjá svarta ketti</i>	(I see)	<i>three black cats</i>
Dative	<i>þremur svörtum köttum</i>	(I lost)	<i>three black cats</i>
Genitive	<i>þriggja svartra katta</i>	(I miss)	<i>three black cats</i>

The noun *köttur* ‘cat’ has a masculine gender in Icelandic and accordingly the forms of the adjective and the number are also in their masculine (plural) forms in Table 1. The feminine (plural) form of ‘three black’ is *þrjár svartar* in the nominative and the nominative (plural) for the neuter gender is *þrjú svört*.

Table 2 presents the inflectional paradigm for the verb *brjóta* ‘break’. In addition to the forms in the table, the verbs also has the following additional forms: *brjóttu* (imperative singular), *brjótið(i)* (imperative plural), *brotinn/brotin/brotið* (past participle) and *brjótandi* (present participle), totalling 23 different forms and including six stem vowels: *ó* /ou/ – *o* /ɔ/ – *y* /i/ – *c* – *au* /œi/ – *u* /ʏ/ – *y* /ɪ/.

Table 2: The paradigm for the verb *brjóta* ‘break’.

	Present tense indicative	Past tense indicative	Present tense subjunctive	Past tense subjunctive
<i>Ég</i> ‘I’ (1.sg.)	<i>brýt</i>	<i>braut</i>	<i>brjóti</i>	<i>bryti</i>
<i>Þú</i> ‘you’ (2.sg.)	<i>brýtur</i>	<i>braust</i>	<i>brjótir</i>	<i>brytir</i>
<i>Hann/hún/það</i> ‘he/she/it’ (3.sg.masc/fem/neut)	<i>brýtur</i>	<i>braut</i>	<i>brjóti</i>	<i>bryti</i>
<i>Við</i> ‘we’ (1.pl.)	<i>brjótum</i>	<i>brutum</i>	<i>brjótum</i>	<i>brytum</i>
<i>Þið</i> ‘you’ (2.pl.)	<i>brjótið</i>	<i>brutuð</i>	<i>brjótið</i>	<i>brytuð</i>
<i>Þeir/þær/þau</i> ‘they’ (3.pl.masc/fem/neuter)	<i>brjóta</i>	<i>brutu</i>	<i>brjóti</i>	<i>brytu</i>

Another typical linguistic feature of Icelandic is the relative frequency of long and complex consonant clusters at the beginning, in the middle and at the end of words (e.g. *strjúka* ‘caress’, *öskra* ‘scream’, *smyrsl* ‘salve’). The pronunciation of these clusters is quite challenging for young children and second language learners. Finally, Icelandic has a very productive system for compounding, which together with all the inflectional suffixes results in longer words, on average, than for example in English and Swedish (Strömquist, Johanson & Ragnarsdóttir, 2002). Icelandic is an SVO language, but, due to case marking, its word order is very flexible. There are no dialects in Icelandic but some sounds have a slightly different pronunciation in different regions.

1.2 Immigration in Iceland

Immigration in Iceland has a short history. Until recently, the population was very homogeneous with few immigrants and few speakers of Icelandic as a second language. In 1998, people of foreign origin comprised 2.5% of the population. They were almost exclusively Northern-Europeans adults who lived in the country for professional reasons and spoke English or Danish with the natives. Less than 1% were children and youth under the age of 17. The last two decades have seen a radical change in this scenario with an increasingly steep growth in immigration in general, as shown in Figure 1, and a corresponding increase in the number of children with one or both parents of foreign origin (Table 3).

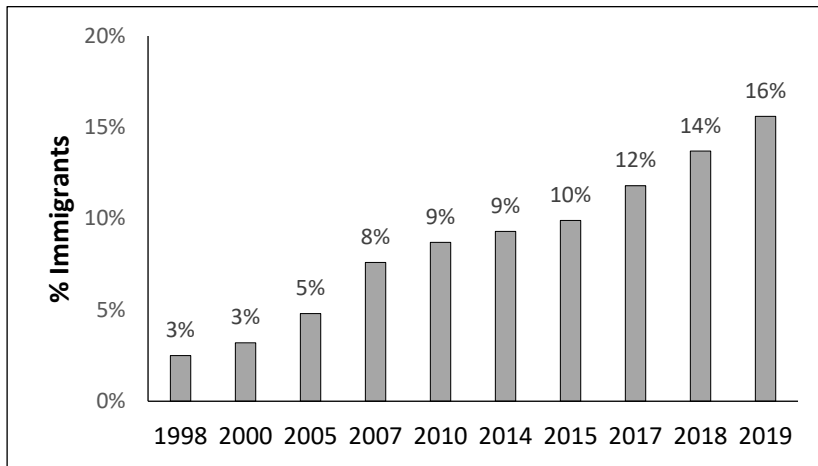


Figure 1: Immigrants (1st and 2nd generation) in Iceland 1998–2019: Percentages of the total population. (Statistics Iceland, 2020).

Table 3: Bilingual children in Iceland age 0 to 17 by year and background. Percentages of all children. (Statistics Iceland, 2020).

	1998	2000	2005	2010	2015	2017
Children of 1st and 2nd generation immigrants	0.8%	1.1%	2.3%	5.5%	7.2%	8.2%
Mixed: one non-native parent	6.0%	6.6%	7.9%	9.5%	10.8%	11.3%
All bilingual children	6.6%	7.7%	10.2%	15%	18%	19.5%

Figure 1 shows that first and second generation immigrants to Iceland progressed from 2.5% in 1998 to 15.6% in 2019, and Table 3 that between 1998 and 2017 the number of immigrant children increased by tenfold (from 0.8% to 8.2%) and children having one non-Icelandic parent from 6% to 11.3%. The total number of children with other mother tongues than Icelandic thus tripled between 1998 (6.8%) and 2017 (19.6%). The official counts of L2 children for 2018 and 2019 are not yet available but taking into consideration that the total percentage of immigrants increased by 3.6% from 2017 to 2019 (Figure 1), the share of L2 children has predictably risen to well over 20% since 2017.

In contrast to Denmark, Norway and Sweden, the larger majority of all immigrants in Iceland are first generation immigrants and the percentage of L2 children considerably higher

in preschools than in primary and secondary schools. In the greater capital area, 24% of preschool children were bi- or multilingual in the spring 2018 and 17% of primary and secondary school children in autumn 2019. The number of different languages represented in Icelandic schools is well over 100. The largest language group by far is Polish which is the first language of 5.8% of all children in preschools and 4% in primary and secondary schools. Other relatively large language groups are Philippian, Vietnamese, Russian, English, Lithuanian and Spanish, each spoken by around 1% of all children (City of Reykjavik, n.d.).

1.3 *The context of L2 learning in Iceland*

Living in a multilingual society is a relatively new experience in Iceland. The recent and rapid increase in the number and variety of immigrants described in the section above, in particular non-native children in Icelandic schools, constitutes a real challenge to the educational system.

In the beginning there was, for obvious reasons, a lack of expertise in bi-/multilingualism and in the teaching of Icelandic as an L2. There was very little specific training for teachers in the instruction of non-native students and no mandatory courses for students graduating with M.Ed. as preschool or primary/secondary school teachers in subjects such as Icelandic as an L2, bilingual or multicultural education. This context has changed radically over the last years and the integration of children from diverse cultural and linguistic backgrounds and teaching them Icelandic in the process is now one of the country's main educational goals. Although there is still a long way to go, expertise in teaching Icelandic as an L2 to children and adults has taken a leap forward and multicultural policy is being adopted adopted for preschool, compulsory schools and after-school activities.

Practically all adult Icelanders speak English fluently. Therefore, adults from different cultural backgrounds who speak English can get by in the workplace and in their daily lives without learning Icelandic. For children, on the other hand, learning Icelandic is vital. All teaching in Icelandic schools is in Icelandic and in order to benefit from the Icelandic educational system they need to be proficient in spoken and written Icelandic. This is a challenging task, given some of the linguistic features of Icelandic described briefly above. For example, non-native four- and five-year-old preschool children in Reykjavík turned out to be far behind their native peers in vocabulary and even more so in morphology (Haraldsdóttir, 2013). Furthermore, research shows that L2 children continue to make limited progress in the acquisition of Icelandic vocabulary throughout their compulsory education (Thordardottir & Juliusdottir, 2013; Ólafsdóttir & Ragnarsdóttir, 2010) and that they lag significantly behind their L1 peers in reading comprehension (Ólafsdóttir, 2015) as well as on PISA (PISA, 2018). The acquisition of Icelandic as an L2 appears to occur at a slower rate than the L2 acquisition of English. In addition to the grammatical complexity of Icelandic, this is likely to be related to the low economic value of the latter (Thordardottir & Juliusdottir, 2013).

To reach Iceland's educational goals, there is an urgently felt need for research-informed methods and structured materials both for instruction in Icelandic as an L2 and for supporting children's heritage languages, on the one hand, and for appropriate assessment tools for language and literacy development in both/all their languages from early childhood onwards on

the other. To date, MAIN has been adapted for over 60 languages. The addition of the Icelandic MAIN will make an important contribution to filling the gap in assessment tools for L2 children in Iceland as well as for bilingual Icelandic children living abroad. It will also, more generally, be useful for the assessment of three to nine-year-old Icelandic children's overall language proficiency.

2 The adaptation of MAIN to Icelandic

The revised (2020) Icelandic MAIN was translated and adapted from the revised English version (Gagarina et al., 2019) following the guidelines for adapting MAIN to other languages (Bohnacker & Gagarina, 2019). The translation was carried out by Hrafnhildur Ragnarsdóttir and carefully checked and compared to the English version (2019) by Rannveig Oddsdóttir. Ragnarsdóttir is professor of developmental science at the University of Iceland who has been engaged in research on most aspects of Icelandic children's language acquisition for over thirty years, including cross-linguistic studies of inflectional morphology and narratives (see e.g. (Ragnarsdóttir, Simonsen & Plunkett, 1999; Ragnarsdóttir 1992; 1999). Oddsdóttir is assistant professor of early childhood language and literacy at the University of Akureyri. Her primary research focus is early writing development.

This final revised 2020 version of the Icelandic MAIN builds on two earlier translations. In 2012, the *Baby Birds Story* was translated into Icelandic by Ragnarsdóttir, who also wrote instructions for its use based on those of Gagarina et al. (2012). This first version was used in M.Ed. courses on language and literacy development at the University of Iceland. The students, majoring in early childhood language and literacy development, were required to assess the language proficiency of native Icelandic children and to compare mono- and bilingual children in Icelandic pre- and elementary schools, using MAIN as well as other measures. The story and the instructions were extensively piloted with these students and subsequently used with 120 five- and six-year-old monolingual Icelandic children participating in a longitudinal research project, *Development in Early Childhood: Language, literacy and self-regulation*. The first version was subsequently revised (2015) by Ragnarsdóttir, Oddsdóttir and Elva Dögg Gunnarsdóttir, an M.Ed. student who made an important contribution to the adaptation and piloting of both earlier versions of the Icelandic MAIN.

Having a mother tongue with less than 400 thousand speakers, Icelandic children are used to books, films, TV programs and other material in, or translated from, other languages and cultures. Although the characters and contexts in the four MAIN picture stories were not all familiar, they therefore did not seem to present any major problems for the children.

The translation of the model stories from English to Icelandic was also mostly straightforward. In a few cases, however, a translation equivalence was not available and a direct translation was substituted with words and expressions which better fitted the context, the overall flow in the story and/or the language level of children in the targeted age-range. Thus, for example, the adjectives *playful* and the verb *grab* do not have directly matching words in Icelandic. Instead, functionally equivalent words were used, i.e. *fjörugur* 'lively, merry,

vibrant, playful’ for *playful* and, depending on the context, *grab* was translated as *ná í* ‘≈get, catch’ in the Baby Bird story or by using a more specific word, *bíta* ‘bite’, in the Dog story. Possessive pronouns are more frequently used in English than in Icelandic and were omitted when they seemed redundant.

All four stories start with the expression *One day...* in English. The literal translation sounds somewhat formal and awkward in this context in Icelandic and was therefore translated with *það var einu sinni* ‘it was once’ or *einu sinni var* ‘once (there) was.’ Other examples of differences include inserting a relative clause, as in (1) and (2):

- (1) *Mmm, nice, what do I see here in the nest?*

Icelandic: *Mmm, dásamlegt, hvað er það sem ég sé í hreiðrinu?*

[Literal translation: Mmm, lovely, what is it that I see in the nest?]

- (2) *Meanwhile, the cat noticed the boy’s bucket and thought: I want to grab a fish.*

Icelandic: *Á meðan tók kötturinn eftir fötunni sem strákurinn var með og hugsaði með sér: ég ætla að ná mér í fisk í matinn.*

[Literal translation: Meanwhile, the cat noticed the bucket that the boy was holding and thought: I am going to get myself a fish to eat.]

Finally, although Icelandic does have non-finite clauses, in a few cases complement clauses were used instead because they are more frequent in colloquial language and in child-directed speech. For example, *He looked at the cat chasing the butterfly* was translated as *Hann sá að kötturinn var að elta fiðrildið* ‘He saw that the cat was chasing the butterfly.’

3 Concluding remarks

Living in a multicultural and multilingual society is a relatively new experience in Iceland. Until recently, the population was homogeneous and non-native speakers of Icelandic extremely rare. Over the last two decades, however, this scenery has changed radically with, in particular, an explosion in the number and variety of L2 children in Icelandic schools.

Icelandic is the only official language in Iceland and all instruction in Icelandic schools takes place in Icelandic. In a relatively short time, integrating children from different cultures and linguistic backgrounds and teaching them Icelandic to enable them to benefit from the Icelandic educational system, has become an educational priority. Multicultural policy has been adopted for all school levels and after-school activities. Although expertise in teaching Icelandic as an L2 has taken a leap forward, it still constitutes a real challenge for teachers and other educators. There is an urgent need for research on Icelandic as an L2, for evidence-based teaching methods and for appropriate assessment tools for language and literacy development in both/all children’s languages from early childhood onwards. The purpose of the Icelandic MAIN is, firstly, to contribute to filling the gap in assessment tools for L2 children in Iceland as well as for bi- and multilingual Icelandic children living abroad. It will also, more generally, be useful for the assessment of three to nine-year-old Icelandic children’s overall language

proficiency. Finally, the fact that this common assessment instrument can be used to study the language development of children's learning over sixty different languages, opens up a wealth of interesting research possibilities. To mention just a couple of examples, comparing the L2 development of Polish immigrant children in Iceland on the one hand and in England on the other, could shed light on the importance of the global status of the L2 language for children's acquisition process since, contrary to learning a lingua franca like English, the benefit of learning Icelandic is limited to Iceland. Another example of a research question inspired by the Icelandic context could concern the role of the grammatical characteristics of the L2: What does immigrant children's acquisition of two closely related languages such as Icelandic and Norwegian (or Danish or Swedish) reveal about the role of morphological complexity of the L2 language to be learned?

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5 References

- Berman, R. A. & Slobin, D. I. (Eds.). (1994). *Relating events in narrative: A crosslinguistic developmental study*. Hillsdale, New Jersey/Hove, UK.: Lawrence Erlbaum Associates.
- Bohnacker, U. & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63, iv–xii.
- City of Reykjavik (n.d.). Overview of the languages spoken in Reykjavik. Downloaded from: https://reykjavik.is/sites/default/files/skjol_borgarstjornarfundur/tillogur_og_greinargerdir_fjolfmenninga_rrads.pdf
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, U. & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives. Revised version. *ZAS Papers in Linguistics*, 63.
- Haraldsdóttir, H. P. (2013). *Þátíðarmyndun og stærð íslensks orðaforða tvítyngdra leikskólabarna*. [Bilingual preschool children's past tense inflections and size of Icelandic vocabulary]. M.Ed. thesis. Háskóli Íslands, Reykjavík.
- Ólafsdóttir, S. (2015). *The development of vocabulary and reading comprehension among Icelandic second language learners* [Þróun orðaforða og lesskilnings íslenskra grunnskólanema sem hafa annað móðurmál en íslensku]. (Ph.D.). University of Iceland, Reykjavík.

- Ólafsdóttir, S. & Ragnarsdóttir, H. (2010). *Íslenskur orðaforði íslenskra grunnskólanema sem eiga annað móðurmál en íslensku* [The Icelandic vocabulary of L2 children in Icelandic primary schools]. Menntakvika, Netla. doi: <http://hdl.handle.net/1946/4612>.
- Programme for International Student Assessment (PISA) (2018). Results for PISA 2018, Iceland: http://www.oecd.org/pisa/publications/PISA2018_CN_ISL.pdf
- Ragnarsdóttir, H. (2004). Málþroski barna við upphaf skólagöngu: Sögubygging og samloðun í frásögnum 165 fimm ára barna – almenn einkenni og einstaklingsmunur [Language development at schoolstart: Story structure and cohesion in 165 Icelandic five-year-olds' narratives]. *Uppeldi og menntun*, 13(2), 9–31.
- Ragnarsdóttir, H., Simonsen, H. G. & Plunkett, K. (1999). The acquisition of past tense morphology in Icelandic and Norwegian children: an experimental study. *Journal of child language*, 26(3), 577–618.
- Ragnarsdóttir, H. (1992). Episodic structure and interclausal connectives in Icelandic children's narratives. In R. Söderbergh, (Eds.), *Berättelser för och av barn. Colloquium Paedo-linguisticum Lundensis 1991* (pp. 33–45). Lund University: Department of Linguistics.
- Statistics Iceland (2020). Information about the proportions of immigrants and bilingual children from 1998 to 2019/2017. Accessed on 16 March 2020.
- Strömqvist, S., Johanson, V., & Ragnarsdóttir, H. (2002). Toward a crosslinguistic comparison of lexical quanta in speech and writing. *Written Language and Literacy*, 5(1), 45–67.
- Thordardóttir, E. T., & Juliusdóttir, A. G. (2013). Icelandic as a second language: a longitudinal study of language knowledge and processing by school-age children. *International Journal of Bilingual Education and Bilingualism*, 16(4), 411–435.

Adapting MAIN to Irish (Gaeilge)

Mary-Pat O'Malley

National University of Ireland

Stanislava Antonijevic

National University of Ireland

Irish (Gaeilge) is the first official language of the Republic of Ireland. It is a fast-changing, endangered language. Almost universal bilingualism (i.e. almost all Irish speakers also speak English), frequent code-switching to English, and loan words are features of the sociolinguistic context in which the language is spoken. This paper describes the adaptation of the Language Impairment Testing in Multilingual Settings - Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, Gagarina et al., 2019) to Irish. Data was collected using the retell mode (Cat story) and the comprehension questions. Eighteen children participated ranging in age from 5;3 to 8;7 (six female and 12 male). Results suggest that story structure is not sensitive to exposure to Irish at home and indicate that MAIN Gaeilge (Irish) is a promising tool for assessing language in Irish-speaking children from a range of Irish language backgrounds.

1 Introduction

Language assessment is a complex task requiring clinicians to distinguish between typical and atypical development across a range of language domains including syntax, semantics, morphology, and pragmatics. For multilingual children, language assessment requires clinicians to distinguish between language differences (compared to monolinguals) associated with multilingualism, length and amount of exposure, and genuine language impairments (Kohnert, 2013; Li'el, Williams & Kane 2020). In order to do this, clinicians rely on a range of measures from norm-referenced standardised tests to criterion-referenced language measures (Ebert & Scott, 2014). Norm-referenced tests have long been identified as inadequate for assessing language in multilingual children due to cultural, content, and linguistic bias (De Lamo White & Jin 2011). Accurate assessment of multilingual children continues to be a critical need for clinicians as global demographics have changed and continue to do so (Peña, Gillam & Bedore, 2014; Rethfeld, 2019; Wiefferink, van Beugen, Sleswijk & Gerrits, 2020).

The importance of narrative as a component of language assessment is well-recognised as is the relationship between narrative development, literacy, and academic success (Boudreau, 2008; Pinto, Tarchi & Bigozzi, 2018). Narratives are considered a more authentic means of assessing children's language than traditional measures (Justice, Bowles, Pense & Goss, 2010). Furthermore, as narratives are common across cultures, they can provide a language assessment context that is likely to result in lower levels of test bias than traditional standardised testing (Peña, Gillam & Bedore, 2014).

The Language Impairment Testing in Multilingual Settings - Multilingual Assessment Instrument for Narratives (LITMUS-MAIN; henceforth MAIN, Gagarina et al., 2012; 2015; 2019) was developed in order to assess narrative comprehension and production in bilingual children aged 3-10 years. It was developed by the Narrative and Discourse working group of COST Action IS0804 (a trans-European research network) as part of the LITMUS test battery (Armon-Lotem, de Jong & Meir, 2015). The MAIN (Gagarina et al., 2012; 2019) allows clinicians to assess a range of linguistic features in context: *macrostructure* (the story grammar components of goal (G), attempt (A), outcome (O), and internal states which initiate the goal (IST as IE) and express the reaction (IST as R) based on Stein and Glenn (1979)) and *microstructure* (lexical diversity and aspects of morpho-syntax) (Gagarina, et al., 2015). It is assumed that macrostructure is universal and not language specific. For example, Boerma, Leseman, Timmermeister, Wijnen and Blom (2016) found equal performance of monolingual and bilingual children on MAIN (Gagarina et al., 2012) demonstrating that measures of macrostructure tend not to be affected by factors such as length of exposure. While some studies show that macrostructure scores tend to increase with age (Bohnacker, 2016; Gagarina, 2016; Kapalková, Polišenská & Marková, 2016), other studies have found that this applies only to story complexity and comprehension scores and not to story structure and internal state terms (ISTs) (Maviş et al., 2016). In a pilot study, Gagarina et al. (2015) found no differences in story structure scores across a number of language pairings even when children had varying levels of ability in their two languages. However, other studies have reported stronger performance in the dominant language for younger children, differences which were not (as) evident in older children (Bohnacker, 2016; Roch et al., 2016).

2 A brief description of the Irish language: a focus on morpho-syntax

Irish is a Celtic, VSO language. The basic order of elements is: Verb + Subject + X where X can be object, indirect object, adverbial, prepositional phrase, verbal noun, and so on (Hickey, 2012). Negatives and interrogatives are marked by the appropriate particle in front of the verb. Apart from the 11 irregular verbs, the verb pattern is highly regular. The Irish alphabet has 18 letters. Extended vowel length is signalled by a length mark over the vowel, known as a *fada*. For example: the word for 'hand' is *lámh* [lɔ:v] while the word for 'hat' is *hata* [hata]. It has a relatively high phoneme count with variations in pronunciation between the three main dialects (Ulster, Munster, and Connaught). Further dialectal variations are found within each of those

three main dialects. Irish educational authorities explicitly recognise local dialects as the target variety for pre-schools in *Gaeltacht* areas (Ó Murchadha, 2016).

Initial consonant mutations (IMs) for expressing grammatical functions such as verb inflections, case, number, and gender agreement with prepositions, articles, and adjectives are a prominent feature of the language (see Müller, Muckley & Antonijevic-Elliott, 2019 for further details on IM). Irish is undergoing a rapid process of language change at present, and the IM system is affected by this process in that many fluent Irish speakers show inconsistent use of IMs in their spoken language (Müller et al., 2019). Additional language changes in each new generation of speakers have been documented including frequent code switching to English and the use of loan words, idioms, and direct translations from English (Ó Catháin, 2016; Pétrváry et al., 2014). As a result of this rapid language change, the quality of language exposure for children acquiring Irish is variable and does not necessarily conform to the formal grammatical standards. Because of that, it is difficult to decide upon the criteria for assessing grammatical accuracy in children's language (Antonijevic, Muckley & Müller, 2020; Nic Fhlannchadha & Hickey, 2019). Therefore, using MAIN Gaeilge (Irish) and focussing on the macrostructure measures might be more efficient in distinguishing between Irish-speaking children with typical language development and those with Developmental Language Disorder (DLD).

2.1 *The Irish language: current sociolinguistic context*

Irish is a threatened, fast-changing minority language. It is the first official language of the Republic of Ireland. English is the second official language and the dominant majority language. In the 2016 Irish Census, 1.7% of respondents (73,803 individuals) reported speaking Irish on a daily basis outside of the education system (Central Statistics Office, 2017). Almost all children speaking Irish as their first language (L1) are growing up bilingually, as they can also speak their second language (L2, English) competently by the time they reach middle childhood, i.e. 6-13 years of age (Nic Fhlannachá & Hickey, 2019). O'Toole and Hickey (2016) noted universal bilingualism among Irish speakers for over two decades and remarked on the current rarity of monolingualism among Irish speakers. The profile of Irish speakers has changed from traditional, rural, native speakers to encompass "growing numbers of young, middle class, urban L2 speakers" (O'Toole & Hickey, 2016: 147).

While the reality of almost universal bilingualism is generally accepted, it is difficult to define the exact Age of Acquisition (AoA) of English as children tend to be exposed to English from an early age: in their wider community, via extended family, mass media, and public services (Hickey, 2007; 2016). It is also difficult to accurately identify the amount of exposure to Irish and English due to the dominant use of English by the general population and frequent code-switching in the Irish-English bilingual communities. High levels of contact between the two languages is believed to have given rise to the current sociolinguistic context for Irish (Hickey, 2007). Another potentially contributing factor is the relative morpho-syntactic complexity of Irish which has been described briefly above. Density of Irish speakers is highest in the *Gaeltacht* areas, the districts officially recognised by the Government of Ireland as Irish-

speaking communities. In these districts, over 60% of people stated that they could speak Irish while 21% reported that they speak Irish daily outside of education (CSO, 2017).

2.2 *The Irish language and education*

According to recent reports, a total of 252 Irish-medium primary schools catering for 45,568 pupils are in operation in the Republic of Ireland. Of these, 105 schools (7,633 pupils) are in the *Gaeltacht* areas while 147 schools (37,935 pupils) are located outside of *Gaeltacht* areas (Department of Education & Skills 2019). In terms of state support, the Department of Education and Skills Policy on *Gaeltacht* Education 2017-2022 forms part of the government's 20-year strategy for the Irish language to maintain and extend the use of Irish as a spoken language. Children growing up in *Gaeltacht* areas typically attend local Irish-medium pre-schools (*naíonraí*) and schools (*Gaelscoileanna*). However, research suggests that there is significant variation in the amount of Irish spoken in different Irish-medium education settings (Hickey, 2001; 2007). Due to demographic changes in *Gaeltacht* areas, children in these areas attending Irish-medium education are likely to have varying exposure to Irish at home. The exposure can range from predominantly Irish to predominantly English exposure at home (Mac Donnacha, Ní Chualáin, Ní Sheaghdha & Ní Mhainín, 2004). As a result, Irish-medium primary schools in *Gaeltacht* areas tend to show variability in their adherence to Irish-medium teaching as classes contain both children with Irish as L1 and children with Irish as L2 (Nic Fhlannchadha & Hickey, 2019). On the other hand, most children attending Irish-medium schools outside of *Gaeltacht* areas have no or minimal amount of Irish at home, and in that sense form a homogenous group immersed in Irish at the same time and with equivalent language exposure (Antonijevic, Durham & Ni Chonghaile, 2017).

3 **Adapting MAIN to Irish**

Given the specific sociolinguistic context in Ireland outlined above, we needed to take the influence of English and universal bilingualism into account when adapting MAIN to Irish. Therefore, we decided to develop a bilingual adaptation, MAIN Gaeilge (Irish). This bilingual version contains the instructions in English (the same as the English version of MAIN), Irish and English versions of the parental questionnaire, story scripts in Irish, and scoring forms with titles and concepts in English while the examples of correct and incorrect response are given in Irish. The decision to produce a bilingual adaptation was informed by a range of factors. All speech and language therapists working with bilingual Irish-English children are themselves bilingual Irish-English speakers. Programmes for the professional qualification of speech and language therapists in Ireland are delivered exclusively through English and as a result speech and language therapists acquire relevant linguistic terminology only in English. Therefore, we felt that having the administration instructions in English and bilingual scoring sheets, particularly for story structure and story complexity, would render the process of administration and scoring more accessible for speech and language therapists. We kept terms such as G, A,

O, IST, structural complexity, retelling etc. in English on the forms. An additional reason for bilingual scoring sheets is that speech and language therapists working with Irish-speaking families have varying levels of written language proficiency. Similarly, some parents raising their children through Irish may be more confident readers in English and may prefer to complete the parental questionnaire in English. These are the factors which informed the decision to produce a bilingual adaptation. We wish to acknowledge the input of Anna Ní Choirbín, Gearóid Ó Cadhain, and Kevin Conboy for the adaptation of the parental questionnaire to Irish. We wish in particular to acknowledge Anna Ní Choirbín for her assistance with naturalness of the story scripts and comprehension questions, and for assistance with questions of grammatical accuracy and spelling.

As outlined in the instructions for the adaptation of MAIN (Bohnacker & Gagarina, 2019), we only began the adaptation once we were thoroughly familiar with the manual and the entire instrument. Using the revised 2019 English version (Gagarina et al., 2019) as the template, we adapted the story scripts to Irish. We opted to adapt MAIN to the Irish language rather than complete a direct translation due to the issues associated with translation of tests from one language to another identified by Paradis, Crago, and Genesee (2011). An accepted unitary norm for spoken Irish does not exist and the “absence of diverse local and regional written norms based on the de facto target spoken models of the Gaeltacht dialects” has been noted (Ó Murchadha, 2016:208). As mentioned above, there are three *Gaeltacht* dialects: Connaught Irish, Munster Irish, and Ulster Irish. For this version of MAIN Gaeilge (Irish), we used the Connaught and Munster dialects. In future, we plan to include Ulster Irish variations in the scoring sheets.

We kept the GAO sequences and ISTs for each protagonist consistent with the English version, and aimed to keep the number of words per story as close to the English as possible within the constraints of the language. See Table 1 for comparisons of the English and Irish versions in relation to number of words per story. The adaptation of the story scripts was checked carefully by two members of the team to ensure naturalness and we arrived at the final version through consensus. This meant that rather than a direct translation, we adapted the stories to sound natural in the dialects while still preserving the content of the stories. We also preserved the same logical sequence of clauses and utterances. With respect to lexicon, we used basic level terms based on the experience of both team members and O’Toole and Fletcher (2012).

Table 1: Comparison of the number of words across the MAIN-stories (Gagarina et al., 2019).

Story	# of words in English	# of words in Irish
Cat	178	213
Dog	174	207
Baby Birds	178	206
Baby Goats	185	201

The main focus to date has been on macrostructure given the need for an assessment tool that is not sensitive to the variations relevant to the Irish context outlined above (i.e. the varying

language backgrounds of children in Irish-medium education and the fact that the language itself is in the process of rapid change). Regarding microstructure we have kept the number of ISTs and direct speech sentences the same overall and have endeavoured to keep the number of subordinating and co-ordinating constructions (+/- 2) as close to the English version as possible within the constraints of the language. The Cat story is presented in both languages in Table 2 as an example of the adaptation to Irish.

Table 2: The three episodes of Cat story in Irish and English with GAO and ISTs identified. The marking of story structure components and internal state terms is marked in the text as per the MAIN manual (Gagarina et al., 2019) i.e.: (goal attempt... outcome *internal state terms*).

Pictures	Irish Total # of words 213	English Total # of words 178
1, 2	Lá amháin, bhí cat <i>spráúil</i> ann a <i>chonaic</i> féileacán buí ina shuí ar thor. <u>Léim sé amach</u> mar <u>bhí Sé ag iarraidh greim a fháil air</u> . Idir an dá linn, bhí buachaill <i>gealgháireach</i> ag teacht ar ais ó bheith ag iascaireacht le buicéad agus liathróid ina lámha aige. <i>D'fhéach sé</i> ar an gcat ag dul i ndiaidh an fhéileacáin.	One day there was a <i>playful</i> cat who <i>saw</i> a yellow butterfly sitting on a bush. He <u>leaped forward</u> because he <u>wanted to catch it</u> . Meanwhile, a <i>cheerful</i> boy was coming back from fishing with a bucket and a ball in his hands. He <i>looked</i> at the cat chasing the butterfly.
3, 4	D'éitil an féileacán leis go tapa agus <u>thit an cat isteach sa tor</u> . <i>Ghortaigh sé é féin</i> agus bhí <i>an-fhearg</i> air. <i>Baineadh geit</i> as an mbuachaill agus thit an liathróid amach as a lámh. Nuair a <i>chonaic</i> sé a liathróid ag rolladh isteach san uisce, <i>lig sé béic as, ag rá</i> : “Ó, ná habair, seo léi mo liathróid.” Bhí <i>brón</i> air agus bhí sé <u>ag iarraidh a liathróid a fháil ar ais</u> . Idir an dá linn, <i>thug</i> an cat buicéad an bhuachalla <i>faoi deara</i> agus <i>chuimhnigh</i> sé air féin: “Tá mise ag iarraidh <u>iasc a sciobadh</u> .”	The <u>butterfly flew away</u> quickly and the <u>cat fell into the bush</u> . He <i>hurt</i> himself and was very <i>angry</i> . The boy was so <i>startled</i> that the ball fell out of his hand. When he <i>saw</i> his ball rolling into the water, he <i>cried</i> : “Oh no, there goes my ball”. He was <i>sad</i> and <u>wanted to get his ball back</u> . Meanwhile, the cat <i>noticed</i> the boy's bucket and <i>thought</i> : “I want to <u>grab a fish</u> .”
5, 6	Ag an am céanna, thosaigh an buachaill <u>ag tarraingt a liathróide amach</u> as an uisce lena shlat iascaigh. Níor <i>thug sé faoi deara</i> go raibh <u>an cat tar éis a iasc a sciobadh</u> . Ar deireadh, bhí an cat <i>an-sásta</i> leis féin <u>iasc chomh blasta a ithe</u> agus bhí <i>áthas</i> ar an mbuachaill <u>a liathróid a fháil ar ais</u> .	At the same time the boy began <u>pulling his ball out</u> of the water with his fishing rod. He did not <i>notice</i> that the <u>cat had grabbed a fish</u> . In the end, the cat was very <i>pleased</i> to <u>eat such a tasty fish</u> and the boy was <i>happy</i> to <u>have his ball back</u> .

With respect to the scoring forms, as there are numerous possibilities for describing G, A, or O in Irish and as we could not anticipate all possible responses, we therefore added an instruction in English in the scoring sheet to the effect that other acceptable responses could be considered. We decided to do this so that researchers and speech and language therapists using MAIN

Gaeilge (Irish) could score responses from children that were not included in the list of correct responses, but still adhered to the desired element G, A, O. With respect to the ten comprehension questions, they were adapted to Irish with a focus on sounding natural while continuing to maintain the questions’ focus on the specific goal or internal state term as initiating event or reaction.

4 Piloting MAIN: Gaeilge (Irish)

Antonijevic, O’Connell, Randle and O’Malley-Keighran (submitted) examined production and comprehension of narrative macrostructure using MAIN Gaeilge (Irish). Eighteen Irish-English bilingual participants (6 female and 12 male), age 5;3 – 8;7 who attended Irish-medium schools were assessed with the Cat story in the retelling elicitation mode, followed by the ten comprehension questions. For this study, story structure, ISTs, and comprehension were analysed. The average narrative story structure scores were compared to the scores of previous studies that also used the retelling mode and whose participants were immersed in their L2 via their education (Roch et al., 2016; Maviş et al., 2016). A comparison of scores for story structure, ISTs, and comprehension are presented in Table 3. While the mean story structure score for Irish was higher than in the other two studies and the mean ISTs score was relatively similar, the mean comprehension score was lower. Participants’ age, exposure to Irish at home, socioeconomic status, birth order, and the number of siblings did not influence the story structure scores, IST score and the comprehension score. Therefore, the current findings suggest that the story structure scores may not be sensitive to children’s language exposure at home when they attend immersion education. While additional data are needed to further explore the influence of exposure to Irish at home and in the broader community on the narrative production and comprehension, these early findings suggest that MAIN Gaeilge (Irish) is not sensitive to the variability of exposure to Irish at home and therefore open a possibility that MAIN Gaeilge (Irish) could be used as part of language assessment for all children attending Irish-medium schools across the country.

Table 3: Means and standard deviations (SDs) for story structure, IST and comprehension obtained in studies by Antonijevic et al. (submitted) for Irish, Roch et al. (2016) for Italian and English, and Mavis et al. (2016) for Turkish.

	Antonijevic et al. (submitted)	Roch et al. (2016)*		Maviş et al. (2016)
Mean age in months (SD)	79 (14.77)	71.5 (3.5)		59 (19)
Language	Irish	L1 Italian	L2 English	L1 Turkish
Story structure (SD)	9.11 (2.08)	7.10	5.75	7.23 (1.90)
IST (SD)	3.44 (1.04)	4.00	3.20	5.15 (2.60)
Comprehension (SD)	5.56 (2.85)	8.25	7.00	7.85 (2.20)

* Results for the younger and older age group were averaged.

5 Challenges and adaptations/changes to the MAIN Gaeilge (Irish) after piloting

In this section we briefly explore minor challenges that we experienced during administration of the MAIN Gaeilge (Irish), the minor adaptations we made to the scoring forms as a result of these challenges, and considerations for future versions of the MAIN Gaeilge (Irish).

5.1 Challenges with the comprehension questions

In the pilot study, almost all participants struggled with the questions focusing on internal state terms as reactions e.g., D2: *How does the cat feel?* We translated this as *Conas a bhraitheann an cat? Conas a mhothaíonn an cat? Cén chaoi a mbraitheann an cat? Cén chaoi a bhfuil an cat ansin?* These are all ways of asking ‘How does the cat feel?’ in Irish. However, participants still struggled to answer the question despite the fact that the tester also points to the relevant picture while asking the question. In personal conversation, Tadhg Ó hÍfearnáin, professor of modern Irish at NUI Galway, suggested the following nuances: *Meastú céard a bhraitheann an cat? / cén dóigh a mhothaíonn an cat, dar leat? Conas atá ag an gcat, dar leat? Conas a bhraitheann an cat, dar leat?* These structures invite the child’s opinion e.g. ‘how do you think the cat is feeling/the cat feels?’ Although this is not exactly the same formulation as in the original MAIN (Gagarina et al., 2019), it is an adaptation that might be more appropriate for the Irish language context. This is an empirical question that needs to be addressed in future studies. Another potentially influencing factor related to the children’s difficulties answering the comprehension questions focusing on internal state terms as reactions is the general sociolinguistic context of Irish: children’s experiences with a limited number of speakers in contracting domains of use may influence their comprehension of such terms (Hickey, 2007; Nic Fhlannchadha & Hickey, 2019).

5.2 Adaptations to the story structure scoring and internal state terms score forms

With respect to scoring and the sociolinguistic context outlined above, participants were occasionally found to mix the language codes in their retelling of the story (Antonijevic et al. submitted). Consider for example, the utterance in (1) (Irish is marked in bold, English in italics).

- (1) ***Léim sé thall ar an butterfly***
‘he jumped over on the butterfly’ (participant P 20SS06).

In the pilot study reported above (Section 4), we decided to award a score of 1 point irrespective of the language in which it was produced. Following this approach, the utterance in (1) received 1 point on the component A4 A, although the crucial noun was in English and not in Irish. This ‘bilingual’ approach to the scoring was not specified in the MAIN Gaeilge (Irish) manual, and we acknowledge that while it deviates from how scoring is done with MAIN (Gagarina et al.,

2015) when investigating a participant's score in one language, it does take into account the almost universal bilingualism of the Irish sociolinguistic context outlined above. The same participant also produced the utterance in (2), which received 1 point on the component A5 O.

(2) *an cat stuck istigh an bush*

'the cat stuck in the bush' (participant P 20SS06).

We now intend to conduct further, detailed exploration of code-switching patterns in both the data reported here and in future data as outlined below. We intend to reconsider the issue of scoring instructions in the manual in order to ensure scoring that is sensitive to the children's sociolinguistic context and patterns of language use.

Regarding ISTs, some lexical items were added to the list of possible responses after the pilot study, for example: *mí-shásta* 'displeased/dissatisfied', *scanrúil* 'frightening/frightful') and *aerach* 'lively' (emotion terms), and *bhí idea* 'he had an idea' (mental verbs).

6 Conclusion and future plans

Having completed a pilot study using the MAIN Gaeilge (Irish) and added the above-mentioned modifications, we now aim to systematically collect data focusing on Irish speakers from different language backgrounds:

- a) children from Irish-dominant homes living in *Gaeltacht* areas and attending *Gaelscoileanna* (Irish-medium schools);
- b) those from English-dominant homes living in *Gaeltacht* areas and attending *Gaelscoileanna*, and
- c) those living in English-dominant areas that are immersed in Irish through education (if possible, from both Irish and from English dominant homes).

This proposed investigation would provide baseline data and guidelines for narrative assessment for Irish-speaking school-aged children from different language backgrounds. Having a single, valid, reliable, quick, and easy to administer tool that can be used for assessing language in children from different language environments would greatly improve speech and language therapy services for Irish-speakers as the current range of language assessments in Irish is limited. This proposed research will also allow us to further adjust the MAIN Gaeilge (Irish) where necessary.

7 References

Antonijevic, S., Durham, R., & Ní Chonghaile, I. (2017). Language performance of sequential bilinguals on an Irish and English sentence repetition task. *Linguistic Approaches to Bilingualism*, 7, 359–393.

- Antonijevic, S., Muckley, S.A., & Müller, N. (2020). The role of consistency in use of morphosyntactic forms in child-directed speech in the acquisition of Irish, a minority language undergoing rapid language change. *Journal of Child Language*, 47, 267–288.
- Antonijevic, S., O'Connell, M., Randle, A., & O'Malley-Keighran, M.P. (submitted). Exploring relationships between, narrative macrostructure and background factors in story organisation: MAIN in the Irish Language. Submitted to *Linguistic Approaches to Bilingualism*.
- Armon-Lotem, S., & de Jong, J. (2015). Introduction. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Methods for Assessing Multilingual Children: Disentangling Bilingualism from Language Impairment* (pp. 1–22). Bristol: Multilingual Matters.
- Boerma, T., Leseman, P., Timmermeister, M., Wijnen, F. & Blom, E. (2016). Narrative abilities of monolingual and bilingual children with and without language impairment: implications for clinical practice. *International Journal of Language & Communication Disorders*, 51, 626–638.
- Bohnacker, U. (2016). Tell me a story in English or Swedish: Narrative production and comprehension in bilingual preschoolers and first graders. *Applied Psycholinguistics*, 37(1), 19–48.
- Bohnacker, U., Gagarina, N., & Lindgren, J. (2019), Macrostructural organization of adults' oral narratives. *ZAS Papers in Linguistics*, 62, 190–208.
- Central Statistics Office, (2017). *Census 2016 Summary Results- Part 1*. Retrieved on March 5th 2020 from <https://www.cso.ie/en/csolatestnews/presspages/2017/census2016summaryresults-part1/>.
- De Lamo White, C. & Jinn, L. (2011). Evaluation of speech and language assessment approaches with bilingual children. *International Journal of Language & Communication Disorders*, 46(6), 613–627.
- Department of Education & Skills (2019) Press release: Minister McHugh announces plan to double number of students in Irish-medium education. Retrieved on May 28th 2020 from <https://www.education.ie/en/Press-Events/Press-Releases/2019-press-releases/PR19-12-30.htm>.
- Department of Education & Skills (2016) Policy on Gaeltacht Education 2017-2022. Retrieved on May 28th 2020 from <https://www.education.ie/en/Publications/Policy-Reports/Policy-on-Gaeltacht-Education-2017-2022.pdf>.
- Department of Education & Skills (2013) 20 year strategy for the Irish language 2010-2030. Retrieved on May 28th 2020 from <https://www.education.ie/en/Publications/Policy-Reports/20-Year-Strategy-for-the-Irish-Language-2010-2030.pdf>.
- Ebert, K. & Scott, C. (2014). Relationships between narrative language samples and norm-referenced test scores in language assessments of school-aged children. *Language, Speech, & Hearing Services in Schools*, 45, 337–350.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 63.
- Gagarina, N. (2016). Narratives of Russian–German preschool and primary school bilinguals: Rasskaz and Erzählung. *Applied Psycholinguistics*, 37(1), 91–122.

- Gagarina, N., Klop, D., Tsimpli, I., & Walters, J. (2016). Narrative abilities in bilingual children. *Applied Psycholinguistics*, 37, 11–17.
- Hickey, T. (2001). Mixed beginners and native speakers in minority language immersion: who is immersing whom? *Canadian Modern Language Review*, 57(3), 443–474.
- Hickey, T. M. (2007). Children's language networks and teachers' input in minority language immersion: What goes in may not come out. *Language and Education*, 21(1), 46–65.
- Hickey, T. (2012). ILARSP: A grammatical profile of Irish. In Ball, M. Crystal, D., & Fletcher, P. (eds.) *Assessing Grammar: The Languages of LARSP*. pp 149-166. Bristol: Multilingual Matters.
- Irish Times (2019). *Number of Primary school pupils taught through Irish at record level*. Retrieved on May 27th 2020 from <https://www.irishtimes.com/news/education/number-of-primary-school-pupils-taught-through-irish-at-record-level-1.4011570>.
- Justice, L., Bowles, R., Pense, K., & Goss, C. (2010). A scalable tool for assessing children's language abilities within a narrative context: The Narrative Assessment Protocol (NAP). *Early Childhood Research Quarterly*, 25(2), 218–234.
- Kapalková, S., Polišíenská, K., Marková, L., & Fenton, J. (2016). Narrative abilities in early successive bilingual Slovak–English children: A cross-language comparison. *Applied Psycholinguistics*, 37(1), 145–164.
- Kohnert, K. (2013). *Language disorders in bilingual children and adults*. (2nd ed.) USA: Plural Publishing.
- Li'el, Williams, Kane (2020). Identifying developmental language disorder in children from diverse linguistic backgrounds. *International Journal of Speech Language Pathology*, 21(6), 613–622.
- Mac Donnacha, S., Ní Chualáin, F., Ní Sheaghda, A., & Ní Mhainín, T. (2004). *Staid reatha na scoileanna Gaeltachta: A study of Gaeltacht schools 2004*. Dublin, Ireland: An Chomhairle um Oideachas Gaeltachta agus Gaelscolaíochta.
- Mavis, I., Tunçer, M., and Gagarina, N. (2016). Macrostructure components in narrations of Turkish-German bilingual children. *Applied Psycholinguistics*, 37(1), 69–89.
- Müller, N., Muckley, S.A., and Antonijevic-Elliott, S., (2019). Where phonology meets morphology in the context of rapid language change and universal bilingualism: Irish initial mutations in child language. *Clinical Linguistics & Phonetics*, 33(1-2), 3–19.
- Nic Fhlannchadha, S. and Hickey, T.M., (2019). Assessing children's proficiency in a minority language: exploring the relationships between home language exposure, test performance and teacher and parent ratings of school-age Irish-English bilinguals. *Language and Education*, 1–20.
- Ó Catháin, B. (2016). The Irish Language in Present-day Ireland. In R. Hickey (Ed.), *Sociolinguistics in Ireland* (pp. 41–59). London, UK: Palgrave Macmillan.
- O'Toole, C. and Fletcher, P. (2012). Profiling vocabulary acquisition in Irish. *Journal of Child Language*, 39, 205–220.
- O'Toole, C. and Hickey, T. (2016). Bilingual language acquisition in a minority context: using the Irish-English Communicative Development Inventory to track acquisition of an endangered language. *International Journal of Bilingual Education & Bilingualism*, 20(2), 146–162.
- Paradis, J., Genesee, F., & Crago, M. (2011). *Dual language development and disorders: A handbook on bilingualism and second language learning*. (2nd ed.). London: Paul Brookes Publishing.

- Peña, E., Gillam, R., & Bedore, L. (2014). Dynamic assessment of narrative ability in English accurately identifies language impairment in English language learners. *Journal of Speech, Language, & Hearing Research*, 57, 2208–2220.
- Péterváry, T. Ó Curnáin, B. Ó Giollagáin, C. and Sheahan, J. (2014). Iniúchadh ar an gCumas Dátheangach; An Sealbhú teanga i measc ghlúin óg na Gaeltachta. *Analysis of Bilingual Competence; Language acquisition among young people in the Gaeltacht*. Dublin: An Chomhairle um Oideachas Gaeltachta & Gaelscolaíochta.
- Pinto, G., Tarchi, C., & Bigozzi, L. (2018). Promoting narrative competence in kindergarten: an intervention study. *Early Childhood Research Quarterly*, 47, 20–29.
- Rethfeld, W. (2019). Speech and language therapy services for multilingual children with migration background: a cross-sectional survey in Germany. *Folia Phoniatica et Logopaedica*, 71, 116–126.
- Roch, M., Florit, E., & Levorato, C. (2016). Narrative competence of Italian–English bilingual children between 5 and 7 years. *Applied Psycholinguistics*, 37(1), 49–67.
- Stein, N.L. & Glenn, C.G. (1979). An analysis of story comprehension in elementary school children. In R. Freedle (ed.). *Discourse processing: Multidisciplinary perspectives* (pp. 53-120). Norwood, NJ: Ablex.
- Wiefferink, K., van Beugen, C., Sleswijk, B., & Gerrits, E. (2020). Children with language delay referred to Dutch speech and hearing centres: caseload characteristics. *International Journal of Language & Communication Disorders*. doi: 10.1111/1460-6984.12540.

Italian adaptation of the Multilingual Assessment Instrument for Narratives

Chiara Levorato

University of Padova

Maja Roch

University of Padova

This paper presents the Italian version of the Multilingual Assessment tool for Narratives (MAIN), describes how it was developed and reports on some recent uses of MAIN within the Italian context. The Italian MAIN has been used in different research projects and for clinical purposes; results have been presented at conferences and in peer reviewed papers. The results indicate that MAIN is an appropriate assessment tool for evaluating children's narrative competence, in production and comprehension from preschool age (5 years) to school age (8 years) in typical language development, bilingual development and language delay/disorders.

1 Importance of narrative assessment in the Italian Context

The study and the assessment of the narrative competence and its development, in particular during the preschool age, is important for several reasons. First, as narratives are pervasive in children's everyday life, they represent the foundation for building world knowledge (Bruner, 1988). Second, narrative competence is related to further development of literacy and school achievement (Bonifacci, 2018; Florit & Levorato, 2015). Third, for researchers, narratives are adequate to get rich information on the language proficiency of children. In fact, when children produce narratives, they have to integrate in a single output – the story – information originating from different language systems. For these reasons, clinicians and researchers consider the analysis of narrative competence an ecologically effective tool to investigate communication competence in children (Iluz-Cohen & Walters, 2012; Pearson, 2002; Squires et al., 2014).

To date, research on the development of narrative competence in Italy has focused mainly on monolingual children (Lever & Sénéchal, 2011; Silva, Strasser & Cain, 2014) and only recently the focus has included bilingual children (Roch & Florit, 2013; Roch, Florit &

Levorato, 2016). The research on the development of narrative competence, which is important for the reasons outlined above, is of particular importance in the field of bilingualism, as it allows to analyse the linguistic development of the bilingual child in both languages and the relationship between them (Pearson, 2002; Roch, Florit & Levorato 2018). Our effort in the last 10 years has been to contribute to the development and adaptation of the MAIN tool in order to be used in the Italian context, both for research and clinical purposes (Roch, 2017).

2 Developing MAIN for Italian

The Multilingual Assessment Instrument for Narratives (MAIN, Gagarina et al., 2012; 2015) was developed within the Narrative and Discourse Working Group (WG2) of the COST Action IS0804, “Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment”. MAIN is part of the battery of tests known as the Language Impairment Testing in Multilingual Settings (LITMUS) battery, which have been developed within the same COST Action. We were members of the Working Group during and after the COST Action. We worked with other members under the leadership of a core group to develop materials and pilot-test MAIN versions in other languages. When MAIN was first published, it was released in 26 language versions, including Italian (see Gagarina et al., 2012).

The Italian version of MAIN has been adapted from the English version. The Italian team worked on the adaptation of the MAIN instrument taking into consideration the linguistic properties of instructions, questions, and answers and comparing the Italian with the English versions. This was done in order to obtain an Italian version parallel to the English one, in terms of performance. The focus was both on cross-cultural, conceptual but also on linguistic equivalence. In order to reach this goal, we used a well-established method: forward and backward translation.

The first Italian MAIN manual included results of 62 Italian-English bilingual children, aged between 5 and 7 years. These results were reported at COST meetings and workshops and it was published in an international peer reviewed journal (Roch, Florit & Levorato, 2016). An updated version of the English MAIN and the manual for its use was released in 2019 (Gagarina et al., 2019). It includes various changes, correction of minor errors and clarifications in some instructions and tables. This was the base for a new Italian version, which is published along with this paper.

3 Using MAIN in Italy

Since it was developed in 2012, the Italian version of MAIN has been used in several research projects that mainly involve bilingual children living in the Italian speaking context, aged between 5 and 8 years. So far, we have collected about 160 narratives in different projects.

Some of these studies have been published, others have been accepted by research journals, and still others are being drafted for submission.

Moreover, the tool has been disseminated through training courses, to operators, mainly psychologists, linguists and speech therapists. Additionally, the tool has been presented in a recent publication, an Italian manual focusing on the linguistic development of bilingual children (Levorato & Marini, 2019, and in particular Roch & Dicaldo, 2019; Roch, Florit & Levorato, 2018). As a result of this dissemination, speech therapists increasingly request to use the tool in clinical settings. They report that the tool is appropriate for assessing the narrative skills of preschool and school children, both monolingual and bilingual, with atypical and/ delayed linguistic development.

3.1 Using the Italian MAIN: general results

In recent years, the Italian MAIN has been used in several projects, some of which have been completed, while others are still ongoing. Some of these works have been published, and therefore are available to the scientific community (see Roch, Florit & Levorato, 2016; Roch & Hrzica, in press; Hrzica & Roch, in press), other works have been presented at relevant national and international conferences, whereas others have not yet been published. Below we provide a summary of the results obtained to date, integrating all the projects that have involved the Italian MAIN.

Within the age range of the participants included in our projects, i.e. between 5 and 8 years of age, we observed an important change in linguistic development, which concerns the increasing ability to produce more and more complex narratives; at the same time, narrative comprehension gradually becomes deeper.

As for the production of narratives, preschoolers tend to produce short stories, in which they connect two events, but often omit events relevant to the understanding of the story. In addition, they often produce stories in the wrong sequence. In the transition to primary school, children tend to construct stories in the correct sequence from a temporal point of view, although the stories are often incomplete. In the early years of primary school, children sharpen their ability to produce stories and tend to produce well-structured stories according to the story grammar and the events narrated tend to be linked by temporal and causal connections.

This developmental trajectory sees the inclusion of a greater number of elements within the texts produced (the stories are longer), so at the time of entering the primary school at age 6 the child is able to narrate a sequence of actions and events and knows how to use appropriate language from a lexical and morphosyntactic point of view to produce them. Moreover, in parallel with the development of the ability to tell a story following pictured stories, the ability to include elements concerning the internal states of the narrative characters develops, starting from pre-school age. At this age children begin to include in their stories references to the perceptions, emotions, thoughts and desires of the characters. Towards the age of 5, in parallel with the development of the theory of the mind, the sequences of events in the story are narrated according to the purpose to which they are directed and explanations

are given about the characters' motivations. The ability to make judgements about the characters' motivations and psychological characteristics is further developed during school age.

To sum up, the results achieved so far through the use of the Italian MAIN indicated that, when they develop, children tend to include a greater number of events, mental states, but especially with age they tend to increase the complexity and coherence of the narratives they produce. Stories produced by older children include more temporal and causal relationships between events than those of younger children and focus more on the internal states of the characters and their motivations.

As far as the comprehension of pictured narratives is concerned, the results of our work show that the understanding of stories generally improves with age, but above all, it becomes deeper: in fact, in the transition from preschool to school age there is a better understanding of the goals and motivations of the characters, and only after the age of 7, the understanding of the internal states of the characters is adequate.

3.2 *Using the Italian MAIN with bilinguals*

There are different tasks within the Italian context that are used to test narrative competence, among which are telling and retelling. To our knowledge, at the moment, MAIN is the only tool available for the evaluation of the bilingual child in both languages, and with different tasks. Our data collected so far, both published (see Roch, Florit & Levorato, 2016; Roch & Hrzica, in press; Hrzica & Roch, in press) and unpublished, suggest that MAIN is appropriate for the evaluation of bilinguals aged between 4 and 8 years, both for the measures of micro- and macrostructure. Our work has involved several groups of children from very different multilingual families. We have bilingual Italian-English children who acquire L2 (English) in the school context while using L1 (Italian) in the context of everyday life; we have immigrant children of different origins (Arabs, Albanians, Moroccans, Romanians, Moldovans, Nigerians) who live in Italy, and acquire Italian as L2; we have Croatian children (L1) who acquire Italian as L2 coming from a multicultural Croatian context on the border between Croatia and Italy; we have children from the Serbian community who live in Italy and acquire Italian as L2.

We learned from our work that the most significant advantage of MAIN is that it enables also the evaluation of the relationship – similarities and differences – between the child's performance in two languages.

Our data suggest that pre-school age bilinguals show an inconsistent and independent development of narrative competence in the two languages, while school age children, thanks to the transfer mechanism, tend to have a similar narrative competence in the two languages. Indeed, in the early stages of L2 acquisition, bilingual children show better narrative competence in their dominant language. In contrast, later on, mainly due to the intervention of literacy, which generally occurs in L2, narrative competence in L2 tends to mature faster than in L1.

With regard to the microstructure elements, which are strongly influenced by the quantity and quality of exposure and the specific language spoken by the child, crosslinguistic transfer occurs later.

Our results indicate that the differences between the two languages concerning the macrostructure are reduced earlier than the differences in the microstructure. It has been pointed out in the literature that even children with limited competence in one of the two languages are able to produce, in the less dominant language, stories with an adequate narrative structure and a good overall quality of the story at the macrostructure level (Bonifacci et al., 2018). Our data seem to go in this direction.

3.3 *Telling vs. retelling*

The Italian MAIN has been used both in the Telling and the Retelling modes. To this date, we have no data available on the Model story mode. Our data collected so far, both published (see Roch, Florit & Levorato, 2016; Roch & Hrzica, in press; Hrzica & Roch, in press) and unpublished, indicate that both the stories adopted for telling (Baby Birds, Baby Goats) and the stories adopted for retelling (Cat, Dog) seemed appropriate for the evaluation of narrative skills in the age range between 5 and 8 years.

Our recommendation is to choose the telling or retelling test depending on the purpose of the assessment, i.e. what you want to measure in the language sample obtained. In particular, retelling, compared to telling, allows to elicit longer narrative productions, with a higher number of words. If the child's production takes up the model proposed by the evaluator, there is an indication that the child is able to reconstruct a story model and therefore that the story has been understood, that a coherent semantic representation has been constructed and that the child is able to narrate it in turn. Retelling results are? seem to be? particularly useful for evaluating the macrostructure, i.e. it is useful in those cases where it is less relevant to evaluate the linguistic aspects (microstructure) but rather the ability to establish temporal and causal links in the construction of a cohesive and coherent narrative structure. For this reason, we recommend to use retelling when assessing younger children, preschoolers, children who may have language difficulties at the microstructure level but not at the macrostructure level, such as children with primary language impairment or bilingual children.

The telling, on the other hand, elicits shorter stories, but provides a pure measure of the extent to which the child is able to express a discourse in a linguistic form: in this case the child is called to construct the semantic representation and to narrate it. Our preliminary data suggest that this test is particularly useful to evaluate both the microstructure and the macrostructure and their integration. Although telling might elicit a purer measure of narrative production than retelling, it may prove to be less informative for the assessment of narrative skills of children of pre-school age, younger than 5 years of age, or who might have language difficulties at any level. In these cases, the narratives are extremely short and not very articulated, but this could be linked not so much to the narrative abilities per se but rather to the difficulty of the task, which involves an extremely high cognitive load. Therefore, we

believe that the telling task is appropriate in assessing children's ability to integrate the various levels of linguistic processing, when they have reached a certain level of linguistic maturity.

3.4 Using the Italian MAIN in clinical settings

Thanks to the dissemination of the Italian version of MAIN in the last few years, we have acquired preliminary data concerning the use of this tool in the clinical setting. Clinicians and speech therapists report that the MAIN appears to be a valid and reliable tool to obtain information on different domains of the bilingual linguistic competence ranging from his or her ability to structure sentences to the ability to choose a proper vocabulary to express concepts; above all, even when these linguistic components are weak in the bilingual child, the analysis of the narrative competence through MAIN gives information on the child's ability to tell a story following the general story structure, thus revealing relevant information related to the communicative competence of the child. Therefore, there are some preliminary indications that the analysis of narrative competence with the MAIN can provide crucial information about the child's ability to integrate different levels of linguistic processing.

The preliminary results reported here need to be confirmed by in-depth analyses, but we believe that the assessment of narrative competence with the MAIN in clinical settings may help the clinician to disentangle the reasons for possible delays in the development of the bilingual language skills. It is our opinion that the assessment of narrative competence through the MAIN can be a valuable ecological tool that could be integrated into the assessment through standardised tools. These sometimes tend to underestimate real language skills. The assessment of narrative skills allows to obtain more complete information providing some useful indications to differentiate bilingual children with a typical profile from bilingual children at risk of language or learning difficulties/disorders.

4 Conclusions

The evaluation of narrative competence through the MAIN in Italy has proved to be a useful assessment tool both in research and clinical setting. On the other hand, the evaluation of narrative productions requires a coding of the linguistic sample and a particularly laborious and time-consuming scoring and interpretation.

The advantages are more numerous than the limitations. First, the evaluation of narrative production gives information on expressive language skills at different levels of language processing with a single test. In addition, it allows the evaluation of spontaneous production, where the child chooses what to say and how to say it. The assessment of narrative production is probably the most ecological tool to measure the child's authentic language skills and is most closely related to the language skills used in everyday life. Therefore, beyond the measure of the different indicators of microstructure and

macrostructure, the narrative production by the child can offer an indication of his or her ability to use language for certain purposes and in certain contexts.

In conclusion, narratives are an important part of a child's linguistic development and represent one of the privileged modes of communication from early childhood. Narratives offer a complex communicative model and the analysis of narrative competence, with a valid tool such as MAIN, makes it possible to obtain multiple information concerning different levels of linguistic processing and their integration.

5 References

- Bonifacci P. (2018). *I bambini bilingui. Favorire gli apprendimenti nelle classi multiculturali*. [Bilingual children. Promoting learning in multicultural classes]. Roma: Carocci.
- Bonifacci P., Barbieri, M., Tomassini, M. & Roch, M. (2018). In few words: Linguistic gap but adequate narrative structure in preschool bilingual children. *Journal of Child Language*, 45(1), 120–147.
- Bruner J.S. (1988). *La mente a più dimensioni* [The multidimensional mind]. Roma-Bari: Laterza.
- Florit E. & Levorato M.C. (2015). Imparare a comprendere e produrre testi. [Learn to comprehend and produce texts]. In S. D'Amico & A. Devescovi (Eds.), *Psicologia dello sviluppo del linguaggio*, Bologna: il Mulino.
- Gagarina N., Klop D., Kunnari S., Tantele K., Valimaa T., Balciuniene I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U. & Walters, J. (2015). Assessment of narrative abilities in bilingual children. In: S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children: disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63, 1–36.
- Hržica, G., & Roch, M. (in press). Lexical diversity in bilingual speakers of Croatian and Italian. In: S. Armon-Lotem & K. Grohmann (Eds.), *LITMUS in Action: Cross comparison studies across Europe*. Amsterdam: John Benjamins.
- Iluz-Cohen, P., & Walters, J. (2012). Telling stories in two languages: Narratives of preschool children with typical and impaired language. *Bilingualism: Language and Cognition*, 15(1), 58–74.
- Lever, R., & Sénéchal, M. (2011). Discussing stories: On how a dialogic reading intervention improves kindergartners' oral narrative construction. *Journal of Experimental Child Psychology*, 108(1), 1–24.
- Levorato, M.C. & Marini, A. (2019). *Il bilinguismo in età evolutiva*. [Bilingualism in the developing age]. Trento: Erikson.
- Pearson B.Z. (2002). Narrative competence among monolingual and bilingual school children In: D.K. Oller & R.E. Eilers (Eds.), *Language and literacy in bilingual children* (pp. 135–174), Clevedon: Multilingual Matters.
- Roch, M. (2017). Potenziare le competenze linguistiche dei bambini bilingui, [Enhancing the language skills of bilingual children]. *Logopedia e Comunicazione*, 13(2), 281–291.

- Roch, M. & Dicataldo, R. (2019). La competenza narrativa in bambini bilingui. [Narrative competence in bilingual children]. In M.C. Levorato & A. Marini (Eds.), *Il bilinguismo in età evolutiva* (pp. 97–110). Trento: Erikson.
- Roch, M. & Florit, E. (2013). Narratives in preschool bilingual children: The role of exposure. *Rivista di Psicolinguistica Applicata*, 13(2), 55–63.
- Roch, M., Florit, E. & Levorato, M.C. (2016). Narrative competence of Italian-English bilingual children between 5 and 7 years. *Applied psycholinguistics*, 37(1), 49–67.
- Roch M., Florit, E. & Levorato, M.C. (2018). Valutare le competenze linguistiche. [Assessing the language skills]. In: S. Bonichini & U. Moscardino (Eds.), *La valutazione psicologica del bambino*. Roma: Carocci.
- Roch, M., & Hržica, G. (in press). Narrative comprehension by Croatian-Italian bilingual children 5-7 years old: the role of receptive vocabulary and sentence comprehension. In: U. Bohnacker & N. Gagarina (Eds.), *Developing narrative comprehension: Multilingual Assessment Instrument for Narratives*. Amsterdam: John Benjamins.
- Silva, M., Strasser, K. & Cain, K. (2014). Early narrative skills in Chilean preschool: Questions scaffold the production of coherent narratives. *Early Childhood Research Quarterly*, 29(2), 205–213.
- Squires, K.E., Lugo-Neris, M.J, Peña, E.D., Bedore, L.M., Bohman, T.M. & Gilliam, R.B. (2014). Story retelling by bilingual children with language impairments and typically developing controls. *International Journal of Language and Communication Disorders*, 49(1), 60–74.

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

Wenchun Yang

The Hong Kong Polytechnic University

Angel Chan

The Hong Kong Polytechnic University

Natalia Gagarina

Leibniz-Zentrum Allgemeine Sprachwissenschaft (ZAS)

This paper introduces the Kam version of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN). Kam is a minority language in southern China which belongs to the Kam-Tai language family and is spoken by the Kam ethnic minority people. Adding Kam to MAIN not only enriches the typological diversity of MAIN but also allows researchers to study children’s narrative development in a sociocultural context vastly distinctly different from the frequently examined WEIRD (Western, Educated, Industrialized, Rich, and Democratic) societies. Moreover, many Kam-speaking children are bilingual ethnic minority children who are “left-behind” children living in Mainland China, growing up in a unique socio-communicative environment.

1 Introduction

Bilingualism is extensive all over the world. It has been estimated that more than half of the world’s population is bilingual (Grosjean, 2010). One long-standing challenge faced by researchers and practitioners working with bilingual children has been differentiating children with and without Developmental Language Disorder (DLD). Recently, the European Cooperation in Science and Technology COST Action IS0804 “Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment” (2009–2013) was carried out to address this challenge (see Armon-Lotem, de Jong & Meir, 2015). Its aim was to develop appropriate tools to assess the linguistic and cognitive abilities of bilingual children

with and without language impairment speaking different pairs of languages. One of the tools developed within this action was the *Language Impairment Testing in Multilingual Settings – Multilingual Assessment Instrument for Narratives* (LITMUS-MAIN, hereafter MAIN; Gagarina et al. 2012; 2015; 2019). MAIN was developed to further our understanding of children’s development of narrative abilities. Thus far, it has been adapted or is undergoing adaption to over 70 languages to assess monolingual and bilingual children’s narrative skills around the world. MAIN is not only suitable for children aged 3 to 12, but can also be used with adults (see Gagarina, Bohnacker & Lindgren, 2019). It consists of four parallel picture-based stories and scripts: Cat, Dog, Baby Birds and Baby Goats. The stories are controlled for cognitive and linguistics complexity, allowing us to conduct dual language testing on bilinguals and draw comparisons between different bilingual children from diverse language and cultural backgrounds. MAIN tests macrostructure (following Stein & Glenn, 1979; and Westby, 2005’s story grammar model) and microstructure (the use of specific language elements). It also allows one to assess Internal State Terms (ISTs). Each story contains three episodes and each episode contains five macro-structural components: Goal (G), Attempt (A), Outcome (O), IST as an initiating event, and IST as a reaction to the outcome. Macrostructure can be assessed quantitatively by calculating the total number of components expressed in a story (i.e. story structure) and qualitatively by computing the combination of episode components (i.e. story complexity, e.g., GA, AO, GAO etc., see Gagarina et al., 2015 for a more detailed description).

Thus far, MAIN has predominantly been adapted to European languages. Adding Kam, a Kam-Tai language, which is distinctly different typologically, will widen the empirical coverage of MAIN.

2 An overview of Kam and the reasons for adapting MAIN to Kam

Kam is a minority language in southern China, spoken by the Kam ethnic minority people. According to the 2010 census of Peoples’ Republic of China (NBS, 2010), the population of the Kam people is about 2.87 million, and they mainly live in the south and southwest of China, in the Guizhou and Hunan provinces and Guangxi Zhuang Autonomous Region. Kam belongs to the Kam-shui branch of the Kam-Tai language family,¹ which is typologically different from the Indo-European languages in phonetics, phonology, morphology and syntax. For example, Kam has a complex and conservative tone system with up to 15 phonetic tones (Wu, 2018). Kam permits both subjects and objects to be omitted. Referring expressions are also different in Kam compared to English and many other European languages; since Kam lacks an indefinite article, bare nominals (i.e. nominals without any determiner) are used to introduce new referents as seen in (1) (extracted from a story by a Kam speaker).

¹ The genetic relationship of Kam-Tai languages is still debated with some researchers arguing that they are part of Sino-Tibetan languages (Li, 1965, 1973) and others arguing that they belong to the Austronesian languages (Benedict, 1942, 1975).

- (1) n̄i-nok li-nu: la:k-nok ja-loŋ x̄n
mother-bird see baby-bird hungry very
'A mother bird saw that her baby bird was very hungry.'

Thus far, a large proportion of participants assessed with MAIN come from the WEIRD (Western, Educated, Industrialized, Rich, and Democratic) societies (Henrich et al., 2010). Most minority children in Mainland China including Kam children live in relatively less developed provinces and come from low-SES families without sufficient parental care and support (Chen et al., 2018). Many of these ethnic minority children are so-called “left-behind” children because they remain in the rural areas when their parent(s) move to cities for employment. These children are therefore primarily taken care of by their grandparent(s), relatives or family friends who often have low education levels and do not interact with these children in the same way as parents would. Currently, little is known about the impact of this unique social-communicative environment on the language development of these ‘left-behind’ children. Raised in an environment that is distinctly different both linguistically and socioculturally from the frequently studied WEIRD populations, these ethnic minority children in Mainland China are important to investigate because such studies might shed light on the putative universals in language acquisition, which have never been examined in this language constellation and sociocultural context.

3 Adapting MAIN to Kam

The Kam MAIN version was adapted from the revised English MAIN (Gagarina et al., 2019) following the guidelines by Bohnacker and Gagarina (2019). The adaptation procedure was as follows. In the first phase, the first author (Yang), a near-native speaker of Kam with a PhD degree in linguistics and language acquisition, translated the MAIN protocol into Kam under the supervision of the second author (Chan; a developmental psycholinguist with a speech therapist qualification serving as a professorial faculty member at a university in Hong Kong), and the third author (Gagarina; the original author leading the development of MAIN and its cross-linguistic adaptations). In the second phase, the translations were carefully proofread for consistency and accuracy by three native speakers of Kam, all of whom have college-level education. The first author then incorporated the suggestions for changes and proofread the entire manuscript again. The back translations were compared and the final version was established.

The Kam MAIN has also been piloted with thirteen native adult speakers. The pilot study confirmed that the MAIN stories and pictures are culturally appropriate for minority Kam speakers: no participants reported any cultural inappropriateness in the stories or pictures. The protagonists of the four stories: a boy, a dog, a cat, goats and birds and other animals such as a mouse and a butterfly are common in Kam villages and the Kam speakers had no difficulties in recognizing these animals in the pictures. The plot and setting of the stories are also appropriate

to the Kam culture. All Kam-speaking adult participants could readily narrate the MAIN stories without noticeable difficulties.

4 Final remarks

To conclude, the Kam MAIN can be used to assess narrative comprehension and production abilities in monolingual and bilingual Kam speakers. We here publish (i) the assessment protocol, which contains the four story scripts together with the scoring forms and instructions for administration; and (ii) this introductory paper that provides key information of our adaptation process, with the intention to make this new tool freely accessible to researchers and clinicians, both locally and internationally. Studies that make use of this tool should cite *both* the assessment protocol and this introductory article as follows:

- 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. Kam version. Translated and adapted by Yang, W.C., Chan, A. & Gagarina, N.
- Yang, W.C., Chan, A. & Gagarina, N. (2020). The Multilingual Assessment Instrument for Narratives (MAIN): Adding Kam to MAIN. *ZAS Papers in Linguistics*, 64, 147–151.

5 References

- Armon-Lotem, S., de Jong, J., & Meir, N. (Eds.). (2015). *Assessing multilingual children: Disentangling bilingualism from language impairment*. Bristol: Multilingual Matters.
- Benedict, P. K. (1942). Thai, Kadai, and Indonesian: A new alignment in Southeastern Asia. *American Anthropologist*, 44(4), 576–601.
- Benedict, P. K. (1975). *Austro-Thai language and culture with a glossary of roots*. New Haven: Human Relations Area Files Press.
- Bohnacker, U., & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63, iv–xii.
- Chen, S., Lawrence, J. F., Zhou, J., Min, L., & Snow, C. E. (2018). The efficacy of a school-based book-reading intervention on vocabulary development of young Uyghur children: A randomized controlled trial. *Early Childhood Research Quarterly*, 44, 206-219.
- Gagarina, N., Bohnacker, U. & Lindgren, J. (2019). Macrostructural organization of adults' oral narrative texts. *ZAS Papers in Linguistics*, 62, 190–208.
- Gagarina N., Klop, D., Kunnari S., Tantele K., Välimaa T., Balčiūnienė I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of narrative abilities in bilingual children. In Armon-Lotem, S., Jong, J. d. & Meir, N. (Eds.),

- Assessing multilingual children: Disentangling bilingualism from language impairment (pp. 243–276). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives. Revised version. *ZAS Papers in Linguistics*, 63.
- Grosjean, F. (2010), *Bilingual: Life and reality*. Cambridge, MA: Harvard University Press.
- Henrich, J., Heine, S., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, 33(2-3), 61–83.
- Li, F. K. (1965). The Tai and the Kam-Sui languages. *Lingua*, 14, 148–179.
- Li, F. K. (1973). Languages and dialects of China. *Journal of Chinese Linguistics*, 1(1), 1–13.
- NBS (National Bureau of Statistics). (2010). *Sixth national population census of the People's Republic of China*. China Statistical Press: Beijing.
- Stein, N. L., & Glenn, C. G. (1979). An analysis of story comprehension in elementary school children. In R. O. Freedle (Ed.), *Discourse processing: Multidisciplinary perspectives* (pp. 53–120). Norwood, NJ: Ablex.
- Westby, C. E. (2005). Assessing and facilitating text comprehension problems. In H. Catts & A. Kamhi (Eds.), *Language and reading disabilities* (pp. 157–232). Boston: Allyn & Bacon.
- Wu, M. X. (2018). *A grammar of Sanjiang Kam*. Muenchen: LINCOM Europa.

The adaptation of MAIN to Luxembourgish

Constanze Weth

University of Luxembourg

Cyril Wealer

University of Luxembourg

This paper describes the addition of Luxembourgish to the language versions of MAIN, the adaption process and the use of MAIN in Luxembourg. A short description of Luxembourg's multilingual society and trilingual school system as well as an overview of selected morphosyntactic and syntactic features of Luxembourgish introduce the Luxembourgish version of MAIN.

1 Introduction

This chapter introduces briefly the addition of Luxembourgish to the language version of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2019). It describes the adaption process and the use of MAIN in Luxembourg. Due to intensive language contact of Luxembourgish to French, productive borrowing of French lexicon into Luxembourgish as well as *lexical doublets*, the Luxembourgish version will widen the empirical coverage of MAIN to a multilingual setting. Although intensive contact with German also exists, the productive borrowing from German is more difficult to identify as Luxembourgish is part of the West Germanic dialect continuum.

2 A short description of the Luxembourgish language

Luxembourg is a small state (around 600,000 inhabitants) and bordered by France, Germany and Belgium. A distinct feature of Luxembourg is its high percentage of foreign residents. Around half of Luxembourg's population (around 322,000) has the Luxembourgish citizenship (STATEC, 2019) and only around 40% of the primary school children grow up speaking Luxembourgish at home (Lenz & Heinz, 2018). Being a small state, Luxembourg puts forward

strong identity-forming elements to differentiate from the neighboring countries. The Luxembourgish language and multilingualism play a central role in this policy.

Luxembourgish is a Mosel-Franconian language variety and part of the West Germanic dialect continuum. Sociolinguistically, Luxembourgish can be considered an *Ausbausprache* because, although an official Standard Luxembourgish with certain sociopolitical functions in Luxembourg exists, it only plays a limited role in certain official domains (Kloss, 1978). For example, children are not alphabetized in Luxembourgish but in German (see point 2.1) and the language of legislation in Luxembourg is French. Politically, Luxembourgish is the national language of the Grand Duchy of Luxembourg and acts in addition to French and German as an official language in Luxembourg. The status of Luxembourgish as a language as well as Luxembourg's official trilingual language situation were formally recognized by Luxembourgish law in 1984 (24 February, 1984 *loi sur le régime des langues* '1984 language law').

2.1 *Multilingualism in Luxembourg*

Multilingualism is an essential feature of the Luxembourgish society. One of its key elements is the trilingual school system (MENFP 2011; Lenz & Bertemes, 2015). While Luxembourgish is the main language of instruction in preschool education (age 4-6), preschool children are also introduced to oral French in short playful teaching activities (e.g. singing songs, being read stories). However, although an official orthographic system exists for Luxembourgish, Luxembourgish is not the language of literacy instruction in Luxembourg. Children are formally introduced to literacy in German in Grade 1 (age 6-7) and German also constitutes the main language of instruction throughout primary school. French is added as a taught subject to the curriculum from Grade 2 (age 7-8) onwards. In addition to the trilingual school system, Luxembourg's school population is one of the most culturally and linguistically heterogeneous in Europe (OECD, 2010). The language abilities in the school languages of the children are extremely heterogeneous. The National Report of Education reports that less than 40% of four-year-olds grow up speaking Luxembourgish, the language of preschool, at home (Lenz & Heinz, 2018).

Although German might be present in television and picture books in Luxembourgish households, almost no pupils actively practice German (> 2%) in family- or other non-formal education settings before they enter Grade 1 (MENJE, 2019). The largest foreign community in Luxembourg is of Portuguese nationality. Portuguese-speaking students represent around 21% of the school population in Luxembourg (MENJE, 2019).

2.2 *Linguistic characteristics*

Although Luxembourgish and German show structural overlaps, they are considered two different language systems (Gilles & Moulin, 2003). For the adaptation of MAIN into Luxembourgish, morphosyntax and syntax as well as the lexicon are of most interest. For an overview of the phonetics of Luxembourgish, see Gilles & Trouvain (2013).

Luxembourgish morphosyntax overlaps largely with German Moselle Franconian dialects, but differs from Standard German (G) (Döhmer, 2017; Gilles, 2017). The following sections highlight three linguistic features of Luxembourgish that contrast to G and, in some cases, are in accordance with French. The sections address aspects of morphosyntax, syntax and lexical doublets in Luxembourgish

2.2.1 Selected aspects of morphosyntax

As well as in G, nouns in Luxembourgish are categorized according to the three genders masculine, feminine and neuter. Although all three genders are productive, masculine seems to be the default gender, as most new lexical items are masculine. In addition, French loan words tend to keep their gender (Gilles, 2017).

As well as in G, case (nominative, dative, accusative) marking is realized through articles and adjectives. The genitive case has almost disappeared and possessive constructions are expressed with dative (Döhmer, 2017). However, case is less marked than in G, as nominative and accusative overlap in general. This formal syncretism holds for all inflecting nominal word classes, except some personal pronouns.

Verbs in Luxembourgish are structurally in line with G, but inflection forms differ from G. Yet preterit has almost vanished except for the high frequency verb *soen* ('to say'). Instead, the present perfect is used. Except for the present tense, all verbal forms split into the inflected auxiliary and the verb, emphasizing a structure typical for Germanic varieties (Weth, 2020).

2.2.2 Selected aspect of syntax

The typical split verb structure in G puts the inflected form at the second syntactic position in a sentence and the uninflected form at the last position. This structure is also highly productive in Luxembourgish (*Ech kann dat verstoen*, 'I can understand this', verbs are underlined). The inflected verb positions at the end of the sentence in subordinate clauses in German. This structure also applies to Luxembourgish, except for one specific type of subordinate clause (Döhmer, 2017; Gilles, 2017). While in the G paradigm the inflected verb shifts at the sentence's last position (*...fir datt dir mech verstoe géift*, '... so that you could understand me'), the majority of Luxembourgish speakers would produce instead *...fir datt dir mech géift verstoen*. The inflected verb is underlined in the examples.

One other striking syntactic feature of Luxembourgish is the inflection of the complementizer position in dependent clauses. The conjunction takes inflectional markers for the second person singular *...fir datt s du mech géifs verstoen* (Gilles, 2017).

2.2.3 Lexical doublets in Luxembourgish

Due to intensive language contact to French, Luxembourgish contains many loans from French, which are often integrated into Luxembourgish on phonological, orthographic and morphologic levels (Gilles, 2017). In addition, Luxembourgish allows for the alternation of lexical doublets, synonymous words from French and Luxembourgish such as *Poubelle/Dreckskëscht* 'bin', *decidéieren/entscheeden* 'to decide'. The actual choice of a French or a Luxembourgish word depends on sociolinguistic variables as well as language competence. Lexical doublets also

exist in German. However, their detection is more difficult as Luxembourgish is part of the Germanic dialect continuum.

3 Adapting MAIN to Luxembourgish

This Luxembourgish version was adapted from the revised English version of the MAIN (Gagarina et al., 2019), following the guidelines for adapting MAIN to other languages (Bohnacker & Gagarina, 2019). Together, the authors of this paper translated and adapted the protocol into Luxembourgish.

The MAIN narratives did not require any cultural adaptation. Neither the lexicon nor the syntactic structure caused any difficulties for translation. However, as doublets exist in Luxembourgish, it is useful to assess the way in which children use one or the other word form. The documentation of doublets allows for a more fine-grained analysis of Luxembourgish language use and its correlation with language biographies. In the long term, it will be interesting to observe the evolution of language use in children's narratives.

4 The use of MAIN in Luxembourg

A first, unpublished, version of the Luxembourgish MAIN assessing telling has been used in the research project *Oral Language Development and its Predictors in Language-Minority Children from Low Income Families* (Loff, 2018-2020; OLAP-C17/SC/11622484). In this project, the *telling* version of the Luxembourgish MAIN was used. The project investigated the role of the home language and literacy environment in the development of oral language skills in three languages (Portuguese, French and Luxembourgish) in Portuguese language-minority children (age 3-4 years) who are growing up in multilingual Luxembourg. A first publication is currently in preparation (Loff, Nikaedo, Wealer & Leseman, in preparation).

The Luxembourgish MAIN will be piloted in the three different elicitation modes, *telling*, *retelling* and *model story*, at the end of the 2020.

5 References

- Bohnacker, U. & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63, iv–xii.
- Döhmer, C. (2017). *Aspekte der luxemburgischen Syntax*. PhD thesis. University of Luxembourg.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives. Revised version. *ZAS Papers in Linguistics*, 63.
- Gilles, P. (2017). *Luxembourgish*. Ms. University of Luxembourg. URL: <https://orbilu.uni.lu/handle/10993/34559>

- Gilles, P., & Moulin, C. (2003). Luxembourgish. In A. Deumert & W. Vandenbussche (Eds.), *Germanic Standardizations. Past to present* (pp. 303–329). Amsterdam: John Benjamins.
- Gilles, P. & Trouvain, J. (2013). [Illustrations of the IPA] Luxembourgish. *Journal of the International Phonetic Association*, 43, 67–74.
- Kloss, H. (1978). *Die Entwicklung neuer germanischer Kultursprachen seit 1800*. Düsseldorf: Pädagogischer Verlag Schwann.
- Lenz, T. & Bertemes, J. (Eds.) (2015), *Bildungsbericht Luxemburg 2015*. Band 2: Analysen und Befunde. Luxembourg: Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse; SCRIPT; Université du Luxembourg. Retrieved from <http://www.men.public.lu/catalogue-publications/themes-transversaux/statistiques-analyses/bildungsbericht/2015/band-2.pdf>
- Lenz, T. & Heinz, A. (2018). Das luxemburgische Schulsystem - Einblicke und Trends. In: T. Lenz, & I. E. Baumann (Eds.). *Nationaler Bildungsbericht Luxemburg 2018*. Luxembourg: University of Luxembourg/SCRIPT.
- Loff, A., Nikaedo C., Wealer C., Leseman, P. (in preparation). Oral Language Development and its Predictors in Language-Minority Children from Low Income Families in Luxembourg.
- MENFP. (2011). *Plan d'Études École Fondamentale*. Luxembourg: Ministère de l'Éducation Nationale et de la Formation Professionnelle.
- MENJE. (2019). *Statistiques globales et analyses des résultats scolaires: Enseignement fondamental. Cycles 1 à 4, Année scolaire 2016/2018*. Luxembourg: Ministère de l'Éducation nationale de l'Enfance et de la Jeunesse.
- OECD. (2010). *PISA 2009 results: Overcoming social background: Equity in learning opportunities and outcomes (Volume II)*. Paris: OECD Publishing.
- STATEC. (2019). *État de la population*. Institut national de la statistique et des études économiques du Grand-Duché de Luxembourg. Retrieved from: https://statistiques.public.lu/stat/TableViewer/tableView.aspx?ReportId=12853&IF_Language=fra&MainTheme=2&FldrName=1&RFPPath=16340%2c16341
- Weth, C. (2020). Grammatische Strukturen im mehrsprachigen Kontext sichtbar und begreifbar machen: Vorstellung des grammatikdidaktischen Materials ‚Bausteine Grammatik‘. In M. Langlotz (Ed.), *Grammatikdidaktik – theoretische und empirische Zugänge zu sprachlicher Heterogenität* (pp. 213–236). Baltmannsweiler: Schneider.

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

Jin Luo

The Hong Kong Polytechnic University;
University of Groningen

Kelly Cheng

The Hong Kong Polytechnic University

Wenchun Yang

The Hong Kong Polytechnic University

Rachel Kan

The Hong Kong Polytechnic University

Angel Chan

The Hong Kong Polytechnic University

Natalia Gagarina

Leibniz-Zentrum Allgemeine
Sprachwissenschaft (ZAS)

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.

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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6 References

- Armon-Lotem S., de Jong J., & Meir N. (Eds.) (2015). *Assessing Multilingual Children: Disentangling Bilingualism from Language Impairment*. Bristol: Multilingual Matters.
- Bohnacker, U., & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63, iv–xii.
- Eberhard, D. M., Simons, G. F., & Fennig, C. D. (Eds.). (2019). *Ethnologue: Languages of the World*. Twenty-second edition. Dallas, Texas: SIL International. Online version: <http://www.ethnologue.com>.
- Gagarina, N., Bohnacker, U., & Lindgren, J. (2019). Macrostructural organization of adults' oral narrative texts. *ZAS Papers in Linguistics*, 62, 190–208.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of narrative abilities in bilingual children. In Armon-Lotem, S., Jong, J. d. & Meir, N. (Eds.), *Assessing multilingual children: Disentangling bilingualism from language impairment* (pp. 243–276). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives. Revised version. *ZAS Papers in Linguistics*, 63.
- Sheng, L., Shi, H., Wang, D., Hao, Y., & Zheng, L. (in press). Narrative production in Mandarin-speaking children: Effects of language ability and elicitation method. *Journal of Speech, Language, and Hearing Research*.

Using LITMUS-MAIN with Norwegian-Russian bilingual children growing up in Norway

Yulia Rodina

UiT The Arctic University of Norway

This paper describes the experience of using the Norwegian and Russian versions of LITMUS-MAIN to elicit narrative data from bilingual Norwegian-Russian children as well as from Norwegian- and Russian-speaking monolinguals (Rodina 2017, 2018). The paper reports on the slight adaptations to the standardized design, procedure and analysis that were done to make the tasks more suitable for this specific population. It highlights the advantages, challenges, and potential associated with the task against a backdrop of the research conducted with Norwegian-Russian bilinguals in Norway.

1 Introduction

The Language Impairment Testing in Multilingual Settings – Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN, Gagarina et al., 2012, 2015) is an assessment tool which was originally designed for bilingual preschoolers and school-aged children up to the age of ten, but has later been successfully used with older children, adolescents and even adults (see Gagarina, Bohnacker & Lindgren, 2019). It was revised in 2019 (Gagarina et al., 2019). MAIN is developed specifically for assessing narrative skills in both languages of bilingual speakers. It uses a controlled experimental procedure which enables comparison across the two languages of bilinguals and across different language combinations.

2 Using MAIN with Norwegian-Russian bilingual preschoolers

2.1 Background information

The Norwegian and Russian versions of the MAIN have been used in two published studies (Rodina 2017, 2018) with simultaneous Norwegian-Russian bilinguals ($N = 16$, $M = 4;6$) as well as with Norwegian ($N = 16$, $M = 4;5$) and Russian monolinguals ($N = 16$, $M = 4;5$). All bilingual participants came from Norwegian-Russian families where the mothers were native

speakers of Russian and fathers were speakers of Norwegian with no knowledge of Russian. The data collection took place in Oslo, Norway, and Norwegian was the majority language for all participants. Russian was their heritage or home language acquired from birth in the home. Narratives were collected in both languages using the MAIN *model story* procedure. In the first part of this procedure, either the *Cat* or the *Dog* story was presented to the participant who was then asked ten comprehension questions. In the second part, immediately following the first one, the child was asked to narrate a new story, either the *Baby Goats* or the *Baby Birds*. Thus, the study tested both narrative comprehension and production but using two different stories. The analysis of the production data included measures of the narrative macrostructure or story structure, as well as the linguistic measures addressing bilinguals' narrative productivity or microstructure at the sentence level.

2.2 *Similarities and differences in tasks and procedure compared to the MAIN manual*

In the studies by Rodina (2017, 2018), the tasks and the procedure were not the exactly same as in the MAIN manual (Gagarina et al., 2012, 2019). In what follows, similarities and differences with the MAIN-manual are described.

The *Cat* and *Dog* stories were used by the experimenter to establish contact with the participants and to evaluate their comprehension skills. While Norwegian has two written standards, Bokmål and Nynorsk, all Norwegian speakers use their dialects in oral contexts, both formal and informal ones. Thus, it appeared necessary to make some adjustments to the Norwegian story scripts of *Cat* and *Dog* compared to the Norwegian MAIN-manual as well as the comprehension questions to make them adhere more to spoken Norwegian and more specifically to the dialect of Norwegian spoken in Oslo. Importantly, the adapted stories had similar lengths compared to the original ones (approximately 170 words) and contained the same words and phrases for the Internal State Terms. The examples in (1) illustrate two adjustments to the Norwegian *Cat* story. Italics are used to highlight the changes. The wording in the Russian version was also adjusted slightly to have the best possible match between the two language versions. This is shown in the examples in (2).

- (1) a. *I mellomtiden* kom en glad gutt tilbake fra fisketur. [Norwegian MAIN-manual]
 ‘In the meantime, a happy boy came back from a fishing trip.’
 a’. *Da* kom det en glad gutt *gående* tilbake fra fisketur. [Adapted version]
 ‘Then a happy boy came back from a fishing trip.’
 b. Gutten *var* så *forskrekket* at ballen falt ut av hånden. [Norwegian MAIN-manual]
 b’. Gutten *ble* så *forskrekka* at ballen falt *rett* ut av *hånda hans*. [Adapted version]
 ‘The boy got upset and the ball fell out of his hand.’
- (2) a. Da kom det en glad gutt gående tilbake fra fisketur.
 b. В это время мимо проходил мальчик, который возвращался с рыбалки.

The participants were tested by Russian-speaking monolinguals in Russian and by Norwegian-speaking monolinguals in Norwegian who also spoke the Oslo dialect. This was necessary in order to create a natural language or dialect environment for the children. Using a local dialect for narrative elicitation in Norwegian may be especially important, as Norwegian-speaking children are known to adjust their speech during role-play, where they show a tendency to switch to the Eastern Norwegian dialect (e.g. Eliassen 1998, Kleeman 2015). Therefore, using a local dialect to elicit narrative production ensures the best outcome, especially if one is interested in studying the microstructure and children's language proficiency.

In order to keep the narratives that the children heard in the model story identical for all participants, the *Cat* and *Dog* stories were audio-recorded. The experimenter played one of the stories for a child while showing the accompanying series of pictures and afterwards asked the ten comprehension questions. This procedure was very successful and had practical advantages given that the data collection was conducted by several research assistants in each of the languages. Afterwards, the participant was asked to narrate a new story, *Baby Goats* or *Baby Birds*. As described in the MAIN manual, each story was copied three times and placed in three differently coloured envelopes. The participant was asked to choose one of the envelopes and tell the story without showing it to the experimenter.

The procedure with model story and telling took approximately 15 minutes per participant, yet the data collection was rather time-consuming. There is virtually no preschool immersion education in Norway and bilinguals usually attend different Norwegian-speaking kindergartens. Only some bilinguals are enrolled in Russian language centers on weekends where the testing took place.

2.3 Experience with data analysis and results: changes and reflections

The bilingual sample size reported in Rodina (2017) is relatively small, yet it represents only a selection of participants. As many as 15 bilinguals were not included in the study, since some children failed to tell a story in either Norwegian or Russian. Some other children, mainly 4-year-olds, produced very short narratives consisting of only a few words. A high drop-out rate in narrative studies is not unexpected especially when the target group are bilingual pre-school children. There were drop-outs in both groups of monolinguals as well.

Reliability is an important issue in the narrative data analysis and it was absolutely necessary to have two raters as well as an additional rater for resolving some unclear/uncertain cases and conflicting views.

The scoring procedure and analysis of the comprehension data elicited with the *Cat* and *Dog* stories was rather straightforward with the exception of question 10. The results reported in Rodina (2017) suggest that question 10 (*Will the boy be friends with the cat/dog?*) is not felicitous, as both bilingual and monolingual children favored a positive answer to this question which is considered to be erroneous in the MAIN manual. While some of the children could not explain their choice, others said that the protagonists would still be friends, since animals are man's friends. They thus relied on their common sense or world knowledge. Given this, one

should treat the results for question 10 with caution and consider using a nine-point scale for the *Cat* and *Dog* stories.

The narrative production data elicited with the *Baby Goats* and *Baby Birds* stories was used to measure the story structure. Rodina (2017) used the standard 17-point scale from the MAIN manual, i.e. the *story structure score*. The scoring procedure and analysis of the production data required some decision-making. First, there were cases when children's production did not match the alternatives suggested in the manual. For example, to introduce new protagonists in the story, such as *fox* and *bird* in *Baby Goats* and *cat* and *dog* in *Baby Birds*, the children typically used the sentences in (3) and (4) in Norwegian and Russian respectively. Given a considerable number of such phrases in the data, it was decided to categorize them as 'IST as initiating event' (A7 and A12 in the manual). It should be noted that this deviates considerably from how this component is described and coded for according to the MAIN-manual (Gagarina et al., 2019), as such cases do not contain any internal state terms (ISTs). Awarding points for cases such as in (3) and (4) leads to higher story structure scores, compared to when the original MAIN-scoring is kept.

- (3) Og så kom det en rev.
'And so a fox came.'
- (4) A potom prišla sobaka.
'And then a dog came.'

Furthermore, during coding it became clear that one sentence can include several macro-structure elements and that the elements may not appear in the order outlined for each of the three story episodes, which is IST as initiating event – Goal – Attempt – Outcome – IST as reaction. The example in (4) shows that the Attempt ('wants to eat the chicks') precedes the Goal ('the cat climbed up the tree'), while the reverse order would be more natural. This observation holds for the narrative production overall: Despite the fact that the story episodes are presented in a serial order in the pictures, preschool children tend to go back and forth between the episodes allowing, for example, Attempts to precede Goals. This is not a change in scoring compared to the MAIN-manual, but rather a reflection based on the experiences of using MAIN.

- (4) koška zalezla na gnezdo i hočet sjest' cyplyatki
'The cat climbed up the tree and wants to eat the chicks.'

2.4 Summary of the results for microstructural measures

In addition to the story structure score, Rodina (2017) used six linguistic measures to investigate the bilinguals' narrative productivity, a part of the microstructure: the number of C-units (CU),¹ the total number of word tokens (TNW), the number of different word tokens (NDW), mean

¹ The C- (communication unit) or T-unit (minimal terminable unit) is usually described as a main clause and its subordinate clauses.

length of CU in word tokens (MLU), the total number of verb tokens (TNV) and the total number of noun tokens (TNN). In Rodina (2017), the link between these microstructural measures and the story structure score was investigated. It was found that the narrative productivity data of 16 Norwegian-Russian bilinguals revealed that only one linguistic measure showed a significant relation to the story structure score, namely MLU, which correlated positively with the story structure score in Russian. None of the six linguistic measures correlated significantly with the story structure score in Norwegian. Thus, bilinguals' story structure in both languages appears to be independent of the narrative productivity. However, it is yet unclear whether these results are generalizable to a larger bilingual population.

It should be highlighted that MAIN appears to be highly suitable for measuring microstructure in bilinguals' narratives, for example providing information about the amount of linguistic material produced, lexical diversity or syntactic complexity. Recent studies investigating the acquisition of grammatical gender in Russian heritage speaking children have used the MAIN narratives as a language proficiency measure (Mitrofanova, Rodina, Urek & Westergaard, 2018; Rodina, Kupisch, Meir, Mitrofanova, Urek & Westergaard, 2020). Specifically, the number of different words in a Russian narrative was found to correlate significantly with the bilinguals' performance on a grammatical gender task. This suggests that a lexical diversity measure, such as the number of different words produced in the MAIN narratives, can be a significant explanatory variable and can be used to assess bilingual language proficiency. MAIN can thus be used as an additional measure in studies investigating bilingual language development.

3 Summary and conclusions

My experience with the MAIN tasks, as presented in the present paper, allows me to conclude that MAIN is a useful tool for studying the narrative abilities of bilinguals growing up in Norway with Russian as their heritage language. It offers a rich source of data for analysis, has a simple and structured design, and a user-friendly scoring system.

4 References

- Eliassen, C. (1998). Rollelekspråk. [The language of the role play.]. MA dissertation, Trondheim University of Science and Technology.
- Gagarina, N., Bohnacker, U., & Lindgren, J. (2019). Macrostructural organization of adults' oral narrative texts. *ZAS Papers in Linguistics*, 62, 190–208.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U. & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.),

- Assessing multilingual children: Disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63, 1–36.
- Kleeman, C. B. (2015). Lek på to språk – en studie av kodeveksling og språkalternering i tospråklig rollelek på nordsamisk og norsk i en samisk barnehage. [Playing in two languages: A study of code-switching and language use during the role play in a bilingual Norwegian-Sami kindergarten]. PhD dissertation, UiT – the Arctic University of Norway.
- Mitrofanova, N., Rodina, Y., Urek, O., & Westergaard, M. (2018). Bilinguals' sensitivity to grammatical gender cues in Russian: The role of cumulative input, proficiency, and dominance. *Frontiers in Psychology*, DOI: <https://doi.org/10.3389/fpsyg.2018.01894>.
- Rodina, Y. (2018). Kartlegging av narrative ferdigheter hos simultant tospråklige: Evaluering av LITMUS-MAIN verktøy. [Assessment of the narrative abilities of the simultaneous bilinguals: Evaluation of the LITMUS-MAIN task] *Norsk tidsskrift for logopedi*, 64(2), 5–17.
- Rodina, Y. (2017). Narrative skill acquisition in preschool bilingual Norwegian-Russian children. *International Journal of Bilingualism*, 21(5), 617–635.
- Rodina, Y., Kupisch, T., Meir, N., Mitrofanova, N., Urek, O., & Westergaard, M. (2020). Internal and external factors in heritage language acquisition: Evidence from Heritage Russian in Israel, Germany, Norway, Latvia and the UK. *Frontiers in Education*. DOI: <https://doi.org/10.3389/educ.2020.00020>.

Polish MAIN: how was it developed and how has it been used so far?

Karolina Mieszkowska

University of Warsaw

Agnieszka Otwinowska

University of Warsaw

Marta Bialecka-Pikul

Jagiellonian University

Dorota Kiebzak-Mandera

Institute of Polish Language of Polish
Academy of Sciences

Marcin Opacki

University of Warsaw

Ewa Haman

University of Warsaw

This paper describes in detail the development of the Polish version of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN). We first describe its two earlier versions, the unpublished version and the published version, developed in 2012, as well as the revised version. We also justify the differences between the unpublished Polish version developed in 2012 and the original MAIN. Then we summarize the results from studies that used the unpublished version of the Polish MAIN. We end with outlining a study that could be conducted to compare the two slightly different procedures in order to examine whether the results obtained with MAIN are resistant to changes in the procedure details.

1 Introduction

This paper briefly introduces the development of the Polish version of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, henceforth MAIN; Gagarina et al., 2012, 2019), focusing on the versions developed and the research conducted with the Polish MAIN (henceforth MAIN-Polish) so far. Before we proceed to a detailed description of the adaptation of MAIN to Polish, let us clarify that below we present information on two slightly different MAIN versions available for Polish: the unpublished MAIN-Polish and the published MAIN-Polish. The unpublished version of MAIN-Polish was developed in parallel to the original English-language MAIN (Gagarina et al., 2012) within the COST Action IS0804 Working Group “Narrative and

Discourse” led by Natalia Gagarina and Joel Walters. However, before the original English-language MAIN (Gagarina et al., 2012) was published, the unpublished MAIN-Polish was already in use in Polish research projects. Despite the substantial similarity to the original MAIN (Gagarina et al., 2012), the unpublished MAIN-Polish differs from the original MAIN in several ways. The differences are described in detail in Section 3, and generally relate to the structure of the warm-up, the way the story-pictures are presented to the child, the number of comprehension questions, and the order and the details of the elicitation modes (Telling, Model Story, and Retelling).

The published MAIN-Polish is a direct translation of the original English version of the MAIN (Gagarina et al., 2012). The published MAIN-Polish has been available since 2012, but has not been used in any studies on Polish monolingual or bilingual children, because the unpublished MAIN-Polish was already in use. The revised MAIN-Polish, published together with this paper, is based on the revised English version (Gagarina et al., 2019).

2 The characteristics of Polish

Before moving on to describing the development of MAIN-Polish, let us briefly present the Polish language whose characteristics influenced the Polish adaptation of the MAIN. Polish is a West Slavic language, spoken primarily in Poland as the official language (and one of the official languages of the European Union), but it is also used by Polish minorities in other countries. Altogether, there are nearly 40 million Polish-language speakers in Poland and about 20 million around the world, mostly due to migration (Tyciński & Sawicki, 2009).

Polish is a highly fusional language with relatively free word order, although the dominant, word order is subject–verb–object (SVO), which is stylistically and pragmatically unmarked. Polish also has very rich inflectional and derivational morphology. This includes six cases – used to inflect all nouns, pronouns, and adjectives – two number classes (singular and plural), and grammatical gender (masculine, feminine, neuter). Additionally, masculine nouns (several of which are considered generic) include a further semantic mandatory subcategorization by personhood (+person, -person) and animacy (+animate, -animate) (Przepiórkowski et al., 2012) which are semantic properties of nouns rather than inflections, but still determine agreement in sentence structure. In Polish, there are no articles. Verbs are conjugated in a highly complex way (for grammatical personhood, gender, number, tense, mood, reflexivity, and aspect, Alberski et al. 2018) through a combination of grammatical and lexical features expressed via inflectional morphology (conjugation), derivational morphology (word formation), or a mixture of both. Thus, while verbs take on two basic aspects – the imperfective/progressive and the perfective – when the other conjugational properties are considered, each verb can take on a wide variety of forms. Since Polish is a pro-drop-language, subject pronouns are typically dropped (Nagórko, 1998; Sadowska, 2012). All these have important consequences in the case of the Polish adaptation of MAIN and its use for cross-linguistic comparisons and for comparisons of storytelling skills of bilingual children speaking Polish (as elaborated below).

3 The Polish MAIN versions

Before the original English-language version of MAIN (Gagarina et al., 2012) was published, the unpublished MAIN-Polish was already in use in the large-scale Polish research project *Cognitive and language development of Polish bilingual children at the school entrance age – risks and opportunities* (Bi-SLI-PL) led by Ewa Haman and Zofia Wodniecka, and in its successor *Phonological and Morpho-syntactic Features of Language and Discourse of Polish Children Raised Bilingually in Migrant Communities in Great Britain* (WLRB) led by Agnieszka Otwinowska. Thus, some of the published results related to bilingual children's narrative abilities were from the unpublished MAIN-Polish. The changes in the unpublished MAIN-Polish were made to ensure the procedure and the story scripts were as culturally appropriate as possible for Polish children aged 3–10. The adaptation procedure included translation of the story scripts by two translators, consultations with expert practitioners working with children, and the choice of language and style most suitable to what Polish children usually encounter in the context of story-telling. The data gathered with the unpublished MAIN-Polish allowed us to create a corpus of children's responses which also informed our coding and scoring procedures.

The published MAIN-Polish does not differ from the original English version of the MAIN (Gagarina et al., 2012). The published MAIN-Polish, however, has not been used in any studies on Polish monolingual or bilingual children because the early MAIN-Polish was already in use. In Table 1 below, we compare the detailed procedures of the original English MAIN (Gagarina et al. 2012) and the unpublished MAIN-Polish. The published MAIN-Polish is not included in the table, as it is identical with the original MAIN.

The differences between the original MAIN and the unpublished MAIN-Polish concern four aspects: the warm-up, the way of presenting the pictures to the child, the comprehension questions, and the order of the modes (Telling, Model Story, and Retelling). Each difference is discussed in detail below.

Warm up. In the unpublished MAIN-Polish, the warm-up was extended by adding more questions relevant to the context of story-telling. The questions directed the child's attention towards stories and fairy tales: "*Do you know any stories or fairy tales?*" If the child did not reply, the experimenter would provide some examples, such as: "*It can be a fairy tale about Little Red Riding Hood or a true story about what happened yesterday to somebody at a shop*". There were also additional questions about how true stories and fairy tales could begin and end. This was done to attune the child to the scheme of storytelling and to stimulate them to include the beginning and the ending in their own stories told afterwards. Also, as the last step of the warm-up phase, the child was encouraged to tell a short story if they wanted to. This served to both accustom the child to story-telling and to facilitate bonding between the child and the experimenter. This longer warm-up phase was considered culture-specific and appropriate to the Polish context. Moreover, a longer warm-up was treated as a lead-in for the Telling mode (child telling a story by themselves) that followed.

Table 1. The differences between the original MAIN (Gagarina et al., 2012) and the unpublished MAIN-Polish. The published MAIN-Polish and the revised MAIN-Polish (2020) are identical to the original MAIN versions (Gagarina et al., 2012, 2019).

	Original MAIN (Gagarina et al., 2012)	Unpublished MAIN-Polish	
tool characteristics	<i>target group for the testing:</i>	mono- and bilingual children aged 3-10	[if empty, the procedure is the same as in the original MAIN]
	<i>evaluates</i>	both comprehension and production of narrative	
	<i>elicitation modes:</i>	Model Story, Telling, Retelling	same modes, but different order of the modes and procedures within the modes, see below
	<i>pictures:</i>	four parallel stories, each with a six-picture sequence: Baby Birds, Baby Goats, Dog, Cat; Procedures counterbalanced for research purposes.	
	Instructions:		
PROCEDURE	The warm-up phase: based on the experimenter's (EXP) previous experience and cultural environment. While talking with the child, EXP is to establish rapport and ask some questions to ensure that the child is able to understand simple wh-questions. Example of warm-up questions included in MAIN manual: (1) Who is your best friend? (2) What do you like to watch on TV? (3) Do you like telling stories? (4) Do you like listening to stories?	Fixed protocol for the warm-up: after the original warm-up, additional questions are asked: (1) <i>Do you like listening to stories/fairy tales?</i> (2) <i>Do you like true stories?</i> (3) <i>Do you know what a story/tale is?</i> (4) <i>Do you know any stories/tales?</i> [If the child does not reply, EXP provides examples: <i>It can be a fairy tale about the "Little Red Riding Hood" or a story about what happened yesterday to somebody at a shop.</i>] (5) <i>Do you know what a story/tale always begins with?</i> [If CHI does not answer, EXP: <i>If it is a fairy tale, it can begin with 'Once upon a time...' If it is a true story, it can begin with 'Once, when I was...' or 'Yesterday, when I was doing the shopping...']</i> (6) <i>And how does it always end?</i> [If the child does not reply or says I don't know, EXP: <i>A fairy tale can end with 'And they lived happily ever after', while a true story - with 'Then, I came back home and went to bed.' or 'This is the end']</i> (7) <i>Can you tell me about something? It can be a fairy tale or a true story.</i> [If the child talks too long (over 3 minutes) stop him/her gently and pass on to the procedure.]	
	D. Make sure that the three envelopes containing the same picture sequence are on the table before assessment begins. (The purpose of this presentation format is for the child to think that the examiner does not know which story is in the envelope s/he has chosen, thus controlling for the effect of shared knowledge during the presentation of the picture sequences.)		
	E. Administer the assessment according to the instructions in the story protocol(s). Please adhere to the recommendations for prompts.		
	F. Additional information about the presentation of the pictures: During the experiment you should sit opposite the child so that the child can hold the pictures facing towards him/her, but away from you. When the child takes the pictures out, tell him/her to unfold the pictures and to	The procedure for the Telling mode is similar (EXP sitting opposite the child, non-shared attention context). The procedure for Retelling is different: the EXP sits next to the child (so that they can both see the story, shared-attention context), tells the story according to the	

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<p>look at the whole story starting from the first picture and say: “Look at the pictures but don’t show them to me. Only YOU must see the story.” (If the child cannot hold and unfold the pictures him/herself, you may hold the pictures instead, facing away from you and towards the child.)</p>	<p>model story and then asks the child to tell the same story again: <i>Now, I’d like you to tell me the story again, as well as you can.</i> Also, in all modes, all the pictures are unfolded at once.</p>
<p>G. When the child is ready to tell the story, help him/her to fold the pictures into 3 parts again. You can direct the folding process without looking at the pictures while the child is still holding them. Instruct the child to start telling the story whilst looking at the first two pictures. When he/she has finished looking at pictures 1 and 2, direct the unfolding of the next two pictures (pictures 1–4 will be unfolded now). When the child has finished, direct the unfolding of the next two pictures so that the whole story is now unfolded. When the child has finished telling/retelling the story, introduce the comprehension questions by saying “Now I am going to ask you some questions about the story”.</p>	<p>No gradual unfolding of the pictures: in all the modes, the child sees (unfolds) all the picture at once.</p>
<p>The order of the modes within the testing:</p>	
<p>(1) Model Story (Cat/Dog): EXP and child sit opposite each other; EXP tells the child a story; followed by comprehension questions</p>	<p>(1) Telling (Baby Birds/ Baby Goats): EXP and child sit opposite each other, child asked to look at the pictures and tell the story. EXP does not interfere, prompts allowed only if the child stops in the middle of the story.</p>
<p>(2) Retelling (same story as in (1): Cat/Dog) EXP says: <i>Now I want you to tell the story. Look at the pictures and try to tell the best story you can.</i></p>	<p>(2) Model Story (Cat/Dog): EXP and child sit next to each other; EXP tells the child a story.</p>
<p>(3) Telling (Baby Birds/ Baby Goats): EXP and child sit opposite each other, child asked to look at the pictures and tell the story. EXP does not interfere, prompts allowed only if the child stops in the middle of the story.</p>	<p>(3) Retelling (same story as in (2): Cat/Dog) EXP says: <i>Now I want you to tell the story. Look at the pictures and try to tell the best story you can;</i> followed by comprehension questions.</p>
<p>Comprehension questions: (0) Did you like the story? (warm-up, not evaluated), (1) Why does the mother bird fly away? (2) How do the baby birds feel? (if no explanation is given then ask (3)) (3) Why do you think that the baby birds are feeling bad/ hungry etc.? (4) Why is the cat climbing the tree? (5) How does the cat feel? (6) Why do you think that the cat is feeling bad/ hungry/ scared etc.? (7) Why does the dog grab the cat’s tail? (8) Imagine that the dog sees the birds. How does the dog feel? (9) Why do you think that the dog feels good/ fine/ happy/ satisfied etc.? (10) Who does the mother bird like best, the cat or the dog? Why?</p>	<p>Question (10) not asked; in Cat and Dog stories, question (2) focuses on picture 3 (where Cat/Dog has fell into the bush/banged its head in the tree), while in the unpublished MAIN-Polish, question (2) focuses on picture 1 (where Cat/Dog has just spotted the butterfly/mouse).</p>

Picture presentation. In the original MAIN (Gagarina et al., 2012), the picture stories were presented in three parts. The child was shown three separate episodes, two pictures per episode. The experimenter supervised the way in which the pictures were unfolded while the child was telling the story. First, the child would be asked to start telling the story while looking at the first two pictures. Then, once he/she has finished looking at pictures 1 and 2, the experimenter would help unfold the next two pictures and then the following two, so that the whole story would be visible (unfolded) in the end. In our unpublished MAIN-Polish, the experimenter did not direct the unfolding of the pictures and the child could always see all the pictures at once (unfolded). Therefore, during the whole of the story telling in MAIN, the child sees all the pictures beforehand. This was based on the assumption that if the child saw the whole story upfront, it would be easier and more natural for them to follow the plot of the story. It was also considered more typical to the Polish scheme of story-telling.

Order of the modes and the setting of testing. Another difference in the unpublished MAIN-Polish, relative to the original MAIN (Gagarina et al. 2012), was the order of the modes and the setting of the testing. In Gagarina et al. (2012), the modes followed the order: Model Story (given by the experimenter, followed by comprehension questions), Retelling (the child retells the same story told by the experimenter), and Telling (the child is asked to tell a new story, based on another set of pictures, completely by themselves). In each of those modes, the experimenter and the child would sit opposite each other.

Importantly, however, the authors of the original MAIN (Gagarina et al., 2012) gave researchers flexibility in the choice of the modes for the testing and the order of the modes, stating that the choice of elicitation procedure depends on the goals and needs of the given assessment. Also, they stressed that the stories are essentially comparable (Gagarina et al., 2012). Therefore, in the unpublished MAIN-Polish, we opted for the order that would allow for the comparison of children's stories told spontaneously (based on picture-stories and without modeling) as well as those told after a model story was given by the experimenter. The order was the following: Telling (the child was asked to tell a story completely by herself/himself; the experimenter and the child sat opposite each other, and only the child saw the pictures to ensure a non-shared attention context), Model Story (the experimenter told a new story while sitting next to the child, i.e. in a shared-attention context), Retelling (the child retold the experimenter's Model Story, with both the experimenter and the child still seated next to each other). Thus, the unpublished MAIN-Polish contained two modifications when compared to Gagarina et al. (2012): first, the order of the modes in the Polish version is different. Second, in the Model Story and the Retelling modes, the experimenter and the child would sit next to each other and look at the picture story together, thus engaging in a shared-attention context. This modification was employed because shared story-reading is a more natural setting for storytelling, so it is more commonly found in the child's environment (Adrian et al., 2005; Bokus, 1978; Dyer et al., 2000). Moreover, the experimenter's behaviour during the Retelling, (i.e. viewing the pictures with the child and providing a coherent and linguistically rich model story) was used to potentially enhance the child's storytelling on the macro- and microstructure level.

Comprehension questions. The last two differences between the unpublished Polish version and the original MAIN (Gagarina et al. 2012) relate to the comprehension questions and the pictures pointed to while one of the questions was asked. First, the unpublished MAIN-Polish did not include the last comprehension question in the Baby Birds/Baby Goats stories, i.e. “Who does the mother bird like best, the cat or the dog? Why?”. This question was added to the original MAIN later, after MAIN-Polish was already being used for testing children. Second, in the original MAIN (Gagarina et al., 2012), the second comprehension question in the *Cat* and *Dog* stories refers to the story character’s feeling in the third picture. The character in question (the dog/cat) in the third picture has just hurt himself by banging its head on the tree/falling into the bush, therefore the expected answer is that the dog/cat is sad/unhappy/angry, etc. However, in the unpublished MAIN-Polish, this question points to the character (dog/cat) in the first picture, where the dog/cat has just spotted the mouse/butterfly and plans to catch it. In fact, the question in the unpublished MAIN-Polish retains its initial shape from the original MAIN, which was later on changed (after the unpublished Polish version was implemented in the Bi-SLI-PL study).

Some of the differences in the task procedures relative to the original MAIN (Gagarina et al. 2012) served to answer our particular research goals. For example, establishing an order of the testing modes constant across participants (first the Telling, then the Model Story followed by the Retelling) allowed us to compare the children’s stories as told spontaneously (based on picture-stories) and as retold after a model story. Below, we present the results obtained with the use of the unpublished MAIN-Polish and presented in four publications (Haman et al., 2017; Mieszkowska, 2018; Otwinowska et al., 2018; Otwinowska et al., 2020). We then discuss them in relation to some studies that employed the original MAIN procedure.

The revised MAIN-Polish version (2020) is based on the revised English MAIN (Gagarina et al., 2019). It follows the MAIN procedure, but is amplified by the examples and outcomes gathered with the unpublished MAIN-Polish. Specifically, it contains examples of internal state terms found in children’s stories (Mieszkowska, 2018, see below), and it reflects the characteristics of Polish. For example, in Polish, the goal is typically expressed by only using a preposition “żeby” (to) not coupled with a verb, i.e. compare English: “[The cat] leaped forward because he wanted to catch [the butterfly]”; Polish: “Kot dał susa żeby złapać mysz” (‘The cat jumped to catch the fish’). Thus, the Polish version of the story scripts are adapted to the grammar and style typically used in story-telling.

4 Results from the unpublished Polish MAIN

Below we discuss the results obtained with the unpublished Polish MAIN. All the data for these analyses were gathered and maintained within two research projects: Bi-SLI-PL and WLRB. Altogether, over 160 Polish-English bilinguals (age range: 4.5-7 years, mean age: 5.5) were tested with MAIN (both the Polish and the English version). There were also over 260 Polish monolinguals (age range: 4-7, mean age: 5.5) and 25 English monolinguals (range: 4.5-8, mean age: 6) tested with the Polish and English MAIN versions. The analyses summarized below are

based on subsamples from the same study. The number of participants differs across analyses as the largest possible subsample was used for each analysis, considering other variables for which data were available.

4.1 *Bilinguals and monolinguals do not differ in story macrostructure*

Previous studies have shown that similar age-dependent narrative patterns are shared by monolingual children from different language backgrounds (Berman & Slobin, 1994). Based on our results, it also seems that narrative abilities develop similarly in bilingual and monolingual children, regardless of their language abilities. In one of the analyses (Haman et al., 2017), we compared Polish language performance across 53 Polish-English bilinguals and 53 Polish monolinguals matched on age, SES, and non-verbal IQ. The measures used for the comparison included productive and receptive vocabulary, productive and receptive grammar, phonological processing, as well as children's narrative abilities (the macrostructural coherence, i.e. story structure of their stories, as measured by the unpublished MAIN-Polish. Although the bilinguals lagged behind their monolingual peers in Polish on all language measures, on the narrative task they performed similarly to the monolinguals on the macrostructure measures. Specifically, their story structure scores were similar to those of monolinguals, replicating the results of Kunnari and colleagues (2016). The reason for this between-group similarity may be that producing coherent discourse taps not only into language abilities, but also into children's pragmatic awareness. Telling a coherent story involves not only vocabulary and the knowledge of grammar, but also cognitive skills which help to build a logical storyline (Gagarina et al., 2016; Paradis et al., 2014). This was also found to be the case in our analysis (Haman et al., 2017).

4.2 *The positive effects of story retelling on children's narrative performance*

In another analysis, we focused more on aspects of the discursive abilities of bilingual children as compared to their monolingual peers. We investigated whether the quality of the narrative (both in terms of the macrostructure and the microstructure) improves when the child is provided with a model story (Otwinowska et al., 2018). In our procedure of the unpublished MAIN-Polish the child was first asked to tell one of the picture-stories (Telling mode, non-shared attention context) and was then presented with the Model Story by the experimenter who next asked the child to retell the story (Retelling mode, shared attention context). The Telling was always performed before any model story was presented to the child. Thus, we were able to compare the stories told by bilinguals and monolinguals spontaneously (Telling mode) and following a model story (Retelling mode). We analyzed both the Polish and English language narratives obtained from 75 Polish-English bilinguals raised in the UK. We compared the Polish-language narratives with those produced by 75 Polish monolinguals matched with the bilinguals for gender, age, and non-verbal IQ (the children were also similar in terms of SES, but were not matched for it). We investigated whether retelling might improve bilingual and monolingual storytelling to the same extent. In the stories, we assessed both the macrostructure

(e.g. story structure and answers to comprehension questions) and microstructure (e.g. type/token ratio, mean length of utterance, number of atypical patterns). We found a positive effect of retelling on macrostructure in both monolinguals and bilinguals. For bilinguals, their retold stories improved, as compared to the told stories, in both languages. As for the microstructure, when retelling, children told longer stories, regardless of the language (Polish, English) and group (bilingual, monolingual). The results from this study also showed that although the bilingual Polish stories contained a higher number of atypical patterns (syntactic and morphological errors) than the monolingual stories, the Mean Length of Utterance (MLU) remained significantly higher for the bilinguals, relative to the monolinguals, and regardless of the mode. These looked like conflicting findings, since errors usually indicate lower morpho-syntactic skills, whereas a higher MLU is usually a marker of better syntactic abilities (Brown, 1973; de Villiers & de Villiers, 1973). This led us to focus more deeply on the bilinguals' use of Polish and to analyze the results concerning children's MLU from a different perspective, as summarized below.

4.3 *Bilinguals overuse overt referential markers: MLU inflation in Polish-language narratives*

When telling a story elicited with MAIN, a child needs to maintain cohesion by using reference markers (e.g. nouns and pronouns) to refer to the story characters. When referring to new entities or story characters, children speaking such languages as English use indefinite determiners (predominantly articles) preceding nouns. For the known entities or characters, they use definite determiners. Also, when narrating in English, to mention a story character for the second time the child should use a pronominal form, such as an overt subject pronoun. However, in some languages referentiality can be expressed in other ways. As mentioned in Section 2, Polish lacks an article system and allows for null subjects. In Polish, referentiality is rendered mostly through morphological marking, while the use of determiners (e.g., demonstratives) and overt subject pronouns is allowed, but restricted for pragmatic reasons. Thus, thanks to complex morphosyntax and the lack of articles, Polish speakers may use fewer words than English speakers to express the same meaning and maintain referential cohesion within a story. This difference has an impact on how referentiality is realised in both languages. In (1) below we compare two sentences from the *Baby Birds* story scripts in Polish and English (Gagarina et al., 2012).

- (1) **Ø** Mama ptaszków wróciła z **Ø** dużym robakiem
The mother bird came back with a big worm
dla swoich dzieci, ale **Ø** nie zauważyła **Ø** kocura.
for her children, but **she** did not see the cat.

In (1), we see how referentiality in Polish is rendered through morphological marking, i.e. morpho-syntactic agreement between words when for the same referent, not through agreement for distinct referents. Items in bold represent the morphemes responsible for co-reference in the

discourse track in both Polish and English. In Polish, the reference for the mother bird is maintained via the feminine morpheme which forces agreement in all verbs that are associated with the real-world referent. Note the empty slots (\emptyset) where the English pronouns (carriers of reference) would be.

In our paper (Otwinowska et al., 2020) we investigated the use of referential markers in Polish narratives produced by Polish-English bilingual children and their Polish monolingual peers. We analysed data from 92 bilinguals and 92 Polish monolinguals matched for age, gender and non-verbal IQ (as before, the children did not differ in SES, but were not matched for it). For this analysis, to create a corpus of data, we merged the Telling and Retelling narratives of each participant. We were able to do so because there were no mode-differences in the data with respect to microstructure. A collapsing (i.e. merging of samples) of the data was carried out to increase the power of the analyses. The results corroborated the findings from the previous study (Otwinowska et al., 2018), whereby the bilinguals' MLU in Polish was significantly higher than that of the matched monolinguals. The reason for the increased MLU was that the bilinguals produced significantly more referential markers (especially personal and demonstrative pronouns), which inflated their word count. In other words, when producing narratives in Polish, the bilinguals overused referential markers, e.g. overt pronouns, as cohesive devices in their stories, which is not ungrammatical, but pragmatically odd in Polish. Such extensive use of referential markers was not found in the stories told by the matched Polish monolinguals. This finding can be explained as follows. Our bilinguals were immersed in English-language input, rich in overt pronouns within the noun phrases. As a result, they transferred the features of the English noun phrase to their Polish noun phrase, which led to increased use of demonstratives and personal pronouns as referential markers, which inflated the MLU. Thus, we conclude that the MLU inflation was caused by cross-language transfer at the syntax-pragmatics level.

4.4 Internal state terms in the narratives

The last analysis was part of a PhD thesis (Mieszkowska, 2018) that focused on internal state terms used in children's narratives. Internal state terms (ISTs) are words related to beliefs, desires, or emotions. Their examples include "think", "want", "notice", "surprised", "scared". ISTs are part of the MAIN procedure in at least three ways: they are present in the Model Story told to the child, they are assessed as part of the story episodes, and they are the focus of three out of ten comprehension questions. Mieszkowska investigated the use of ISTs in the children's narratives and performed a number of comparisons across a variety of conditions including: groups of children (bilingual vs. monolingual), bilingual children's languages (Polish vs. English), and modes of narrating (told stories vs. stories retold after the model). The analyses included data from 75 bilinguals and 75 monolinguals matched for age, SES, and non-verbal IQ. The children's stories were coded for three subclasses of ISTs: emotional, mental, and perceptual terms. Additionally, data on the children's vocabulary and grammar knowledge in their respective languages were included in the analyses, as were the results of their theory of mind performance tests, (Test of Reflection on Thinking, TRT; Białocka-Pikul et al., 2018).

The results showed that while bilinguals exhibited poorer language abilities relative to monolinguals, the two groups did not differ in the amount of internal state terms produced when telling a story. However, the bilinguals outperformed their monolingual peers with respect to Theory of Mind as measured with TRT. Thus, the advantages and disadvantages seem to have cancelled each other out: the superior cognitive abilities of the bilinguals (as measured by TRT) and their weaker language abilities compared to the monolinguals (as measured by the vocabulary and grammar tests), led to no overall difference between the groups in the use of ISTs in the narratives. Also, the bilinguals used ISTs to a similar extent across their two languages (ISTs constituted approximately 3% of all produced words in both languages). Finally, it was also found that providing children with a model story and explicitly asking them about the internal states of story protagonists attuned them to their knowledge, desires, and beliefs. This, in turn, resulted in using more ISTs in the retellings and answers to the comprehension questions than in the narratives told by children on the basis of pictures alone (Mieszkowska, 2018).

5 Conclusions

So far, there have been two previous versions of the Polish MAIN: the unpublished MAIN-Polish, used in a large scale study of Polish-English bilingual children living in the UK (the Bi-SLI-PL project), and the published MAIN-Polish, which is fully compatible with the original MAIN (Gagarina et al., 2012). The new revised version of MAIN-Polish (2020) strictly follows the changes introduced into MAIN by its designers (Gagarina et al., 2019).

The results obtained so far with the unpublished version of MAIN-Polish demonstrate that some aspects of narrative abilities (story macrostructure) show similarity across monolingual and bilingual groups, even if bilinguals lag behind monolinguals in other language skills like lexicon and grammar (Haman et al., 2017). Interestingly, the generally smaller vocabularies of bilinguals do not translate to a smaller amount of internal state terms in their speech compared to monolinguals (Mieszkowska, 2018). When telling a story after the experimenter, both monolinguals and bilinguals improve their stories' structures to the same extent (bilinguals showing this pattern in both of their languages) (Otwinska et al., 2018). Nonetheless, these similarities between mono- and bilingual groups should not belie some intriguing differences: the stories of Polish-English bilinguals tend to have higher MLU than those of Polish monolinguals. A corpus analysis of narratives demonstrated that this is due to the overuse of referential markers in the narratives of bilinguals, which is in turn caused by cross-language transfer at the syntax-pragmatics level from English to Polish (Otwinska et al., 2020).

It is important to stress that the differences in the unpublished MAIN-Polish were thus far never empirically contrasted with the published MAIN-Polish. To this end, a new study should be planned, with the aim of systematically comparing the two slightly different procedures on one group of participants (with a repeated-measures design). Such a study could reveal the extent to which the results of either micro- or macrostructure analysis depend on specific elements of the procedure, such as the introductory prompt meant to activate story-

telling in participants or the exact order of picture presentation. Thus, it would show whether the results obtained with MAIN are resistant to changes in the procedure details. This is important, as many researchers adjust tools such as MAIN to cater to the needs of their particular studies/projects without fully reporting the minor differences in the procedure itself. Although the MAIN manual warns against introducing changes to the procedure, so far its potential sensitivity or resilience to procedural alterations has not been empirically tested. Nonetheless, when reporting the results of studies carried out with MAIN, researchers should make it a point to carefully and overtly acknowledge any deviations from the original procedure to avoid misunderstandings. Such changes compromise the feasibility of cross-study and cross-linguistic comparisons. Thus, the results obtained with the unpublished MAIN-Polish should be also treated with due caution when comparisons with other studies are made, since the procedure was not identical to the original one (Gagarina et al., 2012).

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7 References

- Adrian, J. E., Clemente, R. A., Villanueva, L., & Rieffe, C. (2005). Parent-child picture-book reading, mothers' mental state language and children's theory of mind. *Journal of Child Language*, 32(3), 673.
- Alberski, B., Andrejewicz, J., Andrejewicz, U., Andrzejczuk, A., Batko, P., Brodzińska, M., Bukowiecka, H., Drabik, L., Filipczak, J., Grzeszak, A., Hajnicz, E., Itoya, B., Kaczmarska, E., Kalużna-Gołąb, M., Kocyba, N., Kozłowska, M., Linsztet, B., Łodzińska, A., Maciejewska, M., ... Żurowski, S. (2018). Walenty (2018-06-29). <http://zil.ipipan.waw.pl/Walenty>.
- Berman, R. A., & Slobin, D. I. (1994). *Relating Events in Narrative: A Crosslinguistic Developmental Study*. Psychology Press.

- Białęcka-Pikul, M., Szpak, M., Haman, E., & Mieszkowska, K. (2018). Teoria umysłu i jej pomiar u dzieci w wieku 4–6 lat: Test Refleksji nad Myśleniem. *Psychologia Rozwojowa*, 23(1).
- Bokus, B. (1978). Effect of adult-shared vs. Nonshared perception of a picture on its description by the three-year-old. *Polish Psychological Bulletin*, 9(4), 239–243.
- Brown, R. (1973). *A first language: The early stages*. Harvard U. Press.
- de Villiers, J. G., & de Villiers, P. A. (1973). A cross-sectional study of the acquisition of grammatical morphemes in child speech. *Journal of Psycholinguistic Research*, 2(3), 267–278.
- Dyer, J. R., Shatz, M., & Wellman, H. M. (2000). Young children's storybooks as a source of mental state information. *Cognitive Development*, 15(1), 17–37.
- Gagarina, N., Klop, D., Tsimpli, I. M., & Walters, J. (2016). Narrative abilities in bilingual children. *Applied Psycholinguistics*, 37(1), 11–17.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Gagarina, N. V., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balciuniene, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Haman, E., Wodniecka, Z., Marecka, M., Szewczyk, J., Białęcka-Pikul, M., Otwinowska, A., Mieszkowska, K., Łuniewska, M., Kołak, J., Miękiś, A., Kacprzak, A., Banasik, N., & Foryś-Nogala, M. (2017). How Does L1 and L2 Exposure Impact L1 Performance in Bilingual Children? Evidence from Polish-English Migrants to the United Kingdom. *Frontiers in Psychology*, 8. <https://doi.org/10.3389/fpsyg.2017.01444>
- Kunnari, S., Välimaa, T., & Laukkanen-Nevala, P. (2016). Macrostructure in the narratives of monolingual Finnish and bilingual Finnish–Swedish children. *Applied Psycholinguistics*, 37(1), 123–144.
- Mieszkowska, K. (2018). *Internal State Lexicon of bilingual and monolingual pre- and early school children* [PhD dissertation, University of Warsaw]. <https://depotuw.ceon.pl/handle/item/2878>
- Nagórko, A. (1998). *Zarys gramatyki polskiej: Ze słowotwórstwem* (Wyd. 3. rozszerz). Wydawnictwo Naukowe PWN.
- Otwinowska, A., Mieszkowska, K., Białęcka-Pikul, M., Opacki, M., & Haman, E. (2018). Retelling a model story improves the narratives of Polish-English bilingual children. *International Journal of Bilingual Education and Bilingualism*, 1–25.
- Otwinowska, A., Opacki, M., Mieszkowska, K., Białęcka-Pikul, M., Wodniecka, Z., & Haman, E. (2020). The Overuse of Referential Markers in Polish by Polish-English Bilingual Children: Data from MLU in Narratives. *First Language*. <https://doi.org/10.1177/0142723720933769>
- Paradis, J., Genesee, F., & Crago, M. B. (Eds.). (2014). *Dual language development and disorders: A handbook on bilingualism and second language learning* (2nd ed). Paul H. Brookes Pub. Co.
- Przepiórkowski, A., Bańko, M., Górski, R. L., & Lewandowska-Tomaszczyk, B. (Eds.). (2012). *Narodowy korpus języka polskiego: Praca zbiorowa*. Wydawnictwo Naukowe PWN.
- Sadowska, I. (2012). *Polish: A comprehensive grammar*. Routledge.
- Tyciński, W., & Sawicki, K. (2009). *Raport o sytuacji Polonii i Polaków za granicą 2009*. Polski Instytut Spraw Międzynarodowych.

Adapting MAIN to Brazilian Portuguese

Laís Vitória Cunha de Aguiar

University of Brasília (UnB)

Micaela Nunes Martins dos Reis

University of Brasília (UnB)

A translation process is often seen as only a simple code exchange, but, in fact, it always requires an adaptation of terms, expressions, and structures, which is not exactly straightforward. This paper describes the process of translating and adapting the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN) to Brazilian Portuguese. A brief description of the project, concerning both historic and linguistic aspects, was done in order to emphasize the cultural and linguistic challenges faced during the process.

1 Introduction

The *Language Impairment Testing in Multilingual Settings – Multilingual Assessment Instrument for Narratives* (LITMUS-MAIN, henceforth MAIN; Gagarina et al., 2012, 2015) is a tool developed within the COST Action IS0804 Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment (2009–2013) by an international team of researchers, and which was then revised in 2019 (Gagarina et al., 2019). The instrument was developed to assess narrative skills in bilingual children aged 3 to 10 years in their two languages.

Brazil is currently facing a situation where a large number of refugee families are coming to the country, especially from Venezuela. Instruments assessing the language development of bilingual children, including those from refugee families, do not yet exist. In order to be able to assess the children's language skills, both in Brazilian Portuguese, the national language of Brazil, and in their home languages, using the same type of assessment instrument, we have adapted MAIN for Brazilian Portuguese. The results of such assessments can help disentangling children with developmental language disorder (DLD) from children with typical development. We also expect such assessments to help parents gain knowledge about how their children can

improve the language skills, be it in Portuguese or their mother tongue. A narrative instrument allows for assessment of specific narrative aspects and also gives a holistic picture of the child's language skills. A Brazilian Portuguese version of MAIN would therefore be an important addition to the tools available to assess children speaking this language.

This paper gives a brief description of the Brazilian Portuguese language and outlines how MAIN was translated and adapted into Brazilian Portuguese including some insights which emerged from the experience of translating and adapting the narrative assessment tool.

2 A short description of the Brazilian Portuguese language

The Portuguese language, as a Romance language, has Latin roots. In 218 A.D, when the Roman Empire reached the Iberian Peninsula, which is currently where the territory of Portugal is located, most of the people living there were forced to adopt Latin as their main language. However, the Latin brought by the Romans was not the classical Latin, written and spoken by the upper-class population of Rome, but instead the “Vulgar Latin” spoken by the common people. In 711 A.D, the Arabs conquered the Iberian Peninsula and remained there for seven centuries. As a result of the contact of Latin and Arabic with the existing dialects of the region, a new language emerged, the Galician-Portuguese, which in the 13th century became the Portuguese language.

Brazilian Portuguese, the variety of Portuguese spoken in Brazil, has around 200 million speakers. It differs from the variety of Portuguese spoken in Portugal due to influence from indigenous languages and from the immigration to Brazil after the second world war. For example, regarding phonological aspects, there are striking differences in terms of pretonic vowels in some regions of Brazil, in which raising of the vowels /e/ and /o/ to /i/ and /u/ occur, such as in the pronunciation of the words *menino* ‘boy’ and *dormir* ‘sleep’. In the variety spoken in Portugal, this type of linguistic phenomenon does not occur.

When the Portuguese arrived in 1500, there were already 2 million people living in Brazil (Ribeiro, 1957), but in only 70 years of colonization, the indigenous population decreased to 200,000. There has also been a large decrease in the number of languages spoken in Brazil: initially around 1,000 languages were spoken, but this number has since decreased by 80% (IPEA, 2011). There are now only 274 languages spoken by around 800,000 people of 305 different ethnicities (IBGE, 2010).

The Portuguese language became dominant in Brazil only around the 18th century. In 1757, the use of another language was forbidden by a decree made by Marquis of Pombal's Directorate (Garcia, 2007). The decree was revoked 41 years later, but given the fact the Portuguese missions had been trying to erase the indigenous languages from the daily lives of the Brazilian population since they arrived, the restrictions over indigenous languages were further sustained in a cultural way. As most people living in Brazil did not speak Portuguese, even with the Portuguese attempt to erase the indigenous languages, an exchange language was created. This language was called the ‘Brasílica Language’ (Góis & Martins, 2019). Later, this language became the basis for the standard Brazilian Portuguese. While Brazilian Portuguese

contains many indigenous words, the grammar differs only slightly from the Portuguese spoken in Portugal.

Another important influence on Brazilian Portuguese were the African languages: Portuguese as a second language for the Africans brought many linguistic innovations, even in grammar, such as the sentence construction oriented towards the subject. This structure (known as locative inversion), is common in many languages that belong to the Bantu language family, spoken in Africa, and it is commonly found in Romance languages.

3 The process of adapting MAIN to Brazilian Portuguese

The work of translating and adapting MAIN to Brazilian Portuguese was shared among five students of linguistics of the University of Brasília, including the two authors of this paper. The five people involved in the adaptation process come from different parts of Brazil, where different varieties of Brazilian Portuguese are spoken. This made it necessary to check the translation carefully and standardize the terms used throughout the text. Concerning grammar, the scoring sheet was a challenge because the English grammar differs from the Brazilian Portuguese one, so it was crucial be sure about the aim of each aspect that was to be scored to be certain that we did the right translation. Below, the specific challenges are presented in detail.

The warming-up part of MAIN, which describes how to start the interaction with the child, presented us with the challenge of the best translation of the main term ‘warming-up’, as some of us translated it as *aquecimento* ‘lit. warming-up’, but in Portuguese this term is mainly used to describe physical exercises, e.g. going to the gym and starting exercises with a warming up. After discussion, it was decided to use the word *preparação* ‘lit. preparation’, because we wanted to make it clear that this concerned preparing the child for the MAIN task, not a physical exercise.

Another challenging term was the word *counterbalancing* which has two equivalents in Brazilian Portuguese, *contrapeso* ‘lit. counterbalancing’ and *equilíbrio* ‘balancing’. These two words, although they have similar meanings, are used in different contexts. After a lengthy discussion *contrapeso* was chosen, because it better suits the experimental context of the task. Another complicated word was *deictic*. Since there is no direct equivalent in Brazilian Portuguese to this word, it was decided to include an explanation of its meaning: *referências que limitem a experiência em relação a cada contexto específico, como indicadores de espaço-aqui, lá-, e tempo* ‘references that might limit the experience in relation to each specific context, such as time, place and space.’

The translation of acronyms, such as IST (Internal State Terms), also posed an issue. We were not able to find any existing term for *Internal State Terms* in Portuguese. For this reason, we translated it literally and explained its meaning in the text. In the same way, the term *experimenter effects* caused a problem, because Brazilian Portuguese does not possess an equivalent to this word. Therefore, it was decided to add the following definition of this concepts: *efeitos da sua expectativa em relação à experiência* ‘effects of your expectation in relation to the experience.’

In terms of the vocabulary used in the story scripts and comprehensions questions, writing in a way that would not exclude any child because of the lexical differences between the regions of Brazil was the most difficult part, and the one discussed most extensively in our team. Terms like ‘little bird’, and ‘baby goat’ are not frequently used by Brazilian-Portuguese-speaking children; instead diminutives are used, e.g. *pássaro* ‘bird’ becomes *passarinho* ‘little bird’, and *cabra* ‘goat’, becomes *cabrinha* ‘little goat-FEM’ or *cabritinho* ‘little goat-MASC’. Additionally, in the northeast region, the word *cabra* is used to describe someone who is fool, or silly. For this reason, it was decided to use *cabrito* ‘goat-MASC’ instead of *cabra* ‘goat-FEM’ with its diminutive version *cabritinho* ‘little goat-MASC’, for the goat and the baby goats, respectively. As all nouns denoting animals are explicitly marked as either feminine or masculine in Portuguese (e.g. *cabra* ‘goat-FEM’, *cabrito* ‘goat-MASC’) for each animal in the stories, it was necessary to make a choice between the masculine and feminine form of the word. In the end, our decision was based on what was the most familiar word for children. For this reason, *cabritinho* ‘little goat-MASC’ was used for the baby goats and *passarinho* ‘baby bird-MASC’ for the baby birds. The cat, dog, mouse, and fox were therefore translated as *gato* ‘cat-MASC’, *cachorro* ‘dog-MASC’, *rato* ‘mouse-MASC’, and *raposa* ‘fox-FEM’.

Finally, the issue of how formal the language of the comprehension questions should be was discussed. In Brazil, children are usually addressed using the informal register, and the MAIN comprehension questions should therefore be asked using this register. For interrogatives, Portuguese use the same structure as in affirmatives, i.e. SVO word order. The differences between affirmatives and interrogatives are in the tone used and in the use of an interrogative pronoun (*como* ‘how’, *quando* ‘when’, *onde* ‘where’, *quem* ‘who’, *quanto* ‘how much’, *o quê* ‘what’). Regarding imperative sentences, which were used to encourage the child to carry on with the story, in the formal register, the structure is verb+clitic, e.g. *conte-me a estória* ‘tell me the story’, but here we chose the informal one, with the structure pronoun+verb, e.g. *me conte a estória* ‘tell me the story’ (lit. ‘to me tell the story’).

4 Conclusion

In this paper, we have described some linguistic, historical and social aspects of Brazilian Portuguese and outlined the main challenges in the process of translating and adapting MAIN to this language. It is undeniable that translating MAIN was a challenging task, but since we were especially careful during this process and united our knowledge of dialectal variation between different regions of Brazil, we strongly believe that we have achieved the intended goal. From now on, we aim to use MAIN in Brazil and improve the translation and adaptation, if necessary, based on reports from pilot testings from other researchers.

5 References

- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Garcia, E.F. (2007). O projeto pombalino de imposição da língua portuguesa aos índios e a sua aplicação na América meridional. *Tempo*, 12(23), 23–38.
- Góis, M. L. S., & Martins, A. M. S. (2019). O Tupi antigo no português: Algumas questões sobre história, identidade e ensino de língua [The Ancient Tupi in Portuguese: A few issues on history, identity, and language teaching]. *Trabalhos em Linguística Aplicada*, 58(1), 422–440.
- IBGE (2010). *2010 Population Census*. Brasília: Brazilian Institute of Geography and Statistics (IBGE).
- IPEA (2011). *Retratos – Somos 210 Brasis*. Brasília: Institute of Applied Economic Research (IPEA).
- Ribeiro, D. (1957). *Culturas e línguas indígenas do Brasil*. Rio de Janeiro: Centro Brasileiro de Pesquisas Educacionais.

Serbian version of the Multilingual Assessment Instrument for Narratives (MAIN)

Ljiljana Jeličić

Institute for Research and Development “Life Activities Advancement Center”, Institute for Experimental Phonetics and Speech Pathology

Ivana Bogavac

Institute for Research and Development “Life Activities Advancement Center”, Institute for Experimental Phonetics and Speech Pathology

Alexandra Perovic

University College London

This paper provides the background to the process of translation and piloting of the Serbian version of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN), *Multilingvalni Test za Procenu Narativa* (MTPN). Our review of the sparse research literature on Serbian children’s narrative abilities reveals a need for a well-designed narrative instrument, which will enable researchers and practitioners to assess the production and comprehension of narratives in children of a wide age range, typically and atypically developing, monolingual and bilingual, crucially allowing for cross-linguistic comparisons. We encountered two kinds of challenges during the process of translation and adaptation of the instrument from English into Serbian. The first concerned the lack of established Serbian technical terminology needed to describe test administration to the future users of the test: researchers and practitioners working in different disciplines such as linguistics, psychology, Speech and Language Therapy. The second challenge concerned the translation of linguistic structures required to produce a successful rendition of the narrative: in contrast to English, but in line with other Slavic languages, Serbian relies heavily on verbs marked for perfective aspect in story-telling. Our discussion of preliminary data from four Serbian monolingual children, aged 5;5-10, demonstrates that MTPN is a successful tool in assessing narrative abilities in children acquiring Serbian.

1 Introduction

The Language Impairment Testing in Multilingual Settings – Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN) is a new instrument developed to assess the production and comprehension of narratives of multilingual children (Gagarina et al., 2019). The child’s ability to comprehend, tell or retell a story is assessed relying on a sequence of pictures accompanying each of the four stories, carefully created to be age-accessible and culturally appropriate across languages and cultures. First published in 2012 (Gagarina et al., 2012), it has been used with over 500 children, speakers of 15 languages. The latest version from 2019 is being adapted into over 60 languages, and for the first time, it includes Serbian. Serbian is the official and majority language in Serbia, and one of the recognized official or minority languages in the Western Balkans: Bosnia and Herzegovina, Croatia, Montenegro, North Macedonia, and Kosovo. It is also used amongst the large Serbian diaspora, from North America and Europe to Australia and New Zealand. While we have no definitive numbers, the consistently high emigration rates point to a large number of Serbian-speakers worldwide: just between 2012 and 2016 around 245,000 people left Serbia (the International Migration report, OECD, 2018). The importance of the MAIN enterprise cannot be overestimated: being able to use the same instrument and to compare data from speakers of different languages who are growing up in different socio-cultural contexts has the potential to revolutionize the fields of bilingual language acquisition research and clinical practice, as well as improve access to intervention for vast numbers of children in different corners of the globe.

In the following sections, we give an overview of the sparse research and clinical literature on the elicitation of narratives in Serbian, emphasizing the need for the current instrument. We then describe the process of translation and piloting of Serbian MAIN with four children, two typically developing (TD), aged 5;5 and 10;6 and two with previous diagnoses of dyspraxia and articulatory difficulties, now resolved, aged 6;8. We discuss the challenges that arose during the translation and adaptation process: the first being the technical terminology employed in the instructions on administering the task, and the second the linguistic structures needed to produce a successful rendition of the narrative but which differ in English and Serbian. In the discussion of relevant linguistic structures, we focus on the morphological marking of the perfective vs. imperfective aspect on verbs, and the use of determiners in the article-less language such as Serbian. Finally, we discuss examples of representative structures from our translation of the stories used in the narrative elicitation and give a brief overview of the results of the four children with whom two stories from Serbian MAIN were piloted: the story ‘Cat’ in the telling mode and the story ‘Dog’ in the retelling mode. The section on future directions concludes the paper.

2 Background: Instruments eliciting narratives in Serbian

There is very little research examining children’s narratives in Serbian in particular, and children’s language skills, in general. To assess children’s language production and

comprehension, Speech and Language Therapists (SLTs) in Serbia use one of two instruments developed for screening for language impairment in monolingual Serbian children, neither of which have been standardised, and which are rarely used in research. The first is the Test of Picture Description Abilities (*Test za ispitivanje sposobnosti opisivanja slika*), a subtest from a larger language assessment battery (Vasić, 1993), where a child is asked to describe a single picture. This task was used with 53 typically developing (TD) children and 43 language-impaired children, aged 3;11-6;11, in the study by Čabarkapa, Punišić, Subotić and Čović (2006), and with a sample of 77 older TD and language impaired children, aged 11-14, in Vuković, Avramović and Vuković (2013). The language samples produced by the participants in these studies were descriptions of a single picture; no narratives were produced. The second test used by SLTs in Serbia is the Comic Strip Story (*'Strip priča'*), again a part of a larger assessment (Vladislavljević, 1997). This instrument is more suitable to elicit narratives as it involves a sequence of four pictures in the form of a comic strip, where the child is required to tell the story based on the pictures, without any model given. Jeličić Dobrijević (2011) elicited narratives from 30 TD children aged 3;6-4;6, which were compared to 32 children of the same age born to women with high-risk pregnancies.

While the above studies (all published in Serbian) focused primarily on atypically developing children, a recent study published in English used the method of narrative elicitation to investigate the acquisition of aspectual distinctions in Serbian TD children (Savić, Popović & Anđelković, 2017). The ability to correctly mark temporal relations, as encoded by tense and aspect, is crucial in producing successful narratives. Thirty children, divided into three age groups with each group consisting of 10 children with the mean ages: 3;2 (three years; two months), 4;1 (four years; one month) and 5;1 (five years; one month), were asked to describe events presented in short video clips that featured two or three protagonists involved in some amusing actions (e.g. an elephant baking a birthday cake, a mouse unintentionally destroying the cake). Even though the narratives produced by the children (and adult controls) were relatively short (around 40 words on average, as per the sample narratives provided in the published paper), the increase in the structural complexity of the narrative was evident: while the youngest children needed much prompting, the story-telling abilities of the older children were similar to those of the adults. The focus of the study however was children's competence in their use of grammatical aspect (or viewpoint aspect, e.g. Smith, 1997) and lexical aspect, i.e. Aktionsart, in the context of the narrative. From the earliest age, participants appropriately used a higher proportion of perfective than imperfective verbs, and verbs referring to achievements, activities and accomplishments more frequently than verbs depicting states – both patterns in line with the findings on other Slavic languages (e.g. see Smoczyńska, 1989 for Polish, Gagarina, 2004 for Russian, and Hržica, 2011 for Croatian, a language closely related to Serbian).

While the studies reviewed above elicited some form of a narrative, relying on a range of methods and recruiting children of varying age ranges, their focus was seldom on the actual narrative abilities of these children. The development of narrative skills in both younger and older Serbian children, monolingual and multilingual, is yet to be researched in relevant detail.

An accessible and reliable instrument that can be used by researchers and clinicians alike is the first step towards this goal.

3 Translating and adapting MAIN into Serbian

The Serbian version of MAIN, *Multilingvalni Test za Procenu Narativa* (MTPN), is the first instrument specifically designed to measure narrative abilities in monolingual and bilingual children to be used with the Serbian-speaking population, but can also be used to assess general language abilities. The instrument was adapted from the 2019 revised English MAIN version (Gagarina et al., 2019) in March and April 2020 by a team of Serbian-speaking professionals that consisted of two Speech and Language Therapists based in Belgrade, Serbia (first and second author), and a linguist based in London, UK, who is also a qualified Serbian/English translator (third author).

3.1 Technical terminology

We took great care in adapting the technical terminology employed in the instructions for administering the task, in order to ensure that it would be understood by both clinicians and researchers (e.g. linguists, psychologists): there is little contact between relevant disciplines in Serbia, thus the terminology commonly used in one field may not necessarily be known in another. The terms that proved challenging were those seldom used in Serbian SLT instruments while being familiar to researchers in the fields of psychology or experimental linguistics: *counterbalancing* of stimuli, *elicitation* of narratives, *shared knowledge*, *terms of internal states*, *mental state verbs*. To arrive at the most suitable translations, we decided to keep the terms as close as possible to the English forms (anglicised forms are commonly used in Serbian technical literature): for instance, ‘elicitation’ was translated as *elicitiranje*, ‘counterbalancing’ as *kontrabalansiranje*. The phrase ‘terms of internal states’ was again kept as close to the English original as possible: for ‘term’ we used *termin* rather than the Serbian *pojam*, though ‘internal’ was translated as the more literal *unutrašnji* since the anglicised *interni* is a medical term which would have caused confusion if used in the context of language assessment. To ensure administrators’ full understanding of relevant terminology, each time one of these terms was used for the first time in the instructions, a detailed explanation was also provided in brackets.

Our translation of the technical terminology was verified by experts in the fields of linguistics (Boban Arsenijević, Karl-Franzens-University of Graz), psychology (Dušica Filipović Djurdjević, University of Belgrade), and lexicology (Ana Milenković, Serbian Academy of Sciences and Arts), all Serbian native speakers. For consistency purposes, the terminology was also checked and agreed with a linguist who was part of the team that had worked on the Croatian version of MAIN, Gordana Hržica, University of Zagreb. The two languages are closely related, and researchers are likely to use both versions when eliciting narratives in the countries of the Western Balkans. We anticipate that the introduction of the

new technical terminology in MTPN will help advance the field of SLT in Serbian and enable more efficient communication between researchers and clinicians.

3.2 Tense, aspect and lack of articles in Serbian

One of the issues that needed addressing was the variation in the expression of tense and aspect in Serbian versus English, especially evident in the context of the narrative. Most of the English verbs used in the stories referred to telic events and were marked for the simple past tense. These were translated into Serbian using the perfective form of the relevant verb in the periphrastic past tense.¹ In line with other Slavic languages, Serbian marks grammatical aspectual oppositions morphologically, and almost all verbs come in aspectual pairs (perfective vs. imperfective). The examples below, (1) from the story ‘Cat’ and (2) from the story ‘Dog’, involve perfective verbs: ‘*skočiti*’ (jump), where the imperfective form is ‘*skakati*’; ‘*udariti*’ (bump/hit), where the imperfective form is ‘*udarati*’. The example in (3) from the story ‘Dog’ involves a mental state verb, ‘think’, which can be ambiguous with regard to telic vs. atelic interpretation; however the choice of the perfective member of the aspectual pair, ‘*pomisliti*’ (cf. imperfective ‘*misliti*’), in the Serbian translation leaves no room for ambiguity (see Gagarina, 2004, for the discussion of aspectual pairs and their acquisition in Russian).

(1) *Mačka je skočila.*
 cat aux-3SG-PRES jumped-PFV-SG-FEM
 ‘The cat jumped.’

(2) *Pas je udario u drvo.*
 dog aux-3SG-PRES hit-PFV-SG-MASC in tree
 ‘The dog bumped into the tree.’

(3) *Pas je pomislio*
 dog aux-3SG-PRES thought-PFV-SG-MASC
 ‘The dog thought.’

The English progressive past, used to refer to incomplete past events, was translated using the past tense imperfective form, as in (4).²

(4) *Jedan veseli dečak se vraćao sa pecanja*
 one cheerful boy se-refl-cl return-IPFV-SG-MASC from fishing
 ‘A cheerful boy was coming back from fishing.’

¹ This past tense in Serbian is known as ‘perfekt’. It is constructed using the present form of the aux ‘be’ (the clitic ‘*je*’), marked for tense, number and person and the perfect participle of the main verb, marked for number and gender. We decided against the use of the aorist tense, which used to be common in story-telling, but is now primarily found in literary texts.

² This is a reflexive verb, occurring with the reflexive clitic ‘*se*’: the auxiliary clitic ‘*je*’ is dropped.

Some of the follow-up questions were also made clearer by changing the tense or aspect used in the first version of the translation. For example, our original version of the follow-up question in the story ‘Cat’ included a literal translation from English: ‘Why is the cat jumping?’, using the imperfective form of the verb ‘jump’ in the present tense: ‘*Zašto mačka skače?*’ Following the piloting, the verb form was changed to the more appropriate: ‘Why did the cat jump?’ ‘*Zašto je mačka skočila?*’, where the verb is both perfective and in the past tense.

The other issue that needed addressing in the process of translation was how to convey definiteness, specificity and partitivity in Serbian, an article-less language (see Ko, Perovic, Ionin & Wexler, 2007, for a discussion of these concepts in Serbian). Each context was carefully considered: the numeral ‘one’ was inserted when introducing a new referent (see 4 above) and when it was necessary to clarify that one item in the group of items is being referred to, e.g. (5) below (the sentence is accompanied by a picture which shows more than one fish):

- (5) *mačka je pomislila: “Želim da ugrabim jednu ribu.*
 cat aux thought want comp grab one fish
 ‘The cat ...thought: “I want to grab a fish”.’

4 Piloting of Serbian MAIN: Preliminary results

The Serbian MAIN was piloted in March and April 2020 with four monolingual Serbian children, aged between 5;5 and 10;6. Two typically-developing children, a boy (aged 10;6) and a girl (aged 5;5) were administered the instrument in the telling and retelling mode for the stories, *Cat* and *Dog*. Two children on the SLT caseload of one of the SLTs, a boy (aged 6;8) with a diagnosis of dyspraxia and a girl (aged 6;8) with resolved articulatory difficulties, were administered two stories each, *Cat* in the telling mode, and *Dog*, in the retelling mode.

All four children successfully produced the narratives. While we do not discuss the macrostructure and microstructure of their narratives in this paper in any detail, it suffices to say that all children included all the relevant episodes provided in the model, using appropriate linguistic structures and vocabulary. We shall, however, touch briefly upon on the children’s mastery of tense, and especially aspect, as this is one of the issues that has attracted much attention in the literature of Slavic acquisition.

As is expected for their age, none of the children produced utterances that were morphologically and syntactically ungrammatical. They produced an appropriate range of sentence structures, including subordinating and coordinating constructions, and used correct nominal and verbal inflection.

The children were competent in including the target story grammar categories such as goals, attempts, and outcomes in both the telling and retelling mode. However, they seemed to use terms describing emotional states (*angry, scared*) and perceptive states (*see, notice*) more frequently in the retelling mode compared to the telling mode, though the frequency of the use of perceptual states was generally higher. There were other effects of the mode of elicitation.

All four children produced more false starts and repetitions in the telling mode compared to the retelling mode. With regards to the length of their narratives, three of the four children produced stories considerably shorter than expected: the average length was around 70-80 words, compared to the model story of around 140 words. The length of the story was not affected by the mode, retelling vs. telling, with the exception of the 6-year-old boy with a diagnosis of dyspraxia, who produced a narrative that was over 20 words longer in the retelling mode. This could mean that children with language difficulties may be more attentive to the features of the model story provided in the retelling mode than TD children. Another possibility is that the presentation of the task in the same order for each child, telling followed by retelling, prompted the children to look at the pictures only and ignore the story told by the experimenter in the retelling mode. Of course, our sample of children is too small to make any meaningful generalizations, but the issue of the counterbalancing of the narrative mode certainly needs to be considered in future administrations of the task.

The children correctly used the periphrastic past tense and the correct event type to express relevant events/states, and correctly marked grammatical aspect (perfective/imperfective). The majority of the verbs (over 90%) used were in the perfective form, as is suited to the context of the narrative: the children regularly produced examples similar to those contained in the story texts given in (1) to (5) above. The remaining verbs were correctly used in the imperfective form, for instance ‘live’ and ‘love’, which were produced in the telling mode. A girl of 6;8 with the former diagnosis of articulatory difficulties used the verb ‘live’ when setting the scene of the story ‘Dog’ (6), and the verb ‘love’ when talking about the boy who lost his ball in the telling mode of the story ‘Cat’ (7).

(6) *Nekada davno u dalekom selu živeo*
 sometime long-ago in far village lived-IPFV-SG-MASC
je jedan pas
 aux-3SG-PRES one dog
 ‘A long time ago in a far-away village there lived a dog.’

(7) *jer je jako voleo tu loptu*
 because aux-3SG-PRES much loved-IPFV-SG-MASC that ball
 ‘Because he loved that ball very much.’

There were few instances of inappropriate uses of tense or aspect. In one instance, the same 6-year-old girl used an imperfective past tense form of the verb ‘eat’ (*jeo*) in the context where the perfective form (*pojeo*) was more appropriate:

(8) *pas je bio srećan zato što je*
 dog aux was happy because comp aux
jeo kobasice
 eat-IPFV-SG-MASC sausages
 ‘The dog was happy because he ate the sausages.’

Our participants' generally competent use of tense and aspect marking is in line with the findings reported in Savić et al (2017) for Serbian, as well as the findings reported for other Slavic languages (e.g. Gagarina, 2004). However, more detailed analyses are needed, especially of the youngest amongst our participants, and those with previously diagnosed language difficulties, in order to establish the presence of more subtle patterns of microstructure difficulties in the narratives we elicited.

5 Concluding remarks

MTPN appears to be a successful tool in the elicitation of narratives in Serbian-speaking children. Our participants readily took part in the tests and produced narratives comparable to the age-matched peers in other languages. Their narratives were shown to provide valuable data for further investigations of different features of narrative macro- and micro structure in Serbian. We hope that this instrument can be standardized, normed, and validated in Serbian. We also hope that the existence of such an instrument in Serbian, a language that severely lacks modern language assessments, will stimulate further research, both theoretical and practical, which will provide important insights into the development of narratives in different populations of Serbian-speakers, and enable comparisons of relevant findings to other languages.

6 References

- Čabarkapa, N., Punišić, S., Subotić, M., & Čović, B. (2006). Sintaksička kompleksnost kao pokazatelj govorno jezičke razvijenosti dece predškolskog uzrasta [Syntactic complexity as a predictor of speech and language development in children of preschool age]. *Proceedings of the 50th ETRAN Conference, Belgrade, June 6-8, 2006, Vol. II*.
- Gagarina, N. (2004). Does the acquisition of aspect have anything to do with aspectual pairs? *ZAS Papers in Linguistics*, 33, 39–61.
- Gagarina, N. (2008). *First Language Acquisition of Verb Categories in Russian*. Moskva: Nauka.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children: disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Hržica, G. (2011). *Aspect, tense and actionality in acquiring Croatian as a first language*. PhD thesis. University of Zagreb, Faculty of Philosophy.

- Jeličić Dobrijević, Lj. (2011). *Prenatal hearing screening in function of psychophysiological child development prediction*. Monograph, CUŽA-IEFPG, Belgrade.
- Ionin, T., Perovic, A., Ko, H. & Wexler, K (2008). Semantic universals and variation in L2 article choice. In Roumyana Slabakova et al. (Eds.). *Proceedings of the 9th Generative Approaches to Second Language Acquisition Conference (GASLA 2007)* (pp. 118–129). Somerville: Cascadilla Press.
- Organization for Economic Co-operation and Development (2018). *International Migration Outlook 2018*. Paris: OECD.
- Savić, M., Popović, M., & Anđelković, D. (2017). Verbal aspect in Serbian children's language production. *Psihologija*, OnlineFirst, 1–18.
- Smith, C.S. (1997). The parameter of aspect [*Studies in Linguistics, Volume 43*]. Second edition. Kluwer Academic Publishers: Dordrecht, Boston, London.
- Smoczyńska, M. (1989). The acquisition of Polish. *Journal of Child Language*, 16(2), 440–442.
- Vasić, S. (1993). *Veština govorenja* [Language skills]. Beograd: Beogradski izdavačko-grafički zavod.
- Vladislavljević, S. (1997). *Patološki nerazvijen govor dece – Uputstva za jezički i govorni razvoj* [Pathologically underdeveloped language in children: Instructions for speech and language development.] Beograd: Zavod za udžbenike i nastavna sredstva.
- Vuković, M., Avramović, I., & Vuković, I. (2013). Sintaksičke sposobnosti kod mladih sa poremećajima u jeziku i razvoju [Syntactic abilities in the youth with speech and language development disorders.]. *Poremećaji govora i jezika*, 55(1), 109–122.

MAIN: The Slovak version and pilot data

Svetlana Kapalková

Comenius University

Monika Nemcová

Comenius University

The adaptation of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN) for use with Slovak speaking children is a vital step in the process of creating a transparent evaluation of children's narrative abilities. Since its first translation and adaptation in 2012, new pilot data from different groups of children has been collected in Slovakia. This paper describes the process of adapting the instrument to fit the Slovak language and reports on analyses of narrative production in monolingual (103 Slovak-speaking children) and bilingual (37 Slovak-English speaking) pre-school children. Within a pilot study, the story elicitation method was also compared (telling vs. retelling) within a small sample of 10 monolingual Slovak-speaking children. All results show transparent and detailed possibilities in terms of finding a meaningful evaluation that can evaluate a child's complex narrative abilities.

1 Introduction

A child's narrative abilities in the pre-school age are a significant predictor of their future school success. Many authors draw attention to the direct relationship between oral narratives and later literacy (McCabe, 1996; Cain, 2010; Nicolopoulou, McDowell & Brockmeyer, 2006). A child's narrative abilities represent and reflect the summary of several of their linguistic, as well as cognitive, social, and emotional abilities. Therefore, we can assume that story telling tasks represents the most ecological way of assessing different areas of a child's language. The story structure, the level of lexical diversity used in children's language production, as well as the use of grammatical constructions expressed during storytelling, can help us to objectively define the developmental milestones of a child's language, both in terms of quantity and quality. Therefore, not having access to a structured and reliable narrative instrument poses a significant disadvantage for any pedagogical, psychological, or speech-language practice. In Slovakia,

child specialists have usually asked children to recount a personal story, to retell a story that has previously been told by adults, or to speak about events from their daily life. All these types of narratives have many limitations, such as the lack of an objective and transparent process for assessing the child's narrative ability. The fact that the children's stories differ in topic and length, and are influenced by the cultural background of their family can also negatively influence the children's ability to produce a cohesive story. Additionally, due to these factors, it becomes much more difficult to compare their individual narrative abilities. As a result of designating objective and structured ways in which to ensure the same assessment criteria for all, the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagatina et al., 2012, 2015) was developed during the research project COST Action IS0804 *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment* by one the working group on discourse. MAIN has since been revised (Gagarina et al., 2019). Svetlana Kapalková and Daniela Slančová were members and representatives for Slovakia in the COST project, as well as partial members of the working group on discourse during the adapting process of the instrument. Here, we present the adaptation of MAIN to Slovak, based on the revised MAIN (Gagarina et al., 2019), and report results for the studies that have used the Slovak MAIN since 2012, including recent pilot studies.

2 A brief description of the Slovak language

Slovak is the mother tongue of approximately 4.5 million people in Slovakia. Additionally, about 2.8 million people of Slovak origin live outside of Slovakia (Ondrejovič, 2009). With respect to language typology, Slovak is a West-Slavic language. It has a rich morphology, is heavily reliant on inflections, and has a relatively free word order. These features are all in stark contrast to English with its sparse morphology and reliance on function words within a stricter word order. Slovak is a pro-drop language, and pronominal subjects are usually omitted unless particular emphasis is required (Kesselová & Slančová, 2010).

3 Adapting MAIN to Slovak

MAIN is quite complex instrument. It allows for the evaluation of both narrative comprehension and production. The assessment of narrative production focuses on two main domains: macrostructure and microstructure. The theoretical framework for macrostructure is based on the story grammar model, which is seen as the universal knowledge about storytelling and is defined by story components, characters, and sequence of events (Stein & Glenn, 1979). All of these facts have motivated us to adapt the MAIN in a way which would allow specialists in Slovakia to employ it also.

The first step in the process of adapting MAIN to Slovak, the translation of the story scripts and scoring protocols by Svetlana Kapalková, took place during the COST project. These translations were later adapted to match the revised English version (Gagarina et al.,

2019). During the translation process, Daniela Slančová, as a linguist, checked the meaning, as well as the appropriateness of the language used.

The first topic that was discussed at this stage of the process concerned the story characters names. In the English version, the gender of the animals (the cat or the fox) does not need to be specified, and can, therefore, be referred to with the same words regardless of their actual gender. Due to the nature of the Slovak language, gender has to be specified, and we have, therefore, decided to allow the use of both gender forms of the words in the Slovak version (e.g. for the cat: *mačka* ‘female cat’ and *kocúr* ‘male cat’). However, in the Cat story we decided to name the cat in the feminine form (*mačka*) since that Slovak children much more often identify the character as feminine. In contrast, in the Baby Birds story, we used the masculine form of word cat (*kocúr*). (Here, children used both forms equally.) Additionally, in the Baby Goats story, based on the children’s answers we decided to use the masculine form of the word fox (*lišiak*). A similar situation appeared with naming the bird characters. In Slovak, distinctions are often made based on the size of objects and characters, most notably through the use of the diminutive form, e.g. *vták* ‘bird’ and *vtáčik* ‘little bird’.) In this case, it was culturally more appropriate to use the diminutive word for bird (*vtáčik*) in the Baby Birds story. In contrast, in the Baby Goats story, we used the neutral word for bird (*vták*), since this was more suitable based on the picture of the bird and the situation.

When the narrative macrostructure of the stories was controlled, we realized the importance of expressing internal terms as initiating events and reactions. We also carefully checked all relevant adjectives, adverbs, and verbs when finding their closest meaning parallels within the Slovak language. In microstructure, we used the same number of coordinating and subordinating constructions, and the number of direct speech sentences as in the English version.

In the end, the number of words used in the Slovak stories is approximately 40 words less than in English. One of the reasons for this difference is the absence of the (in)definite articles in Slovak. Additionally, since Slovak is a pro-drop language, an overt pronoun does not have to be used. However, the all four stories have a similar number of words in Slovak (Baby Birds: 139, Baby Goats: 143, Cat: 147, Dog: 146 words).

Next, the Slovak version of MAIN was translated back to the English version by Martin Kubáň, a professional translator. We then checked and compared the scripts to check for discrepancies. No major discrepancies were found.

Finally, six students of speech-language therapy (Lenka Marková, Alexandra Pyšná, Ľudmila Mičianová, Kristína Schweighoferová, Monika Schieberová, Klára Krokusová and Monika Nemcová), who were native speakers of Slovak checked the text of Slovak version carefully. All of these students have also administered the working version of Slovak MAIN to collect the first Slovak pilot data. Based on the feedback from the children’s data, we then finalized the Slovak version. Below, we describe our preliminary results from three studies using the Slovak MAIN.

4 Using the Slovak MAIN in research

4.1 Study 1: Monolingual Slovak-speaking pre-school children

In Study 1, we examined to what extent monolingual typically-developing Slovak-speaking pre-school children expressed story structure in their narratives. Our sample consisted of 102 children. We asked whether there were significant differences between 3-, 4-, and 5-year-olds in the number of macrostructural components they expressed in their narratives. Table 1 gives an overview of the three groups.

Table 1: Age description of monolingual pre-school children.

Age group	N	Mean	SD	Min	Max
3-year-olds	18	42.72	4.39	37	48
4-year-olds	33	56.52	2.69	51	60
5-years-olds	52	67.94	4.08	61	75

All children were asked to tell one of the MAIN stories (Cat, Dog, Baby Birds, Baby Goats) and afterwards answered the comprehension questions. The procedure and method of counterbalancing from Gagarina et al. (2012) was followed, and the scoring of the story structure was done according to the MAIN scoring protocol. For expressing the different components of the story structure (setting, internal states as the initiating event, goal, attempt, outcome, internal state as reaction), the maximum score was 17 points. The results for the three age groups are given in Table 2.

Table 2: Story structure scores, one MAIN story, Slovak monolinguals pre-school children.

Age Group	N	Median	Mean	SD	Min	Max
3-year-olds	18	3	3.33	1.57	1	6
4-year-olds	33	5	4.61	1.77	1	9
5-year-olds	52	5.5	5.62	1.52	3	9

The distribution of the story structure scores were significantly non-normal for the 4- and 5-year-olds (3-year-olds, $D(18) = 0.915$, $p > .05$; 4-year-olds, $D(33) = 0.164$, $p < .05$; 5-year-old $D(52) = 0.170$, $p < .05$). Consequently, we compared the three age groups using the non-parametric Kruskal-Wallis test. The number of macrostructure components expressed differed significantly between the age groups ($H(3) = 20.76$, $p < 0.001$). Man-Whitney tests (Bonferroni-corrected) were used to follow up these findings. The youngest children, the 3-year-olds,

expressed fewer components than the 4-year-olds ($U = 177, r = -0.336$), and the 4-year-olds expressed fewer components than the 5-year-olds ($U = 592, r = -.266$).

4.2 Study 2: A comparison of elicitation methods (telling vs. retelling)

Since MAIN offers different methods of eliciting narratives, telling, retelling, and model story (Gagarina et al. 2012; 2019), we decided to compare two of them (telling and retelling) using a small sample of 10 typically-developing Slovak-speaking children (Pyšná & Kapalková, 2012). The mean age of the children was 82.3 months (range 74-92, SD 5.7). The children were asked to tell and retell one out of two MAIN stories which were assigned randomly (Cat and Baby Birds). The order of the elicitation modes was counter-balanced too; half of the children first told the story while the rest of the children first retold the story. Due to the small sample, we analyzed the results as descriptive statistics and qualitatively for both macro- and microstructure.

On average, children expressed fewer macrostructural components in their tellings (6.3 components, SD 2.21), compared to in their retellings (8.4 components, SD 2.80). However, the results for the microstructure are less clear. For microstructure, we compared the following: total number of spoken words, lexical diversity (TTR), total number of utterances, and the number of clauses. The overview is offered in Table 3.

Table 3: Microstructure measures for the telling and retelling story respectively by the same children.

	Mean Tell/Retelling	SD Tell/Retelling	Min Tell/Retelling	Max Tell/Retelling
Total number of words (TNW)	63.8/58.7	31.25/17.53	26/39	135/88
Total number of utterances (TNU)	8.2/7.5	2.39/2.17	5/5	12/11
Type-token ratio (TTR)	55,7%/64%	13.55/8.11	41%/53%	85%/83%

Based on the pilot data presented above, the shared knowledge between the administrator and the child during the retelling elicitation (where both of them look at the story pictures), influences the microstructure. Children tended to express less words during the retelling story, in contrast to a higher number of words expressing macrostructure components in the same process.

4.3 Study 3: Bilingual Slovak-speaking pre-school children

A central feature of the MAIN instrument is the possibility to assess the narrative skills of bilingual children in both languages using the same instrument. Based on the suggestion that macrostructure performance is mainly dependent on cognitive patterns and less dependent on language skills, we analyzed the same macrostructure components in both L1 and L2. In Kapalková, Polišíenská, Marková and Fenton (2016), we analyzed narratives from 38 successive Slovak-English bilinguals, with Slovak as their L1, and English as their school language (L2). In each language, the children told one story and retold another story. In total, the maximum was 34 points for expressing the macrostructural components in each language. We hypothesized that the production of macrostructural components in L1 and L2 would not differ significantly in children with a minimum of 12 months of intensive exposure to English as an L2. The hypothesis was addressed by a comparison of macrostructure production scores across two languages (L1 vs. L2). A paired-samples t-test with a number of macrostructural components as the dependent variable revealed a significant effect on language, $t(38) = .34$, $p < .001$, with the children achieving higher scores in their L1 ($M = 15.49$, $SD = 2.69$) compared to their L2 ($M = 13.39$, $SD = 3.38$). The hypothesis was thus not proven. However, the order of acquiring the macrostructural components seems to be the same in both languages. In the beginning of the development of narrative skills, we see an expression of the Attempt and the Outcome, as they are the most uncomplicated story components in both languages. The most demanding expression is the Internal States as Reaction component. The same trajectory was described by Samko & Kapalková (2014) in their case study of one successive bilingual pre-school Roma-Slovak-speaking child with Slovak as L2.

5 Conclusion and future steps

The different conditions under which the Slovak version of the MAIN instrument was piloted proves its appropriateness and attractiveness for the evaluation of a child's narrative language in Slovakia. It is also very useful that it can be used with different elicitation methods, combined with comprehension questions. Its quick administration offers a lot of linguistic information about a child, which is why it is necessary not only as a research tool but also as a diagnostic instrument for describing children who are at risk for language delay or developmental language disorder during the preschool age. It would be very important, as a next step, to have more clinical studies comparing typical children and children with developmental language disorders to prove the sensitivity of MAIN. We hope to be able to begin collecting normative data in Slovakia soon, after which we can offer some referential data to specialists who work with children. A very important next step will be to describe all the psychometric features of the tool, its validity, reliability, sensitivity, and what is necessary for its clinical use.

6 References

- Cain, K. (2010). *Reading development and difficulties*. Chichester, UK: Blackwell Publishing.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Kapalková, S., Polišenská, K., Marková, L., & Fenton, J. (2016). Narrative abilities in early successive Slovak-English children a cross-language comparison. *Applied Psycholinguistics*, 37(1), 145–164.
- Kesselová, J., & Slančová, D. (2010). Slovak. *Revue Belge de Philologie et d'Histoire*, 88(3), 873–896.
- Krajčírová, K. (2016). *The analysis of macrostructure and microstructure in the children narration in first and second grade*. (Unpublished master's thesis). Faculty of Education Comenius University, Bratislava, Slovakia.
- McGabe, A. (1996). Evaluating narrative discourse skills. In K. Cole, P. Dale & D. Thal (Eds.), *Assessment of Communication and Language* (pp. 121–142). Baltimore, MD: Paul H. Brooks.
- Nicolopoulou, A., McDowell, J., & Brockmeyer, C. (2006). Narrative play and emergent literacy: Storytelling and story-acting meet journal writing. In D. Singer, R. Golinkoff & K. Hirsh-Pasek (Eds.), *Play = Learning* (pp. 124–144). New York, NY: Oxford University Press.
- Ondrejovič, S. (2009). *The Slovak Language, Languages in Slovakia*. Bratislava: Ministry of Foreign Affairs of the Slovak Republic. Public Diplomacy Department.
- Pyšná, A., & Kapalková, S. (2012). Porovnanie hodnotenia naratívnych schopností slovensky hovoriacich detí vo veku 6-7 rokov metódou rozprávania a prerozprávania. *Jazyk a kultúra*, 3(10), 1–13.
- Samko, M., & Kapalková, S. (2014). Analýza naratívnej schopnosti rómskeho dieťaťa v rómčine a slovenčine. *Psychológia a patopsychológia dieťaťa*, 48(3-4), 372–384.
- Stein, N. L., & Glenn, C. (1979). An analysis of story comprehension in elementary school children. In R. O. Freedle (Ed.), *New directions in discourse processing* (pp. 53–120). Norwood, NJ: Ablex.

Using MAIN in South Africa

Daleen Klop

Stellenbosch University

Monique Visser

Stellenbosch University

South Africa is a country marked by cultural and linguistic diversity with 11 official languages. The majority of school children do not receive their formal schooling in their home language. There is a need for language assessment tools in education and rehabilitation contexts to distinguish between children with language learning problems and/or SLI, and language delay as a result of limited exposure to the language of learning. The Multilingual Assessment Instrument for Narratives (LITMUS-MAIN) provides clinicians and researchers with an appropriate and culturally relevant tool to assess bilingual children in both languages. So far MAIN has been widely used in Afrikaans-English bilingual children. However, translating and adapting MAIN to our other nine official languages to achieve functional and cultural equivalence is more challenging.

1 Introduction

This paper describes the use of Language Impairment Testing in Multilingual Settings – Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012, 2015, 2019) in South Africa by clinicians and researchers and the challenges to adapt MAIN for implementation in our culturally and linguistically diverse context.

2 Linguistic diversity in South Africa

South Africa is one of the most diverse societies in the world. Multilingualism and cultural diversity are valued and celebrated features of the South African society. In acknowledgement of the importance of our cultural and linguistic diversity, the 11 main languages spoken in South Africa, namely isiZulu, isiXhosa, Sepedi, Setswana, Sesotho, Xitsonga, siSwati, Tshivenda,

isiNdebele, English and Afrikaans are all recognised as official languages in our Constitution. Afrikaans originated in South Africa and is a West Germanic language derived from Dutch. The official African languages are Bantu languages and belong to four language families namely Nguni (isiZulu, isiXhosa, isiNdebele and siSwati), Sotho-Tswana (Sepedi, Setswana, Sesotho), Xitsonga and Tshivenda. Besides these official languages, many other Southern African Bantu languages such as Siphuthi, Khilobedu, Sindebele, Shona, Shangaan and Chichewa are also spoken. Furthermore, South Africa is home to migrants from African countries where Portuguese and French are spoken. The most common languages used as home languages in South Africa are IsiZulu (23%), followed by isiXhosa (16%) and Afrikaans (14%). (Statistics South Africa, 2016). Although only 10% of the population speaks English as a home language, it is the prominent political and educational language in South Africa and the language of learning for most school children. Unfortunately, many children start their school careers with limited proficiency in their school language and this, together with poor academic and parental support, often have detrimental effects on their literacy development.

3 MAIN in South Africa

There is a dire need in South Africa for language assessment instruments and protocols that are culturally appropriate and linguistically valid. Speech-language pathologists (SLPs), educators and researchers are often confronted with the challenge to disentangle the effects of bilingualism from specific language impairment (SLI) and language delay. Many children in South Africa receive their formal schooling in their second or even third language that may differ substantially from their home language. SLPs and educators are therefore often required to distinguish between children with language learning problems and/or SLI, and language delay as a result of limited exposure to the school language. The majority of SLPs in South Africa are from Afrikaans and English home language backgrounds with limited or no proficiency in the other official languages. To exacerbate this, most SLPs have only access to English standardised language assessment tools that were normed on populations in the USA and UK. Many SLPs use translated versions of these tests that have not been standardised on the South African population (Southwood & Van Dulm, 2015). There is therefore a great need for protocols that could assess bilingual children in both their languages, while taking into consideration their experiential, linguistic and cultural backgrounds.

The assessment of narratives is deemed to be an ecologically valid way to investigate communicative competence and is often regarded as more sensitive and less biased than norm-referenced assessment tools that target discrete aspects of language in some populations (Manolitsi & Botting, 2011). The Multilingual Assessment Instrument for Narratives (MAIN) (Gagarina et al., 2019) was specifically developed to assess the narrative production and comprehension of bilingual children in a way that is culturally fair and unbiased. The developers strived to develop pictorial stimuli that are accessible to children from diverse cultural, linguistic and socio-economic backgrounds and the pilot studies in a variety of languages across the world confirmed the cultural robustness of this instrument (Gagarina et

al., 2015). The adaptation and translation of MAIN to all official languages in South Africa will therefore provide clinicians and researchers with much-needed instruments to assess language in our population.

Adapting MAIN for use in South Africa is, however, not without challenges. The rich oral tradition and practices associated with African cultures provide children with language and learning experiences that are often very different from typical Western contexts. It is therefore not a straightforward process to adapt and translate MAIN from English or Afrikaans to an African language, for instance isiZulu. Measures to ensure linguistic equivalence through processes such as back-translation or double translation may still not result in functional and cultural equivalence. Functional equivalence refers to the adaptation of protocols so that they represent concepts in ways that are familiar to participants from different linguistic or cultural groups. For instance, functional equivalence would include measures to ensure that the isiZulu adaptation of MAIN from English still examines the same constructs such as goal structures in both languages. Cultural equivalence aims to ensure that members from different cultural and linguistic groups view and interpret the instructions and underlying meaning of constructs in the same way (Pena, 2007). Recent adaptations to the MAIN picture stimuli, such as adjusting the boy's skin colour and replacing the sausages in the boy's bag with chicken legs, has improved the content validity and cultural appropriateness of MAIN for use in the South African context. MAIN has so far been translated to isiXhosa and Tshivenda, but more work is needed to ensure functional and cultural equivalence for these versions. Following the procedures stipulated by the International Test Commission Guidelines (Bartram et al., 2018), research projects are underway to consult with cultural insiders in isiXhosa and Tshivenda populations to investigate the appropriateness and validity of MAIN in their contexts.

4 Clinical applications

MAIN has been used in the Speech-Language Therapy Clinic at Stellenbosch University not only for children with language problems, but also for the assessment of children with speech fluency disorders such as stuttering and cluttering. Diagnostic assessment procedures for fluency disorders usually include in-depth analyses of speech samples to determine the nature and frequency of the disfluent speech behaviour. It is important to obtain a variety of samples because speech fluency is influenced by the linguistic and speech-motor planning demands of different speech and language tasks (Guitar, 2014). Furthermore, it is recommended that bilingual children with stuttering are assessed in both languages to determine and compare the nature and extent of their speech disfluencies in both languages, and to assess the impact of language proficiency in both languages on their stuttering (Shenker, 2011). MAIN provides clinicians with an appropriate tool to obtain speech samples at discourse level for fluency analyses, and at the same time clinical information about their narrative production and comprehension.

5 Conclusion

At present, the Afrikaans and English versions of MAIN are used in South Africa in monolingual and bilingual populations in both research and clinical settings. The Afrikaans adaptation has been piloted in a variety of contexts and populations and found to be an effective tool to assess narrative production and comprehension in Afrikaans-English bilingual populations. However, translating and adapting MAIN to our other nine official languages is more challenging and several projects are underway to create functional and cultural equivalent versions of MAIN in these languages.

6 References

- Bartram, D., Berberoglu, G., Grégoire, J., Hambleton, R., Muniz, J., & van de Vijver, F. (2018). ITC Guidelines for Translating and Adapting Tests (Second Edition). *International Journal of Testing*, 18(2), 101–134.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). Multilingual Assessment Instrument for Narratives (MAIN). *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of narrative abilities in bilingual children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children: Disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Guitar, B. (2019). *Stuttering: An Integrated Approach to its Nature and Treatment (5th ed)*. Baltimore, MD: Lippincott, Williams & Wilkins.
- Manolitsi, M., & Botting, N. (2011). Language abilities in children with autism and language impairment: Using narrative as an additional source of clinical information. *Child Language Teaching and Therapy*, 27(1), 39–55.
- Peña, E. D. (2007). Lost in translation: Methodological considerations in cross-cultural research. *Child Development*, 78(4), 1255–1264.
- Shenker, R. C. (2011). Multilingual children who stutter: Clinical issues. *Journal of Fluency Disorders*, 36(3), 186–193.
- Southwood, F., & Van Dulm, O. (2015). The challenge of linguistic and cultural diversity: Does length of experience affect South African speech-language therapists' management of children with language impairment? *South African Journal of Communication Disorders*, 62(1), 1–14.
- Statistics South Africa. (2016). Census 2011: Census in brief. Retrieved from http://www.statssa.gov.za/Census2011/Products/Census_2011_Census_in_brief.pdf

The Spanish adaptation of MAIN

Maria José Ezeizabarrena

University of the Basque Country (UPV/EHU)

Isabel García del Real

Universidad Pública de Navarra (UPNA)

In this paper, we present some features of the European Spanish adaptation of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN), most of them related to specificities of the Spanish grammar as compared to English, the source language of the original MAIN (Gagarina et al., 2012). These two languages differ in e.g. 1) the use of 3rd grammatical person to address the hearer; 2) the ways of maintaining nominal cohesion: English (non-pro drop) vs. Spanish (pro-drop); 3) the verbal paradigm with regard to morphological tense and aspect morphology. Finally, preliminary results for micro- and macrostructure measures in the narratives of children with Spanish as L1 and L2 confirm their consistency across MAIN stories and procedures.

1 Introduction

The Language Impairment Testing in Multilingual Settings – Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN), developed in 2012 by an international research group, is designed to assess children’s comprehension and production of narratives (Gagarina et al., 2012; 2015). It includes four picture-based stories, each of them in the form of a set of six pictures, which can be used as visual support for the elicitation and/or the comprehension of their corresponding narratives. The four stories were designed with a parallel micro- and macro-structure, so that they had a very similar degree of complexity and could be used with children from three years of age. The instrument has been used to assess mostly oral narrative skills, though it may also be used for assessing participants’ skills in the production and comprehension of written narratives.

Universality is one of the features of the instrument, since MAIN is intended to be universal in different ways: culturally and (psycho-)linguistically. It aims to be as culturally neutral as possible, so that it can be used to assess children’s narrative skills, receptive and/or

expressive, regardless of their linguistic, social and cultural backgrounds. The large number of languages into which it has been adapted so far guarantees its linguistic universality, and this is reinforced by their genetic variability, as well as by the typological distance between many of them. The instrument is intended to be sensitive to participants' monolingual, bilingual and multilingual profiles. The instrument makes it possible to test bilingual participants in their two languages using comparable stories, which also opens the door to the possibility of testing multilinguals in more than two of their languages. Moreover, the revised version of MAIN (Gagarina et al., 2019) includes some modifications which have increased the clarity of some instructions and the easiness in the scoring.

In this paper, we present some details of the *Instrumento multilingüe para la evaluación de la narración* (IMEN), the adaptation of MAIN to Spanish. Spanish, a Romance language of the Indo-European language family, is the fourth largest language in the world, with around 463 million native speakers and around 537.9 million speakers in total (Bernhard, Simons & Fenning, 2020). More specifically, the current paper focuses on the variety of Spanish spoken in Spain. *Español* 'Spanish' or *Castellano* 'Castilian' is the official language in Spain and (one of) the first language(s) of the majority of the population. *Español* or *Castellano* is co-official with other Romance languages such as Catalan, Valencian, Aranese and Galician, and the non-Indoeuropean Basque language in the Spanish regions in which these vernacular languages are spoken. It is also co-official with Spanish Sign Language, and Catalan Sign language in Cataluña and Aragón autonomous communities. All these languages are written using the Latin alphabet.

Spanish shares many lexical roots with the other Romance languages (e.g. French, Italian), and also the (non-rigid) SVO basic constituent order, in contrast to the Latin SOV. In the nominal domain, Spanish has a very reduced case system, which is restricted to pronouns, but has overt gender and number marking in the nominal domain (nouns, determiners, adjectives and pronouns) and a very rich system of verbal inflection, where verbs are specified for person, number, tense, aspect and mood. Spanish is a pro-drop language with very frequent omission of the (lexical and pronominal) subject, though the person and number inflection of the verb identifies the grammatical person of the non-overt subject.

The frequent use of pro-drop in adult and child Spanish (Bel, 2003; Ezeizabarrena, 2013) makes the identification of the reference difficult, especially in narratives, in which most sentences contain subject-less verb forms inflected for third person singular. Another challenge in the production and comprehension of narratives in Spanish is the use of verb inflections, i.e. correct markers of aspect and tense. Studies in the acquisition of these markings have revealed that 5-year-olds understand and produce adult-like past verb inflection, but that they have difficulties interpreting and producing imperfective past verb forms in Spanish (García del Real, 2010; García del Real, van Hout & Ezeizabarrena, 2014; Garcia del Real, 2015).

In what follows, we describe some typological differences between the source language English (the language version on which all MAIN-adaptations are based) and the target language Spanish that are relevant for the adaptation of MAIN to Spanish. Moreover, we present insights based on our experience in the use of the instrument to collect and analyse data and on the preliminary results.

2 Linguistic features and their relevance in the adapted Spanish version

The MAIN text is addressed to researchers and professionals who aim to assess participants' narrative skills. It includes different levels of content that needs to be translated and adapted to the language in which it is to be used: the description of the test materials (pre-test phase), the description of the experimental procedure (test phase) and the criteria for scoring (post-test phase, scoring sheets). The typological differences between English and Spanish does not affect the adaptation of all components of the MAIN protocol equally. For instance, the differences in the ways of marking grammatical person in the two languages (Section 2.1) affects the descriptions of the materials and the procedure, and the text of the scoring sheets as well, whilst the obligatory (English) vs. optional (Spanish) presence of overt subjects (Section 2.2) and the complexity of the verb morphology (Section 2.3) affects the materials and the scoring, but not the description of the procedure.

2.1 Grammatical person

The experimental procedure section describes what the experimenter should do and say when interacting with the participant, and, consequently, this part of the text includes instructions for two different addressees, the adult experimenter, who reads the protocol and will run the test, and the test participant (child or adult), who will not read the protocol but will carry out the narrative task based on the instructions.

The Spanish grammar distinguishes three persons in the pronominal system and in the verb inflectional systems: the 1st person corresponds to the speaker (1a), the 2nd corresponds to the listener/addressee (1b, 1d), and the 3rd corresponds to non-human referent(s) or to humans which do(es) not participate in the conversation. The third person is marked for masculine (M) and feminine (F) gender. Notice that the third person (1c, 1e) was also called the “non-person” by Benveniste (1966) and is zero-marked in many unrelated languages.

- | | | | | | | |
|-----|----------------------|-----------|------------------------|-----------|-----------------|----------|
| (1) | a. yo | habl-o | b. tú | habla-s | c. el/ella | habla-Ø |
| | 1s.pron | speak-1s | 2s.pron | speak-2s | 3s.M/F.pron | speak-3s |
| | 'I speak' | | 'you (singular) speak' | | 'he/she speaks' | |
| | d. vosotros | hablá-is | e. ellos/ellas | habla-n | | |
| | 2pl.pron | speak-2pl | 3pl.M/F.pron | speak-3pl | | |
| | 'you (plural) speak' | | 'they speak' | | | |

In Spanish (as in German, French and in many other languages) there are two ways to address the interlocutor: using either the informal or the formal register. In informal registers, the 2nd person morphology is used, marking pronouns and verbs for the 2nd person singular (1b), or the 2nd plural (1d), in case of more than one addressee. The formal register requires the use of the singular pronoun *usted* (2a) or the plural *ustedes* (2c) ‘you singular/plural’ in European Spanish, but in contrast to other languages and varieties of Spanish, these formal pronouns agree with 3rd-person-inflected verb forms (2a or 2c), instead of with the 2nd-person-inflected one (1b, 1d).

- (2) a. Usted habla-Ø
2.pron.formal speak-3s
'You speak (singular, formal)'
- b. Ustedes habla-n
2.pl.pron.formal speak-3pl
'you speak (plural, formal)'

In English, imperative forms are not inflected, and they are very rarely preceded by a personal pronoun, whilst the rest of finite verbs need to have a nominal or pronominal subject. In contrast, Spanish imperatives are always inflected, and the informal imperative (3a) versus formal subjunctive (3b) contrast is maintained among them.

- (3) a. ¡Cuent-a la historia!
tell-3s.Indic the story
'tell the story! (2s informal)'
- b. ¡Cuent-e la historia!
tell-3s.Subjunctive the story
'tell the story! (2s formal)'

The optionality between two different forms of address depending on the choice of formal or informal register becomes useful to distinguish the two different addressees involved in the MAIN protocol: the experimenter (the most formal, as in (2a, 3b)) and the child participant (the less formal, as in (1b, 3a)). Thus, in contrast to the four bare infinitives in the English MAIN (4a), the Spanish MAIN distinguishes the informal inflected imperatives (*cuéntame* 'tell me') as in (3a, 4b) from the formal ones (*anímele* 'encourage' (4b), *señale* 'point' (4b), *cuenta* 'tell' (3b)).

- (4) a. ...encourage the child to tell the story by him/herself by saying: "Tell me the story"
(point to picture)
- b. ...anímele al niño a que **cuenta** la historia, diciéndole: *cuéntame el cuento* (señale la imagen).

2.2 The optionality of the subject

Pro-drop languages allow subject (and in some cases also object) arguments to be lexical (5a), pronominal (5b) or null (5c). Spanish differs from other Romance and non-Romance pro-drop languages in the high rate of null subjects (over 60% across child and adult corpora) and the marked character of overt pronouns, including masculine (M) and feminine (F) 3rd person personal pronouns, whose use is very restricted (mostly human referents, used for contrast and focus), and consequently non-frequent. In fact, null subjects are the default option in child and adult Spanish and in many other pro-drop and non-pro drop languages as well (Bel, 2003; Ezeizabarrena, 2013). This feature has direct consequences in the production of narratives, since it directly affects the nominal cohesion and the interpretation of 3 person referents.

- (5) a. el chico estaba-Ø contento
the-M boy was-3s happy-M
'the boy was happy'
- b. él/ella estaba-Ø content-o/-a
3s.pron-M/F was-3s happy-M/F
'he/she was happy'
- c. estaba-Ø content-o/-a
was-3s happy-M/F
'he/she was happy'

In the absence of lexical subject arguments, the identification of characters and the nominal cohesion, in general, becomes a difficult task, especially in long narratives with many characters. This may not be a major issue with MAIN, where there are three main animate characters and they are involved in actions where the thematic roles are rarely reversible: the cat/dog/fox chases the butterfly/birds/mouse/goats, the cat/dog steals the fish/sausages, the mother bird/goat protects her children (and not vice versa) and the limited number of six pictures reduces considerably the number of potential cases of referent misidentification. However, at the same time, the visual support may reduce the need for the story (re)teller to produce lexical arguments, especially in the case of young children, who may tend to use deictic and (overt or null) pronominal expressions instead, even though there is no context of shared visual attention between the child and the adult experimenter. The communicative situation may induce children to build oral texts which are closer to sequences of short descriptive utterances than to cohesive well contextualized coherent narrative texts.

Moreover, grammatical features such as number and gender may help the (partial) identification of characters in languages with inflected pronouns like English or Spanish (6b), but, even then, the identification is not always guaranteed. For instance, the masculine singular feature of the subject pronoun in *he hurt himself* is not enough to disambiguate between its two animate referents *mouse* and *dog* in the passage of the Dog story, and probably in neither language (6a, 6b). In fact, both Spanish translations, the more literal with a personal pronoun (6b), and the more natural with a null subject (6c), result in grammatical sentences, but neither option completely solves the reference problem. However, including the personal masculine pronoun *él* as the experiencer of *hacerse daño* ‘hurt him/herself’ and of *enfadarse* ‘be(come) angry’ increases the number of potential candidates, since the *él* pronoun could be associated with an additional human male referent such as the *boy*.

- (6) a. The mouse ran away quickly and the dog bumped into the tree. **He** hurt **himself** and was very angry.
b. El ratón se escapó corriendo rápidamente y el perro chocó contra el árbol. **Él** se hizo daño y se enfadó.
c. El ratón se escapó corriendo rápidamente y el perro chocó contra el árbol. Ø **Se** hizo daño y se enfadó.

Nevertheless, there are many cases in the MAIN stories where morphological (gender and number) marking on nominal categories may reduce ambiguity by lowering the number of potential referents for both overt and null 3rd person pronouns. For instance, in (7) the feminine singular inflection of the adjective *content-a* ‘happy-F.sing’ excludes *gusano* ‘worm.M’, *crías* ‘baby animal.F.pl’, and *gato* ‘cat.M’ as potential referents for the null subject of *estaba* ‘was’. In some way, the Spanish feminine ending *-a* “compensates” for the lack of the feminine pronominal subject *she*, which was sufficient to exclude the same potential referents in the original English text.

- (7) a. The mother bird came back with a big worm for her children, but **she** did not see the cat. **She** was happy ...

- b. La madre de los pájaros regresó con un gusano enorme para sus crías, pero no Ø vio al gato. Ø Estaba muy contenta ...

2.3 The verbal system

The Spanish morphology is rich in the verbal domain, with verb forms being inflected for 1st, 2nd, and 3rd person, singular and plural number, present/past/future tense and indicative/subjunctive/potential-unreal/imperative modes. Present tense is regularly used to refer to the speech time (8a), but can also be used to refer to past events (historic present) (8b), which can be used to express perfective (8c) and imperfective past events in narrative contexts.

- (8) a. aquí el chico tiene-Ø una caña de pescar
 here the boy have-3s.present a rod of fishing
 ‘here the boy has a fishing rod’
- b. y entonces el rey dimite-Ø
 and then the king resign-3s.present
 ‘and then the King abdicated’
- c. y entonces el rey dimit-ió
 and then the king resign-3s.past.indef
 ‘and then the King abdicated’

Grammatical aspect is also coded in the verbal inflectional morphology. Similarly to English, Spanish durative predicates are regularly expressed by periphrastic forms using the present/past auxiliary *estar* ‘to be’ followed by the imperfective participle of the lexical verb bearing the imperfective suffix *-ando* ‘ing’ (9).

- (9) la cabra se está/estaba ahogando
 the-F goat 3s.reflexive is/was drown-IPF
 ‘the goat is/was drowning’

Perfective (10) and imperfective (11) predicates have a different paradigm distribution in English and Spanish. In Spanish, events which are culminated in the “close” recent past (*this* morning/week/year) can be expressed by the present perfect periphrastic forms conformed by the auxiliary *haber* ‘have’ followed by the participle bearing the perfective suffix *-do* (10a) or by the *indefinido* ‘aorist’ tense (10b).

- (10) a. el balón ha caído al río b. el balón cayó al río
 the ball has fall-Past.PF to the river the ball fall-Past.PF to the river
 ‘the ball has fallen/fell into the river’ ‘the ball fell into the river’
- (11) el pajarito tenía hambre
 the baby-bird have-Past.IPF hunger
 ‘the baby bird was hungry’

Spanish pre-school children tend to tell stories in the present tense and insert past inflected verb forms as they grow older. Similarly to other adaptations (e.g. Bulgarian, see Meier & Kuehnast, 2020), we think that the use of indicative present forms in the story-telling task could be equally appropriate, as children may interpret the pictures as actions occurring in the speech time.

Acquisition studies in L1 Spanish have shown that neither children's interpretation nor production of past imperfective forms is adult-like at the age of 5 (García del Real, 2015), since they tend to interpret both perfective and imperfective telic predicates as culminated, and they tend to produce imperfective telic predicates to refer to culminated events in a context in which the use of the perfective would be more appropriate, as in (12), as this aspect conveys completion.

- (12) Mientras sonaba la música, el payaso dibujaba una flor
While play-Past.IPF the music, the clown draw-Past.IPF a flower
'While the music was playing, the clown was drawing a flower' (in a context in which there is completion: the clown drew a flower)

Moreover, imperfective forms are used frequently in child spontaneous speech, in imaginary play contexts, sometimes overriding the distinction between perfective and imperfective forms for the reference to completion (13) as reported by Algrem and Idiazabal (2001).

- (13) Ahora yo era el médico y tú te caías y te rompías una pierna
Now I was-IPF the doctor and you fall.IPF and break.IPF a leg
'Now (let's imagine that) I am the doctor and you had fallen and broken a leg'

This finding is relevant for the interpretation of children's productions as referring to attempts or results, as in the one produced by a child in (14), where the use of the imperfective form may refer either to an attempt or to a result. This ambiguity is problematic in the case of incremental theme predicates, but not so in the case of accomplishments, as in (15).

- (14) y el gato estaba estaba comiendo un pez y el niño se puso muy
and the cat was was eat-IPF a fish and the boy SE put.PF very
contento porque recuperó su pelota
happy because recover-PF his ball
'and the cat **was...was... eating/ate** a fish and the boy **was** very happy because he **recovered** the ball'

- (15) se caía su balón y no lo podía recuperar
3s.reflex fall-Past.IPF his ball and not it can-Past.IPF recover
'his ball **fell** down and he **could** not **recover** it.'

3 Preliminary results obtained with the Spanish MAIN-version

In this section, we report preliminary results from a pilot study based on narrative data elicited with the Spanish MAIN. The data come from 12 five-year-old children (mean age: 5;7 range:

5;1-6;1). Each of the narrative samples was collected for a different research purpose, which means that some narratives were collected in combination with the comprehension task, whilst others were collected combining the two elicitation procedures, with or without comprehension questions. Moreover, the use of the four different stories was not counterbalanced. As a result, for narratives elicited from children with Spanish as L1, the distribution over stories and tasks is as follows (Table 1):

Table 1: Number of task instances for L1 Spanish.

Story	Comprehension	Narrative production	
		Retelling	Telling
Baby Birds	7	2	5
Baby Goats	0	1	2
Cat	6	3	0
Dog	10	4	0
Total	23	10	7

With respect to the four different stories (Baby Birds, Baby Goats, Cat, Dog), the results presented in Table 2 show that there were no statistical differences between them in the pilot sample for the comprehension score ($F(2,20) = 0.828, p = .451$), and neither in the story structure score ($F(3,13) = 0.839, p = .496$) nor in the amount of internal state terms (IST) ($F(3,13) = 0.668, p = .587$) contained in the narratives produced.

Table 2: Mean scores for the different MAIN stories, L1 Spanish.

Story	Comprehension		Story structure		IST	
	score		score			
	Mean	SD	Mean	SD	Mean	SD
Baby Birds	8.00	1.73	7.86	2.41	4.72	3.20
Baby Goats	---	---	6.33	1.53	2.33	1.53
Cat	8.83	1.17	8.00	1.00	3.67	0.58
Dog	7.80	1.69	8.50	1.29	3.75	2.02
Total	8.13	1.57	7.29	1.86	3.88	2.39

In relation to the type of elicitation procedure, as shown in Table 3, the comprehension scores tend to be higher in the retelling than in the telling task. In contrast, story structure scores are higher, and there are more internal state terms (IST) in the telling than in the retelling task. However, none of these differences are significant (comprehension: $U = 12.5, p = .432$; story structure: $U = 17, p = .088$; IST: $U = 23.5, p = .270$).

Table 3: Mean scores by elicitation mode, L1 Spanish.

Task	Comprehension		Story		IST	
	score		structure score			
	Mean	SD	Mean	SD	Mean	SD
Telling	8.14	1.46	6.60	1.50	3.20	1.75
Retelling	7.40	1.37	8.29	1.97	4.86	1.22
Total	8.13	1.57	7.29	1.86	3.88	2.39

Regarding macro-structural complexity, the most frequent structure is the one that mentions the single goal (43%), and the least frequent is the one that includes the goal, the attempt and the outcome (7%). This distribution is constant for all four stories and in both tasks.

Finally, we used the Spanish MAIN with the aim of investigating whether it would be useful to distinguish between monolinguals' and bilinguals' performance. Therefore, six additional children with Spanish as an L2 were tested (mean age: 5;6, range: 4;5-6;1). However, none of the differences in mean scores shown in Table 4 are significant (comprehension: $U = 12.5, p = .432$; story structure: $U = 17, p = .088$; IST: $U = 23.5, p = .270$).

Table 4: Mean scores depending on the child's linguistic profile.

Linguistic profile	Comprehension		Story structure		IST	
	score		score			
	Mean	SD	Mean	SD	Mean	SD
L1 Spanish	8.13	1.57	7.29	1.96	3.88	2.39
L2 Spanish	7.25	1.84	5.83	2.12	2.75	1.81
Total	7.77	1.72	6.69	2.07	3.41	2.21

4 Conclusion

The adaptation of MAIN to Spanish and to many other languages constitutes an important step in the development of instruments for measuring mono-, bi- and multilingual children's narrative skills. Preliminary results on micro- and macrostructure measures in MAIN-narratives from L1 and L2 Spanish-speaking children confirm the consistency of the instrument across stories and elicitation procedures.

Language-specific features may pose a challenge for the accurate adaptation of MAIN as well as for a unified interpretation of the variability of responses observed across language versions. Nevertheless, an instrument adapted to many typologically distant languages will also contribute to the identification of grammatical (and lexical) development indexes. The few grammatical features discussed in this paper (person marking, null subjects, aspect and tense

inflection) are just the first in a long list of relevant linguistic features which can be considered for a promising cross-linguistic comparative research, based on the high number of languages to which MAIN has been adapted already.

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6 References

- Almgren, M., & Idiazabal, I. (2001). Past tense verb forms, discourse context and input features in bilingual and monolingual acquisition of Basque and Spanish. In J. Cenoz & F. Genesee (Eds.), *Trends in bilingual acquisition* (pp. 107–130). Amsterdam: John Benjamins.
- Bel, A. (2003). The syntax of subjects in the acquisition of Spanish and Catalan. *Probus*, 15, 1–26.
- Benveniste, E. (1966). *Problèmes de linguistique général I*. Paris: Gallimard.
- Berhard, D. M., Simons, G.F., & Fennig, C.D. (Eds.). (2020). *Ethnologue: Languages of the World. Twenty-third edition*. Dallas, Texas: SIL International. Online version: <http://www.ethnologue.com>
- Ezeizabarrena, M.J. (2013). Overt subjects in early Basque and other null subject languages. *International Journal of Bilingualism*, 17(3), 309–336.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives. Revised version. *ZAS Papers in Linguistics*, 63.
- García del Real, I. (2010). La adquisición del contraste aspectual perfectivo/imperfectivo en castellano: semántica y discurso. In M.R. Caballero Rodríguez & M.J. Pinar Sanz (Eds.) *Modos y formas de comunicación humana* (pp. 163–170). Ediciones de la Universidad de Castilla-La Mancha.
- García del Real, I. (2015). *The acquisition of Tense and Aspect in Spanish*. Unpublished PhD thesis. University of the Basque Country.
- García del Real, I., van Hout, A. & Ezeizabarrena, M. J. (2014) Comprehension and production of grammatical aspect in child Spanish: Semantics vs. pragmatics. In Chu, C-Y. (Ed.) *Selected Proceedings of the 5th Conference on Generative Approaches to Language Acquisition North America (GALANA 2012)* (pp. 99–110) Somerville: Cascadilla Proceedings Project.
- Meier, E. & Kuehnast, M. (2020). Storytelling and retelling in Bulgarian: a contrastive perspective on the Bulgarian adaptation of MAIN. *ZAS Papers in Linguistics*, 64, 11–21.

Tagalog adaptation of the Multilingual Assessment Instrument for Narratives: History, process and preliminary results

Kathleen Kay Amora

University of Groningen, University of Potsdam, University of Eastern Finland

Rowena Garcia

Max Planck Institute for Psycholinguistics

Natalia Gagarina

Leibniz-Zentrum Allgemeine Sprachwissenschaft (ZAS)

This paper briefly presents the current situation of bilingualism in the Philippines, specifically that of Tagalog-English bilingualism. More importantly, it describes the process of adapting the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN) to Tagalog, the basis of Filipino, which is the country's national language. Finally, the results of a pilot study conducted on Tagalog-English bilingual children and adults (N=27) are presented. The results showed that Story Structure is similar across the two languages and that it develops significantly with age.

1 Introduction

This paper expounds the bilingual history of the Philippines as well as the processes involved in adapting the Language Impairment Testing in Multilingual Settings – Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012, 2015, 2019) to Tagalog/Filipino. To fill the gap in the narrative literature among understudied language combinations, a pilot study was conducted to investigate narrative macrostructure, particularly Story Structure (Story Grammar Elements) of Tagalog-English bilingual children, who are 5 and 10 years of age, and a control group of Tagalog-English bilingual adults in both languages while telling a picture-based fictional narrative. This study offers a cross-linguistic comparison between Tagalog and English using MAIN across the same set of participants of different age groups.

2 Language use in the Philippines

2.1 History of bilingualism in the Philippines

Bilingualism has been the part the Philippine history since the 1600s. The Philippines is considered as one of the countries with a high number of distinct languages (ranked 25th out of 232 countries with a score of 0.842) in the recent Greenberg Linguistic Diversity Index with around 183 local languages (Eberhard, Simons, & Fennig, 2019a). Since the Philippines is a linguistically diverse country, it has two official languages - Filipino and English. This paper focuses on the use of Tagalog (basis of Filipino) and English in bilingual children and adults. Tagalog, a verb initial language with a distinct voice marking system, belongs to the Malayo-Polynesian branch of the Austronesian linguistic family and has over 23 million native (L1) and second language (L2) speakers (Eberhard, Simons, & Fennig, 2019b; Schachter & Otnes, 1972).

Tagalog native speakers are mostly located in the National Capital Region, also more commonly known as Metro Manila, the southern parts of Luzon and in some parts of Central Luzon (Himmelmann, 2005). Based on the 2000 Philippine census, aside from Tagalog, other Philippine-languages (e.g., Cebuano, Ilocano, Bikolano) are also commonly used in Metro Manila households (Mahboob & Cruz, 2013; Philippine Statistics Authority, 2003). Foreign languages also influenced the Philippines due to trade and colonization. Spanish and English, as well as Asian languages such as Malay and Chinese, heavily influenced Tagalog's lexicon and phonology and some aspects of morphosyntax (Himmelmann, 2005).

When the United States of America (USA) gained control of the Philippines from Spain, English replaced Spanish as the official language and became the common medium of education, press, and speech during the 1900s. This foreign occupation led to the "Americanization" of the Philippines, where English took a dominant role in public education to further the colonial motives of the colonizers (Mahboob & Cruz, 2013; Tupas & Lorente, 2014). The locals also initially embraced learning English as it provided them benefits in civil service, career and politics (Tupas & Lorente, 2014). This prestige status given to English than any other vernacular languages of the Philippines led to a negative reaction later on. The Philippines eventually clamoured for the establishment of national language to regain political independence and collective identity after years of colonization, as English symbolized repression and supremacy of the colonizers (Tupas & Lorente, 2014).

As a result, in the 1930s, Tagalog became the basis for the national language which was later renamed as Pilipino for political reasons (Tupas & Lorente, 2014). However, in 1973, English and Pilipino, which became Filipino in 1987, were both established as the official languages of the Philippines; this has been the case up until the present (Ledesma & Morris, 2005; Tupas & Lorente, 2014). The differences between Filipino and Tagalog are purely lexical in nature, with the Commission of the Filipino Language (KWF) expanding Filipino by adding cognates and loan words from other Philippine languages as well as foreign languages (Himmelmann, 2005; Paz, 1996).

The usage of English and Filipino in schools paved the way for Bilingual Education Program (BEP) in the entire Philippines which lasted until 2009, wherein Filipino and English are the main media of instruction for social sciences as well as life sciences and mathematics, respectively, since Grade 1 regardless of their native languages (Tupas & Lorente, 2014). This BEP meant that those who come from non-Tagalog areas learn and use two languages in school, whereas those who hail from Tagalog-speaking regions only need to additionally learn English (Smolicz & Nical, 1997; Tupas & Lorente, 2014).

However, after years of BEP implementation, unsatisfactory results, especially in the non-Tagalog areas and the lower ranking of the Philippines in the Sciences and Mathematics tests, brought impending changes to this long-running bilingual curriculum around 2009 to 2013 (Martin, 2015). In 2013, the Department of Education institutionalized the Mother-Tongue Based Multilingual Education (MTB-MLE) policy, which started in 2009, wherein schools would teach scientific and mathematic concepts using the children's native languages in kindergarten and in the first three years of primary school (Manabat, 2016). Since then, especially in Metro Manila, English and Tagalog are similarly present in everyday contexts, may it be speech or print. English dominates schools, mass and print media whereas Tagalog is frequently present at home and in entertainment such as in radio and on television (Ledesma & Morris, 2005). In their study of 81 Tagalog-English bilingual kindergarten boys in Metro Manila, Ledesma and Morris (2005) found that as the boys reached the start of the first grade, both languages were used equally in social contexts, but English dominated in media and formal contexts (i.e., school setting).

2.2 *The current status of Tagalog-English bilingualism*

Despite the constant usage of both Tagalog and English in everyday situations and curriculum changes, a dominant use of English at home is becoming prevalent as many parents talk more to their children in English than Tagalog nowadays (Quebral, 2018). According to Quebral (2018), English proficiency has been a status symbol for years as those who speak it fluently are regarded as smarter and more affluent. Moreover, Filipinos deem English to be the language with high prestige, which functions as a measure of social stratification, where fluent speakers of English are regarded as belonging to the highly educated middle to upper societal class (Ledesma & Morris, 2005; Sicam & Lucas, 2016; Tupas, 2003; Vizconde, 2006). This mindset continues to exist today, thus some parents talk to their children exclusively in English (Quebral, 2018) and these children only learn Tagalog at a later age.

Private schools also prefer to use English as the medium of instruction from the first grade to college where students are trained to speak English in all settings, except during Filipino classes (Ledesma & Morris, 2005; Smolicz, 1984). Lastly, English also plays a privileged role in social and economic advancements, global competitiveness of Filipinos in the labor market as well as perceived as the most preferred language in higher educational contexts (Lorente, 2013; Mahboob & Cruz, 2013; Pascasio, 2005). Nevertheless, the usage of both Tagalog and English is widespread in the capital, Manila, and its nearby cities and regions. Tagalog is often used during personal and social conversations whereas English is frequently

used in government publications, law, business and commerce (Ledesma & Morris, 2005; Vizconde, 2006).

This everyday exposure to both languages in Manila and nearby regions results in regular code-switching. Code-switching occurs when bilingual speakers alternate between languages during discourse to fill linguistic gaps and to compensate for word finding issues (Moreno, Federmeier, & Kutas, 2002). Similar to code switching in Hispanic speakers between Spanish and English that resulted in appearance of *Spanglish*, this mixed Tagalog-English speech is called *Taglish*. *Taglish* is usually used by middle-class and educated Filipinos in informal settings to convey a message more efficiently and concisely (Bautista, 2004). This type of code-switching is common in print (i.e., on signs) and especially in speech for both children and adults and has fascinated researchers around the world (Thompson, 2003; Wei, 2000). These switches give a glimpse on how Tagalog and English interact together in different contexts. As there are no standardized instruments that could capture this phenomenon, narrative production could be used to observe this.

3 MAIN and its adaptation to Tagalog

Gagarina et al. (2012) originally designed Multilingual Assessment Instrument for Narratives (MAIN) to assess narrative comprehension and production abilities of children from 3 to 10 years of age. However, recent work has showed that MAIN stories can also be used with adults (Gagarina, Bohnacker & Lindgren, 2019). One of the aims of MAIN is to be able to carry out comparable examination of narrative skills in both languages of bilingual individuals. Additionally, MAIN can be used as a screening tool to classify children at risk for Developmental Language Disorders (DLD). MAIN is part of the Language Impairment Testing in Multilingual Settings (LITMUS) test battery, which was funded by the COST Action IS0804 *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment* (2009-2013) (see Armon-Lotem, de Jong, & Meir, 2015).

MAIN is composed of four parallel stories. Each story consists of six pictures that are culturally robust and controlled for linguistic complexity and narrative structure (Gagarina et al., 2012). This makes the stories comparable when done in different languages. Moreover, MAIN contains a detailed description for investigating macrostructure using a multidimensional model with comparable categories to Stein and Glenn (1979)'s *story grammar* framework to determine Story Structure, but prioritizing the *Goals* and including *Internal State* as an *Initiating Event* (Gagarina et al., 2012, 2019). The instrument can be used to elicit narratives in three modes: model story, retelling and telling (Gagarina et al., 2012). MAIN contains protocols for analyzing macrostructure in three parts: Story Structure, Story Complexity and added Internal State Terms (ISTs) to further express parts of macrostructure.

3.1 *Translation and Adaptation of MAIN to Tagalog*

Similar to the problems found with other understudied languages, the Philippines has very limited linguistic tools in different languages and dialects. Moreover, there are no standardized instruments in Tagalog that would assess and investigate children's specific linguistic skills. Most teachers, researchers, and clinicians use Western assessment tools on children and just directly translate them on the fly, with less consideration of the different linguistic properties of Tagalog. However, the results for the standardized tests in English-speaking countries cannot be directly applied to Tagalog due to several obvious cultural and language-specific differences. Instead, clinicians and researchers frequently use criterion-based and dynamic assessments to obtain linguistic data for children. Hence, there is a high need for assessment tools in Tagalog. Given that validated, normed and standardized linguistic tests need years to develop, providing a narrative assessment tool in Tagalog could help clinicians, teachers, and linguists gain a better understanding of children's linguistic capabilities. For this reason, the first author (a native speaker) first translated and then performed the full adaptation of MAIN to Tagalog with the help of the second author (also a native speaker), and another Tagalog-native linguist, Ivan Paul Bondoc. This is the first MAIN adaptation to an Austronesian language. The two Tagalog-native linguists carefully reviewed the entire Tagalog translation of the manual, especially the story scripts, to ensure naturalness, appropriateness, and consistency. After two rounds of evaluation, discussions, backwards translation and revision, the final Tagalog story scripts for *Maliit na Ibon* 'Baby Birds', *Maliit na Kambing* 'Baby Goats', *Pusa* 'Cat' and *Aso* 'Dog' as well as the translation of the manual were finalized.

3.2 *Proposed changes for the adaptation*

Although the authors followed the MAIN adaptation guidelines (Bohnacker & Gagarina, 2019), evident changes in the Tagalog version as compared to the English one were done. Based on the results of the pilot study (see Section 4), changes in some terminologies were suggested to make the stories more culturally appropriate. Overall, the word counts for Tagalog scripts slightly differed from the English version due to differences in vocabulary and morphological structures. For example, in Tagalog, verbs are only marked for aspect and not tense and always consist of only one word (whereas in English progressive is formed with the use of an auxiliary, e.g., 'is going'). Moreover, in Tagalog, there is no direct one-word translation for a 'boy'. The closest translation is the gender-neutral *bata* 'child'. Adding the gender and connecting the words together with a linker (e.g., *batang lalaki* for 'boy') gives the same meaning as its English counterpart. In this case, two words are needed in Tagalog. Another example is the direct translation for 'baby' in Filipino/Tagalog *sanggol*, a word which does not accurately reflect the main characters in the *Baby Birds* and *Baby Goats* stories (i.e. baby birds and goats, respectively). A more apt translation would be *bata* 'child'; however, results from the pilot study (see Section 4) showed that children also use *maliit* 'small' to describe the younger animal. Thus, the latter was used in the story scripts.

After discussions, some minor revisions to the illustrations and in the physical attributes of the characters were also proposed to make them applicable to the Asian culture, particularly in the Southeast Asian regions. The first author suggested to change the appearance of the boys in the *Cat* and *Dog* stories to make them appear more Asian-looking (a typical Filipino child is described as brown-skinned with a black-colored hair). Moreover, even though foxes are familiar to children due to exposure to Western books, the English word ‘fox’ is more commonly used than the Tagalog word *soro* ‘fox’, as evidenced by the responses of the participants, especially the children, in the pilot study. Therefore, the first author suggested to change the fox to a wolf to avoid lexical switches. Even though there are no wolf species in the Philippines, its Tagalog translation ‘*lobo*’ is more commonly known to children than the fox’s due to its increased prevalence in translated versions of Western stories and in Philippine media. A decision was made to adapt the MAIN pictorial stimuli slightly based on these suggestions. After intensive discussions via e-mail with Natalia Gagarina, the first author of MAIN, and Celestino Oriikiriza, a researcher from Uganda who has encountered similar challenges with the fox picture when testing children in the Luganda language (also known as Ganda), it was decided to change the following aspects:

- 1) Changes to the physical features of the characters in *Cat* and *Dog*, as shown in Figure 1.
- 2) Changes to the animals in *Baby Goats*: changing the fox to a wolf and additional fur color changes, leading to two versions of the wolf, one desert wolf that is browner in color, and the ‘typical’ grey wolf, as shown in Figure 2.



Figure 1. Picture 3, *Dog*, of the original MAIN stimuli (left), and the proposed changes after considering cultural differences (right). Copyright 2020 by ZAS Papers in Linguistics.

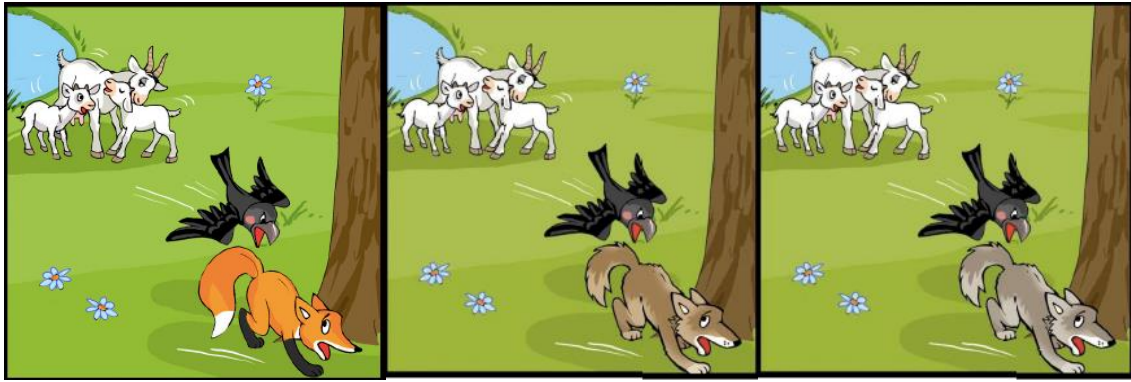


Figure 2. Picture 6, *Baby Goats* of the original MAIN stimuli (left), the proposes changes after considering cultural differences, desert wolf (middle) and grey wolf (right). Copyright 2020 by ZAS Papers in Linguistics.

4 Pilot study

After finalizing the translated Tagalog story scripts, the first author conducted a pilot study using only the telling mode with the stories *Baby Birds* and *Baby Goats* with 27 typically developing Tagalog-English bilingual participants (six 5-year-old children, 12 10-year-old children and 9 adults). The first author translated the instructions and comprehension questions into Tagalog and also followed the same protocol stated in the English version throughout the entire study.

4.1 Participants

The 5-year-old children (mean age: 5;5, age range: 5;4 – 5;10, SD: 0.2) attended preschool classes at a school in the Metro Manila area. As there were no available screening tests to check the Tagalog and English proficiencies of young children, the participants were recruited based on teacher recommendations. All the participants were reported to be Tagalog-English bilinguals, with Tagalog as their dominant language. The older children (mean age: 10;7, age range: 10;4 – 11;0, SD: 0.2) were Grade 4 students at a grade school around Metro Manila. The older children answered a basic online screening tool for English proficiency¹ and the average score was 19.42 out of 20. Prior to the testing, all children were assessed with a non-verbal IQ test called the Raven's Colored Progressive Matrices (Raven, Court, & Raven, 1976). The adult participants (mean age: 24;0, age range: 22;1-25;6, SD: 1.2) were graduates of a university in Manila and were working as rehabilitation professionals (e.g., physical, occupational, and speech therapists) all over the Metro Manila area. The adults, having completed their academic degrees in English, provided a self-assessment rating of their English proficiency. All rated themselves within above-average to advanced levels (e.g., CEFR self-rating level B2-C1).

All groups were homogenous in terms of social-economic status (middle-class), handedness (all right-handed) and native language (Tagalog). Participants with persisting developmental and neurological problems were excluded from the study. All participants were

¹ See <https://tv-english.club/education-en/tests-en/placement-tests-en/placement-test-kids-10-16-years-age/>

currently exposed mostly to the Tagalog and English languages for communication at home and academic instruction or work, respectively, based on their answers in the MAIN language questionnaire.

In addition to the approval of the University of Groningen's Research Ethics Review Committee (CETO), the parents signed a written consent for their children to participate in the study. Furthermore, the 10-year-old children gave their verbal and written consent prior to the testing. The adult participants personally signed the consent forms, signifying their intent to participate voluntarily. All groups agreed for their sessions to be audio-video recorded. Aside from this, the parents of the children and the adults filled in a revised and Tagalog-translated version of the questionnaire from the MAIN, providing personal information, developmental, educational and speech-language histories, as well as exhaustive information about language exposure and frequency of use. Lastly, most of the participants had started to acquire their L2 before the age of 5, except for one who learned it at 6 years of age (one 10-year-old child).

4.2 Design and procedure

The study combined a within-subject design, comparing the bilinguals' two languages, and a between-subjects design, comparing both bilingual narratives across three age groups (i.e., younger children, older children and adults). For narrative production, two picture stories, *Baby Birds* and *Baby Goats* were randomly distributed for each language in the telling mode. The order of stories and languages varied per participant and was counterbalanced (e.g., Participant 1 received *Baby Birds* first, whereas Participant 2 received *Baby Goats* first). Following the standardized testing procedure, three envelopes containing the same set of pictures were placed in front of the participant. This setup was in adherence to the MAIN protocol to give an illusion of randomness of the stories the participants could get. The envelopes contained picture stimuli which could be opened in a fold-out manner. The participants were asked to tell one of the two stories (i.e., *Baby Birds* or *Baby Goats*) in either their L1 or L2, depending on the randomization procedure.

The interval between tasks was around four to seven days to avoid learning and carry-over effects. The first author used the same procedure again after the interval, but the language of instruction differed from the first session and the story which was not used in the first session was utilized in the second day of narrative testing. Scripts during elicitation followed the instructions of the MAIN manual wherein only neutral feedback and comments (e.g., *okay*, *well*) were used.

4.3 Results and discussion

The mean and standard deviations for the Story Structure scores of all groups per language are presented in Figure 3. To check the effect of language in the production of Story Structure elements (maximum score = 17 points) within groups, a Kruskal-Wallis test was performed. The test showed no differences between languages across all groups. Based on these results, Language did not have any effect on Story Structure scores. These relatively similar Story

Structure mean scores in both languages across all the groups, younger children (Tagalog: 6.33, English: 6.17), older children (Tagalog: 9.42, English: 9.33) and adults (Tagalog: 10.33, English: 10) support the claim of language invariance.

Furthermore, a separate Kruskal-Wallis test for each language to check for Age effects was considered. Results revealed significant main effects of Age for both Tagalog ($\chi^2 = 10.67$, $p = .005$) and English ($\chi^2 = 8.586$, $p = .014$). A post-hoc test using the Wilcoxon rank-sum test with Sidak correction ($p = .02$) (see Table 1) to check the differences between groups was also conducted. In Tagalog, there was only one significant difference, i.e., between 5-year-old children and adults ($W=52$, $p=.004$), such that adults performed better than the younger children. In English, five-year-old children scored significantly lower than both 10-year-old children ($W=8.5$, $p = .01$) and adults ($W= 52$, $p= .004$).

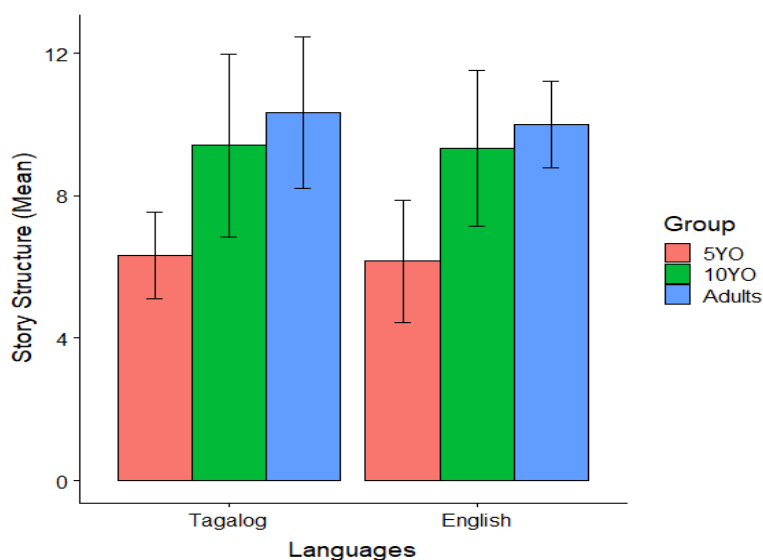


Figure 3. Mean Story Structure scores by language for the three groups. (Error bars show ± 1 SD.)

Overall, the results showed that Story Structure did not differ across languages. There was no evidence to conclude that narrative macrostructure is language-dependent, supporting the findings from previous studies (Bohnacker, 2016; Fiestas & Peña, 2004; Gagarina, 2016; Kunnari et al., 2016; Pearson, 2002). The results suggest that narrative structure could indeed be language-invariant in bilinguals, supporting the claim of Otwinowska and co-authors (2018) and Squires and colleagues (2014) about the sharing of conceptual bases of narrative macrostructure for both languages, thus facilitating cross-linguistic transfer. Additionally, this result was interpreted as a possible support for the claim that narrative macrostructure more closely hinged on the cognitive maturation of an individual than on the language (Bohnacker, 2016; Pearson, 2002).

Moreover, the results of the statistical tests showed that the Story Structure increased from 5 years to adulthood in both languages. These results are consistent with previous findings that younger children produced significantly fewer story structure components than older groups (Bohnacker, 2016; Fiestas & Peña, 2004; Gagarina, 2016; Kunnari et al., 2016; Schneider, Hayward, & Dubé, 2006; Trabasso & Nickels, 1992). The results also support the

previous literature that at age 5, Goal-Attempt-Outcome sequences start to emerge; verifying that the age range of 3-7 years old is crucial for narrative development (Bohnacker, 2016; Trabasso & Nickels, 1992; Westby, 2014). Moreover, ten-year-olds' narrative structure was indistinguishable from that of adults indicating that the narratives of 10-year-old children are nearly adult-like, similar to the findings of Berman and Slobin (1994) and Trabasso and Nickels (1992). However, even though the results revealed a similar narrative structure, adult narratives are still superior in terms of thematic organization and generalization due to advanced rhetorical thinking, as Berman and Slobin (1994) suggested.

5 Conclusion

This study describes the bilingualism status of the Philippines, where Tagalog (or Filipino for which Tagalog is used as basis) and English are the official languages of the country. The Philippines lacks tests in assessing narratives, hence Multilingual Assessment Instrument for Narratives (MAIN) was adapted to Tagalog/Filipino and tested in 27 bilingual Tagalog-English-speaking children and adults. Results showed that Story Structure increased with age but did not differ between Tagalog and English in any of the investigated age groups, suggesting universality across languages.

6 Disclosures

The content of this chapter is based on the first author's unpublished Master's thesis entitled: *Narrative Structure and Complexity of typically developing Tagalog-English bilingual children and adults* (2019) supervised by R. Garcia of Max Planck Institute for Psycholinguistics, N. Gagarina of Leibniz-Zentrum für Allgemeine Sprachwissenschaft (ZAS), and I. Sekerina of City University of New York.

7 References

- Armon-Lotem, S., de Jong, J., & Meir, N. (Eds.). (2015). *Assessing multilingual children: Disentangling bilingualism from language impairment*. Bristol: Multilingual matters.
- Bautista, M. L. S. (2004). Tagalog-English Code Switching as a Mode of Discourse. *Asia Pacific Education Review*, 5(2), 226–233.
- Berman, R.A., & Slobin, D. I. (1994). *Relating events in narrative: A crosslinguistic developmental study*. Hillsdale, NJ: Erlbaum.
- Bohnacker, U. (2016). Tell me a story in English or Swedish: Narrative production and comprehension in bilingual preschoolers and first graders. *Applied Psycholinguistics*, 37(1), 19–48.

- Bohnacker, U. & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63, iv–xii.
- Eberhard, D. M., Simons, G. F., & Fennig, C. D. (2019a). *Summary by country*. Retrieved 2 June 2019, from <https://www.ethnologue.com/statistics/country>.
- Eberhard, D. M., Simons, G. F., & Fennig, C. D. (2019b). *Tagalog*. Retrieved 15 July 2019, from <https://www.ethnologue.com/language/tgl>.
- Fiestas, C. E., & Peña, E. D. (2004). Narrative discourse in bilingual children: Language and task effects. *Language, Speech, and Hearing Services in Schools*, 35(2), 155–168.
- Gagarina, N. (2016). Narratives of Russian – German preschool and primary school bilinguals: Rasskaz and Erzählung. *Applied Psycholinguistics*, 37(1), 91–122.
- Gagarina, N., Bohnacker, U., Lindgren, J. (2019). Macrostructural organisation of adults' oral narrative texts. *ZAS Papers in Linguistics*, 62, 190–208.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN : Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of narrative abilities in bilingual children. In S. Armon-Lotem, J. de Jong & N. Meir (Eds.), *Assessing multilingual children: Disentangling bilingualism from language impairment* (pp. 243–276). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Gagarina, N., Klop, D., Tsimpli, I. M., & Walters, J. (2016). Narrative abilities in bilingual children. *Applied Psycholinguistics*, 37(1), 11–17.
- Himmelmann, N. (2005). Tagalog. In K. A. Adelaar & N. Himmelmann (Eds.), *The Austronesian Languages of Asia and Madagascar* (pp. 350–376). New York: Routledge.
- Kunnari, S., Välimaa, T., & Laukkanen-Nevala, P. (2016). Macrostructure in the narratives of monolingual Finnish and bilingual Finnish-Swedish children. *Applied Psycholinguistics*, 37(1), 123–144.
- Ledesma, H. M. L., & Morris, R. D. (2005). Patterns of language preference among bilingual (Filipino-English) boys. *International Journal of Bilingual Education and Bilingualism*, 8(1), 62–80.
- Lorente, B. (2013). The grip of English and Philippine language policy. In L. Wee, R. B. H. Goh, & L. Lim (Eds.), *The Politics of English: South Asia, Southeast Asia and the Asia Pacific* (pp. 187–204). Amsterdam: John Benjamins.
- Mahboob, A., & Cruz, P. (2013). English and mother-tongue-based multilingual education: Language attitudes in the Philippines. *Asian Journal of English Language Studies*, 1, 1–19.
- Manabat, A. (2016, October 16). DepEd implements mother tongue-based learning to make lessons more interactive, easier for pupils. *Business Mirror*. Retrieved from <https://businessmirror.com.ph/2016/10/16/depd-ed-implements-mother-tonguebased-learning-to-make-lessons-more-interactive-easier-for-pupils/>.
- Martin, I. P. (2015). English in Mother Tongue based Multilingual Education (MTBMLE) in the Philippines. In T.W. Bigalke & S. Sharbawi (Eds), *English for ASEAN Integration: Policies and Practices in the region* (pp. 110–119). Bandar Seri Begawan: Universiti Brunei Darussalam.

- Moreno, E. M., Federmeier, K. D., & Kutas, M. (2002). Switching languages, switching Palabras (words): An electrophysiological study of code switching. *Brain and Language*, 80(2), 188–207.
- Otwinowska, A., Mieszkowska, K., Białocka-Pikul, M., Opacki, M., & Haman, E. (2018). Retelling a model story improves the narratives of Polish-English bilingual children. *International Journal of Bilingual Education and Bilingualism*, 1–25.
- Pascasio, E. M. (2005). The Filipino Bilingual from a Sociolinguistic Perspective. *Philippine Journal of Linguistics*, 35(1), 136–145.
- Paz, C. J. (1996). The nationalization of a language: Filipino. In *The Fourth International Symposium on Language and Linguistics* (pp. 2052–2059). Thailand.
- Pearson, B. Z. (2002). Narrative Competence among Monolingual and Bilingual School Children in Miami. In D. K. Oller & R. E. Eilers (Eds.), *Language and Literacy in Bilingual Children* (pp. 135–174). Bristol: Multilingual Matters.
- Philippine Statistics Authority (2003), *National Capital Region: Close To 10 Million Persons (Results from the 2000 Census of Population and Housing, NSO)*. <http://www.psa.gov.ph/population-and-housing/node/428>
- Quebral, C. (2018). *Help! My Child Can't Speak Filipino*. Retrieved 15 July 2019 from <http://www.familywiseasia.com/help-my-child-cant-speak-filipino/>.
- Raven, J. C., Court, J. H., & Raven, J. (1976). *Manual for Raven's progressive matrices and vocabulary scales*.
- Schachter, P., & Otones, F. (1972). *Tagalog Reference Grammar*. University of California Press.
- Schneider, P., Hayward, D., & Dubé, R. V. (2006). Storytelling from pictures using the Edmonton Narrative Norms Instrument. *Journal of Speech-Language Pathology and Audiology*, 30(4), 224–238.
- Sicam, F. P. M., & Lucas, R. I. G. (2016). Language attitudes of adolescent Filipino bilingual learners towards English and Filipino. *Asian Englishes*, 18(2), 109–128.
- Smolicz, J. J. (1984). National Language Policy in the Philippines: A Comparative Study of the Education Status of 'Colonial' and Indigenous Languages with Special Reference to Minority Tongues. *Southern Asian Journal of Social Science*, 12(2), 51–67.
- Smolicz, J. J., & Nical, I. (1997). Exporting the European idea of a national language: Some educational implications of the use of English and indigenous languages in the Philippines. *International Review of Education*, 43(5–6), 507–526.
- Stein, N. L., & Glenn, C. G. (1979). An Analysis of Story Comprehension in Elementary School Children. In R. Freedle (Ed.), *New Directions in Discourse Processing* (pp. 53–120). Hillsdale, NJ: Ablex, Inc.
- Squires, K. E., Lugo-Neris, M. J., Peña, E. D., Bedore, L. M., Bohman, T. M., & Gillam, R. B. (2014). Story Retelling by Bilingual Children with Language Impairments and Typically-Developing Controls. *International Journal of Language and Communication Disorders*, 49(1), 1–14.
- Thompson, R. M. (2003). *Filipino English and Taglish: Language switching from multiple perspectives*. Amsterdam: John Benjamins.
- Trabasso, T., & Nickels, M. (1992). The Development of Goal Plans of Action in the Narration of a Picture Story. *Discourse Processes*, 15(3), 249–275.
- Tupas, R., & Lorente, B. P. (2014). A 'new' politics of language in the Philippines: Bilingual education and the new challenge of the mother tongues. In P. Sercombe & R. Tupas (Eds.), *Language, Education and Nation-building* (pp. 165–180). London: Palgrave Macmillan.

- Tupas, T. R. F. (2003). History, language planners, and strategies of forgetting: The problem of consciousness in the Philippines. *Language Problems and Language Planning*, 27(1), 1–25.
- Vizconde, C. (2006). Attitudes of Student Teachers towards the use of English as Language of Instruction for Science and Mathematics in the Philippines. *The Linguistics Journal*, 1(3), 77–33.
- Wei, L. (2000). *The Bilingualism Reader*. New York: Routledge.
- Westby, C. (2014). Assessing and Remediating Text Comprehension Problems. In H. W. Catts & A. G. Kamhi (Eds.), *Language and reading disabilities-Pearson New International Edition* (pp. 189–247). Essex: Pearson Education Limited.

MAIN in the Tajik and Shughni languages of Tajikistan

Qurbonidin Alamshoev

NGO Kuhhoi Pomir

Aleksandra Trifonova

Universität Potsdam

After a brief overview of the linguistic situation in Tajikistan, this paper describes the adaptation and use of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN) in the Tajik and Shughni languages of Tajikistan.

1 Introduction

Nowadays, children growing up bilingually or even multilingually is a highly wide-spread phenomenon. Although linguistic and cultural contacts between nations have always been commonplace, research on bilingual populations is still relatively scarce. Furthermore, investigation of bilingual language development is challenging for both speech-language therapists and linguists due to the fact that, as a rule, standardized diagnostics tests are not suitable for bilingual language acquisition assessment, which, in turn, can lead to misdiagnoses (cf. Fleckstein et al., 2018; Grimm & Schulz, 2014). Things get even more complex when it comes to understudied minority languages. Therefore, it is vital to develop assessment tools that are sensitive enough to fully take into account the nature of bilingual language acquisition.

In the literature, narrative abilities have been reported to be one of the most ecologically valid measures of communicative competence in various speakers' populations (Botting, 2002, p. 1). One test of narrative ability is the *Multilingual Assessment Instrument for Narratives* (MAIN; Gagarina et al., 2012; 2015; 2019), which is part of the language test battery *Language Impairment Testing in Multilingual Settings* (LITMUS; Armon-Lotem et al., 2015). MAIN constitutes a reliable assessment tool for investigation of language attainment in children with different linguistic backgrounds (mono-, bi- and multilinguals of different ages). It can be used to evaluate children's narrative comprehension and production in three elicitation modes (telling, retelling, model story), and to assess measures of macro- and microstructure of a narrative (Gagarina et al., 2019). MAIN has received much public attention, has been

recognized by the global linguistic community and has already been adapted to a large number of languages from different parts of the world (German, Russian, Turkish, Mandarin, etc.)

In this paper, the linguistic situation in Tajikistan is outlined, including an overview of Tajik and Shughni, two Indo-Iranian languages, after which the initial steps of the process of adapting MAIN to Tajik and Shughni are described.

2 Languages in Tajikistan

In the Republic of Tajikistan, Tajik is the official language. Apart from Tajik, people in Northern Tajikistan also speak Yagnob. The Pamir languages Shughni, Rushani, Khufi, Bartangi, Roshorvi, Sariqoli, Yazghulami, Wakhi, and Ishkashimi are spoken in the Gorno-Badakhshan Autonomous Region of Tajikistan; Tajik is used for communication between different ethnic groups in this region (Dodikhudoeva, 2004). Therefore, the population in Gorno-Badakhshan is multilingual: 140,000 out of 211,000 inhabitants spoke different East-Iranian Pamir languages in 1999 (Dodikhudoeva, 2004). Additionally, Russian is also widely used in Tajikistan and is officially recognized by the constitution as a language of inter-ethnic communication, and a small part of the work of state organizations is done in Russian (The Constitution of the Republic of Tajikistan). Today, the language of instruction in schools of the Gorno-Badakhshan Autonomous Region is Tajik. However, before entering school, children usually do not speak Tajik or have very poor knowledge of the language (Dodikhudoeva, 2004).

2.1 The Tajik and Shughni languages

Tajik is an Indo-Iranian language of the Indo-European family and is spoken by more than eight million people (Ethnologue). It is mainly spoken in Tajikistan but is also used in Afghanistan, Pakistan, India, China. Tajik is an analytic language with the SOV basic word order (Ethnologue). Recently, a corpus consisting of more than 5 million words in Tajik has been introduced, which was reported to be the largest computer corpus of the Tajik language so far (Dovudov et al., 2011). After the establishment of the Tajik Soviet Socialist Republic in 1929, Tajik became the official language in Tajikistan, and the Arabic script, traditionally used by Tajiks for centuries, was first transformed into Latin script, and later into Cyrillic script (Avezova, 2017; see Dodikhudoeva, 2004 for a detailed discussion). During the Soviet period (1929-1991), the Tajik language was heavily influenced by Russian, which resulted in numerous borrowings from Russian in the domain of vocabulary (Avezova, 2017).

Shughni belongs to the East Iranian group of languages spoken by approximately 130,000 people in several districts in the Gorno-Badakhshan Autonomous Region of Tajikistan and the Shighnan district in Afghanistan (Mueller, 2015; Olson, 2017). Shughni has a number of different dialects: Badjuvi, Khufi, Rushani, Bartangi, and Roshorvi (Mueller, 2015; Olson, 2017). However, there is an ongoing debate about the status of the dialects: whether some are independent languages, subdialects, or all, including Shughni, are varieties of one single language (Mueller, 2015; Olson, 2017). Shughni, like the other Pamir languages spoken in the

Gorno-Badakhshan Autonomous Region, has no tradition of written language (Dodikhudoeva, 2004). However, several attempts for establishing a written form for Shughni have been made (Mueller, 2015).

In the 19th century, Robert Shaw was the first to describe the Shughni language. Later, the Russian researcher D.L. Ivanov visited the Pamirs and collected linguistic and folklore samples of the Shughni language, based on which the first Russian-Shughni dictionary was compiled by K.G. Zaleman in 1895. In the second half of the 20th century, the study of Shughni and other Pamir languages was revived by establishing the department of world studies in Dushanbe, where Pamir scholars started to explore these languages. Today, on the basis of the Institute of Humanities of the Academy of the Republic of Sciences of Tajikistan, a department for the study of Pamir languages is active in the Gorno-Badakhshan Autonomous Region.

Shughni has a number of characteristic linguistic features. It has an unstrict SOV word order and allows for scrambling (Parker, 2020). Additionally, it is mainly head-final and displays the following linear structure: DEM-ADJ-NOUN (Parker, 2020). Shughni is also a vestigial ergative language (Parker, 2020). Interestingly, Shughni determiners have three degrees of distance: proximal, medial, and distal (Mueller, 2015).

3 Adapting MAIN for use in Tajikistan

During the Fall School on Documentary Linguistics in the MENA region (the Middle East and North Africa) at the Leibniz-Zentrum Allgemeine Sprachwissenschaft (ZAS) in Berlin in October 2018, the first author of this paper Qurbonidin Alamshoev, who is a staff member of the public organization *Kuhhoi Pomir* in Tajikistan, was introduced to MAIN. After receiving training on the use of MAIN, Qurbonidin Alamshoev started the adaptation of MAIN to Shughni and Tajik based on the revised Russian version of MAIN. A personal Skype-training for testers was organized by Alyona Sternharz, a research assistant at ZAS. During this training, the process of data collection and assessment guidelines were discussed.

In order to ensure correct adaptations of MAIN to Tajik and Shughni (see Bohnacker & Gagarina, 2019), assistants, who were to help with data collection in Tajikistan, were selected from scholars and postgraduate students of the Khorog Institute of Humanities. These assistants (Nurijahon Kurbonkhonova, Shiringul Azorabekova, Ibodat Karamova, Chilla Nazarshoeva, and Muslima Broimshoeva) were philologists, historians, and specialists in the languages and culture of the Pamirs, and also had the experience of working with children. Within a one-day workshop, the testers were introduced to the MAIN-materials and were trained in carrying out data collection with MAIN. After this training, pilot data from Shughni-Tajik bilinguals were collected following the MAIN procedure (Gagarina et al., 2019).

Each tester collected data from four typically-developing bilingual Shughni-Tajik children (mean age=10.75). Audio recordings were made of each testing session. Each child was tested with MAIN in both languages: first, in their native language Shughni and 10 days later in Tajik. Since children who have a Pamir language as their native language hardly speak Tajik before entering school, only children who attended the third and fourth grades were

chosen to participate in the pilot study, as at this age they were already conversant in Tajik. A total of 40 testing sessions was conducted: 20 in Shughni and 20 in Tajik. All four stories (Cat, Dog, Baby Birds, Baby Goats) in the three testing modes (telling, retelling, model story) were administered to the participants. In addition, a parent survey was carried out. These pilot data will contribute to the development of the Tajik and Shughni MAIN-versions, which are planned to be finished by the end of 2020.

4 Some preliminary results from the pilot study

In the *Shughni* narratives, the mean story structure score was 6.9 out of 17 (score range: 2–11). Only 2.3% of all episodes consisted of a GAO-sequence, i.e. were complete episodes. The percentage of children who produced at least one GAO-sequence in Shughni, was 12.5%. On average, the Shughni narratives contained 2.5 IST tokens. For *Tajik*, the numbers were similar: the mean story structure score was 6.8 out of 17 (score range: 3–9) and only 2.9% of the episodes were complete (GAO-sequences); 13.6% of the children produced at least one GAO-sequence in Tajik. The average number of IST tokens in Tajik was 2.7.

A more detailed analysis comparing narratives elicited in the telling and retelling modes revealed that the mean scores for story structure in Shughni were slightly higher in the retelling as compared with telling: 8 points vs. 6.7 points. However, the mean scores in the Tajik narratives were equal: 6.8 points. It seems that story structure in the reproduction of the story in Shughni, which the children heard beforehand, is more developed than in storytelling.

A comparison of the number of Goals across the three episodes yielded interesting results. In both languages, the number of Goals was much lower in the third episode: 0 for Shughni and 3 for Tajik. In contrast, the number of Goals in the first episode was 10 for Shughni and 11 for Tajik, and the second episode elicited a total of 17 Goals in the Tajik narratives and 16 Goals in the Shughni narratives.

5 Conclusion

This paper gave a brief overview of the language situation in the Republic of Tajikistan and presented a summary characterization of the Tajik and Shughni languages. The current example of the MAIN implementation contributes to the growing body of research on understudied languages and provides useful information on the two Indo-Iranian languages (Tajik and Shughni).

6 References

Armon-Lotem, S., de Jong, J. & Meir, N. (Eds.). (2015). *Assessing multilingual children: Disentangling bilingualism from language impairment*. Bristol, UK: Multilingual Matters.

- Avezova, B. (2017). The influence of Russian on Tajik. In Polenova, et al. (eds.), *Language and Speech in Synchrony and Diachrony: Papers from an International Linguistics Conference*. (pp. 180–203). Cambridge Scholars Publishing.
- Bohnacker, U. & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63, iv-xii.
- Botting, N. (2002). Narrative as a tool for the assessment of linguistic and pragmatic impairments. *Child Language Teaching and Therapy*, 18(1), 1–21.
- Dodikhudoeva, L. (2004). The Tajik Language and the Socio-linguistic situation in the Mountainous Badakhshan, *Iran and the Caucasus*, 8(2), 281–288.
- Dovudov, G., Pomikálek, J., Suchomel, V., Šmerk, P. (2011). In Building a 50M Corpus of Tajik Language. Aleš Horák, Pavel Rychlý (Eds.), *Proceedings of Recent Advances in Slavonic Natural Language Processing* (pp. 89–95). Tribun EU.
- Ethnologue (2020). Languages of the world. www.ethnologue.com (accessed: 19.06.2020).
- Fleckstein, A., Prévost, P., Tuller, L., Sizaret, E. & Zebib, R. (2018) How to identify SLI in bilingual children: A study on sentence repetition in French. *Language Acquisition*, 25(1), 85–101.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In Armon-Lotem, et al. (Eds.), *Assessing multilingual children disentangling bilingualism from language impairment* (pp. 243–269). Bristol, UK: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Grimm, A., & Schulz, P. (2014). Specific Language Impairment and Early Second Language Acquisition: The Risk of Over- and Underdiagnosis. *Child Indicators Research*, 7(4), 821–841.
- Mueller, K. S. (2015). Deixis in Shughni: Grammatical and Semantic Considerations. ND: University of North Dakota MA thesis.
- Olson, K. (2017). Shughni phonology statement. *Silk Road Ascent, SIL International*. www.zabanha.af (accessed: 19.06.2020).
- Parker, C. (2020). Vestigial ergativity in Shughni: At the intersection of alignment, clitic doubling, and feature-driven movement. *Glossa: A Journal of General Linguistics*, 5(1), 52.
- The constitution of the Republic of Tajikistan (2003). www.unesco.org (accessed: 19.06.2020).

Adapting the Multilingual Assessment Instrument for Narratives (MAIN) to Torwali

Zubair Torwali

Idara Baraye Taleem-o-Taraqi (IBT), Institute for education and development

Torwali, a Dardic language of the Indo-Aryan family spoken in the District Swat in Pakistan, is an endangered language that lacks a literary tradition. This paper gives a background on the Torwali language and people, and describes the development of an orthography for Torwali and the establishment of Torwali-medium schools by the local organization Idara Baraye Taleem-o-Taraqi ‘institute for education and development’ (IBT). Finally, the process of adapting the Multilingual Assessment Instruments for Narratives (MAIN) to Torwali is outlined.

1 Introduction

The *Atlas of World Languages in Danger* (Moseley, 2010) lists 26 out of the 74 languages spoken in Pakistan as endangered. One of the 26 endangered languages is Torwali, which is rated as ‘Definitely Endangered’, because it does not have a literary tradition and its speakers are undergoing a rapid language shift toward the predominant language, Pashto, in the areas of Pakistan where children acquire Torwali as their first language (see Section 2).

The Language Impairment Testing in Multilingual Settings – Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012; 2015) is a narrative assessment tool developed within the COST Action IS0804 *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment* (2009–2013) and has subsequently been revised in 2019 (Gagarina et al., 2019). This instrument is used to investigate “children’s acquisition of narrative skills” (Bohnacker & Gagarina, 2019, p. iv) from age 3 to 12. It has been designed to allow assessment in several languages in the same child and it also has three different elicitation modes: Telling, Retelling and Model Story. MAIN contains four parallel stories, each with a six pictures sequence. The stories are parallel in their linguistic and cognitive complexity in both micro- and macro structure (Gagarina, et al., 2012). In this paper, the process of adapting MAIN to Torwali is described.

The paper is structured as follow: it first provides an overview of the Torwali language and people (Section 2), and then reports on previous research on Torwali (Section 3), features of Torwali (Section 4), and the development of the standardized Torwali orthography (Section

5) as well as the Torwali schools that the organization *Idara Baraye Taleem-o-Taraqi* ‘institute for education and development’ (IBT), the author’s organization, has started (Section 6), after which the process of adapting MAIN to Torwali is described (Section 7). The paper ends with a short conclusion (Section 8).

2 The Torwali language and people

Torwali is a Dardic language of the Indo-Aryan family and is mainly spoken in the Bahrain and Chail areas of District Swat in the northwest frontier province, Khyber Pakhtunkhwa, in Pakistan. Figure 1 shows a map of Pakistan indicating the area in which Torwali is spoken as well as a more detailed map of the specific region, District Swat, where it is spoken.

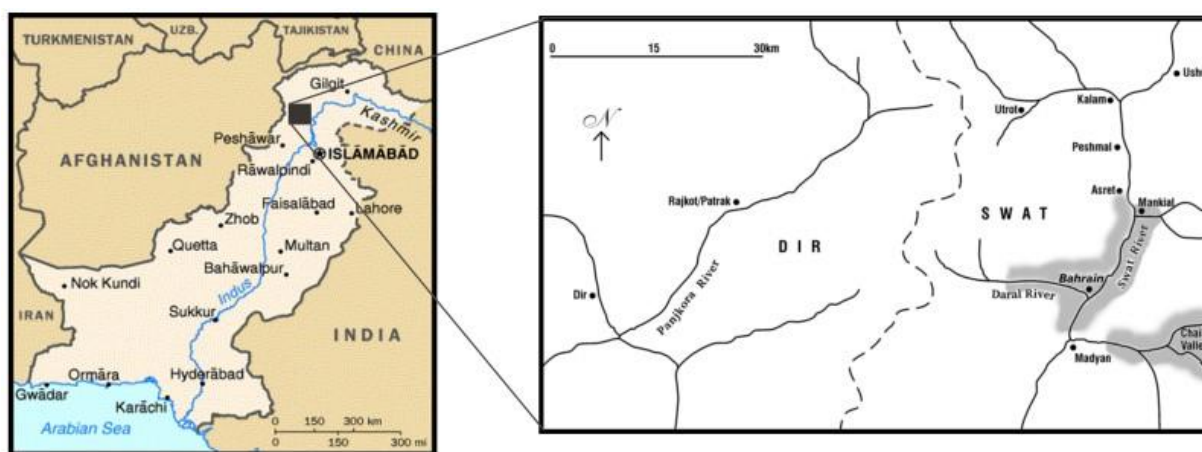


Figure 1. The Torwali-speaking area (District Swat), Pakistan (from Lunsford, submitted, reprinted with permission).

The level of endangerment of the Torwali language can be seen by its small community of speakers, which is estimated to be approximately 80,000 (Lunsford, 2001). However, a recent survey found that a majority (60 %) of the respondents said that the population of the Torwali community is more than 120,000 (Torwali, 2014). Around 30–35 % of the Torwali speakers have migrated permanently to the larger cities of Pakistan, where they shift to speaking the national language, Urdu, or by other languages of wider communication, such as Pashto or Punjabi.

The Torwali language is said to have originated from the pre-Muslim Dardic communities of Pakistan (Viaro & Inam-ur-Rahim, 2002). The speakers of Torwali are called Torwalik or Torwal (Grierson, 1929). The area where Torwali is spoken is known as Torwal by other Dardic communities like Gawri and Kohsitani. In Torwali folktales, the entire area is also referred to as Tu:aal (Torwal) (see McCabe, 2019, p. 161). As is common in other Dardic communities in Northern Pakistan, the Torwali people living in the valleys of Bahrain and Madyan in the Swat Valley in Pakistan did not know where they and their language originated. They had largely lost their identity centuries ago because of being invaded by outsiders. The majority of the Torwali attributed, and many still do so, their descent to Arabs by “boasting an

Arab origin” (Hay, 1934, p. 241) and call themselves Kohistani, an identity given to them by the Pathans (Barth, 1956), who captured their lands and converted them to Islam. The reason for this can be that “the Dards unfortunately did not succeed in arousing comparable interest” (Jetmar, 1961), and that their history and origin remained shrouded in the debris of history. A few reports about them have been written by the British colonial officers during their service in the mountains, but the reports are not generally known (Jetmar, 1961). With the loss of the history, identity and culture of the Torwali people, their language had also become threatened by extinction, mainly because it did not have a written form, and nor could its speakers undertake any measures to promote and develop it.

3 A short overview of early research on the Torwali language

In the late 19th and the 20th century, numerous surveys were carried out on Pakistan’s endangered languages by individuals and international organizations, including the five volumes of *Sociolinguistic Survey of Northern Pakistan* (Calvin, Sandra, & Daniel, 1992) and the *Linguistic Survey of India* (Grierson, 1928), the latter perhaps being the first book that focuses specifically on the Torwali language. Grierson (1928) is based on field data collected by Sir Aurel Stein, who visited Swat-Kohistan in the Swat Valley in 1926, and includes Torwali texts written using the phonetic alphabet with English translations and a couple of folktales of the Torwali community narrated by a single speaker. Before that, in 1885, John Biddulph dedicated a short chapter of his book, *Tribes of Hindoo Koosh*, to the Torwali lexicon (Biddulph, 1885). In 1956, Fredrik Barth wrote a chapter on the language, people, economy, political organization, lineage, and habitat of the Torwali community (Barth, 1956).

4 Some basic features of the Torwali language

Torwali has two distinct dialects. The dialect with the largest number of speakers is spoken in the main valley to the north beyond the town of Madyan and is usually referred to as the *Sinkaen* or *Bahrain* dialect. The other dialect is known as the *Chail* dialect and is spoken in the Ulaal Dara (Bishigram valley) to the east of the town of Madyan (see Figure 1).

Torwali has 35 consonant phonemes and 13 vowel phonemes (Bashir, 2003; Lunsford, 2001). The syllable structure of Torwali is limited, with only four types of syllables: V, VC, CV, and CVC (Lunsford, 2001). Both Bashir (2003) and Lunsford (2001; submitted) have found four contrastive tone patterns in Torwali: high (H), low (L), rising LH) and falling (HL).

The Torwali word order is subject-object-verb (SOV), a pattern that is common in Indo-Aryan languages. Torwali uses postpositions (Lunsford, 2001), for example [sum mi] ‘soil in’, [tha:m zed] ‘tree on’, and [bop si] ‘father of’.

In contrast to e.g. English, the Torwali number system is a base-20 system, which means that the numbers 1-20 are all unique forms (although some of the numbers 1-10 are similar to some of the numbers 11-20). Just as the English decimal cycles on every ten, Torwali’s system

cycles on every twenty, e.g., [br:f] ‘twenty’, [dɔbr:f] ‘forty, lit. two twenty’; [ɛabr:f] ‘sixty, lit. three twenty’, [çəubr:f] ‘eighty, lit. four twenty’, and so forth.

Grierson (1928) claims that Torwali has eight cases: nominative, accusative, agentive (ergative), instrumental, dative, ablative, genitive, and locative. In contrast, Lunsford (submitted) claims that, grammatically speaking, there are only three grammatical cases: nominative (which is unmarked), ergative and oblique. For example, in *a gam ma ap* ‘I came from the village’, the noun *gam* ‘village’ is unmarked, whereas in *a gama ma ap* ‘I came from the villages’, *gama* ‘villages’ is marked for the plural oblique case.

There are three tenses in Torwali, past, present, and future, and three aspects, perfective, imperfective, and inceptive. The inceptive aspect is used to mark events about to begin.

5 Developing an orthography for Torwali and teaching literacy to the community

Literacy is one of the most complex issues in language revitalization efforts (Grenoble & Whaley, 2006) and is usually thought of as a first step in the process of revitalizing a language. Since literate individuals and communities are deemed to hold high status in modern societies, making literacy in a language possible can add prestige to it. Literacy in a local language also makes the language suitable to be used in many social domains. For these reasons, many language revitalization efforts focus on putting in place school-based literacy programs. Developing literacy in an endangered language which only has an oral form poses many challenges because in the absence of a writing tradition one comes across the challenge of developing a script or orthography from scratch. The question one faces when thinking about literacy in a local language that is spoken only is how to develop it and where to start. In many cases, minority languages spoken in a community, usually the languages facing challenges of extinction, do not have a writing system, at all. The first step, therefore, has been to develop an orthography for Torwali, which involves a number of social, political, historical, economic, psychological, and linguistic considerations.

The orthography for Torwali was developed by the local organization IBT in 2004-2005. The script is alphabetic, is based on the Perso-Arabic script and is written from right to left. This was the logical choice, since many members of the Torwali people were already familiar with and used this writing system in the national language Urdu, in the “regional” language Pashto (i.e. the language of wider communication in the northwest province of Pakistan, the province of Khyber Pakhtunkhwa), or in Arabic through the Holy Quran. The Torwali alphabeth has 47 letters/written symbols. All of them except four also exist in Urdu. Some dialects of Pashto, for example the Qandahari dialect, use two of these four letters (both consonants). Out of the four unique letters written ش, ژ, چ, ا in Torwali with the phonetic representations [ʂ], [z], [ç] and [æ], respectively, the last one is a vowel, which is used frequently in Torwali. The other three are consonants: the retroflex fricatives [ʂ] and [z], and the palatal fricative [ç] (Torwali, 2015). Figure 2 shows the alphabet, with the four special characters highlighted in red.

توروالی ا ب ت

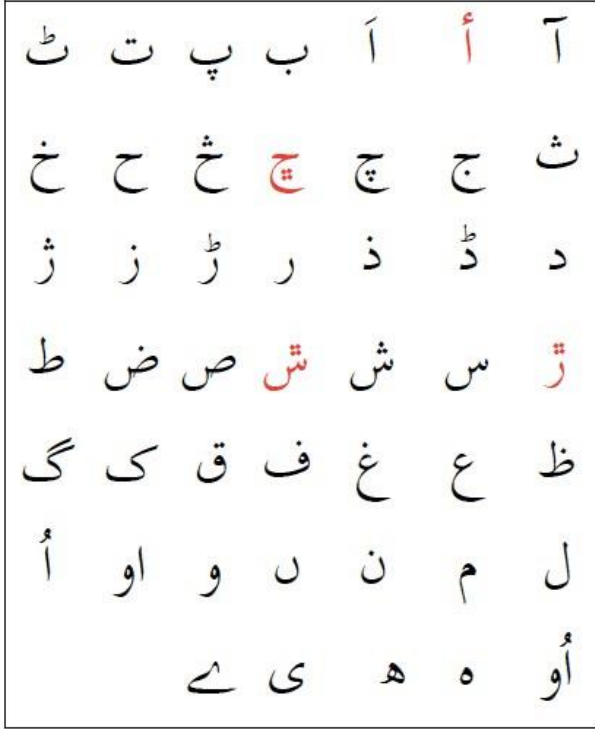


Figure 2. The Torwali alphabet (Torwali, 2007).

The first Torwali alphabet book was developed in 2006 and a primer was published in 2007 (Torwali, 2007). The teaching of Torwali to children was started in 2008 by the local organization, Idara Baraye Taleem-o-Taraqi (IBT). The first school was set up in Bahrain Swat under the name *Mhoon School* (Torwali, 2012), which means ‘our school’. By 2020, four such schools had been started in the Torwali community. In these schools, children start their pre-primary education in their mother tongue Torwali, and two more languages, Urdu and English, are added later on. The children who are admitted to these schools are from four to 11 years old. The grades at these schools are kindergarten 1, kindergarten 2, grade 1, grade 2 and grade 3. At the Torwali schools of IBT, the pupils complete two years of their early schooling in Torwali and after that their parents get them admitted to either the public primary schools or to the low-cost private schools. In none of the private or public schools, Torwali is taught, neither as a subject nor as the medium of education. However, most of the teachers use Torwali for giving instructions at these schools as well.

Currently (in 2020), 250 children (both boys and girls) between the ages of 4 and 11 attend the Torwali schools of IBT. (At the time of writing, the schools are closed due to the lockdown instated throughout the country in order to try to contain the Covid19-pandemic). The parents of the pupils are multilingual. The children learn Urdu as a second language at school, and also through the Urdu news and entertainment TV channels which broadcast movies and tv series. A limited number of children are also exposed to Pashto as a second language if this language is spoken by their teachers at schools.

6 Adapting MAIN to Torwali

When starting the process of adapting MAIN to Torwali, MAIN was a new tool for us, but we were familiar with the macrostructure and microstructure of a narrative as we had developed similar stories for our Torwali education program. To be able to adapt MAIN to Torwali, the first thing we had to do was to understand the concepts behind MAIN and its guidelines. In order to fully understand the philosophy of MAIN, we read both the 2012 MAIN manual (Gagarina et al., 2012) and the guidelines for adopting MAIN to new languages (Bohnacker & Gagarina, 2019) carefully. Our next task was to read, understand and translate the MAIN assessment materials (i.e. guidelines for assessment, protocols, scoring, story scripts, and the background questionnaire).

The four stories, *Baby Birds*, *Baby Goats*, *Cat* and *Dog*, were found to be appropriate for Torwali-speaking children as they are already familiar with folktales which often have animal protagonists such as dogs, cats, goats, birds, and other animals such as bears, lions, wolves, monkeys, fox, and jackals. The first challenging task was to translate and adapt the four story scripts to Torwali because one has to take great care to keep the various aspects of the micro- and macrostructure comparable to the original (e.g. internal states terms, goals, attempts and outcomes), but at the same time keep the original Torwali information structure and other language-specific aspects. For example, Torwali verbs are usually complex verbs, i.e. a noun plus an action make a verb, e.g. for the English verb ‘fly’ the Torwali verb would be شيش ديؤ [šiš déo]. The majority of Torwali verbs are constructed in this manner, which makes Torwali sentences longer than their English counterparts. However, otherwise there were no difficulties in translating the story scripts to Torwali. The task of translating the story scripts was given to the IBT team who translated the stories, and then reviewed them multiple times to check the accuracy of the various aspects of the micro- and macrostructure. The number of words, phrases and clauses were considered here along with the goals, attempts, outcomes and the internal state terms. The next challenge has been to translate the scoring sheets, a process that is currently underway. After the scoring sheets have been finalized, we will again review the story scripts because we have experienced that reviewing of a product after a longer time help increase its accuracy.

Next, we plan to carry out a pilot study using MAIN with pupils of the IBT Torwali schools and with pupils of the state-run primary schools. We plan to include 65 pupils from our IBT Torwali schools and 65 from state-run primary schools. It is important for us to keep the number of pupils from the state-run primary schools and from our schools the same because we want to assess and compare the narratives abilities of pupils in both kinds of school systems. The data collection as well as the finalizing of the Torwali MAIN is planned to be completed by summer 2021, as during 2020, the schools have remained closed for longer time because of the Covid19 pandemic.

7 Conclusion

Adapting MAIN to Torwali is the first project of its kind in Pakistan. Pakistan is a multilingual country and majority the children and parents speak both a mother tongue and the national language Urdu; in some areas up to four or even five languages may be used. Having access to an assessment instrument such as MAIN will be of great significance for programs such as ours, mother tongue based multilingual education programs. It will help us to improve our pedagogy and teaching materials. It will also help other similar communities who have also been implementing such educational programs. The adaptation of MAIN will also support the educationists in Pakistan who are responsible to develop teaching materials for a multilingual setting. Our organization, the IBT, is very passionate about adapting MAIN and it hopes to begin to use it in late 2020 or early 2021.

8 References

- Barth, F. (1956). *Indus and Swat Kohistan-an Ethnographic Survey* (Vol. II). Oslo: Forenede Trykkerier.
- Biddulph, J. (1885). *Tribes of Hinoo Koosh* (Vol. 1). Lahore, Pakistan: Ijaz Ahmad, Ali Kamran Publishers.
- Bohnacker, U. & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63, iv–xii.
- Chaghatai, M. I. (2002). *Writings of Dr. Leitner: Islam, Education, Dardistan, Politics and Culture of Northern Areas*. Lahore, Pakistan: Government College Research and Publication Society & Sang-e-Meel Publications.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children: Disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Grenoble, L. A., & Whaley, L. J. (2006). *Saving Languages: An Introduction to Language Revitalization*. Cambridge, UK: Cambridge University Press.
- Grierson, G. A. (1929). *Torwali: An Account of a Dardic Language in Swat-Kohistan*. UK: Asian Educational Services.
- Hay, R. W. (1934). The Yousafzai State of Swat. *The Geographical Journal*, 84(3), 236–246.
- Jetmar, K. (1961). Ethnological Research in Dardistan 1958 preliminary report. *Proceedings of the American Philosophical Society*, 105(1), 79–97.
- Lunsford, W. A. (submitted). A typological profile of Torwali.

- Lunsford, W. A. (2001). *An overview of linguistic structures in Torwali*. Arlington, Texas, USA: University of Texas.
- McCabe, C. (Ed.) (2019). *Poems from the Edge of Extinction: An Anthology of Poetry in Endangered Languages*. London: Chambers.
- Moseley, C. (Ed.) (2010). *Atlas of the World's Languages in Danger* (3 ed.). Paris: UNESCO Publishing. Online version. Retrieved 24 May 2020, from <http://www.unesco.org/culture/en/endangeredlanguages/atlas>
- Sathanvi, S. S. (2011). *Kitab ul Ibra* (Vol. 1). Islamabad, Pakistan: Poorab Academy.
- Shah, P. M. (1979). *Tuwarikh Rahmat Khani*. Peshawar: Pashto Academy, University of Peshawar.
- Torwali, Z. (2015). *Torwali Alif, Bey, Tey* [Torwali alphabets] (3rd ed.). Bahrain Swat, Pakistan: Idara Baraye Taleem-o-Taraqi (IBT).
- Torwali, Z. (2014). *Baseline Survey of the status of Torwali language*. Bahrain Swat, Pakistan: Idara Baraye Taleem-o-Taraqi (IBT). Available online at: doi:10.13140/RG.2.1.4238.1847
- Torwali, Z. (2012). *My Education, my language*. Retrieved April 4, 2018, from pakistantoday.com.pk: <https://www.pakistantoday.com.pk/2012/04/18/my-education-my-language/>
- Torwali, Z. (2007). *Torwali Alif, Bey, Tey* [Torwali alphabets] (1st ed.). Bahrain Swat, Pakistan: Idara Baraye Taleem-o-Taraqi (IBT).
- Viaro, A., & Inam-ur-Rahim. (2002). *Swat: An Afghan Society in Pakistan*. Geneva, Switzerland: City Press and Graduate Institute of Developmental Studies.

The adaptation of MAIN to Turkish

İlknur Maviş

Anadolu University

A. Müge Tunçer

Anadolu University

Semra Selvi Balo

Anadolu University

This paper presents a short overview of Turkey and the Turkish language, and then outlines the process of adapting the Multilingual Assessment Instrument for Narratives (MAIN) to Turkish and how the Turkish MAIN has been used with monolingual and bilingual children. The grammatical features of Turkish, the critical points in the adaptation process of MAIN to Turkish and our experiences of extensive piloting of the Turkish MAIN with typically developing monolingual children are described.

1 Introduction

Turkey occupies a unique geographic position, lying as a bridge, partly in Asia and partly in Europe (see Figure 1) so Turkey is culturally influenced by both Europe and Middle East. The current population of Turkey is 84,068,992 as of 2020 (Worldometer, 2020). According to the previous studies, more than 3 million people of Turkish origin live abroad. Over a million speakers of Turkish are found in Bulgaria, Macedonia, and Greece, over 1.5 million live in Germany and other northern European countries, including Belgium, France, Denmark, and England (Schaufeli, 1991; Yağmur, 1997), and about 24,000 Turkish speakers live in the United States (Grimes, 1992; Turkish Ministry of Affairs, 2003; cited in Topbaş, 2006). Eighty four percent of the population in Turkey speaks Turkish as the official language, however, Kurmanji and/or Zazaki dialects and Arabic can be listed as minority and immigrant languages in Turkey, some of which are spoken by large numbers of people.



Figure 1. Location of Turkey in World map (<https://medium.com/>)

Next to German, French and English, Arabic is also offered as an elective language. Yet, most of the children in Turkey are taught English as a second language at school. However, the unusual relationship between English and Turkish due to their syntactic and morphological differences makes English exceptionally difficult for native speakers of Turkish to learn. In addition, a highly centralized education system in Turkey also likely influences the relatively low proficiency in English. Therefore, unless they are born in a bilingual family or a situation, in Turkey, children start learning a second language and its grammar in secondary school. The motivation or the attitude for learning a second language at that age and the amount of time that is invested in young peoples' learning of English are all considered factors for insufficient levels of English in Turkey (Maviş, 2010). However, in the meantime, the need for English to ensure job security and economic advancement makes the study of that language in Turkey a topic of interest (Thompson & Erdil-Moody, 2016).

1.1 A short description of the Turkish language and the Turkish context

Turkish is the official language spoken mainly in Turkey and the surrounding regions and has about 70 million native speakers worldwide. Turkish is spoken in Turkish Republic of Northern Cyprus and by small groups of ethnic Turks in Iraq, Greece, Bulgaria, the Republic of Macedonia, Kosovo, Albania and some other regions of Eastern Europe. In Turkish, there are a large number of word borrowings, especially from Persian, Arabic and French. These loanwords usually fill a newly-formed linguistic need as a result of cultural contact or increasingly technological development, and are often phonologically or orthographically adapted into the language.

Turkish belongs to the Altaic branch of the Ural-Altaic linguistic family. The canonical word order of Turkish is subject–object–verb. Yet, word order in Turkish is relatively flexible. A simple combination of predicate (verb), subject, and object may result in six possible orders – SOV, SVO, OSV, OVS, VOS, and VSO – in transitive sentences, all of which are grammatical in principle. The flexibility of word order has also been observed in narration. Aksu-Koç (1994) elicited narrative data from children and adult Turkish speakers using a picture book, *The Frog Story* (Mayer, 1969), and found that pro-drop sentences such as OV, VO, and V constitute about 50% of the narratives, while SOV and SV orders together were about 40% (Arık, 2016).

Other distinctive characteristics of the Turkish language are vowel harmony and extensive agglutination; that is, Turkish depends on the morphological endings attached to content words. This means that our language tends to ‘agglutinate’ speech elements, which might be expressed in English by separate words such as prepositions or modal verbs. This process is widespread in Turkish. Affixes attached in sequence to the end of a word do the work of grammatical features. They build up nouns and supply verbs with tense and person. By this way, word structure (morphology) does more communicative work in Turkish than in languages like English, which depends on sentence structure (syntax) (Menn et al., 1990). The vowels of suffixes undergo vowel harmony. When a suffix is attached to a stem, the vowel in the suffix generally agrees in frontness or backness and in roundedness with the last vowel in the stem or of the preceding suffix.

In general, Turkish stems can be assigned to one of the two major categories nouns and verbs. Turkish verbs are very regular in forming their tenses. The verbs consist of three fundamental elements: verb root, tense particle(s) and personal endings. Verbs have six grammatical persons (three singular and three plural), various voices (active and passive, reflexive, reciprocal, and causative), and a large number of grammatical tenses. Meanings of negation, obligation, ability and/ or a condition (such as ‘not, be able to, must’, etc.), which are expressed as separate words in most European languages, are usually expressed with verbal suffixes in Turkish.

1.2 Background of Turkish MAIN

During the process of adapting the Multilingual Assessment Instrument of Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012, 2019) to Turkish, some studies investigated narrative structure in Turkish-speaking monolingual and bilingual children (Maviş, Tunçer & Akyıldız, 2011; Maviş et al., 2012). The results demonstrated that both monolingual and bilingual children could answer some comprehension questions correctly by about 4 years of age. The appropriate use of internal state terms appeared at age 6, regardless of mono- or bilingualism; however, age and internal state terms were not correlated. On the contrary, macrostructural components and comprehension improved with age.

Another study (Maviş et al., 2012) compared three Turkish-German speaking boys (ages 4-6 years) to three age-matched Turkish-speaking monolingual children living in Turkey. The two groups of children told a story based on a set of 6 pictures (*Baby Birds* or *Baby Goats*) and

retold a story based on another set of 6 pictures (*Cat* or *Dog*). A non-parametric statistical analysis demonstrated no difference between the monolingual and bilingual groups regarding the macrostructure components (story structure, story complexity, use of internal state terms, and comprehension) on either ‘the tell or retell’ tasks.

Using MAIN (Gagarina et al., 2012), two studies examined the effects of age, gender and the narrative task on Turkish narrative skills of Turkish-German bilingual children (Maviş, Tunçer & Gagarina, 2016). The first research objective was to assess the effects of age on the production and comprehension of macrostructure components in the first language –Turkish – of bilingual children living in Germany. The second objective was to examine how gender impacts the production and comprehension of macrostructure. The last objective was to determine if different narrative tasks affect macrostructure components. In this study, 36 children; 21 girls and 15 boys aged from 2;11 to 7;11 (months; years) told stories in two conditions (tell-after model vs. tell-no model) and answered comprehension questions. All participants were Turkish-German simultaneous bilinguals who were born in Germany and had been living there since their birth, and were from Turkish families. They were attending monolingual German-speaking kindergartens/schools in Berlin, Singen and Konstanz. The studies showed significant age effects on story complexity and comprehension, but not story structure and internal state terms. There were no significant effects for gender. Comprehension was significantly better in the ‘tell-after model’ vs. ‘tell-no model’ condition (Study 1). For production (storytelling), a trend favouring ‘retell’ over ‘tell’ was found (Study 2).

2 Adapting MAIN to Turkish

Here, we describe the revised process of adapting MAIN to Turkish. The critical points in the translation process of MAIN to Turkish were related to: (a) the use of pronouns, (b) the conjunction ‘and’ in Turkish, and (c) typology of the language in general.

Turkish has no grammatical gender and the 3rd person pronoun ‘o’ (he/she/it) can be used for male, female and neutral referents. In the *Baby Goats* story, the personal pronoun ‘him’ in a sentence ‘The fox let go of the baby goat and the bird chased him away’, was substituted with the noun *tilki* ‘fox’ in the translation in order to avoid misunderstanding. Otherwise, ‘him’ might refer either to the fox or the baby goat for especially the children with DLD, who cannot follow the referents as typical children do. We observed the same problem in the sentence ‘The cat let go of the baby bird and the dog chased him away’. To clarify whom the dog chases, we substitute the referent with the name itself as such *Kedi yavru kuşu bırakmış ve köpek kediyi (onu) kovalamış*.

Turkish is a pro-drop (pronoun-drop) language in which certain classes of pronouns may be omitted when they are pragmatically and/or grammatically apparent. Reflexive pronouns belong to this group. They are mostly used to emphasize the meaning and are therefore used with lesser frequency in Turkish. Hence, in some sentences the ‘pronoun’ was just omitted and the translation of ‘The cat hurt himself’ became as in (1).

- (1) kedinin canı acımış
 cat-GEN self-3SG.POSS hurt-PF
 ‘The cat hurt *himself*’

Main clause predicates are necessarily marked for person in Turkish whereas subject pronouns are not always necessary. Accordingly, if the pronoun has a clear noun antecedent, we do not have to emphasize the doer of the action to avoid redundancy as seen in (2).

- (2) Ø yavru kuşlardan birini yakalamış
 baby bird-PL-GEN one-3SG.ACC grab-PF Ø
 ‘*He* grabbed one of the baby birds’

In regard to such flexibility, pronouns were also omitted in the translation of ‘One day there was a mother goat who saw that baby goat had fallen into the water and that **it** was scared’ (*Bir gün anne keçi yavrusunun suya düştüğünü ve [onun] korktuğunu görmüş*) and ‘The mother bird came back with a big worm for her children, but **she** did not see the cat’ (*Anne kuş yavruları için büyük bir solucan getirmiş fakat [o] kediyi görmemişti*).

In Turkish, the conjunction *ve* ‘and’ is used to link two sentences in the same syntactic level, and both the sentences before and after the conjunction express either positive or negative meaning. Yet, children tend to process connected sentences easily if the doers of the both sentences are the same. In the story *Baby Birds*, when we examined the sentence ‘The dog was very glad that he could save the birds, **and** the cat was still hungry’, we decided that the connection *ve* ‘and’ does not imply the opposing idea between the sentences in Turkish so we changed *ve* to *ama* ‘but’. Consequently, Turkish translation appeared as *Köpek kuşları kurtardığı için çok memnun olmuş ama kedi hala açmış*. The same is available for the parallel structure in *Baby Goats*.

As is well known, Turkish is an agglutinating language with rich suffixation; however, there are no articles such as the/a/an in this language. As a result, the number of words in the four stories was lower than those in the English version.

In the stories *Cat* and the *Dog*, new structures such as ‘the ball was saved’ or ‘the balloon was saved’ were added to the correct responses of the revised version of the English MAIN. The usage of such constructions is common in English; yet, in their responses, Turkish children did not prefer the ball or the balloon topicalized with a passive morphology. Children preferred an active structure as ‘the boy saved the ball/the balloon,’ shifting their focus more toward the doer of the action.

The last revision is related to the sentences in *Cat* and *Dog* stories ‘the cat *noticed* the boy’s bucket and *thought*: “I want to grab a fish.’ and ‘the dog *noticed* the boy’s bag and *thought*: “I want to grab a sausage.’ In Turkish, the children ignored that intentional thinking simply saying, ‘the dog/the cat wants to grab a fish/a sausage.’ Thus, to make the children use the internal term ‘thinking’, we changed the present tense to a subjunctive/optative mood like

alayım/alsam, as in *kedi çocuğun kovasını gördü ve kovadan bir balık alsam/alayım diye düşündü* ‘the cat saw the bucket and the cat thought/desired he would grab a fish from the bucket.’ Optative mood seems to fit more in Turkish context.

3 The use of the Turkish MAIN (MAIN-TR)

During 2011-2012, 17 languages (Afrikaans, Albanian, Croatian, Cypriot Greek, Dutch, English, Finnish, French, German, Greek, Hebrew, Italian, Lithuanian, Russian, Swedish, Turkish) were represented in the MAIN-LITMUS project (within COST Action IS0804); where two members participated from Turkey: İlknur Maviş and A. Müge Tunçer. We attended most of the WG meetings and each time, we presented a pilot study with monolinguals (15 children) and bilinguals; children with Turkish-German (21 children) and Turkish-Kurdish (7 children). In the revised 2020 version of MAIN-TR, which is based on the revised MAIN (Gagarina et al., 2019), the stories have been checked for translation into Turkish from English, considering the macrostructure elements in the context of story structure, structural complexity and internal state terms. The stories have been controlled for linguistic complexity, parallelism in macrostructure and microstructure and both for cultural and linguistic appropriateness.

Nowadays, Semra Selvi Balo, a research assistant writing her PhD thesis at Anadolu University, carries out a validity and reliability study of MAIN-TR. The participants of the study are typically developing monolingual children between 36 to 72 months and a group of age matched children with Developmental Language Disorder (DLD). Recently, she did a pilot testing with a small group of participants; 13 typically developing children between 45-75 months ($M = 62$ months) and 7 children with developmental language disorder between 49-72 months ($M = 57$ months), attending DİLKOM, a speech and language therapy centre in Eskişehir, Turkey. The children were first assessed for language development by Turkish version of Test of Early Language Development-3 (TEDİL; Topbaş & Güven, 2011), then were administered model story-tell and retell-tell in alternative modes using MAIN-TR, which lasted almost about 20 minutes per child. Story structure components, structural complexity, internal state terms and the comprehension questions were scored.

The findings of the pilot study showed that MAIN-TR is a useful task to discriminate the child with developmental language disorder from the typically developing child in macrostructure analysis. Yet, it was surprising to observe that typically developing children do not start narrating with an opening phrase such as ‘once upon a time, one day, or in the forest, etc...’, regardless of the narration mode. The pictures of the stories seemed cultural and age appropriate. Yet, most of the children have misnamed the ‘fox’ for a wolf and the ‘bird’ for a crow; which we relate the naming problems either to their insufficient familiarity to the animal world or their frequent exposure to the stories more with wolves rather than foxes. When the children saw the mother goat saved the baby goat and was glad that the baby was not drown, they said the mother goat missed her baby very much. Some children told the baby goat is crying but instead the verb ‘cry’, they said the baby goat is bleating (*mee diyor*). Considering

the comments, in 2020 version of MAIN-TR, ‘missing and getting sad’ are added into the list of internal emotional terms.

The typically-developing children were quite competent in answering the questions tapping theory of mind (ToM) compared to the children with DLD. For example, when the children were asked ‘Will the boy be friends with the dog? Why?’, typically-developing children gave reasonable explanations: ‘No because the dog ate all the sausages,’ ‘No because the boy would take the sausages to home and give his mum, but the dog ate all,’ ‘No because the boy had already paid for the sausages, but the dog ate them all,’ etc. On the other hand, children with DLD often misunderstood the question saying ‘Yes, they would be friends’, without any reasons. The aim of the ToM questions is to see if the child can infer meaning about the story as a whole. It is clear that Turkish-speaking monolingual children with DLD show lower performances inferring meaning or taking the perspective of others.

So far, the adaptation of MAIN to Turkish has been finalized by some pilot studies, including small number of participants. As we mentioned, the reliability and validity study of MAIN-TR is ongoing with age groups of 3 to 6 regarding macrostructure analysis. The microstructure analysis of MAIN-TR has been studied for a small group of children but will be studied from a broad perspective to elicit syntactic development of the Turkish-speaking children, both typical and/or disordered. When we reach to the age based normative values, we plan to carry out projects with bilingual/multilingual children, children with autism and children with special needs.

These studies reflect how narratives will be discriminative to identify disordered children from their typically developing peers. As one of the traditional modes of discourse, narration should be used in adult language disorders as well. It is certain that the participant groups of aphasia, primary progressive aphasia and Alzheimer’s disease will benefit from the narratives both in assessment and therapy.

4 References

- Aksu-Koç, Ayhan (1994) Development of linguistic forms: Turkish. In R. A. Berman & D. I. Slobin (Eds.) *Relating events in narrative: A crosslinguistic developmental study* (pp. 329–385). Hillsdale, New Jersey: Lawrence Erlbaum.
- Arik, E. (2016). An experimental approach to basic word order in Turkish intransitives. *Psychology of Language and Communication*, 20(1), 73–91.
- Gagarina N., Klop D., Kunnari S., Tantele K., Välimaa T., Balčiūnienė I., Bohacker U., & Walters J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U. & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Grimes BF. (1992) *Ethnologue: Languages of the World*. Dallas, Texas: Summer Institute of Linguistics
- Mayer, M. (1969). *Frog, where are you?* New York: Dial Press. Chicago.

- Maviş, İ. (2010). Characteristics of Aphasia in Turkish. In: S. Topbaş & M. Yavaş, *Communication disorders in Turkish*. Multilingual Matters.
- Maviş, İ., Tunçer, A. M., & Akyıldız, D. (2011). Administering the Baby Birds to bilingual children speaking Turkish-Kurdish (TR/KR) and monolingual children speaking Turkish. Poster session presented at *COST ACTION IS0804, Fifth MC & WGs Meeting*, Malta.
- Maviş, İ., Gagarina N., Tunçer A. M., Ünal Ö., Yeleğen D., Akyıldız D. & Akpınar, D. (2012). Administering the telling (Baby Birds/Baby Goats) & re-telling (Cat/Dog) stories to Turkish-German bilingual children living in Berlin. Paper presented at *COST ACTION IS0804, Sixth MC & WGs Meeting*, Berlin.
- Maviş, İ., Tunçer, A.M. & Gagarina, N. (2016). Macrostructure components in narrations of Turkish-German bilingual children. *Applied Psycholinguistics*, 37(1), 69–89.
- Menn, L. & Obler, L.K. (1990). *Agrammatic Aphasia: Cross-Language Narrative Sourcebook*. Amsterdam/Philadelphia: John Benjamins.
- Schaufeli, A. (1991). *Turkish in an immigrant setting: A comparative study of the first language of monolingual and bilingual Turkish children*. Unpublished PhD dissertation, Amsterdam University, Amsterdam, the Netherlands.
- Thompson A. S & Erdil-Moody Z (2016) Operationalizing multilingualism: language learning motivation in Turkey, *International Journal of Bilingual Education and Bilingualism*, 19(3), 314–331.
- Topbaş, S. & Güven, S. (2011). *Türkçe Erken Dil Gelişim Testi-TEDİL-3*. Ankara: Detay Yayıncılık.
- Topbaş, S. (2007). Turkish Speech Acquisition. In: S. McLeod (Ed.), *The international guide to speech acquisition* (pp. 2–7). Clifton Park, NY: Thomson Delmar Learning.
- Topbaş, S. (2006). A Turkish perspective on communicative disorders. *Logopedics, Phoniatrics and Vocology*, 31(2), 76–88.
- Turkish Ministry of Foreign Affairs. Available at <http://www.disisleri.gov.tr>. Accessed on 24 October, 2003.
- Yagmur, K. (1997). *First Language Attrition among Turkish Speakers in Sydney*. Tilburg, the Netherlands: Tilburg University Press.
- Worldometer (2020). Turkey population (2020) (retrieved from <https://www.worldometers.info/world-population/turkey-population/>).

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

Saboor Hamdani

The Hong Kong Polytechnic University

Angel Chan

The Hong Kong Polytechnic University

Rachel Kan

The Hong Kong Polytechnic University

Natalia Gagarina

Leibniz-Zentrum Allgemeine
Sprachwissenschaft (ZAS)

The Multilingual Assessment Instrument for Narratives (MAIN), an assessment tool in the Language Impairment Testing in Multilingual Settings (LITMUS) battery, aims to improve the assessment of bilingual children. This paper describes the process of adapting MAIN to Urdu. Given the lack of language assessment tools for Urdu-speaking children, the Urdu MAIN is an important new instrument that is made widely and freely accessible to researchers and practitioners, allowing them to examine the narrative abilities of children acquiring Urdu as a first, heritage, second, or additional language.

1 Introduction

Over-identification and under-identification of language impairments are common problems when assessing bilingual children (Bedore & Peña, 2008). For instance, younger bilingual children, compared to older bilingual children, have a higher risk of being under-identified for language impairments, when some practitioners prefer adopting a wait-and-see approach, as they reason that the children are still young and need time to develop bilingual competence. The European Cooperation in Science and Technology (COST) Action IS0804 (2009-2013) *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment* was a large research initiative that aimed to address the problems in assessing the language abilities of bilingual children in Europe, and to improve the differentiation of bilingual children with and without language impairments. Their overarching objective was to improve the assessment of bilingual children with and without language impairments, and to disentangle the effects of bilingualism and Developmental Language Disorder (DLD, earlier Specific Language Impairment). Within this initiative, a number of assessment tools appropriate for

bilingual children have been designed and adapted to different languages, forming the Language Impairment Testing in Multilingual Settings (LITMUS) battery (see Armon-Lotem, de Jong, & Meir, 2015).

One part of the LITMUS-battery is the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012, 2015, 2019). MAIN was designed to evaluate the narrative production and comprehension abilities of bilingual children aged between 3 and 12 years, but it has also been used to study the narrative abilities of adults (Gagarina, Bohnacker & Lindgren, 2019). MAIN assesses narrative production in terms of macro- and microstructures, and the use of internal state terms (ISTs). Its design allows one to assess narrative production in telling (story generation) and/or retelling modes. Narratives are elicited using four stories each of which being featured by a parallel set of pictures and an associated story script that are controlled for macro- and microstructure components. It also measures narrative comprehension, focusing on macrostructure such as goals and ISTs.

MAIN has been adapted to numerous languages and can be used to evaluate the dual languages of bilingual children, allowing one to study bilingual children with and without DLD acquiring different language pairs. Language samples from typically-developing children provide useful data to generate developmental expectations for the target language, and provide important baseline data for identification of children at risk for or suspected of DLD. Therefore, MAIN not only provides clinicians with an assessment tool appropriate for bilinguals, but offers researchers invaluable language data to make cross-linguistic comparisons and test (clinical) linguistic theories.

This paper introduces a new language adaptation of MAIN, the Urdu MAIN. To date, there are no standardized tests to assess the language abilities of Urdu-speaking children. Adapting MAIN to Urdu provides researchers and practitioners with an important new tool to assess the narrative abilities of children acquiring Urdu as a first, heritage, second or additional language.

2 A short description of Urdu

Urdu is an Indo-Aryan language. Globally, the total number of speakers of Urdu is estimated to be 170 million (Eberhard, Simons, & Fennig, 2020). Among these speakers, 70 million has it as their first language and 100 million as their second language, chiefly in Pakistan and India (Zeidan, 2019). Urdu has the status of a national language and an official state language in Pakistan and is used in almost all contexts in this country. It is taught as a major and compulsory subject in all educational institutions in the primary and secondary levels in Pakistan (Eberhard, Simons, & Fennig, 2020). Urdu is closely related to Hindi and the two languages are mutually comprehensible. Both languages have the same Indo-Aryan foundation, but there has been significant lexical borrowing from Arabic and Persian to Urdu.

Urdu has a number of typologically interesting characteristics. For instance, it is an SOV language with postpositions and head-final noun phrases and does not have definite articles. All proper nouns and some common nouns are considered to have inherent definiteness. To express

indefiniteness, a numeral adjective or an indefinite pronoun is used together with the noun. The context also determines whether a noun is definite or indefinite (Platts, 2002). Urdu nouns have grammatical gender, and its verbs are marked for subject gender, person, and number using affixes (Eberhard, Simons, & Fennig, 2020).

3 Adapting MAIN to Urdu

MAIN was adapted to Urdu following the guidelines for adapting MAIN to new languages (Bohnacker & Gagarina, 2019). This includes that, in each story, the number of macrostructure components such as Goal, Attempt, Outcome are the same across language versions. The microstructural aspects of each story script such as total number of words and overall number of internal state terms were also matched as closely as possible to the English version. In addition, the age of acquisition and the use of basic-level terminology were also considered when selecting the vocabulary. Moreover, the use of idioms was avoided. Matching the total number of words between the English and Urdu story scripts was a challenge – compared to English, Urdu usually uses more words to achieve grammaticality in a sentence. This issue was resolved by being very precise in terms of word selection during the whole adaptation procedure, such that grammaticality and clarity of the sentences were achieved following the requirements specified in the guidelines.

The adaption process involved the contribution of different team members, including a native Urdu-speaking speech therapist (Hamdani), who is doing her PhD research using Urdu-MAIN jointly supervised by Kan (a postdoctoral researcher in developmental linguistics), Chan (a developmental psycholinguist with a speech therapist qualification who is a professorial faculty member in a speech therapy program of a university in Hong Kong), and Gagarina (the original and leading author of MAIN). The assessment protocol and the adaptation guidelines were first studied carefully, and the assessment protocol was then translated into Urdu by the first author (Hamdani). There were no significant challenges in the process except matching the total number of words in each story script as mentioned above. The translations were further checked by three native speakers of Urdu, including: (1) a speech and language pathologist; (2) a college student with Urdu and English as her major subjects; and (3) an engineer who has studied Urdu and English for more than 10 years. These speakers commented on the lexical and grammatical appropriateness of the translation, and suggested changes to meet the requirements set out in the guidelines. None of these four native-speakers of Urdu reported any cultural inappropriateness with the MAIN stories and pictures for Urdu-speakers in Pakistan and Hong Kong. The proofread Urdu version was then translated back into English, and this translation was carefully compared with the original English version. When questions arose during the adaptation process, the other team members (Chan, Kan, Gagarina) were consulted and the questions were addressed and resolved in the team. We have used the MAIN stories to assess narrative abilities in Urdu-Cantonese bilingual ethnic minority children in Hong Kong (Chan et al., 2018) and are planning to use Urdu-MAIN to further assess L1 Urdu-speaking children in Pakistan in an ongoing project.

4 Final remarks

The Urdu MAIN consists of two components: (a) this paper that introduces the Urdu adaptation of MAIN, the Urdu language, and key information regarding the adaptation process; and (b) the full assessment protocol of Urdu-MAIN which contains the four story scripts, instructions for administration, and the scoring forms. The Urdu MAIN can be used free-of-charge for non-commercial purposes under a Creative Commons License (BY-NC-ND 3.0) provided that the copyright and licensing rules are respected. Studies that make use of this tool should cite both the assessment protocol and this introductory article as follows.

- 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. Urdu version. Translated and adapted by Hamdani, S., Kan, R., Chan, A. & Gagarina, N.
- Hamdani, S., Kan, R., Chan, A. & Gagarina, N. (2020). The Multilingual Assessment Instrument for Narratives (MAIN): Adding Urdu to MAIN. *ZAS Papers in Linguistics*, 64, 257–261.

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6 References

- Armon-Lotem, S., & de Jong, J. (Eds.) (2015). *Methods for assessing multilingual children: Disentangling bilingualism from language impairment*. Bristol: Multilingual Matters.
- Bedore, L. M., & Peña, E. D. (2008). Assessment of bilingual children for identification of language impairment: Current findings and implications for practice. *International Journal of Bilingual Education and Bilingualism*, 11, 1–29.
- Bohnacker, U., & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63, iv–xii.
- Chan, A., Chui, B., Lo, J., Luk, P. & Gagarina, N. (2018). Narrative abilities of bilingual Urdu-Cantonese ethnic minority children in Hong Kong. Poster presented at the *Child Language Symposium*, Reading, the UK, June 2018.
- Eberhard, D. M., Simons, G. F., & Fennig, C. D. (2020). *Urdu*. Retrieved from Ethnologue: Languages of the World: <https://www.ethnologue.com/language/urd>

- Gagarina, N., Bohnacker, U., & Lindgren, J. (2019). Macrostructural organization of adults' oral narrative texts. *ZAS Papers in Linguistics*, 62, 190–208.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of narrative abilities in bilingual children. In Armon-Lotem, S., de Jong, J., & Meir, N. (Eds.), *Assessing multilingual children: Disentangling bilingualism from language impairment* (pp. 243–276). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives. Revised version. *ZAS Papers in Linguistics*, 63.
- Platts, J. T. (2002). *A Grammar of the Hindustani or Urdu Language*. Lahore, Pakistan: Sang-e-Meel Publications.
- Zeidan, A. (2019). *Urdu Language*. Retrieved from Encyclopædia Britannica: <https://www.britannica.com/topic/Urdu-language> on 5 December 2019.

The adaptation of MAIN to Vietnamese

Tue Trinh

Leibniz-Zentrum Allgemeine
Sprachwissenschaft

Hien Hoang

Hanoi National College for Education

Giang Pham

San Diego State University

Linh Pham

Hanoi National College for Education

Ben Phạm

Hanoi National University of Education

This paper describes the revision of the Vietnamese version of the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN). We first introduce the Vietnamese language and Vietnamese-speaking populations after which we describe the translation and adaptation process of the Vietnamese MAIN and present results from monolingual and bilingual children.

1 Introduction

The Multilingual Assessment Instrument for Narratives (LITMUS-MAIN, hereafter MAIN; Gagarina et al., 2012, 2015), a picture-based narrative instrument, has been translated and adapted to many languages, of which the majority are Indo-European. This paper introduces the revised Vietnamese version, which is based on the revised English version of the MAIN (Gagarina et al., 2019). We first provide an overview of the Vietnamese language and Vietnamese-speaking populations worldwide. We then describe the translation and adaptation process of the Vietnamese MAIN and summarize how this tool has been used with Vietnamese monolingual children as well as bilingual children who speak Vietnamese and English.

2 Overview of the Vietnamese language

Vietnamese (*tiếng Việt*), which is the official language of the Socialist Republic of Vietnam, belongs to the Mon-Khmer branch of the Austroasiatic family. It is spoken as a native language

by Vietnam's largest ethnic group, the Kinh, and is, for this reason, also called *tiếng Kinh* when it needs to be distinguished from the languages of other ethnic groups in the country. Below is a brief description of some aspects of Vietnamese grammar which can be considered to fall, roughly, under the headings of morphology, syntax, semantics and pragmatics, and which may seem particularly distinctive from the perspective of speakers of English and, more generally, of Indo-European languages.

Morphologically, Vietnamese is an isolating language, which means morpheme boundaries and syllable boundaries generally coincide. These boundaries are indicated in writing by empty spaces, which in English are used to mark word boundaries. The result is that Vietnamese texts often look like they contain more words than their English counterparts. To illustrate, the English title *Multilingual Assessment Instrument for Narratives*, comes out as *Công cụ Đánh giá Khả năng Trường thuật Đa Ngôn ngữ* in Vietnamese. The isolating nature of Vietnamese also means that there is no inflection in the language: grammatical categories such as nominal case or verbal tense are not overtly expressed by affixes or changes in word form. Thus, *tôi thích nó* means 'I like him' or 'I liked him', and *nó thích tôi* means 'he likes me' or 'he liked me'.

Syntactically, Vietnamese is marked by its consistent left-headedness. Thus, verbs precede their complements and nouns precede their modifiers. To give an example, the sentence *tôi thích sách cũ* means 'I like old books', where *cũ* means 'old'. Vietnamese is also characterized syntactically by being a so-called *in situ* language, which means question words such as *ai* 'who' and *gì* 'what' are not fronted but are instead pronounced in their thematic positions: *nó thích ai* means 'who does he like', for example.

Semantically, Vietnamese exemplifies a classifier language, which means its bare nouns have number neutral interpretation: *tôi có chó* (literally 'I have dog') is true when the speaker has one single dog, or when he has several dogs. In this respect, *chó* 'dog' is similar to such English words as *furniture*. A consequence of this semantics is that *chó* cannot combine directly with a numeral, but requires the mediation of a classifier: **tôi có một chó* (literally 'I have one dog') is as ungrammatical as **I have one furniture*, while *tôi có một con chó* (literally 'I have one CL dog') where *con* is the classifier (CL) for animals, is as grammatical as *I have one piece of furniture*. This property of the noun *chó* generalizes to most other common nouns in the language.

Vietnamese is rich in resources which serve to encode such facets of meaning as can be called 'pragmatic,' i.e., those that relate to the language users and the context of communication. This is most clearly exemplified by the pronoun system, which is intricate and capable of expressing minute distinctions pertaining to the relative social positions of speaker and hearer, as well as their feelings and attitudes towards each other. As an example, in normal situations, a man refers to himself as *anh* when he speaks to his wife and as *bố* when he speaks to his child. In an angry argument with his wife, he may change self-reference from *anh* to *tôi*, or he may switch from *bố* to *tao* when yelling at his child. Discourse particles exemplify another class of items which are used to express pragmatic meanings. For example, the particle *ạ*, is appended to everything a well-behaved child says to an adult. The particles *ừ* and *vâng*, both of which express a meaning similar to that of English *yes*, differ in that *ừ* may be used in speaking

to people of equal social rank, but when the hearer is to be shown respect and deference, *vâng* is obligatory.

3 Vietnamese-speaking populations

Vietnamese is the 18th most commonly spoken language in the world (Simons & Fennig, 2017). As the official language of Vietnam, it is spoken by most of the population accounting for over 95 million people from all 54 ethnic groups in the country. Approximately 86% of the population in Vietnam from the *Kinh* or *Viet* ethnic group speaks Vietnamese as the first language, and individuals from the remaining 53 ethnic minority groups speak Vietnamese as a second language in addition to their indigenous language (Trần, 2016).

Vietnamese is also spoken as a (minority) home language in many countries of the world. The Vietnam Ministry of Foreign Affairs (2012) estimates that the Vietnamese diaspora consists of about four million people. Over 1.5 million people of Vietnamese origin live in the US which makes Vietnamese the fifth most common home language in the country, after English, Spanish, Chinese, and Tagalog (U.S. Census, 2013). In Canada, Vietnamese is one of the top 25 languages spoken (Statistics Canada, 2012). In Australia, Vietnamese is the fourth most commonly spoken home language with 1.2% of the population (Australia Bureau of Statistics, 2017). Vietnamese is also recognized as a minority language in many European countries including Germany, France, the Czech Republic, Slovakia, Slovenia, and UK. For example, there are about 165,000 people with a Vietnamese migrant background living in Germany who are either Vietnamese nationals or German nationals with Vietnamese roots (Schaland & Schmitz, 2015). In the Czech Republic, Vietnamese people are the third largest foreigner group (Czech Statistics Office 2018). In sum, there is a large number of Vietnamese speakers around the world, and many are likely to be bilingual or multilingual.

4 Adapting MAIN to Vietnamese

The first Vietnamese version of the MAIN, which was published in 2012, is a direct translation from the English version (Gagarina et al., 2012). The translator was Tue Trinh, a linguist and Vietnamese native speaker who worked at the Zentrum Allgemeine Sprachwissenschaft (ZAS), Berlin, Germany at the time.

The 2020 revision of the Vietnamese MAIN was a collaboration between Vietnamese colleagues in Vietnam, Germany, and the United States. When embarking on translation, it is important to consider linguistic equivalence as well as cultural equivalence (Peña, 2007). Linguistic equivalence is when the words and meaning in both versions are the same. One way to ensure linguistic equivalence is through expert consultation (Peña, 2007). To this end, the authors of this paper include individuals with high proficiency in Vietnamese and who have an educational background in linguistics, speech-language pathology, or education. Authors

conducted independent reviews of the English and Vietnamese language versions to ensure that the Vietnamese translation was faithful to the English version from which it was adapted.

One challenge to achieving linguistic equivalence was in the use of specific terminology in Vietnamese. Many technical terms in English do not readily have standardized terms in Vietnamese. Careful attention was made to select terms in Vietnamese that reflected the original meaning of the English words. However, there are terms that will inevitably be unfamiliar to many Vietnamese speakers. We as authors of the Vietnamese version of the MAIN debated the use of certain terms (e.g., translations for protocol, picture sequence, story episode), and there were disagreements among group members. As the fields of language acquisition and disorders continue to develop for Vietnamese-speaking children, we will further discuss and refine the use of field-specific terminology in Vietnamese.

Beyond linguistic equivalence alone, cultural equivalence depends on the way members of different cultural and linguistic groups view or interpret question prompts and/or test items (Peña, 2007). Of key concern in the adaptation process was to verify that the Vietnamese MAIN would be accessible to different regional dialects of Vietnam as well as to Vietnamese-speaking communities outside of Vietnam. In order to do so, we had to consider dialectal variation and linguistic differences between the current language use in Vietnam and that of the Vietnamese diaspora. To illustrate, *picture* as in the picture sequences used in the MAIN is commonly translated as *tranh* in the northern region of Vietnam. However, *tranh* in Vietnamese-speaking communities outside of Vietnam means *painting* as in a large wall painting. Instead, *hình* is much more frequently used worldwide, which was the reason for its selection. This is just one example of how word selection for common terms used throughout the manual needed to be met with much consideration.

In cases where an object within a MAIN story had two labels depending on regional dialect, we presented both words for the examiner to choose. For example, *balloon* is *bóng bay* in the northern region of Vietnam and *bong bóng* in the southern region of Vietnam and in many communities outside of Vietnam. Another example is the word for *ball*, which is *quả bóng* in the northern region and *trái banh* in the southern region. In such cases, we included both labels so that the MAIN story models can be accessible to children across dialects.

5 The use of MAIN with Vietnamese monolingual and bilingual children

We have used the Vietnamese MAIN in our research projects with monolingual and bilingual children. In a study of monolingual Vietnamese children, G. Pham and colleagues (2019) administered the MAIN Cat and Dog stories as story retells to 104 children in kindergarten (aged 5;0 to 5;11) living in Hanoi, Vietnam. Children were classified into three groups: 45 children were considered to have typical language development, 49 children were at some risk of having developmental language disorder (DLD), and 10 children were classified as having DLD. We found that the story structure score of the MAIN was closely related to other language measures including tests of expressive vocabulary ($r = .43, p < .01$) and receptive vocabulary ($r = .52, p < .01$). Story structure scores also correlated with parental report measures of

children's language skills ($r = .26, p < .01$) and teachers ($r = .36, p < .01$). Importantly, MAIN story structure scores distinguished between typically developing children and children with DLD, with a very large effect size ($d = 2.89$). Thus, the MAIN stories and story structure scores show great potential for contributing to the accurate identification of DLD in Vietnamese-speaking children (for details, see G. Pham et al., 2019).

In a study of Vietnamese-English bilingual children, Dam and colleagues (in press) utilized data collected with MAIN to analyze the grammatical patterns of 89 children, aged 3 to 8 years. Children completed MAIN tasks in both Vietnamese and English. Following procedures outlined in the MAIN manual, MAIN Dog and Cat story retells were counterbalanced between languages (e.g., MAIN Cat in Vietnamese, MAIN Dog in English for one child and MAIN Cat in English and MAIN Dog in Vietnamese for another). Stories were audio recorded, transcribed using SALT software (Miller & Iglesias, 2012) and scored for grammaticality and sentence complexity. Grammaticality was calculated as the number of grammatically correct utterances divided by the total number of utterances. The subordination index (SI) was calculated as the number of clauses divided by the total number of utterances. Dam and colleagues (in press) found a positive correlation between age and grammaticality in English, but not in Vietnamese. The lack of a correlation between Vietnamese and age suggested that older children had similar grammaticality scores as younger children, a possible indication of first language stagnation in this typically developing bilingual sample. However, SI in Vietnamese did correlate with age ($r = .38, p < .001$), albeit to a lesser extent than the association between age and English SI ($r = .65, p < .001$). This result indicates that bilingual children may be producing more complex sentence structures with age in both languages (for details, see Dam et al., in press).

6 Conclusion

This latest version of the Vietnamese MAIN has been carefully translated by a group of international experts to be faithful to the English original, use terms in Vietnamese that can be understood in Vietnam as well as by Vietnamese speakers worldwide. The MAIN has been shown to be a useful tool to assess various language skills in Vietnamese monolingual and bilingual children. Future studies can include a wider age range and the use of all four stories of the MAIN. Additionally, in order to increase its effectiveness as a diagnostic tool, a next step is to calculate diagnostic accuracy measures of sensitivity, specificity, and positive and negative likelihood ratios (Dollaghan, 2007) to verify whether the MAIN can identify DLD at the individual child level.

7 References

Australian Bureau of Statistics. (2017). *Census reveals a fast changing, culturally diverse nation*. <http://www.abs.gov.au/ausstats/abs@.nsf/lookup/Media%20Release3>.

- Czech Statistics Office. (2018). *Foreigners by type of residence, sex, and citizenship*. <https://www.czso.cz/csu/cizinci/number-of-foreigners-data#rok>
- Dam, Q.D., Pham, G., Potapova, I., & Pruitt-Lord, S. (in press). Grammatical characteristics of Vietnamese and English in developing bilingual children. *American Journal of Speech-Language Pathology*.
- Dollaghan, C. A. (2007). *The handbook for evidence-based practice in communication disorders*. Paul H Brookes Publishing.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., & Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of narrative abilities in bilingual children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children: Disentangling bilingualism from language impairment* (pp. 243–276). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Peña, E. D. (2007). Lost in translation: Methodological considerations in cross-cultural research. *Child development*, 78, 1255-1264.
- Pham, G., Pruitt-Lord, S., Snow, C.E., Nguyen, H.T.Y., Pham, B., Dao, T.B.T., Tran, N.B.T., Pham, L.T., Hoang, H.T., & Dam, Q.D. (2019). Identifying developmental language disorder in Vietnamese children. *Journal of Speech, Language, and Hearing Research*, 62, 1452-1467.
- Schaland, A-J. & Schmiz, A. (2015). *The Vietnamese diaspora in Germany*. Migration background, structure, organisations and transnational activities. <https://www.cimonline.de/static/media/giz2016-en-vietnam-diaspora.pdf>
- Simons, G. F., & Fennig, C. D. (2017). *Ethnologue: Languages of the world* (20th ed.). SIL International.
- Statistics Canada. (2012). *Linguistic characteristics of Canadians: Language, 2011 census of population*. <http://www12.statcan.gc.ca/census-recensement/2011/as-sa/98-314-x/98-314-x2011001-eng.cfm>.
- Trần, D. T. (2016). *Ngôn ngữ các dân tộc thiểu số ở Việt Nam [Language of ethnic minorities in Vietnam]*. Nhà xuất bản Đại học Quốc gia Hà Nội [Hanoi National University Publishing House].
- U.S. Census Bureau. (2013). Infographics & Visualizations: Top Languages Other than English Spoken in 1980 and Changes in Relative Rank, 1990-2010. <https://www.census.gov/dataviz/visualizations/045/>
- Vietnam Ministry of Foreign Affairs. (2012). *Review of Vietnamese migration abroad*. http://www.un.org.vn/en/publications/doc_details/387-review-of-vietnamese-migration-abroad.html.

Storytelling using MAIN in Yakut

Yulia Androsova

Research Institute of National Schools of the Republic of Sakha, Russia

Aleksandra Trifonova

Universität Potsdam

This paper describes the process of adapting the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN) to Yakut. A brief description of the Yakut language and its status in Russia is given after which the use of the Yakut version of MAIN in the Republic of Sakha (Russia) is described.

1 Introduction and the context in which Yakut is spoken

The system of preschool and general education in the Sakha Republic includes the following forms of bilingual education: 1) the native language Yakut as the language of instruction in primary schools with subsequent transition to Russian; 2) Russian as the language of instruction and Yakut as a school subject (Androsova, 2019). However, internal migration has led to a massive resettlement of members of the rural population to the bigger cities, where education institutions do not have the appropriate level of expertise in educating children in Yakut (Androsova, 2019).

The Republic of Sakha, also called Yakutia (yakut. *Саха Өрөспүүбүлүкэтэ, Саха Сирэ*), is one of the 85 multi-ethnic federal states of Russia. Yakutia occupies over 3 million km² and has a population of one million people (The Federal Agency for Tourism of the Russian Federation). Yakut is spoken by 450,140 people in Russia, 441,536 of whom live in the Sakha Republic (Ferguson, 2016). According to the All-Russian Population Census (2010), over 130 ethnic groups live in Yakutia.

Yakutia has two official languages, Russian and Sakha, as well as five minority languages: Even, Evenki, Yukaghir, Chukchi and Dolgan. The Sakha language has a standardized written language and is broadly used in culture, education, mass media, in the work of state organizations, and public organizations in the republic (Androsova, 2019). The majority of the Yakuts, with the exception of the elderly who live in monolingual rural areas,

are bilingual speakers of their native language Yakut and Russian: 89% of the population in Yakutia are reported to be bilingual (Androsova, 2019; Ferguson, 2016). Moreover, linguistic and cultural diversity in Yakutia is protected by federal and regional laws, mainly by the state program “Preservation, study and development of state and official languages in the Republic of Sakha (Yakutia)” (The Government of the Republic of Sakha, 2019).

Nowadays, due to globalization processes, the language environment has changed even in monolingual communities in Yakutia. A recent research project, carried out by the Research Institute of National Schools of the Republic of Sakha (Yakutia), revealed a general decline in native language proficiency of Yakut children aged 5–9, and a prevalence of the use of Russian in informal communication and play activities (Androsova, 2016). The knowledge of the native language Yakut is decreasing in the population more generally, the number of children with speech problems is increasing, a mixed Yakut-Russian speech variety is becoming the norm even in adults, and the number of preschool age children who do not know their native language is also increasing (Androsova, 2018). In 1998, every fourth child from a Yakut family living in a city did not speak his/her native language (Robbek, 1998). However, families, in which neither the parents nor the grandparents can pass on their native language to their children and grandchildren, choose for their children to attend nurseries which have Yakut as the medium of education in the hope that their children will learn their native language there (Androsova, 2019).

2 A brief overview of the Yakut language

The Yakut language (*саха тыла*), which is also known as Sakha, is a member of the Northern group of the Siberian-Turkic branch of the Turkic languages (Ivanova et al., 2019). A brief description of the Yakut grammar is presented below.

In terms of *phonology*, as is typical in Turkic languages, vowel harmony is attested in Yakut. This means that, first, front and back vowels never appear within one word, and second, that vowels in the following syllables have to harmonize with those in the antecedent syllables (Ebata, 2012). Further, palato-velar and labial vowel harmony are differentiated (Ivanova et al., 2019).

Morphologically, Yakut is an agglutinative language (Ebata, 2014). In terms of word formation, Yakut makes an extensive use of suffixation (Ebata, 2012). Case agreement is characterized as dependent-marking, meaning that case is expressed by the attachment of case suffixes to NPs. However, while possessive suffixes are attached to the possessed NPs, the possessor NPs do not receive any morphological marking (Head-marking) (Ebata, 2012). In addition, Yakut has an exceptionally high number of verbal tenses. The main tenses are proximal-past, remote-past, past perfect, episodic past, past imperfect, pluperfect, episodic pluperfect (Ivanova et al., 2019).

With respect to *syntax*, Yakut has a basic SOV word order (Ebata, 2014). However, the word order is not strict and can be alternated or inverted leading to a shift in the meaning of the sentence. The basic word order pattern also receives support from the morphology, although

not all sentence components may display overt morphological features; in this case, the word order plays a crucial role in understanding a sentence (Čeremisina, 1995). When it comes to syntactic derivation, which is quite prominent in Yakut, this process is reported to have a cross-linguistically unique feature: the base verb valency is retained after the nominalization process, leading to a “mismatch” between syntax and morphology (Ebata, 2012; Ebata, 2020). In contrast to English, there are instances of Yakut deverbal derivation where the base preserves its verbal property, namely, government. For example, in *kinige-niaak-aaččī*, ‘book reader’ (lit. ‘read a booker’), after the derivational process has taken place, the verb stem is still able to assign the accusative case to the noun (Ebata, 2020, p. 8). Furthermore, various sources of syntactic derivation have been reported for Yakut: noun phrases containing modification, wh-questions, total negation, which constitute a counter-argument for the lexical integrity hypothesis (Ebata, 2020 for discussion). Another unique property of Yakut is the double-accusative causatives, which are virtually impossible in other Turkic languages (Ebata, 2013). In addition, impersonal passives derived from transitive and intransitive clauses are found in Yakut (Ebata, 2013).

3 Adapting MAIN to Yakut

The problem of teasing apart developmental language disorders and the specifics of bilingual language acquisition has been addressed extensively in previous research (Gillam et al., 2013; Grimm & Schulz, 2014; Paradis, 2010). The need for appropriate linguistic assessment tools for minority languages has also been pointed out (Fleckstein et al., 2018). One tool that addresses this problem is the *Multilingual Assessment Instrument for Narratives* (MAIN; Gagarina et al., 2012, 2015, 2019), which belongs to the language test battery *Language Impairment Testing in Multilingual Settings* (LITMUS) (Armon-Lotem et al., 2015). The MAIN is a tool which allows for the narrative skills assessment in children acquiring one or more languages. It includes four parallel testing stories accompanied by a picture-sequence that can be used in three elicitation modes, telling, retelling, model story (Gagarina et al., 2012). In what follows, the process of adapting MAIN to Yakut is described.

As has been previously pointed out in Peña (2007), not only linguistic equivalence should be ensured in the process of translation of assessment instruments and their instructions, but also the functional equivalence, cultural equivalence and metric equivalence. These recommendations have been taken into consideration and implemented during the process of adapting MAIN to Yakut. The guidelines for adapting MAIN to new languages (Bohnacker & Gagarina, 2019) were followed closely. At the first stage of the adaptation process, the materials were translated to Yakut by the first author, Yulia Androsova, a researcher at the Research Institute of National Schools (Yakutsk, Russia). After the translation process was completed, a pilot testing (see Section 4) was conducted in collaboration with Ainara Sokolnikova, a child psychologist. A number of modifications to the translation of two stories were undertaken after the pilot testing. Finally, the Yakut MAIN was checked by linguists from the Research Institute

of National Schools to ensure that it was in accordance with the revised English MAIN (Gagarina et al., 2019).

During the translation process, some difficulties occurred with respect to finding the appropriate equivalents of some adjectives, such as ‘playful’ and ‘cheerful’. This was due to the fact that these words are expressed with rather complicated constructions in Yakut, which might be challenging for young children to understand. Therefore, the adjective ‘playful’ was translated as *мэник-мэнигыйээн* (*menik-menigijeen* ‘frolicsome’), which generally conveys the same meaning as ‘playful’. The adjective ‘cheerful’ was translated as *yerbyt-keppyt*, ‘joyful’). The rest of the linguistic structures did not cause much difficulty for translation.

All stories were translated at the level most accessible for children, i.e. without using complex constructions that might be unknown to or infrequently used by children. The content of all stories and their characters were found to be suitable for the culture and daily life of Yakut children. The pilot study (see Section 4) showed that children did not have any difficulty in understanding the stories.

4 Piloting the Yakut MAIN

Thirty typically developing bilingual Yakut-Russian children aged 6–8 (20 boys and 10 girls) participated in the pilot testing of the Yakut version of MAIN. The analysis of the performance in Yakut and Russian revealed that while most of the stories in Yakut were very short and scanty, the children’s performance on the Russian tasks turned out to be much better. The Yakut narratives usually began immediately with a goal and an attempt, without any spatial or temporal specification. Furthermore, only a limited number of internal state words was used in the Yakut narratives. In contrast, the Russian narratives were much more detailed and richer in terms of vocabulary use. Many children used internal state words in Russian that they did not use in their Yakut narratives. Also, all children showed good results with regard to narrative comprehension in Russian. In addition, the following information about the language use of the children in the study was obtained with the help of a parental questionnaire:

- 90.3% of the children attended kindergartens which had Yakut as the language of instruction.
- 45% of parents reported that they exclusively used Yakut in communication with their child; the remaining 55% used both Russian and Yakut.
- 43% of parents indicated that, in most cases, the speech of their child would include a mixture of Russian and Yakut.
- For the majority of children (65%), the onset of regular contact with the second language Russian began before age 3; 25% came into regular contact with Russian only before age 5, whereas 10% were exposed to Russian already before age 1.
- 48% of parents reported that their child had a “quite good” or “excellent” knowledge of both Yakut and Russian.

- 52% of parents reported that their child had a preference for using Russian.

5 Conclusion

MAIN has been adapted to Yakut and piloted by a group of Russian researchers in the Republic of Sakha (Yakutia). The adaptation process was based on the revised English version of MAIN (Gagarina et al., 2019) and was carried out in accordance with the procedure for adapting MAIN to new languages (Bohnacker & Gagarina, 2019). The MAIN is proving to be a useful diagnostic tool for the Yakut language. The researchers at the Research Institute of National Schools of the Republic of Sakha (Russia) are planning to receive an official approval for the use of MAIN and apply it in their research on bilingual child language acquisition. In addition, MAIN is planned to be used for individual work with bilingual children and their parents at education centers for preschool and junior school children in the Republic of Sakha (Russia).

6 References

- All-Russian Population Census (2010). <https://www.gks.ru/>. Accessed on 17 June 2020.
- Androsova, Y. (2016). Модель психолого-педагогического сопровождения билингвального образовательного процесса. [A model of psychological and pedagogical support of the bilingual educational process]. *Nauchnoe mnenie*, 16, 126–130.
- Androsova, Y. (2018). Игровые предпочтения детей дошкольного возраста в билингвальной среде. [Game preferences of pre-school children in a bilingual environment]. *Modern Studies of Social Issues*, 9(12), 6–18.
- Androsova, Y. (2019). Модель развития национально-русского двуязычия у детей через игровую деятельность. [The development model of national-Russian bilingualism in children through play activities]. *World of Science. Pedagogy and psychology*, 6(7).
- Armon-Lotem, S., de Jong, J. & Meir, N. (Eds.) (2015). *Assessing multilingual children: Disentangling bilingualism from language impairment*. Bristol, UK: Multilingual Matters.
- Bohnacker, U. & Gagarina, N. (2019). Background on MAIN – Revised, how to use it and adapt it to other languages. *ZAS Papers in Linguistics*, 63, iv–xii.
- Čeremisina, M. I. et al. (Ed.). (1995). *Грамматика современного якутского литературного языка. Синтаксис*. [Grammar of the modern standard Yakut. Syntax]. Moscow: Nauka.
- Ebata, F. (2012). Valency retention in Sakha derivational nominalization. *Asian and African Languages and Linguistics*, 13, 53–66.
- Ebata, F. (2013). Causative and passive in Sakha: focusing on double-accusative causative and impersonal passive. *Tomsk Journal of Linguistics and Anthropology*, 2(2), 16–28.
- Ebata, F. (2014). The Sakha proprietive suffix -leex. *Tomsk Journal of Linguistics and Anthropology*, 1(3), 23–34.
- Ebata, F. (2020). Agglutinateness, Polysynthesis, and Syntactic Derivation in Northeastern Eurasian Languages. *Northern Language Studies*, 10, 1–16.

- Ferguson, J. (2016). Language Has a Spirit: Sakha (Yakut) Language Ideologies and Aesthetics of Sustenance. *Arctic Anthropology*, 53(1), 95–111.
- Fleckstein, A., Prévost, P., Tuller, L., Sizaret, E. & Zebib, R. (2018) How to identify SLI in bilingual children: A study on sentence repetition in French. *Language Acquisition*, 25(1), 85–101.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual Assessment Instrument for Narratives. *ZAS Papers in Linguistics*, 56.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Assessing multilingual children disentangling bilingualism from language impairment* (pp. 243–269). Bristol: Multilingual Matters.
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Bohnacker, U., & Walters, J. (2019). MAIN: Multilingual Assessment Instrument for Narratives – Revised. *ZAS Papers in Linguistics*, 63.
- Gillam, R. B., Peña, E. D., Bedore, L. M., Bohman, T. M., & Mendez-Perez, A. (2013). Identification of specific language impairment in bilingual children: I. Assessment in English. *Journal of speech, language, and hearing research*, 56(6), 1813–1823.
- Grimm, A., & Schulz, P. (2014). Specific Language Impairment and Early Second Language Acquisition: The Risk of Over- and Underdiagnosis. *Child Indicators Research*, 7, 821–841.
- Ivanova, S., Katinskaia, A., & Yangarber, R. (2019). Tools for supporting language learning for Sakha. In M. Hartmann, & B. Plank (Eds.), *The Proceedings of the 22nd Nordic Conference on Computational Linguistics (NoDaLiDa)* (pp. 155–163).
- Paradis, J. 2010. Bilingual children’s acquisition of English verb morphology: Effects of language exposure, structure complexity, and task type. *Language Learning*, 60, 651–680.
- Peña, E. D. (2007). Lost in translation: Methodological considerations in cross-cultural research. *Child development*, 78, 1255–1264.
- Robbek, V. (1998). Language Situation the Sakha Republic (Yakutia). *Bicultural Education in the North: Ways of Preserving and Enhancing Indigenous Peoples’ Languages and Traditional Knowledge*. 113–122.
- The Federal Agency for Tourism of the Russian Federation. (2020). www.russiatourism.ru. Accessed on 17 June 2020.
- The Government of the Republic of Sakha. (2019). Указ Главы Республики Саха (Якутия) от 21 февраля 2019 г. №383 "Об утверждении Концепции сохранения, изучения и развития государственных и официальных языков Республики Саха (Якутия). [Decree of the Head of the Republic of Sakha (Yakutia) dated February 21, 2019 No. 383 “On approval of the Concept for the preservation, study and development of state and official languages of the Republic of Sakha (Yakutia)”. www.sakha.gov.ru. Accessed: on 19 June 2020.

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