Child Language Impairment in Multilingual Contexts

COST Action IS0804 Final Conference

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Contents

Introduction 5

Oral Presentations 8

Keynote Lectures ................................................................. 8
  Treating Bilingual Children with Primary or Specific Language Impairment: Evidence and Options ........................................... 8
  Validating Non-Traditional Measures with Traditional Tools:
    From the DELV (Diagnostic Evaluation of Language Variation) to Multilingual Settings ................................................. 9

Working Group 1 ................................................................. 10
  WG1: Developing tasks on the interface between syntax, morphology and semantics to assess bilingual children with SLI ............ 10
  WG1: Sentence Repetition in bilingual Russian-Hebrew speaking children with and without SLI ........................................... 11
  WG1: Differences between typically developing children and children with SLI in a bilingual context .................................. 11

Working Group 2 ................................................................. 12
  WG2: Multilingual Assessment Instrument for Narratives (MAIN) .... 12

Working Group 3 ................................................................. 14
  WG3: Nonword repetition tests for assessing bilingual children ........ 14
  WG3: Parent report of early lexical production in bilingual children across varied contexts .................................................. 15
WG3: Cross-linguistic Lexical Tasks (CLT) assessing word knowledge and lexical processing in bilingual children ........................................... 15

Working Group 4 ............................................................................. 17

WG4: The role of Executive Functions in Multilingualism and Language Impairment ................................................................. 17

Assessment and diagnosis .................................................................. 18

Sentence Repetition – A comprehensive tool for assessing both languages of a bilingual child ......................................................... 18

Parental Questionnaires .................................................................... 18

Assessment of L2 children in the Lebanese multilingual context: Using Parental Bilingual Questionnaire (PABIQ) scores as diagnostic predictors for language impairment ........................................... 19

The bilingual parents questionnaire (BIPAQ) in a clinical setting ......... 20

Cross-linguistic and bilingual research on SLI: the importance of equivalent diagnostic methods ......................................................... 21

Posters ............................................................................................... 22

Poster Session I, Monday 27th May .................................................. 22

Syntax and morphology ..................................................................... 22

Narrative, discourse, oral production .................................................. 33

Cognitive development ..................................................................... 43

Poster Session II, Tuesday 28th May .................................................. 55

Lexicon ............................................................................................... 55

Phonology .......................................................................................... 70

Other studies ..................................................................................... 79

Poster List .......................................................................................... 85
Introduction

The demographic changes in the western world in the last two decades have led to rapid growth in the number of bilingual children, and in many locations they represent a majority of the school population. With this increase in the number of bilingual children, researchers as well as educators and practitioners face a diagnostic dilemma which arises from similarities in the linguistic manifestations of child second language acquisition and of Specific Language Impairment.

COST Action IS0804 Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment started its networking under the auspice of COST in July 2009 bringing together in one research network researchers from 28 European countries together with researchers from the USA, Canada, South Africa, and the Middle and Far East. The Action addressed the relatively new and ignored problem of identifying children with BISLI, which was an understudied and vulnerable population in Europe. The Action took a bilingual approach which drew from previous work on bilingualism and SLI.

This new approach promoted:

a. testing in both languages in tandem with tools that are sensitive to the nature of bilingual acquisition
b. testing which addresses several levels of linguistic and non-linguistic representation, also tapping into processing and memory skills which go beyond language use
c. testing which takes into consideration sociolinguistic factors beyond language and parental background.

LITMUS (Language Impairment Testing in Multilingual Setting) is the outcome of four years of international networking and collaboration. While testing is still on-going to validate this testing battery, the conference presents the tools and the findings already available in experimental and clinical settings. The work carried within COST Action IS0804 using LITMUS shows three general traits which reiterate Paradis’ (2010) conclusions:

1. Bilingualism and SLI are not the same and can be disentangled
2. Bilingualism and SLI do not show cumulative effect
3. Bilingualism might even offer a partial compensatory mechanism

Findings along these lines will be presented for syntax and its interfaces with morphology and semantics, for storytelling and retelling, for lexical and phonological knowledge and for executive functions.

Sharon Armon-Lotem, MC Chair
**INTRODUCTION**

**Scientific Committee**
Sharon Armon-Lotem, MC Chair  
Bar Ilan University, Israel
Jan de Jong, MC Vice-Chair  
Universiteit van Amsterdam, the Netherlands

Management Committee of COST Action IS0804 (http://www.bi-sli.org)

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Jagiellonian University, Poland
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University of Warsaw, Poland
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Jagiellonian University, Poland

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University of Warsaw, Poland

**Conference Webmaster**
Magdalena Łuniewska  
University of Warsaw, Poland

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Sharon Armon-Lotem  
Bar Ilan University, Israel

**MC Vice Chair**
Jan de Jong  
University of Amsterdam, the Netherlands

**Action Secretary**
Natalia Meir  
Bar Ilan University, Israel

**WORKING GROUP 1 "Syntax and interfaces with Morphology and Semantics"**

**Leaders**
Theo Marinis  
University of Reading, UK
Petra Schultz  
Goethe University, Frankfurt am Main

**WORKING GROUP 2 "Narrative and Discourse"**

**Leaders**
Natalia Gagarina  
ZAS, Berlin, Germany
Joel Walters  
Bar Ilan University, Israel

**WORKING GROUP 3 "Lexical and Phonological Processing"**

**Leaders**
Shula Chiat  
City University London, UK
Ewa Haman  
University of Warsaw, Poland

**GROUP LEADERS 4 "Executive Functions"**

**Leaders**
Anne Baker  
University of Amsterdam, the Netherlands
Kristine Jensen de Lopez  
Aalborg University, Denmark

**Parental Questionnaires Leader**
Laurie Tuller  
University of Tours, France

**Assessment Committee Leader**
Thordardottir, Elin  
McGill University, Montreal, Canada
ReykjavikurAkademian, Iceland
Oral Presentations

Keynote Lectures

Treating Bilingual Children with Primary or Specific Language Impairment: Evidence and Options

Kohnert, Kathryn
Professor Emeritus, University of Minnesota, USA

The focus of this talk is on the potential generalization of positive effects from treated to untreated areas in bilingual children with primary or specific language impairment (PLI). PLI is a high-incidence developmental disorder characterized by poor language abilities not attributable to frank neurological, sensory, intellectual or motor impairments or to environmental factors. PLI is chronic, although the most observable symptoms may shift with severity of impairment, characteristics of the ambient language(s) to be learned, and the individual’s developmental stage. Bilingual children with PLI demonstrate impairment in both of their languages, as compared to chronological age peers with similar language-learning experiences. For children with PLI, timely, effective treatment is viewed as essential for improving language and, by extension, academic and social outcomes. The professional mandate for clinicians who work with bilingual children with PLI is to facilitate both/all languages needed for participation in meaningful life activities. This is particularly challenging when the clinician does not speak both of the child’s languages. In this talk I consider evidence from three recent treatment studies with bilingual children. These studies exploit technological, theoretical and empirical advances to ask: Is it possible to support both languages needed by bilingual children with PLI, even when there is a mismatch between client and clinician languages? Theoretical frameworks, diverse service delivery models and empirical evidence will be combined into multi-pronged intervention recommendations.
Validating Non-Traditional Measures with Traditional Tools: From the DELV (Diagnostic Evaluation of Language Variation) to Multilingual Settings

Pearson, Barbara Zurer  University of Massachusetts, USA

The discussion of markers of language impairment across different languages highlights the analysis of vulnerabilities in language development as universal or language-specific. COST Action IS0804 Language Impairment in a Multilingual Society is uncovering fascinating interplays between the two areas of investigation. Likewise, identification of LI within dialects of the same language is served by a similar analytical framework. When candidate markers of LI derive from the very domains where dialects are seen to differ, diagnostic processes must focus on commonalities across language varieties. The DELV Project (Seymour, Roep, & de Villiers, 1994-2005) was among the first to translate this intuition into a standardized diagnostic process that took dialect differences into account, but based its actual diagnoses on universal features of language. As such, the DELV was a precursor to this Action, and its predecessor, COST Action A33 Crosslinguistically Robust Stages of Children’s Linguistic Performance under Uli Sauerland.

Looking forward from the shared missions to the tests that are the outcomes of the projects, I want to pose a question that is still ahead for this Action: How does one validate the innovative assessments in the various languages treated? How will we know that the new, non-traditional tests work to identify both typical development and language impairment? And how will we convince others? Concurrent validation and standard tests of diagnostic accuracy rely on known, agreed-upon gold (or reference) standards against which to compare outcomes. What does one do if the available gold standards are the very tests which the new tests were created to improve upon? How are discrepancies between traditional gold standards and non-traditional tests to be resolved? This talk shares solutions to this thorny problem adopted by the DELV researchers and lays open the question for the audience to consider for their own projects.
Working Group 1

WG1: Developing tasks on the interface between syntax, morphology and semantics to assess bilingual children with SLI

Marinis, Theo
University of Reading, UK

Working Group 1 developed a series of tasks to investigate the acquisition of syntax in relation to morphology and semantics in bilingual children with SLI. The tasks aim at assessing the children’s language competence in the domains of subject-verb agreement, case, clitics, relative clauses, and exhaustivity in wh-questions. In addition, online tasks were developed using grammatical violation and picture-sentence matching paradigms. This presentation will introduce the tasks developed by the working group and will discuss cross-linguistic differences that are crucial for task development and the assessment of bilingual children with SLI.

Sentence repetition as a feasible assessment tool for identifying children with SLI in the Lebanese and French bilingual contexts

Abboud, Layal
Université François Rabelais- Tours, France

Tuller, Laurie
Université François Rabelais- Tours, France

Henry, Guillemette
Université Saint-Joseph, Beirut, Lebanon

Saad, Selma
Université Saint-Joseph, Beirut, Lebanon

Diagnosing specific language impaired (SLI) children in a bilingual (BI) context is fraught with difficulties for clinicians. Previous research has shown that sentence repetition (SRep) is a particularly efficient way of detecting SLI, and some studies have shown that it may also be useful to distinguish between BI-SLI and BI-typically developing (TD) children from the same bilingual context. Building upon that, this paper studies the feasibility of using SRep in two different bilingual contexts, specifically French-Arabic BI children in the Lebanese and the French contexts. Due to reasons such as sociological and cultural differences, bilingualism in these two countries is quite different. While the Arabic and French languages are given equal attention in Lebanon, Arabic has a secondary status in France. We report on SRep results from bilingual children in both countries, aged between 5 and 8. Does SRep pick out the BI-SLI, and, if so, which sentence types best differentiate them from BI-TD children in the two bilingual contexts?
WG1: Sentence Repetition in bilingual Russian-Hebrew speaking children with and without SLI

Meir, Natalia  Bar-Ilan University, Israel
Armon-Lotem, Sharon  Bar-Ilan University, Israel

Sentence Repetition (Conti-Ramsden, Botting, & Faragher, 2001) is one of the screening measures that have proven to be reliable markers for teasing apart monolingual children with and without SLI. The study aimed to examine the diagnostic accuracy SR in Russian in sequential bilingual Russian-Hebrew speaking pre-school children.

Sentence repetition (SR) tasks were developed for Russian and Hebrew within COST Action IS0804 testing 56 sentences of different length and complexity based on SASIT-56 (Marinis, Armon-Lotem, Chiat, 2010).

28 bilingual children with TLD (ages 71-78 months) and 10 bilingual children with SLI (ages 71-85 months) participated in the study. The children in the sample met the inclusionary criteria for SLI (Leonard, 1998). Children were assigned to two groups - bilingual children with typical language development (biTLD) and bilingual children with SLI (biSLI) – a) based on expressed parental concern and b) children’s language proficiency scores in L1 and L2. Children’s language proficiency (LP) in L1/Russian was measured on The Russian Language Proficiency Test for Multilingual Children (Gagarina, Klassert, & Topaj, 2010) and in L2/Hebrew on the Goralnik Screening Test for Hebrew (Goralnik, 1995). The biSLI children scored severely below the norm in L1 and L2. The two groups were matched on LoE, AoO, mothers’ education and non-verbal IQ (as measured by The Raven’s Coloured Progressive Matrices non-verbal IQ test (Raven, 1998)).

BiTLD performed significantly better on SR in both languages (in L1 and L2) than BiSLI. A strong association between children’s level of proficiency and SR performance was observed uniquely in each language. No correlations were detected between the tasks across the two languages. The diagnostic accuracy improved when LoE was taken into account.

WG1: Differences between typically developing children and children with SLI in a bilingual context

Prévost, Philippe  Université François Rabelais de Tours, France
Schulz, Petra  Goethe Universität, Frankfurt am Main, Germany

This presentation will focus on two tasks, clitics and exhaustive wh-questions. Each task will first be outlined in more detail. We will then present datasets of bilingual typically developing children and children with SLI and highlight how differences between typically developing children and children with SLI can be identified in a bilingual context.
WG2: Multilingual Assessment Instrument for Narratives (MAIN)

Gagarina, Natalia
Klop, Daleen
Kunnari, Sari
Tantele, Koula
Välimaa, Taina
Balcūcienė, Ingrida
Bohnacker, Ute
Kapia, Enkëleida
Kananaj, Anila
Hržica, Gordana
Kuvač Kraljević, Jelena
Grohmann, Kleanthes
Knapp, Alfred
Haiden, Matrin
Skerra, Antje
Brykcynski, Ulrike
Raith, Lina-Sofie
Reichardt, Valerie
Reichenbach, Katrin
Peristeri, Eleni
Andreou, Maria
Tsimpli, Ianthi
Armon-Lotem, Sharon
Meir, Natalia
Fichman, Sveta
Roch, Maja
Levorato, Chiara
Kiebzak-Mandera, Dorota
Otwinowska, Agnieszka
Białecka-Pikul, Marta
Schuktomow, Regina
Maviş, İlkınur
Tunçer, Müge
Visser, Monique
Oosthuizen, Helena
Walters, Joel

ZAS, Berlin, Germany
Stellenbosch University, South Africa
University of Oulu, Finland
University of Cyprus, Cyprus
University of Oulu, Finland
Vytautas Magnus University, Kaunas, Lithuania
Uppsala University, Sweden
Center for Albanian Studies, Tirana, Albania
Center for Albanian Studies, Tirana, Albania
University of Zagreb, Croatia
University of Zagreb, Croatia
University de La Rochelle, France
Université Lille, France
ZAS, Berlin, Germany
ZAS, Berlin, Germany
ZAS, Berlin, Germany
ZAS, Berlin, Germany
Aristotle University of Thessaloniki, Greece
Aristotle University of Thessaloniki, Greece
Aristotle University of Thessaloniki, Greece
Bar-Ilan University, Israel
Bar-Ilan University, Israel
Bar-Ilan University, Israel
University of Padova, Italy
Jagiellonian University, Cracow, Poland
University of Warsaw, Poland
Jagiellonian University, Cracow, Poland
ZAS, Berlin, Germany
Anadolu University, Eskişehir, Turkey
Anadolu University, Eskişehir, Turkey
Stellenbosch University, South Africa
Stellenbosch University, South Africa
Bar-Ilan University, Israel
We report here on the initial results from a large-scale comparison of narrative skills across more than a dozen languages in simultaneous, early and late successively bilingual children with and without Specific Language Impairment (SLI). The poster focuses on macrostructure features and internal state language elicited via the Multilingual Assessment Instrument for Narratives (MAIN), an assessment instrument developed in the framework of COST Action 0804 (www.bisli.org).

Narrative production (telling and retelling) was elicited from children ages 4-9 years in both of the child’s languages using four picture sequences designed to be parallel in macrostructure (story grammar categories, internal states). Each story depicted three episodes, each episode consisting of a goal, attempt and outcome. All picture sequences/retelling scripts were designed to elicit equal numbers of internal state terms. This design allowed both within-subject and cross-language comparisons.

Children were tested individually. For the 'telling' condition, the entire set of six pictures was presented first, then two at a time, and again the full set of pictures prior to being asked to tell the story. For 'retelling', an oral script accompanied presentation of the pairs of pictures. Comprehension questions targeting goals and internal states of the story protagonists followed the production section.

The following research questions were addressed:

1. **Bilingualism**: To what extent does children’s performance differ across languages in terms of macrostructure (goals, attempts and outcomes as well as story grammar complexity) and internal state language? Which macrostructure and internal state measures are most susceptible to differences in language dominance?

2. **Story structure**: Which story structure categories and combinations characterize children age 5;5 to 9;5 best? To what extent is there a developmental sequence for story structure in each of the child’s languages?

3. **SLI**: To what extent do children with typical language development differ from those with SLI in terms of story structure production and comprehension? Which macrostructure components and mental state terms best differentiate children with typical language development and SLI?
In nonword repetition tasks, children are asked to repeat phonological forms that are not real words in the language. Studies spanning many languages have reported poor performance on nonword repetition in groups of children with SLI. Given these findings, nonword repetition clearly has potential as a clinical assessment tool. In the case of bilingual children, particularly those with limited exposure and limited vocabulary knowledge in the target language, nonword repetition has a special advantage. Since nonwords are by definition items that children have never heard, limited experience of a language should not affect performance. Indeed, nonword repetition is less influenced by cultural and linguistic experience than vocabulary and language performance. Nonword repetition tests therefore hold particular promise for our project of distinguishing language impairment from language difficulties due to limited exposure.

Our working group were lured by this promise, whilst recognising that the picture is not simple. Though less affected by language exposure and knowledge, children’s ability to repeat nonwords depends on characteristics of target items: nonwords are more challenging if they are longer, are more complex (containing more clusters), and contain phonological patterns that occur less frequently in real words. These characteristics are to some extent language-specific.

Taking all these factors into account, we developed a COST nonword repetition framework that includes sets of items that are relatively universal/language-independent, and items that are relatively language-specific/language-dependent. This paper will give an overview of tests created within the framework, and present examples of these tests with results for groups of monolingual and bilingual children with and without SLI. These interim findings will demonstrate the potential contribution of nonword repetition tests for identifying bilingual children at risk of language impairment, which we are following up in further research.
Limited word production in young children may be the first indicator of a language delay, which in turn signals risk for Specific Language Impairment (SLI). There is limited knowledge as to which level of bilingual vocabulary size should be considered as a risk marker of SLI. As a result, the effects of bilingualism and language-learning difficulties on early lexical production are often confounded. Establishing profiles for early vocabulary production in children exposed to more than one language across different contexts should enhance more accurate identification of vocabulary delays that signal a risk for SLI.

The present study employed a parental report method to measure lexical production in 224 TD children aged 24 to 36 months who were exposed to various language pairs, namely Maltese and English, Irish and English, Polish and English, Turkish and German, Hebrew and English, as well as Cypriot Greek dialect and Standard Greek. Expressive vocabulary measures were obtained using adaptations of the MacArthur-Bates Communicative Development Inventories: Words and Sentences (CDI: WS) (Fenson et al., 1993, 2006) vocabulary checklist to the participants’ languages. Data gathered were analysed descriptively for Total Vocabulary, Total Conceptual Vocabulary and word class scores across all language pairs. Background information on the children’s language exposure and developmental history, including the presence of risk factors for language impairment, was gathered through questionnaires that the children’s parents also completed. Statistical effects of demographic, language exposure and risk variables on vocabulary measures were examined. Implications of the findings will be discussed and their relevance to the early identification of language delay in children exposed to more than one language will be evaluated.

Delayed and impaired lexical abilities are among the earliest indicators of SLI (Leonard, 1998). Children with SLI show a delay in lexical development and display relatively weak semantic categories (Leonard & Deevy, 2004; McGregor, Newman, Reilly,
Capone, 2002). Bilingual children often have smaller lexicons in each of their languages (Bialystok, Luk, Peets, & Yang, 2010), even though the number of words in the two languages put together may be no different than monolingual norms (Marchman, Fernald, & Hurtado, 2009). Lexical abilities are a potentially early identification measure of bilingual SLI (Gatt, Letts, & Klee, 2008), and can be used as a baseline for assessment of bilingual dominance/proficiency. Thus comparable measures of lexical knowledge in both languages of a bilingual child are necessary.

The Cross-linguistic Lexical Tasks (CLT) designed within COST Action IS0804 WG3 (Working Group 3) form an attempt to address this need for children at the age of 5 years or younger ones. In this paper the rationale and the method for CLT construction will be discussed.

The CLT were conceived to assess comprehension and production of nouns and verbs in different languages. Response accuracy measured in these tasks indicate the level of receptive and expressive vocabulary size, while reaction time measurement (i.e. comprehension and naming speed) provide insight into the processing demands of passive and active knowledge across the two word classes. Picture choice and picture naming were chosen as tasks least involving other types of linguistic or conceptual skills.

A unique procedure for designing CLT in parallel for 34 different languages according to the same criteria was used by members of WG3. Phases of CLT design will be described, including:

1. Finding a set of CLT-candidate words (158 nouns and 142 verbs) mostly shared across 34 languages (a picture naming and rating study)
2. Determining formal complexity of CLT-candidate words for each of the languages involved (expert informants, uniform procedure for all languages)
3. Determining the age of acquisition (AoA) of CLT-candidate words (subjective on-line rating study in each language)
4. Selecting a list target words for each language according to key criteria (word complexity and its age of acquisition) & preparing a uniform instruction for CLT use.
5. Designing a set of culturally-neutral coloured pictures for all CLT-candidate words.

This procedure guarantees comparability of the results for different language pairs. This is crucial for accurate assessment of lexical knowledge in both languages of bilingual children.

Currently CLT are ready for 17 languages (Afrikaans, Catalan, English (British and South African), Finnish, Hebrew, Italian, Lebanese, Lithuanian, Luxembourgish, Maltese, Norwegian, Polish, Russian, Serbian, Slovak, Turkish) and more versions are underway. First results for monolingual, bilingual typically developing children and mono-SLI and bi-SLI children are going to be shortly presented. Detailed results are going to be shown on a series of posters at the conference.
The study of executive functions in multilingual children with LI may offer an opening into the problem of disentangling the effects of bilingualism and LI in these children. Monolingual children with LI have in some studies been shown to perform worse than typically developing children on some tasks tapping executive functions for example in inhibition and non-verbal working memory (Henry et al., 2012), suggesting that they have a deficit in specific areas of executive functioning. On the other hand, recent research on adult bilinguals has demonstrated that they have enhanced abilities in executive functions tapping inhibition and shifting (Bialystok, 2004). In this presentation the rationale of using EF tests will be presented as well as details of particular aspects of EF and how they can be tested.
Assessment and diagnosis

Sentence Repetition – A comprehensive tool for assessing both languages of a bilingual child

Marinis, Theo
University of Reading, UK

Sentence repetition (SR) tasks are increasingly recognised as useful clinical tools for identifying children with Specific Language Impairment (SLI) (Conti-Ramsden, Botting, & Faragher, 2001). They are quick to administer, they can include a range of different structures, they can elicit structures that are rare in naturalistic language, and they can provide insight into the children’s lexical, and morpho-syntactic knowledge. However, the SR tasks available to date in clinical settings are not controlled for several psycholinguistic factors that have been shown to affect the children’s accuracy in production, such as the length of the sentences and the frequency and age of acquisition of words. As a result, sequential bilingual typically developing children have been shown to score very low in some SR tasks widely used with monolingual children (Chiat, et al., in press). Moreover, the tasks available are not comparable across languages. This poses a difficulty when testing multilingual children in all languages spoken by the child. The COST Action developed parallel SR tasks across the languages represented in the action that are controlled for psycholinguistic factors. This presentation will first illustrate the scheme used to develop the SR tasks and then will present highlights of the findings from bilingual and monolingual children with SLI compared to control typically developing children.

Parental Questionnaires

Tuller, Laurie
Université François Rabelais de Tours, France

Questionnaires designed to be used with parents of children growing up in multilingual contexts aim to gather three major types of information: possible risk factors for SLI (early language milestones and parental concern, familial history for language difficulties), current language skills, and richness of early and current language exposition and use. The first part of this presentation will consist of an over-view of studies in COST Action IS0804 which have used and analyzed parental questionnaires, their principal results, and contribution to the Bi-SLI question. The second part will consist of two presentations from research teams who were able to use parental questionnaires in studies with a prospective research design, with parents who had no prior knowledge of their child’s language status (TD or SLI), in clinical settings and in ordinary schools; parental report is compared with later language assessment and clinical diagnosis. Edith Kouba Hreich and
Assessment of L2 children in the Lebanese multilingual context: Using Parental Bilingual Questionnaire (PABIQ) scores as diagnostic predictors for language impairment

Kouba Hreich, Edith  
Messarra, Camille  
Prévost, Philippe  

Université Saint Joseph, Beirut, Lebanon  

Identifying language impairment in children from bilingual backgrounds is challenging because of the lack of certified and accurate diagnostic measures in these contexts. Standardized measures of language can provide accurate identification of language impairment in monolingual children. In multilingual environments studies on language assessments using parental reports showed that they are more than efficient to obtain information on child’s language development, language abilities and the impact of factors such the use of languages in the child’s environment on his second Language development (Paradis et al, 2010). In the Lebanese context, facing the lack of resources for language assessments, studies were conducted using Parental Bilingual Questionnaire (PABIQ). It appeared to be useful to discriminate Bilingual children with Specific Language Impairment and bilingual typically developing children (Bi-TD); parents’ answers to the PABIQ allowed to refine the interpretation of the performance on the standardized tests, thus demonstrating the value of the parental questionnaire as a complementary tool to clinical evaluation (Abou Melhem, 2011; Kouba-Hreich et Messarra 2012). The objective of this study is to test how well scores on the PABIQ could differentiate between Bi-TD and Bi-LI children, and to show the value of PABIQ scores as a diagnostic indicator for language impairment. 29 bilingual Lebanese children aged between 3 to 8, participated to this study. They were all newcomer to Speech and Language Therapy centers affiliated to Saint Joseph University in Beirut. Parents were interviewed using PABIQ (COST IS0804) and children language abilities were evaluated with ELO-L Battery (Zebib et al. in process). Results would show if the information provided with PABIQ scores can be used as a diagnostic indicator for language impairment or if it has to be used in conjunction with other measures.
The bilingual parents questionnaire (BIP AQ) in a clinical setting

Abutbul-Oz, Hadar  Bar-Ilan University, Israel
Armon-Lotem, Sharon  Bar-Ilan University, Israel

Israel Central Bureau of Statistics reports 14% of the children in Israel are immigrants, but in some towns it can reach 40%. Difficulties or delays in the acquisition of L2-Hebrew lead to many referrals to Speech and Language Pathologists (SLPs) who are experiencing difficulties diagnosing those bilingual children. Lack of standardized tests in L1, L2 norms inappropriate for bilingual children and lack of information regarding quantity and quality of exposure and identity result in Over- and under-diagnosis of Specific Language Impairment (Iluz-Cohen 2008, Armon-Lotem 2006).

BIP AQ is an adaptation of ALDeQ (Paradis et al.2010) and ALEQ (Paradis 2011) and was developed in parallel to PaBiQ (COST Action IS0804) to be used in the Israeli population. BIP AQ (2012) consisting of five parts: (a) Demographic Information, (b) Developmental background, (c) L1 abilities, (d) L2 abilities and (e) Quantity and quality of exposure to both L1 & L2.

Our research goals were (a) Develop a unified parental questionnaire to gather accurate data that cannot be obtained by formal tests, (b) Determining whether parental questionnaire data can differentiate Hebrew L2 learners with and without SLI. (c) Provide a clinical tool for SLPs assisting in diagnosing LI and determine an effective treatment plan.

54 bilingual children (ages 30-78 months) participated in this study, 42 children who were referred to SLP’s due to language performance difficulties and 12 children who were never referred to SLP’s. 33 of the referred group presented L2 abilities below the norm expected of their peers in L2 Hebrew standardized tests (Goralnik 1995, Katzenberger 2009) whereas only 19 were diagnosed with Language impairment by the treating clinicians. Using the mean score of the SLP children as a cut-off point, Of 12 TDs in preschools 3 were below the mean. All three had very low scores in both L1 and L2 standardized tests. In the referred group Of 23 not LI bilinguals only 2 were below the mean. Furthermore, of 19 Language Impaired bilinguals 17 were below the mean and one more was within 1 SD of the average result.

Our conclusions suggest: (a) parental questionnaire data can differentiate Hebrew L2 learners with and without SLI, (b) L1 evaluation and Total scores were most reliable and correlated best with SLP post treatment diagnosis and (c) The clinical results suggests strong specificity and sensitivity but more data from non-referred population is needed to verify this and determine the cut-off point since the current mean reflects an atypical proportion of children with LI.

Clinical implications: 23 out of 42 children referred to SLP’s were not diagnosed as language impaired and most likely would have closed the linguistic gap in the course of time. However, our intention is not to diminish the importance of assisting those
children but to suggest an alternate treatment performed in a group setting. Such group treatment, based on the Developmental approach which emphasizes the communication and its reciprocity as the main purpose of the intervention including specific parental guidance, was performed in our main experimental facility and resulted in meaningful linguistic progress.

Cross-linguistic and bilingual research on SLI: the importance of equivalent diagnostic methods

Thordardottir, Elin
McGill University, Montreal, Canada
ReykjavikurAkademian, Iceland

This talk will address general methodological problems facing researchers in the areas of cross-linguistic and bilingual research on SLI. Results of a survey of procedures currently used in COST countries to identify SLI in monolingual and bilingual children will be presented. These reveal a large degree of variability both in formal criteria and test materials and procedures used for monolingual children, and essentially a total lack of formal procedures or criteria for bilingual SLI. This heterogeneity of procedures creates an important confound in research, making the comparison of groups of children with SLI from different language groups or countries hard to interpret. In order to promote consistency in identification procedures across COST projects, protocols of assessment were proposed, recognizing the large difference across countries in available resources. These protocols will be presented and their implications for clinical and research applications will be discussed.
The poster presents data on a new sentence repetition task for German bilingual children developed at the University of Oldenburg. The task is designed for children between the ages of 5;6 and 12, but can also be used for younger children when suitably modified. The task asks for repetition of structurally simple and complex sentences controlling the number of words, syllables and referents in a way which allows comparison of structurally complex with less complex constructions containing the same number of syllables and referents. The task is modeled on existing tasks for English, Russian and French, see COST IS0804. There are 64 sentences in the task which can be grouped into 3 different levels according to syntactic complexity, so that children younger than 5 can do the first level in future versions. Level 1 contains simple SV and SVO sentences involving tense, agreement and case marking, as well as constructions typical for German involving a sentence bracket. Level 2 contains object questions (bare and with an NP-restriction), sentences characteristic for German such as topicalization or scrambling, as well as biclausal sentences with coordination, complements and adjuncts. Finally, level 3 contains subject relatives, object relatives with full NP subjects and with pronominal subjects, short and long passives. For this round of testing sentences from...
all levels were randomly distributed.

Data were collected for 20 TD Russian-German bilingual children, age 7;11-10.5, by N. Gagarina and her group. A group of younger TD Russian-German bilingual children were tested by S. Chilla and her group, of which 5 are presented here: age: 4;3-5;11. Additionally, 3 Russian-German bilingual children with SLI were tested: ages, 4;10, 6;5 and 10;1. Results showed a mean of 8.5 sentences with at least one error in the older TD group. In the younger group a clear progression could be found: the two children younger than 5 could not complete the task when presented in random order of complexity; the three children older than 5 did not have much difficulty with the task as such but had a mean of 33 sentences with at least one error. Interestingly, the types of errors were different in the two groups: the older group had a ratio of 3:1 of structural to lexical errors (means: 6.2 vs. 2.2), whereas in the younger group lexical errors occur at higher rates so that the ratio of structural to lexical errors almost reaches 2:1 (means of 22 vs. 12.4). As to the SLI children, the two younger ones could not complete the task. The older SLI child who can be age matched to the older TD-group, could clearly do the task but produced 38 sentences with at least one error. The error profile with 19 structural errors vs. 11 lexical errors resembles the younger TD group. A close analysis of sentence and error types will show which structures and factors (complexity or number of referents) are most likely to provide diagnostic differentiation.

2. Sentence repetition as a feasible assessment tool for identifying children with SLI in the Lebanese and French bilingual contexts

Abboud, Layal
Tuller, Laurie
Henry, Guillemette
Saad, Selma

Université François Rabelais- Tours, France
Université François Rabelais- Tours, France
Université Saint-Joseph- Beirut, Lebanon
Université Saint-Joseph- Beirut, Lebanon

Diagnosing specific language impaired (SLI) children in a bilingual (BI) context is rift with difficulties for clinicians. Previous research has shown that sentence repetition (SRep) is a particularly efficient way of detecting SLI, and some studies have shown that it may also be useful to distinguish between BI-SLI and BI-typically developing (TD) children from the same bilingual context. Building upon that, this paper studies the feasibility of using SRep in two different bilingual contexts, specifically French-Arabic BI children in the Lebanese and the French contexts. Due to reasons such as sociological and cultural differences, bilingualism in these two countries is quite different. While the Arabic and French languages are given equal attention in Lebanon, Arabic has a secondary status in France. We report on SRep results from bilingual children in both countries, aged between 5 and 8. Does SRep pick out the BI-SLI, and, if so, which sentence types best differentiate them from BI-TD children in the two bilingual contexts?
3. The reduced Sentence Repetition task as an efficient assessment tool for identifying children with SLI in the Lebanese bilingual context

Abou Melhem, Nouhad  
Tuller, Laurie  
Prévost, Philippe  
Zebib, Rasha  
Université Saint Joseph, Beirut, Lebanon  
Université François Rabelais de Tours, France

Current available data has brought to light similarities between the linguistic development of children with specific language impairment (SLI) and bilingual children. Knowledge as well as available tools for assessment are insufficient for adequate differential diagnosis. How can difficulties related to normal bilingual language development be distinguished from those related to SLI? A previous research has shown that sentence repetition task (SRep) is efficient in detecting SLI and in distinguishing them from their Bi-typically developing (TD) peers. It also brought to light particular structures that best differentiate the two groups. A reduced SRep task was then developed based on the results obtained in the previous study. Will this reduced task be able, as well, to point out children with SLI? This present paper studies the usefulness and the efficiency of the reduced SRep in the Lebanese bilingual context among French and English speaking children aged between 5 and 8 years old.

4. Using Sentence repetition in L2 Lebanese to identify SLI in L1 French and L1 Armenian children in Lebanon

Henry, Guillemette  
Saad, Selma  
Tuller, Laurie  
Prévost, Philippe  
Zebib, Rasha  
Université Saint-Joseph, Beirut, Lebanon  
Université Saint-Joseph, Beirut, Lebanon  
Université François Rabelais- Tours, France  
Université François Rabelais- Tours, France  
Université François Rabelais- Tours, France

In a multilingual context, diagnosing Specific Language Impairment (SLI) in children is hard for clinicians, given the similarity of syntactic difficulties encountered with L2 speakers. Recent research has shown that sentence repetition (SRep) might be a particularly reliable and efficient tool to distinguish between typically developing children (Bi-TD) and Bi-SLI. This study seeks to verify if the Lebanese version of the COST Action IS0804 SRep differentiates Bi-SLI children from two different Bi-TD groups of L2 Lebanese speakers. Three groups of children were tested, two Bi-TD groups and one Bi-SLI group: 15 L1 Armenian speakers (aged between 5;7 and 7;6), 12 L1 French
speakers, and 12 Bi-SLI (aged between 5;7 and 9). Young L1 Armenian children and L1 French children grow up in very different (socio-) linguistic environments. We wanted to see how well SRep in the L2, Lebanese, distinguishes TD from SLI in these different multilingual contexts. SRep-Lebanese contains 8 different types of sentences, including both simple structures (mono-clausal) and complex structures (with embedded clauses). The protocol included a parental questionnaire about language development and use of children, as well as measures of non-verbal abilities (Raven’s Matrices and "The Mouse" test). Since, in general, L1 Armenian children have less exposure to Lebanese Arabic than L1 French children do, and also since, for many of them Lebanese is an L3 (English being the L2), comparing the results of these two groups will allow us to determine just how useful SRep is in distinguishing Bi-SLI from different types from Bi-TD children.

5. Using Sentence repetition in both L1 and L2 to distinguish Bi-TD from Bi-SLI children: the case of French-Lebanese bilingual children

Henry, Guillemette
Université Saint-Joseph, Beirut, Lebanon

Saad, Selma
Université Saint-Joseph, Beirut, Lebanon

Tuller, Laurie
Université François Rabelais- Tours, France

Prévost, Philippe
Université François Rabelais- Tours, France

Zebib, Rasha
Université François Rabelais- Tours, France

Lebanon is a very multilingual country. Not only are there several languages widely used in the country, but these are spoken in different combinations and have different contexts of language use. The same language can be an L1, an L2 or even an L3. Due to these numerous linguistic contexts, it is hard to distinguish between children with Specific language impairment (SLI) and L2 or L3 speakers. This study uses sentence repetition (SRep), a task which has been shown to be efficient and reliable in differentiating L2 speakers from SLI children, at least in some contexts. Two groups of children were tested in both French and Lebanese Arabic: 22 typically developing bilingual children (Bi-TD) aged between 5;7 and 6;6, including 12 L1 French children and 10 L1 Lebanese children, and 8 Bi-SLI children aged between 5;7 and 9 years. SRep consists of 64 sentences in Lebanese (with 8 different mono- and bi-clausal sentence types) and 54 in French (with 7 different mono- and bi-clausal sentence types). The two tasks share the following sentences types: Simple imperfective and perfective, Clitic left dislocation of the direct object, Wh-question, Subject and Object Relative Clauses and Sentential complements. The protocol also included a parental questionnaire which informs us about children's linguistic development, and measures of non-verbal abilities (Raven’s Matrices and "The Mouse" test). The results of inter-language and inter-group comparisons will be reported on, with particular attention to which sentences types best distinguish Bi-SLI from Bi-TD children, in which groups.
Several studies reported similar language developmental paths in bilingual children and monolinguals with SLI, which makes it hard to determine whether language problems in bilingual children are due to SLI or to typical second language (L2) acquisition (Gruter 2005; Hakansson 2001; Paradis & Crago, 2000, 2004; Hamann & Belletti, 2006). In particular, previous results in typical and atypical language acquisition have shown the crucial role played by computational complexity in language development, as determined by the nature and number of morphosyntactic operations, such as movement, and by depth of embedding (Friedmann et al., 2009; Hamann, 2006; Hamann et al., 2007; Jakubowicz, 2011; Jakubowicz & Tuller 2008; Tuller et al., 2011).

We tested performance on structures of various computational complexity levels in French among different populations aged 5;7 to 6;7: monolinguals with typical development (TD) (n=12), monolinguals with SLI (n=8), and bilingual children with English as their L1, some with a suspicion of SLI (n=6) and some without (n=10). We used a sentence repetition task since such tasks have been shown to be a reliable diagnostic marker of SLI (Conti-Ramsden et al., 2001). The task contained 56 sentences controlled for length, such as main clauses with present and (composite) past tense, sentences with accusative clitics, passives, wh-questions, and biclausal sentences (with clausal embedding or relative clauses). All children were also administered tasks from the CELF in order to evaluate their English and different standardized tasks in French (from the NEEL and BILO). Finally, the bilingual children and the monolinguals with SLI took a standardized test on Raven’s Progressive Matrices. We predict that performance on the sentence repetition task will be worse in children with SLI than in TD children, especially on constructions involving higher computational complexity (e.g. object relative clauses and object clitics), thus proving the usefulness of sentence repetition tasks in identifying SLI in bilingual children.
7. Sentence Repetition Task and Test for Reception of Grammar as measures of grammatical competence of monolingual and bilingual Polish children

Banasik, Natalia  
University of Warsaw, Poland  
Educational Research Institute, Warsaw, Poland

Miękisz, Aneta  
University of Warsaw, Poland

Smoczyńska, Magdalena  
Educational Research Institute, Warsaw, Poland

Bochińska, Agnieszka  
University of Warsaw, Poland

Foryś, Małgorzata  
University of Warsaw, Poland

Kochańska, Magdalena  
Jagellonian University, Kraków, Poland  
Educational Research Institute, Warsaw, Poland

Haman, Ewa  
University of Warsaw, Poland

This study is a part of BI-SLI-PL project (http://www.psychologia.pl/bi-sli-pl) assessing linguistic and cognitive development of bilingual children at the school entrance age and COST IS0804 cooperation program (BI-SLI), which aims at profiling bilingual Specific Language Impairment across various immigrant communities.

Sentence repetition has been identified for various languages as a good indicator of children’s language skills and a tool differentiating children with Specific Language Impairment from children with typical language development (Briscoe, Bishop & Norbury, 2001; Conti-Ramsden, Botting, & Faragher, 2001; Tomblin, Freese, & Records, 1992; Gabriel, Chiat, Dodd, 2010). The present study explores the relationship between sentence repetition and understanding of grammatical contrasts. For this purpose, two tasks were used: Sentence Repetition Task - SRT (Banasik, Haman, & Smoczyńska 2011), adapted from School Age Sentence Imitation Test (Marinis et al. 2011) and the Polish version of Test for Reception of Grammar - TROG (Bishop 1989) adapted by Smoczyńska.

In SRT, children repeated 68 sentences of varying length and morphosyntactic complexity. Quantitative scoring included correct repetitions, as well as total words omitted, added or substituted. Additionally, qualitative analysis of grammatical error types was conducted.

In TROG, children were asked to select a picture that matched the sentence presented orally. It was scored in terms of number of blocks and total items (of increasing difficulty) that were passed.

The performance in the two tasks in 88 monolingual and 22 Polish-English bilingual (4 to 6 year old) typically developing children will be presented.
8. Morphosyntactic features of Albanian in TD Albanian-English and Albanian-Greek children

Kapia, Enkeleida  
Center for Albanian Studies, Tirana, Albania
Kananaj, Anila  
Center for Albanian Studies, Tirana, Albania

This study investigates the differences in syntactic behavior in two groups of Albanian TD bilinguals: Albanian-Greek bilinguals and Albanian-English bilinguals. These children are part of two of the largest immigrant groups from Albania to Greece or English-speaking countries. As such, understanding their typical language development and whether this development is the same or whether it differs for each group is of pivotal research, educational and clinical importance. The study looks at 12 children, 6 of which are Albanian-Greek speakers and 6 others are Albanian-English speakers. They are all in first grade, in bilingual schools in Tirana, and do not have any known neurological disorders. Importantly, all participants are matched for their level of proficiency in both of their languages. Participants are tested in three different syntactic tasks: 1) the clitics task, 2) the sentence repetition task and 3) the case task, developed in the context of COST Action ISO804. These tasks have been shown to isolate the characteristics of bilingualism and language impairment in bilingual groups (Flekstein et al, 2013; Karpava et al, 2013; Hrzica et al, 2013; Meir & Armon-Lotem, 2013; Conti-Ramsden et al, 2001). Participants were found to perform almost adult-like in all the three tasks for both bilingual groups. These results show that despite the high number of morphosyntactic similarities between Albanian and Greek (Kallulli, 1995, 2001), children of this group performed similarly to children of the Albanian-English group even though Albanian is a language with richer overt morphosyntax than English is. This means that these tasks can be used to develop educational and clinical policies for atypical language development for both Albanian-Greek and Albanian-English children by adopting as a guide the linguistic clinical markers of typical development found in this study.

9. Same, same but different. A meta-analysis of grammatical language impairment in 19 languages in the framework of Processability Theory.

Håkansson, Gisela  
Lund University, Sweden

Studies of grammatical problems in children with language impairment report general weaknesses in morphology or syntax, but also language-specific difficulties, i.e. structures that cause problems in certain languages. For example, English-speaking children show particular difficulties with tense and agreement morphology, whereas Swedish-speaking children have problems with verb-second, and Italian-speaking children with free-standing
function words such as direct object clitics (Leonard 2009).

This poster provides a meta-analysis of 48 empirical studies on children with language impairment in 19 different languages. The studies are taken from refereed journals (Applied Psycholinguistics, International Journal of Language and Communication Disorders, Journal of Child Language, Journal of Speech, Language and Hearing Research, Lingua) during the period 2000-2013. Articles focusing on oral production of grammatical structures by children with language impairment were selected. As English is dominating in the area, only a small selection of articles on English was chosen, but for other languages all articles were used. Both Indo-European languages such as English and Spanish, and languages from other language families, for example Finnish, Arabic, Hebrew and Japanese are represented.

The studies were analysed in the framework of Processability Theory (PT; Pienemann 1998, 2005). PT sees language acquisition as the gradual development of procedural skills needed for speech processing and speech production. It builds on Levelt’s model for speech production and uses LFG for the grammatical analyses. The result of the meta-analysis reveals a tendency for structures involving unification of grammatical features at the sentence level and/or having a non-canonical mapping of arguments to be the most vulnerable in children with language impairment, irrespective of language. This finding has implications for analyses of monolingual and bilingual children with language impairment.

10. Case production in Dutch-Russian bilinguals: implications for Bi-SLI

Janssen, Bibi 
University of Amsterdam, Netherlands

The acquisition of the case system is known to be one of the most difficult aspects of Russian bilingual language acquisition. Dutch-Russian bilinguals are reported to have a low mastery of case production around age 6 (Peeters-Podgaevskaja, 2008). Typically developing Russian monolinguals on the other hand acquire the basis of the case system and case morphology before age 3;0 (e.g. Cejtlin, 2003; 2009). This study looked at 4- to 6-year-old Dutch-Russian children contrasted with Russian monolingual controls on the Russian Case Elicitation Task (Ruigendijk, in preparation), in which single object sentences (accusative or dative case) and double object sentences (with accusative and dative case) were elicited. The lexical items used varied in their frequency.

The main results of this study are:

1. bilinguals with one Russian parent show a very poor mastery of case inflection and almost do not decline nouns, using frozen nominatives for the accusative and dative case. Bilinguals with two Russian parents on the other hand more often inflect nouns, but make mistakes in the inflection: they use genitive or accusative endings for the dative case, or use inflectional endings that belong to another
declensional pattern. The Russian controls were at ceiling. The amount of input of Russian seems to be critical here.

2. The frequency level of the lexical items had an influence on performance in all bilingual children, the inflection being produced more accurately in the high frequency items. A poorer lexicon also seems to be the result of amount of input.

In Russia, a delay in case acquisition is used as diagnostic marker for specific language-impairment (SLI). But these results suggest that case production is not so suitable for detecting SLI in bilinguals (Bi-SLI) since factors originating in bilingualism (input and lexicon) also influence acquisition resulting in poor scores. Thus bilingual and SLI effects cannot be distinguished.

11. The COST Subject-Verb agreement task in German monolingual TD and SLI children

Bittner, Dagmar ZAS, Berlin, Germany
Siegmüller, Julia EWS, Rostock, Germany

This poster presents the results on the Subject-Verb-Agreement task proposed by the COST action xx. Our participants were mainly monolingual typical developing (TD) and language impaired (SLI) children. Additionally we tested 2 bilingual TD children. At the moment we are in the process of testing the SLI children.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Monolinguals</th>
<th>Bilinguals</th>
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<tr>
<td>TD 10 5-year-olds</td>
<td>2</td>
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<tr>
<td>5 4-year-olds</td>
<td>(1 German/Moroccan 5;1.24; 1 German/Mongolian 4;9.29)</td>
<td></td>
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<tr>
<td>4 3-year-olds</td>
<td></td>
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<td>SLI 10 3;0:10:0</td>
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The task is a picture-naming test and manipulates subject-verb agreement in 1st-3rd person singular. Each child has to help the investigator to sort a series of pictures by describing the action shown on the picture, correctly describing the agents and patients shown in the picture, e.g.: I am washing you. / You are washing me. / I am washing him. etc. Children were taught which character corresponded to which person (i.e., child, investigator).

Our results confirm that German 4- and 5-year-old monolingual TDs do not have any problems with subject-verb-agreement. Their results show a ceiling effect. Even the 2 bilingual children (both visiting a German dominated children’s day care) show a ceiling effect.

These results support the hypothesis that problems with subject-verb-agreement at age 4 (or after 3 years of exposure to German), very likely, indicate SLI.

While the 4- and 5-year-olds could do the task without any problems, the test appeared to be not appropriate for testing 3-year-olds. Kids of this age have difficulties
to manage the switch from you to I and vice versa from I to you. E.g., during the introduction the investigator has to teach the child that the small character on the pictures is you (the child). But when performing the task the child has to use I for this same character.

So far we cannot report on the data of the SLI children. However, results on spontaneous speech data indicate that 4-year-old SLI kids still have some difficulties in subject-verb-agreement.

12. Exhaustivity as a measure of typical development in the L2 of Russian-Hebrew children

Armon-Lotem, Sharon  
Bar-Ilan University, Israel

Garner, Sharon  
Bar-Ilan University, Israel

Shnaiderman, Irena  
Bar-Ilan University, Israel

Meir, Natalia  
Bar-Ilan University, Israel

Shultz & Roeper (2011) showed that German speaking children with SLI, age 5-6, showed difficulty in responding with exhaustive answers to multiple wh-questions and performed significantly below their age-match peers. They suggest that such difficulties could single out children with SLI. The present study explores the generalizability of this observation to bilingual children, testing Russian-Hebrew bilinguals in there L2 Hebrew. 42 children were tested using the exhaustivity task developed by Shultz et al. within COST Action A33: 34 with typical language development (TLD, 12 ages 4;4-5;0 (younger), 24 ages 5;1-6;3 (older)) and 8 with SLI (age 5;2-6;4).

Our findings follow the same pattern reported for monolinguals. Bilinguals with TLD scored over 90% with wh-questions, with no significant difference between the younger (91%) and the older (95%) children. Multiple wh-questions gave a developmental perspective with a significant difference between the two age groups. The younger group with TLD provided exhaustive response to 31% of the paired wh-questions and 46% of the triple wh-questions with no significant difference between the two types of questions. The older group with TLD provided exhaustive response to 80% of the paired wh-questions and 74% of the triple wh-questions, again with no significant difference between the two types of questions. For both types of question there was a significant difference between the two age groups.

When compared to their age matched peer, children with SLI scored significantly lower already on single wh-questions (77%). Most errors on simple wh-questions were singleton errors. Multiple wh-questions showed a similar pattern. The group with SLI scored significantly lower than their age matched peers for both types of questions, providing exhaustive responses to only 31% of the paired wh-questions and 20% of the triple wh-questions with no significant difference between the two types of questions. Most of the correct responses in the SLI group came from two children who provided
exhaustive responses consistently, while the others did it sporadically or not at all. On the other hand, in the older group with TLD all children could provide exhaustive responses at least to some of the items. These findings suggest that exhaustivity can be used for singling out bilingual children with SLI.

13. A test of grammatical maturity for Catalan

Gavarró, Anna
Universitat Autonoma de Barcelona, Spain

In the present European multilingual context, it is common to find that the so-called minority languages enjoy fewer (if any) diagnostic tools than the majority languages. This has repercussions for the detection and proper assessment of the children brought up in these languages. With views to remedy this situation for Catalan, we developed a repetition task to assess grammatical maturity in school-age children; in current practice, Catalan-speaking children are assessed with tests translated from Spanish, with disregard of the fact that the markers of SLI may differ substantially from one language to another. The test proposed here is based on the English test by Marinis et al. (2011) and involves three levels of complexity, administered in pseudorandom order. Level 1 includes canonical SVO sentences, and sentences with 3rd person accusative clitics (known to be problematic in Catalan SLI, Gavarró 2011); level 2 includes passives, wh-interrogatives and subordinate clauses; level 3 includes subject and object relatives and conditionals. The test consists of 56 items in which number of words and syllables was controlled for. It was administered to thirty 6- and 7-year-olds, and the results scored under two systems: (i) identical vs. non-identical repetition and (ii) identical, grammatical and ungrammatical repetition, with detail regarding the error type. Four children diagnosed with SLI (aged 6;6-10;0) have been tested so far, and further testing is underway. The results for the two groups show clear differences between the groups: identical repetition is 89% for TD but only 53% for SLI children; ungrammatical productions are higher for the SLI group, and so are grammatical but different repetitions. The trend is found in every child individually. This means the results of the test appear so far to be reliable and the first scoring method is sufficient, with the advantage that the test is user-friendly.

Graph 1: Percentage of answer types by TD and SLI children
**Narrative, discourse, oral production**

14. Production and perception of narrative texts across languages and cultures: MAIN

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The study presents a cross-linguistic comparison of narrative abilities across simultaneous, early and late successive bilingual children. The emphasis is on macrostructure of narrative texts elicited through the Multilingual Assessment Instrument for Narratives (MAIN). MAIN is a procedure designed by joint efforts of an interdisciplinary composed team including experts from over 20 EU countries. The method of elicitation includes both languages of the bilingual child and is composed of telling and retelling/model story condition based on four stories (each consisting of six pictures). Additionally to the production, the comprehension questions targeting the goals and internal state terms are asked. The comparison between telling vs. retelling/model story and production vs. comprehension allows us to investigate a) the possible effects of priming as a consequence of the retelling mode, b) the degree of transferability of narrative skills across languages, and c) the possible implications of language dominance (measured through independent language tasks and through a detailed parental questionnaire).

The research questions tested across languages:

1. Story structure: Which story structure complexity, measured quantitatively and qualitatively, is characteristic for children between 66 and 109 month? And how does it develop?

2. SLI: What are the differences in the story structure production and comprehension across monolingual and bilingual TD and SLI population? Which components best differentiate TD and SLI?

3. Bilingualism: Do macrostructure measures, such as complexity of story grammar as well as mental state terms, show similar transferability between the two languages of the child? Are macrostructure measures different in terms of selectively showing language dominance? In other words, is it the case that mental state terms show higher and more accurate production in one language only, usually the dominant one, while story grammar measures fail to reveal language dominance or preference?

15. Story structure in Croatian typically developing children and children with specific language impairment

Hržica, Gordana  
Vdović, Ivana  
Kuvač Kraljević, Jelena  
Kovačević, Melita

University of Zagreb, Croatia  
University of Zagreb, Croatia  
University of Zagreb, Croatia  
University of Zagreb, Croatia

The narrative discourse production is developmentally first and most frequent pragmatic ability in preschool children that is in positive correlation with child later academic...
Therefore, it is important to enable assessment of narrative abilities of children prior to school. It is also crucial to validate if the assessment of narrative production is a proper method for differentiating typically developing children from children with language impairment.

The aim of the present study was to investigate the influence of narrative type on story structure in children with specific language impairment (further SLI) and children with typical language development (further TLD) and to analyse differences in the story structure between groups according to the two different narrative measures.

The sample of Croatian speaking monolingual children consisted of two groups, SLI (n=20) and TDL (n=20). Age range of children was 5;6 to 7;6. Children were asked to tell two narratives elicited by two different methods:

1. **telling**, based on the sequence of six pictures;

2. **retelling**, based on the oral model of the story and the sequence of six pictures.

Pictures and sounds of the story were presented on a computer screen. During the narration children were audio-taped and narratives were transcribed. The story grammar analysis was then conducted in accordance with the story grammar model created in project Language Impairment in a Multilingual Society (BI-SLI, COST ISO804 - further BI-SLI).

Results have shown that TLD children were significantly better on both narrative measures than their SLI counterparts. In TLD group there were no significant differences between the story structures on two different measures. The story structure in SLI group was significantly better on retelling than telling. Therefore, influence of the narrative type was evident in SLI group. Results of the present study have shown that retelling is not a better discriminator of SLI than telling. However, larger sample would be needed in order to make conclusions about the whole SLI population.

16. **Narrative assessment of Polish pre-schoolers: bilingual vs. monolingual language production in the telling and retelling modes**

**Otwinowska, Agnieszka**
University of Warsaw, Poland

**Biłecka-Pikul, Marta**
Jagiellonian University, Kraków, Poland

**Opacki, Marcin**
University of Warsaw, Poland

**Mieszkowska, Karolina**
University of Warsaw, Poland

Although bilingualism and multilingualism result in significant cognitive benefits later in the lifetime, in childhood they may cause assessment problems. Bilinguals may differ from monolinguals in the use of the lexical, syntactic and phonological systems, as well as pragmatics. In the case of Polish pre-schoolers, all these can be measured by tasks currently developed within the BI-SLI-PL project. One of the tasks is narration, which
involves eliciting children’s spontaneous speech samples in the context of standardized picture stories. Such speech samples provide additional qualitative data that corroborate evidence from quantitative measures. Importantly, specially designed narrative tasks elicit data that can be analysed not only qualitatively but also quantitatively.

The poster analyses children’s production in two modes of narrative elicitation: telling and retelling. It examines the macrostructure (qualitative analysis) and the microstructure (quantitative analysis) of narratives produced by five- and six-year-old Polish bilingual pre-schoolers raised in the UK (N=12). We attempt to show whether and how these bilingual narratives in Polish and English differ from those produced by bilinguals raised in Poland (N=12), and those produced by Polish monolingual children matched for age (N=12). We point to similarities and differences of narrative macrostructure (story grammar categories) and microstructure (e.g. type/token ratio, number of communication units). Erroneous forms produced by bilinguals are analysed to point to crosslinguistic influences in the areas of syntax, lexis and morphology.

17. Narrative language in Lithuanian TD and language-impaired children

Balciciené, Ingrida

Vytautas Magnus University, Vilnius, Lithuania

The presentation deals with the main micro- and macrostructural indications in the narrative speech of Lithuanian monolingual TD (N=12) and language-impaired (N=12) 5-6-year-age children. The narratives were elicited following a methodology developed in the framework of the COST IS0804 Language Impairment in a Multilingual Society: Linguistic Patterns, and the Road to Assessment WG2 Narrative and Discourse (Gagarina et al., in press). During individual session, a picture sequence The Dog Story was presented to a child, and then he/she was asked to tell a story according to the pictures. The stories were audio-recorded, transcribed, and morphologically annotated for automatic analysis according the CHILDES (MacWhinney, 2010) tools.

The analysis indicated the main micro- and macrostructural differences between the TD and language-impaired samples. Summing up, it can be stated that TD subjects demonstrated much significantly different and much better developing general productivity, lexical skills, and syntactic devices of story coherence in comparison to the language impaired subjects. However, both micro- and macro indications in the language-impaired sample are not homogenous and they can be related with particular subtype of language impairment and impact of individual speech therapy.
Dynamic Assessment is an umbrella term that encompasses a range of methods of assessment aimed to assess the potential for learning rather than a static level of achievement. It does this by prompting, cueing, or mediating within the assessment and evaluating the enhanced performance.

The COST Narrative Task, consisting of four sets of comparable stories for Telling (T) and Retelling (RT), provides the means by which we can have baseline data of the subjects' narrative ability both at microstructure and macrostructure levels which can then be compared to post-mediation data using comparable prompts.

Hypothesis: Children with specific language impairment (SLI) will not show positive change in their performance in a narrative generation task following a T–RT–T2 scheme. In contrast, typically developing children are expected to demonstrate a dynamic change in performance.

One group of 7- to 8-year-old children with SLI participated, compared to a group of 6- to 7-year-old typically developing children. Each child is first given the story strip and asked to tell the story (T1), setting the baseline of the child’s ability (macro- and micro-structure). Next, the child is told a different story and asked to retell it to the examiner (RT). The child is then asked the comprehension questions that are based on the story grammar model. Finally, the child is shown the first picture strip and asked to generate the story (T2). In this way, the data from T2 can be compared to the baseline data.

The assumption is that the child exposed to the retelling condition, and having paid attention to the story elements by having to answer the comprehension questions after retelling, will demonstrate a dynamic learning effect. Following this line of thought, children with SLI will not show this learning effect or will not show the same effect in all parameters.

Purpose: The current study was designed to explore narrative production in Italian...
Method: 30 bilinguals aged 5-6 years and 32 bilinguals aged 6-7 years were asked to produce four narratives elicited by sequences of pictures (COST-MAIN WG2). For both L1 (Italian) and L2 (English) two tasks were used: telling and retelling. The macro-structure of the narrative production was analysed in terms of the total number of story content information.

Results: A mixed three way ANOVA with 2 Tasks (Telling vs. Retelling) x 2 Languages (Italian vs. English) x 2 Age groups (Young vs. Old) was run on the total number of story content information. The results indicated that: a) more story content was elicited by the retelling than by the telling task; b) the older children outperformed the younger; c) more story content was produced in L1 than in L2. Moreover, two significant interactions emerged: a) Language x Age indicated that language dominance in favour of L1 is higher for Younger children than for the older ones who produced a similar amount of story content in both languages; b) Language x Task suggested that language dominance is evident only for telling, namely when the child spontaneously produce the story, but not for the retelling task, when the story structure is offered to the child previously to the story recall;

Conclusions: The amount of story content resulted to be a sensible measure in capturing individual differences related to the performance on two tasks evaluating narrative competence and to a different language proficiency in the two languages. Finally, the tasks resulted adequate to capture the development of narrative competence between 5 and 7 years in sequential bilinguals. The results are discussed for their theoretical and educational implications.

20. Comparison of Narrative Abilities in Monolingual and Bilingual Slovak Speaking Children

Halamová, Michaela  
Kapalková, Svetlana  
Comenius University, Bratislava, Slovak Republic

Many studies demonstrated the significance of children’s narrative development for later acquisition of literacy skills (Cain, 2003; Nicolopoulou, et al., 2006). Assessing narratives in bilingual children is a topic intensively discussed these days. Our study analyzes and compares narrative abilities in two groups of 40 TD children- monolingual Slovak children (n=21, age 4;2 - 6;1, mean 5;3) and bilinguals with L1 - Slovak (n=19, age 3;11 - 6;1, mean 4;11).

The examination was conducted in Slovak language. Amount of language exposure was checked by COST Action ISO804 Questionnaire.

In the study there was used a telling method based on Frog Story Test. Children’s samples were assessed in terms of expressing macro- and microstructural parameters. In order to find possible correlations between the narrative performance and level of other
language and cognitive abilities, three other tests were used. Sentence repetition task (Slovak GAPS), Slovak Non-word repetition task and one subtest from WISC.

Results show no significant difference between mono- and bilingual preschoolers neither in story macrostructure nor in microstructural parameters. On the other hand, interesting correlations were found between macrostructure and Sentence repetition, as well as between macrostructure and intelligence measured in children by WISC subtest. Contrarily, level of investigated microstructural parameters of the story doesn’t seem to be related to intelligence. In the domain of microstructure, some relationships were found between total number of utterances and total number of verbs on one side and repetition abilities on the other.

21. Narrative Skills of Turkish Monolingual, Turkish-German Bilingual Children and Their Peers with SLI

Maviş, Ilknur
Anadolu University, Eskişehir, Turkey
Tunçer, Müge
Anadolu University, Eskişehir, Turkey

In the Working Group 2 (WG2): "Narrative and Discourse"of COST Action IS0804 project: "Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment", a narration task was developed() and later adapted to Turkish (Maviş & Tunçer, 2012). In this study, our aim was a) to identify narrative skills of Turkish-German bilingual children living in Germany and SLI children telling over a pictured story, b) to compare monolinguals children with bilingual and SLI groups to determine differences between these groups.

For that purpose, we administered the narration task to 15 Turkish-German bilingual children who live in Konstanz, Singen, Erbahand Berlin in Germany and to 15 Turkish monolingual children who live in different cities of Turkey. The participants are ranging in age from 4;0 to 7;11 (years; months).

For narration task, the stories "Cat" and "Dog" were used as model stories, which the children listened to before telling another story. The children were asked to tell "Baby Birds", and "Baby Goats" stories after listening the models, as well as to answer the comprehension questions about both stories. The stories were presented in a laptop screen and children listened the model story by a headphone.

The data was scored for macrostructure and microstructure measures on which the narrative and discourse group decided. Macrostructure measures were the numbers of Goal, Attempt, Outcome (Story Structure and Complexity) and Internal terms produced by the participant. The answers of comprehension questions were examined also in macrostructure measures. Microstructure measures were total number of tokens, number of different words, number of communication units (CUs), mean length of CUs, the ratio of subordination out of CUs and the ratio of morpho-syntactical errors out of total tokens.
Monolingual and bilingual groups and their peers with SLI will be compared in terms of macro and microstructure measures.

22. Narrative abilities in bilingual children

Kapalková, Svetlana  Comenius University, Bratislava, Slovak Republic
Distlerová, Lenka  Comenius University, Bratislava, Slovak Republic
Polšenská, Kamila  University of Manchester, UK

Narratives are strong predictors of language and literacy skills in monolingual children but little is known about bilingual children’s narrative skills and how L1 scores relate to L2 microstructure and macrostructure scores. Forty typically developing Slovak-English bilingual children (age range 5-7 years, mean age 5;10) participated in the study. The minimum length of exposure to L2 was 12 months and children were exposed to the L2 for 38 months on average. Two types of narrative tasks were administered: a story generation task and a story retell task. Children were assessed on their narrative skills in both Slovak and English and their performance was evaluated for macrostructure and microstructure. In addition, the children were given a nonword repetition task in their L1.

The macrostructure analyses revealed a significant main effect of both method and language. Children scored higher when asked to retell a story rather than generate a story from pictures and they demonstrated superior skills in their L1 (Slovak). No interaction between method and language was found. For microstructure, children produced a similar number of word types in both languages, but there was a significant main effect of method with children producing more types when retelling the story. No interaction between language and method was found. However, language played a significant role in a number of tokens, with children producing more tokens in their L2 (English) than in their L1 (Slovak). There was no main effect of method or interaction between language and method. Nonword repetition scores in the children’s L1 was significantly related to both microstructure and macrostructure scores in their L2. In light of our findings, the relations between nonword repetition skills and narrative skills in bilingual children are discussed.
23. Elicited Imitation in search of factors affecting development of young learners’ oral production

Campfield, Dorota E. Educational Research Institute, Warsaw, Poland

Exposure to spoken language and a focus on developing oral skills are key elements in the ‘learning-centred’ approach advocated for young foreign language learners (Cameron, 2001) and recognised in the Polish curriculum. This work is an investigation of English oral production skills of 10-year-old learners using Elicited Imitation. EI is reconstructive in nature (Erlam, 2006), involves mechanisms similar to those used in spontaneous speech and measures oral language proficiency (Hamayan et al. 1977; Munnich et al. 1994). Participants may be able to understand more difficult sentences than those they are able to imitate (Naiman, 1974), however, their ability to imitate cue sentences reflects the level of representation their internal grammar controls. Six hundred children were asked to imitate 40 sentences ranging from four to thirteen syllables. The study was based on the assumption that ability to imitate what they hear accurately is proof of learners’ uptake following exposure and oral practice. The results showed that children could not accurately imitate words and phrases they had not previously been exposed to. The results are presented in the context of factors influencing effective development of oral production skills.

24. Home language stimulation in children with SLI, a pilot

Blumenthal, Mirjam Royal Dutch Kentalis, Netherlands
Voorn, Susanne Royal Dutch Kentalis, Netherlands

Parents of children with an auditory or communicative handicap (like SLI) are known to have trouble conducting normal language-stimulating talks with these children.

If the children are raised bilingually additional problems may arise because these parents frequently receive contradictory advise about how to raise their children bilingually. Parents feel insecure and often they feel responsible for the language problems of their children: ‘my child is probably behind because it has to learn more languages’.

In a specialised care-unit for young children with SLI in Enschede, the Netherlands (De Cirkelboog) professionals felt they should address this issue. The multilingual context in which the children grow up should be the starting point of the parent-based part of the usual intervention. However, the professionals did not know how to implement this in their daily practice. In this project we are developing guidelines for professionals to set up and implement such an intervention plan.

The goal of the intended intervention is to help parents to stimulate the language
development of their child in their own best language. In this pilot study we have formulated initial guidelines that professionals will use to design individual interventions for five bilingual children and their parents. Each intervention will be tailor-made, according to the possibilities and wishes of the parents, and will be applied for 4 months. The cases will be described in detail and the entire process will be carefully monitored. Before and after the intervention a language sample of parent-child interaction will be taken and analysed on relevant aspects in order to also obtain a quantitative measure of the effect of the intervention.

At the moment (February 2013) three families have agreed to participate, one family has started the intervention. In May 2013 we will be able to present the first results.
Cognitive development

25. Working memory and inhibition in Dutch children with SLI

Duinmeijer, Iris  University of Amsterdam, Netherlands

Executive functions such as working memory and inhibition are often found to be deficient in children with specific language-impairment (SLI). Some theories of SLI even assume a deficit in these aspects of information processing to be underlying the language problems seen in this population (Im-Bolter et al. 2006). Identification of SLI should then be more language independent and thus more similar across countries, when non-verbal tests of executive functioning are used. The value of impaired executive functions as a clinical marker of the group children with SLI is however debated because not all studies report executive deficits in SLI (e.g. Parigger 2012) and SLI is not the only population showing problems in the executive domain (Pennington & Ozonoff, 1996). This study contributes to this debate by comparing the data of Dutch children with SLI and typically developing controls on an inhibition task and two working memory tasks. Inhibition was measured using the VIMI Hand-Fist Game (Henry, 2001) and working memory was measured both auditorily (digit span) and visuo-spatially (odd-one-out, Henry, 2001). Results will be discussed in the light of the debate on the role of executive functioning in SLI.

26. Non-verbal loaded visual WM predicts narrative comprehension in bilingual, but not monolingual children - is this a bilingual effect?

Jensen de Lopez, Kristine  Aalborg University, Denmark
Kronqvist, Bjarke Sund  Aalborg University, Denmark
Clasen, Line Engel  Aalborg University, Denmark
Knudsen, Hanne S.  Aalborg University, Denmark
Reichardt, Valerie  ZAS, Berlin, Germany
Gagarina, Natalia  ZAS, Berlin, Germany

In this study we examined the relationship between language and working memory (WM) by comparing a group of Danish monolingual (n = 20) and German-Russian bilingual (n = 20) typically developing children; mean age = 106, SD = 7.37. An Odd-One-Out (OOO) task was used to assess children’s executive-loaded working memory (Henry et al., 2012).

The children’s language abilities were tested on short narratives. In the monolingual group "Fox" Narrative was used, while the bilingual group was tested on "Dog", "Cat", "Babybirds" and "Babygoats" narratives from the COST Action. All narratives follow
similar comprehension questions. For the bilingual children a composite narrative score was calculated.

A set of t-tests revealed no significant difference between the groups considering age $t((25)=-1.45, p=.157)$ or WM; OOO-trials $t((25)=-.306, p=.762)$ and OOO-span $t((25)=-.401, p=.686)$. This suggests that growing up bilingual does not enhance performance on this OOO WM task.

Correlational analyses were conducted to examine the relationship between narrative comprehension and OOO-trial scores. No significant relationship was found in the monolingual group ($r = .095, p = .689$), however for the bilingual children the correlation was moderate ($r = .619, p = .004$).

Multiple regression analyses were conducted to see whether scores on the OOO task predicted comprehension of the narratives and to control for language. The results showed that for bilingual children performance on OOO-trials predicted 38.3% of the total variance in their comprehension, $F (1, 19) = 11.178, p<0.004$. After entering age the total variance explained was 54.4%, $F (2, 19) =10.127, p<0.001$. Age explained an additional 16.1% after controlling for OOO-trials $R^2 = .161, F \text{ change} (2, 19) = 5.98, p<.026$. For the monolingual children however both models failed to reach significance. These results suggest that demanding cognitive control might enhance narrative comprehension.

27. Inhibitory control in bilingual children: evidence from the Stop-Signal and the Simon Says tasks.

Senderecka, Magdalena  
Wodniecka, Zofia  
Bia³ecka-Pikul, Marta  
Karwala, Magdalena  
Jagiellonian University, Kraków, Poland

The first aim of the study was to determine whether bilingualism influences inhibitory control in children. The second aim was to compare children’s response inhibition performances in two kinds of tasks - the Stop-Signal and the Simon Says tasks.

The Stop-Signal task (Senderecka et al., 2012) required children to perform a primary binary-choice 'go' task involving two visual stimuli. They consisted of a cartoon picture of a plane heading left or right, presented randomly one at a time, each with 50% probability. The subjects were instructed to react to the 'go' stimuli as fast and as accurately as possible. On a random 33.3% of trials, an auditory tone was presented and prompted the participant to inhibit the response to the primary 'go' task. The interval between the presentation of the visual go stimulus and the auditory stop-signal was varied trial-by-trial using a tracking method. The participants completed 3 experimental blocks, each of 50 trials with short breaks in between the blocks.

The Simon-says task (Strommen, 1973) required children to perform a certain
activity (e.g. to jump high, turn around) if the instruction was preceded by the expression 'Simon says' or refrain from doing the activity, if the instruction was not preceded by the expression. The main task consisted of 2 blocks. In each block, 10 instructions were given, half of which required inhibition and half of which did not. The order of instructions given was random for each child.

The analysis of the behavioral measures of inhibitory control and response monitoring are currently conducted.

28. Can we use musical working memory for SLI diagnostic?

Sallat, Stephan
University of Leipzig, Germany

Verbal working memory performance in typically developing children and adults was shown to correlate with comprehension of spoken language (Daneman & Merikle, 1996; Just & Carpenter, 1992), written language (Daneman & Merikle, 1996; Gathercole & Baddeley, 1993), word acquisition (Baddeley, Gathercole, & Papagno, 1998), and syntax processing (Ellis & Sinclair, 1996). Due to its importance for language acquisition (especially word learning) Baddeley et al. (1998) proposed one of the subsystems, the phonological loop, as Language Learning Device. Children with SLI show deficiencies in verbal WM, as reflected in poor performance in word, non-word or sentence repetition paradigms. It is suggested that children with SLI have difficulties in maintaining the novel phonological information in WM long enough to process its meaning and also difficulties to store speech material which hinders their ability to generate complete sentence representations (Marton & Schwartz, 2003; Montgomery, 2003; Weismer, Evans, & Hesketh, 1999).

Beside the problems in speech processing SLI children also show problems in musical and thus nonlinguistic tasks (Jentschke et al., 2008; Sallat, 2008; Sallat, Stachowiak & Jentschke, under review., see also Mampe et al. 2009). Up to now it is a matter of discussion whether the phonological loop is also involved in storing musical or tonal information (Pechmann & Mohr, 1992; Salamé & Baddeley, 1989; Semal, Demany, Ueda, & Halle, 1996).

In a discriminant analysis Sallat and colleagues could show that the results in musical working memory can classify TD and SLI children in 78,5% correct (Sallat, 2008; Sallat & Jentschke, in prep.). Thus, the collection of results in musical working memory tasks can offer a new non-linguistic tool for SLI diagnostics in different languages. In the poster the tasks and further development of the items will be discussed.
29. The processing of Turkish counterfactuals in SLI: the role of executive functions

Yarbay Duman, Tuba
Anadolu University, Eskişehir, Turkey
Topbaş, Seyhun
Anadolu University, Eskişehir, Turkey
Baker, Anne
Anadolu University, Eskişehir, Turkey

Counterfactuals are thoughts about ‘what might have been’; imagining what might have happened, but did not. For example, when a child loses his favorite toy at school, he might say ‘if I had not taken it to the school!’ Thus, a different event and a different outcome is considered. Counterfactual thinking develops around five years of age. This is the age when significant developments in the Executive functions (EF) are observed (e.g., Beck, Riggs, & Burns, 2011): (1) inhibition – to ignore what has happened; (2) working memory – to hold two different representations simultaneously in mind; (3) cognitive switching – shifting between those representations.

Children with SLI have problems with both language and these EF (e.g. Im-bolter et al., 2006). The central question is whether there is a relationship between linguistic processing (of counterfactuals) and EF in SLI.

A sentence comprehension test with Turkish conditionals with(out) counterfactual interpretation was developed. These conditionals were morpho-syntactic minimal pairs. Furthermore, non-verbal EF tests on inhibition, working memory, cognitive switching, & planning were administered. There are two main findings. First, children can think counterfactually when their EF are well-developed. Second, counterfactuals are particularly difficult for SLI since they have problems with specific EF, namely inhibition and cognitive switching.

30. Cognitive control in bilingualism: increasing inhibitory control following bilingual exposure?

Asbjoormsen, Arve
University of Bergen, Norway
Torkildsen, Janne von Koss
University of Bergen, Norway

The role of cognitive control, or executive functions, in bilingualism has been under dispute, but an association between good cognitive control functions, in particular the sub functions of inhibition and cognitive shift are frequently reported as well developed in samples of bilinguals. This study was designed to assess if such differences are present early or evolve at a later stage of the bilingual development.

The present study addressed cognitive control functions in samples of children (Mean age 8yrs) and young adult (Mean age 25 yrs) Norwegian participants. Participants
were classified according to the information following the Bilingual Parents Questionnaire (BIPAQ). Sixteen of the participants were monolingual with fluent skills in Norwegian only. Thirteen were bilingual with fluent skills in Norwegian and in English (n= 29).

They were tested with a battery of tests that have been found valid assessment tools of the cognitive control functions of inhibition and attention shifts, and also have been used across age groups. The battery included the Wisconsin Card Sorting Test and Dichotic Listening to CV-syllables with Forced Attention.

The results showed enhanced inhibition skills in the bilingual young adults compared to the other participant groups. Performance on tests of cognitive control also shared variance with the performance on more language specific tasks like rapid naming and grammar comprehension. These findings lend support to the assumption that exposure to and use of more than one language facilitates the development of cognitive control skills, but that the benefits of increased cognitive control may not be manifest before late childhood or early adulthood.

31. Executive functions in language minority children with specific language impairment: Evidence from bi- and monolingual children from low income families in Luxembourg and Portugal

Engel de Abreu, Pascale University of Luxembourg
Cruz-Santos, Anabela University of Minho, Portugal
Puglisi, Marina University of Oxford, UK

This study explored executive function skills and language abilities in bilingual immigrant children with specific language impairment (SLI) from low income families in Luxembourg. Data from 81 eight-year-olds from three different groups were analyzed: 1. 15 Portuguese-Luxembourgish children with SLI living in Luxembourg (Bi-SLI); 2. 33 TD Portuguese-Luxembourgish bilinguals from Luxembourg (Bi-TD); 3. 33 TD monolinguals from Portugal (Mo-TD). Groups were matched on first language, chronological age, and socioeconomic status, and did not differ in nonverbal intelligence. All children came from low income families and completed a range of measures tapping verbal and visuospatial working memory, selective attention, interference suppression and different domains of language (syntax and expressive and receptive vocabulary). Results indicate that despite large differences in their language scores (Bi-SLI < Bi-TD < Mo-TD), the groups exhibited comparable performance on the measures of visuospatial working memory, focused attention, and inhibitory suppression. Group differences emerged on verbal working memory measures with Bi-SLI children performing significantly less well than the bilingual and monolingual typically developing groups that manifested comparable performance. The data suggests that: (a) children with SLI present verbal working memory limitations accompanied by preserved visuospatial executive functioning; (b) the measure that best discriminated the Bi-SLI group from their typically developing peers
was the verbal working memory task *digit recall*. Practical implication for diagnosing SLI in bilingual children from disadvantaged social contexts will be discussed.

### 32. Language and executive functioning in French monolingual and early-bilingual children with SLI

**Laloi, Aude**  
University of Amsterdam, Netherlands  
**Baker, Anne**  
University of Amsterdam, Netherlands  
**de Jong, Jan**  
University of Amsterdam, Netherlands

Whereas it is a general finding that children with SLI have massive language deficits, recent studies suggest that SLI might also involve non-linguistic deficits, particularly deficits in executive functioning (EF). To date, however, the relation between language and EF deficits in SLI remains unclear. In contrast, a clear relation between language and EF has been observed in typically-developing bilingual children who exhibit enhanced EF abilities due to their constant need to inhibit one language system while using the other. The discrepancy in EF performances between monolinguals and bilinguals provides the potential to investigate the nature of the relation between EF and language in SLI. Using a four group design, with monolingual children with and without SLI and bilingual children with and without SLI, the present study assesses the effect of bilingualism, the effect of SLI and their combined effect on both language and EF abilities in order to shed light on the relation between language and EF in SLI. Language performance will be measured within the syntactic domain in French monolingual and early-bilingual children with and without SLI aged between 7 and 8. The language data will subsequently be linked to performances on four non-linguistic EF tasks, tapping respectively inhibition, shifting, working memory and planning.

### 33. Cognitive development in the context of emerging bilingualism: Cultural minority children in the Netherlands

**Boerma, Tessel**  
Utrecht University, Netherlands  
**Timmermeister, Mona**  
Utrecht University, Netherlands  
**Blom, Elma**  
Utrecht University, Netherlands

In this contribution, we present the outline and methodology of a recently started five-year research programme on minority children in the Netherlands, funded by the Netherlands Organisation for Scientific Research (NWO grant no. 016.124.369). The programme is set up to explore relationships between language abilities and cognitive development in bilingual minority children in the Netherlands. In the Netherlands, as
in many other countries, minority children are overrepresented in special education, and this could be due to diagnostic tools falling short for this population (Smeets et al., 2010). One project within the programme will be concerned with the improvement of the diagnosis of bilingual minority children whose performance in Dutch - the majority language in the Netherlands - raises worries. The second project seeks to investigate whether the cognitive advantages for bilingual children found in the North American context are also found in bilingual minority children in the Netherlands (Engel de Abreu et al., 2012), and aims at identifying the specific conditions for the bilingual advantage. A third project will focus on the effects of the combined conditions, bilingualism and language impairment. In this programme the narrative task, nonword repetition task and executive function tasks developed within the COST Action ISO804 will be used. Information regarding children’s language levels and their environment will be collected using parental questionnaires, made available through the same COST Action.

34. Diagnostic validity of different working memory measures on a Serbian sample of children with and without SLI

Živanović, Marko
Bjekić, Jovana
Purić, Danka
Vuksanović, Jasmina
University of Belgrade, Serbia
University of Belgrade, Serbia
University of Belgrade, Serbia
State University of Novi Pazar, Serbia

A large body of evidence suggests that deficient working memory provides a clinical marker of specific language impairment (SLI) in preschool children. The aim of this study was to evaluate diagnostic validity of different working memory and short term memory measures among children with and without SLI. 35 children participated in the research, divided into two groups which were matched on age and fluid abilities (Raven’s Colored Progressive Matrices raw score). Typically developing monolingual group consisted of 19 children age 5;1 to 6;6 (M=5;9). Second group consisted of 16 monolingual children age 3;7 to 7;2 (M=5;5) diagnosed with SLI. All children were assessed using three tasks from computerized Automated Working Memory Assessment: Counting Recall task (verbal complex span), Odd-One-Out task (nonverbal complex span), Dot matrix (visuo-spatial short term memory), and two Nonword repetition tasks (verbal short term memory). Group differences emerged on all tasks except from Dot Matrix. The results of EFA (Alpha factoring extraction, with Promax rotation) suggested that two factor solution is best fitting the data, explaining 71% of variance. First factor was saturated with verbal and noverbal complex span measures (.85 and .83 respectively), whereas second factor was saturated with two measures of verbal short term memory (.85 and .84). These results are in line with theoretical expectations. Discriminant analysis (with these two factor scores as predictors) revealed that canonical
discriminant function, which is primarily saturated with verbal short term memory measures, correctly classifies 86% of children into SLI and TD group. Results suggest that measures of verbal short term memory can be a useful tool in SLI diagnostics.

35. Working memory and executive functions in Hungarian children with Specific Language Impairment

Lukács, Ágnes  BME, Budapest, Hungary
Kemény, Ferenc  BME, Budapest, Hungary
Ladányi, Enikő  BME, Budapest, Hungary
Fazekas, Kata  BME, Budapest, Hungary

Numerous results show that SLI is often associated with impairments in working memory (WM) in executive functions (EF), but the nature, extent and generality of these deficits is yet unclear, as is their relationship with language abilities. There is also a growing body of research demonstrating that executive functions, more specifically control abilities play an important role in production and comprehension at both the word and the sentence level where representations compete. We present results from linguistic and non-linguistic tasks examining WM and EF in Hungarian-speaking children with SLI and their age-matched typically developing peers (TD). The tasks presented include tasks for testing inhibition, updating and simple and complex working memory. The design allows us to examine whether verbal and non-verbal executive and WM functions are similarly affected in SLI. Children with SLI were found to be impaired on several verbal and nonverbal measures.

36. Verbally loaded WM, but not Non-verbal loaded WM is challenging for Danish teens with SLI

Jensen de Lopez, Kristine  Aalborg University, Denmark
Knudsen, Hanne S.  Aalborg University, Denmark
Kronqvist, Bjarke Sund  Aalborg University, Denmark
Jørgensen, Karina Niss  Aalborg University, Denmark

It is unclear which cognitive domains children with SLI show deficits on. For older children Lucy et al’s 2012 showed that non-verbal loaded WM (NV-LWM) is impaired, however Windsor et al’s 2008 showed a ceiling effect for accuracy in similar tasks. This study examines the cognitive profiles of 27 children (SLI = N13, TD = N14). Each SLI child scored at least 1.5 SD below the standardized score on TROG-2 and was recruited from schools for children with language delay. The SLI children were
37. Cross-language Differences and Locus of Codeswitching in a Sentence Repetition Task with Typically Developing and Language Impaired English-Hebrew Bilingual Children

Soesman, Aviva
Tel Aviv University, Israel

Walters, Joel
Bar-Ilan University

Cross-language differences and locus of codeswitching (CS) were examined to assess effects of language (L1-English/L2-Hebrew), syntactic function (subjects/objects) and part of speech (nouns/verbs) in bilingual preschool children’s performance on sentence repetition tasks in both languages as a potential clinical marker of language impairment in bilingual children.

Participants. 19 children (15 TLD/4 SLI), ranging in age from 5;5-6;5. SLI children tested at 1-1.5 standard deviations below norm on standardized measures in both languages.

Stimulus materials. Codeswitched sentences were designed to investigate syntactic function (subject/object) and part of speech (noun/verb). All codeswitches were single lexical items embedded mid-sentence in a frame which consisted of an animate subject, a transitive verb, a direct object NP, and a temporal or locative prepositional phrase, e.g. The melex opened the umbrella before the rain (L1-English matrix/CS subject).
Ha-more kara et ha-story be-bet ha-sefer (L2-Hebrew matrix/CS object)

A total of 36 test sentences for each language (6 each with codeswitched subjects, objects, nouns and verbs and 12 syntactically parallel, non-CS sentences) and 12 non-CS 'fillers' served as stimuli. Sentences were matched across languages for semantic content, word order and number of words preceding the switch. Overall sentence length ranged from 7-8 words in English and 5-6 words in Hebrew.

Procedure. Sentences were recorded by a fluent female bilingual English-Hebrew speaker in a sound-proof studio and presented via high-resolution audio headphones. Separate sessions on different days were conducted for each language, counterbalanced for order, half of the participants beginning with L1/English, half with L2/Hebrew.

Data analyses. Responses were audiorecorded and transcribed. Data were analysed for repetition of the entire sentence, for repetition of the target CS element, and errors (omissions, substitutions and codeswitching at non-target locations). Only the data for repetition of the entire sentence are reported here.

Results. Accuracy rates ranged from 46%-68% on whole sentences. Performance on CS sentences was similar to performance on non-CS sentences. Overall, more accurate repetition was found for codeswitching in English matrix sentences (L1’L2), for subject switches and for noun switches than for Hebrew matrix sentences, objects and verbs. Patterns of performance for TLD participants were remarkably similar to those of children with SLI for CS/non-CS, subject/object, and noun/verb stimuli, but at lower rates of accuracy. The noun/verb task for Hebrew matrix sentences resulted in particularly low accuracy rates for switching from Hebrew to English on verbs, especially for SLI children.

Conclusions/implications. Results support production data based on narrative tasks, i.e. better performance on L1/Eng’L2/Heb CS than in the opposite direction. Similar performance on CS and non-CS sentences indicates that CS is part of bilingual children’s everyday language use. There is no indication here that CS is a clinical marker, but group differences in level of accuracy encourage us to search for other aspects of CS which may be more fruitful.

38. Verbal and non-verbal working memory in monolingual and bilingual preschoolers

Karwala, Magdalena
Jagiellonian University, Kraków, Poland

Białecka-Pikul, Marta
Jagiellonian University, Kraków, Poland

Wodniecka, Zofia
Jagiellonian University, Kraków, Poland

This study is a part of the BI-SLI-PL project (http://psychologia.pl/bi-sli-pl/) assessing linguistic and cognitive development of bilingual preschoolers. The aim of current analyses is to compare working memory performance in a group of Polish-English bilingual preschoolers with their Polish monolingual peers (aged 4;6-7;0). Children were tested on a set of working memory tasks: short-term auditory memory and verbal working memory.
were assessed by an adaptation of "Digit span" test from Weschler Intelligence Scale (bilinguals performed the task in both languages), whereas the visuospatial short-term memory and nonverbal working memory was assessed by the Corsi Block Tapping Task. The data analyses are currently in progress. We will discuss similarities and differences in short term and working memory between monolingual and bilingual children.

39. Attentional functioning in monolingual and bilingual children: evidence from childANT

Kołak, Joanna
Wodniecka, Zofia
Białecka-Pikul, Marta

Jagiellonian University, Kraków, Poland

The study is a part of BI-SLI-PL project (http://www.psychologia.pl/bi-sli-pl) assessing linguistic and cognitive development of bilingual children at the school entrance age.

The aim of the analyses is to compare performance of a group of 4,5-6,5 year old Polish-English bilingual children living in the UK with their monolingual Polish only speaking peers living in Poland in the child version of Attention Network Test (ANT) developed by Rueda et al (2004). The task allows to evaluate the three separate attention networks’ processing efficiency (Fan et al., 2002) and it is based on flanker and warning cues manipulation. It enables measuring conflict resolution and the functioning of alertness and orienting in attention.

Bilingual and monolingual children will be compared on general performance in these task as well as in the three aspects of attention. Based on a study by Yang and Lust (2011) who employed the ANT task to test Korean-English preschoolers, we expect bilingual children to outperform monolinguals in overall RTs and overall accuracy. Moreover, based both on the Yang & Lust study as well as on two more recent investigations (Poarch & van Hell, 2012; Engel de Abreu et al., 2012), we also predict that bilingual children will demonstrate a particular advantage in the ability to resolve conflict assessed by the flanker effect. The data collection process is being completed.
40. Working Memory Test

Kaczan, Radosław  Educational Research Institute, Warsaw, Poland
Rycieński, Piotr  Educational Research Institute, Warsaw, Poland

Working memory may be described with the help of a metaphor of the central executive system or a central processor which is responsible not only for storing the information and placing it in the non-volatile memory but it is also responsible for all the operations performed on this material. A Working Memory Test has been prepared within the operations of the SUEK (School Effectiveness Research) Unit of the Educational Research Institute. The test was executed by Millward Brown SMG/KRC in cooperation with the Interdisciplinary Center for Applied Cognitive Studies associates. The test involved 325 children aged 6 and 7. The working memory test includes three tasks to be solved by a child on a device fitted with a touch screen. Each task corresponds to one of the working memory functions distinguished by Klaus Oberauer and others (2000, 2003). In this model, three basis working memory functions are distinguished:

- Simultaneous storage and performance; Supervision; Coordination. The research studies conducted by I. Krejtz (2012) indicated that in the case of Polish sixth-graders, working memory was an important factor forecasting school achievements in math and Polish language; similar interrelations were obtained for tested middle and secondary school students.
Lexicon

1. Monolingual CLT results - a cross-linguistic comparison

<table>
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<tr>
<th>Name</th>
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<tr>
<td>Hansen, Pernille</td>
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<td>Kalninytė, Agne</td>
<td>Vytautas Magnus University, Kaunas, Lithuania</td>
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<td>Comenius University, Bratislava, Slovak Republic</td>
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<td>Slančová, Daniela</td>
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<td>Southwood, Frenette</td>
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<td>Anadolu University, Eskişehir, Turkey</td>
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<td>Vuksanović, Jasmina</td>
<td>State University of Novi Pazar, Serbia</td>
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Vocabulary size is claimed to predict both current and prospective grammar (Dionne et al. 2003), later literacy (Lee, 2010) and school success. Bilingual children tend to have smaller vocabularies in each language than their monolingual peers (McRae et al. 2005), presenting a possible risk for low educational achievement in that language. As a consequence, bilingual children risk being misdiagnosed with language impairment (Bedore & Pena, 2008). Thus accurate measures of word comprehension and production and of lexical processing in both languages of bilinguals are needed.

Within COST Action IS0804, a set of cross-linguistic lexical tasks (CLT) has been constructed to assess bilingual preschoolers’ vocabulary and lexical processing. The tasks were made to facilitate full comparability of results within language pairs in bilingual children and across all languages: A list of 300 words shared across 34 different languages was established, and culturally reduced pictures were created for all words. Age of acquisition and measures of phonological and morphological complexity were established for each word in each language. Items for each version of CLT were then selected based on the measures for the words in that language.

In this paper, we will present monolingual CLT results from more than 200 children.
aged 3-6, speaking 9 different languages: Afrikaans, Finnish, Lithuanian, Norwegian, Polish, Serbian, Slovak, South African English and Turkish. We analyse the effects of word characteristics (age of acquisition and complexity) and informant properties (age and gender) on the children’s performance, and investigate comparability across all languages controlling for these factors.

This poster is related to an oral presentation on the CLT construction rationale (Haman & Łuniewska) and to 3 other posters presenting CLT cross-linguistic results of typically developing bilinguals (Łuniewska et al.), monolinguals with SLI (Kapalkova et al.) and bi-SLI children (Southwood et al.).

2. Bilingual CLT results - a cross-linguistic comparison

Łuniewska, Magdalena
University of Warsaw, Poland

Bjekić, Jovana
State University of Novi Pazar, Serbia

Chyl, Katarzyna
University of Warsaw, Poland

Ege, Pinar
Ankara University, Turkey

Hansen, Pernille
University of Oslo, Norway

Kouba Hreich, Edith
Saint Joseph University, Beirut, Lebanon

Messarra, Camille
Saint Joseph University, Beirut, Lebanon

Onraet, Lauren
Stellenbosch University, South Africa

Simonsen, Hanne Gram
University of Oslo, Norway

Southwood, Frenette
Stellenbosch University, South Africa

Tunçer, Müge
Anadolu University, Eskişehir, Turkey

Ünal, Özlem
Anadolu University, Eskişehir, Turkey

Vuksanović, Jasmina
State University of Novi Pazar, Serbia

Živanović, Marko
University of Belgrade, Serbia

Haman, Ewa
University of Warsaw, Poland

Bilingual children are claimed to have limited vocabulary size in each language when compared to their monolingual peers (Bialystok et al., 2010; McRae et al.2005). That indicates a possible risk for low educational achievement in one of bilinguals’ languages. As a consequence, bilingual children are at risk of misdiagnosis of language impairment (Bedore & Pena, 2008). Thus accurate measures of vocabulary size (word comprehension and production) and lexical processing in both languages of bilinguals are necessary.

Within COST Action IS0804, cross-linguistic lexical tasks have been constructed in 17 languages so far. CLTs enable assessment of bilingual children vocabulary size and lexical processing. The tasks were designed in a way that makes it possible to compare results within language pairs in bilingual children and across all languages: in each language, the items were selected according to the same criteria (related to age of
acquisition, complexity of the words and results of a cross-linguistic naming study).

In this poster, we present bilingual data from 6 different languages: Afrikaans, Lebanese, Norwegian, Polish, Serbian and Turkish (100 children aged 4-6). The effects of age of acquisition and complexity of words on children’s performance are analyzed with respect to participants’ characteristics (such as age and gender) across the languages.

This poster is related to an oral presentation on the CLT construction rationale (Haman & Łuniewska) and to 3 other posters presenting CLT cross-linguistic results of typically developing monolinguals (Hansen et al.), monolinguals with SLI (Kapalkova et al.) and bi-SLI children (Southwood et al.).

3. Monolingual SLI CLT results - a cross-linguistic comparison

Kapalková, Svetlana
Comenius University, Bratislava, Slovak Republic

Bjekić, Jovana
State University of Novi Pazar, Serbia

Bjerkan, Kirsten M.
Statped, Norway

Hansen, Pernille
University of Oslo, Norway

Ribu, Ingeborg
University of Oslo, Norway

Simonsen, Hanne Gram
University of Oslo, Norway

Slančová, Daniela
Prešov University, Slovak Republic

Tokárová, Ol’ga
Institut of Child Language, Slovak Republic

Vuksanović, Jasmina
State University of Novi Pazar, Serbia

Vocabulary size can predict grammar (Dionne et al., 2003), later literacy (Biemiller, 2007; Lee, 2010) and school success (Hoff, 2009). Several studies show that children with LI groups showed significantly lower word learning performance than typical peer groups and equivalent performance to typical younger language-matched groups (Kan, Windsor, 2010). Object naming and action naming differentiates TD children from children with SLI age matched. The naming abilities of SLI children are commensurate with their vocabulary level. Their naming errors suggest immaturities in semantic representation. Action naming is significantly more difficult than object naming, but the noun-verb gap that characterizes the performance of children with SLI is appropriate for their vocabulary level (Sheng, McGregor, 2010).

We present a new method to assess comprehension and production of nouns and verbs in group of SLI children in four typologically different languages - Serbian, Slovak and Norwegian. In addition to analysing performance in comprehension task, electronic version of test allows us to measure reaction time processing words as well. Performance in the area of production nouns and verbs, comprehension nouns and verbs, and reaction time will be compared between two groups - SLI children and TD- age matched children. Similar profile of results are expected for performance SLI children from typologically different languages as Serbian, Slovak and Norwegian are.
This poster is related to an oral presentation on the CLT construction rationale (Haman & Łuniewska) and to 3 other posters presenting CLT cross-linguistic results of typically developing monolinguals (Hansen et al.), bi-TD children (Łuniewska et al.) and bilinguals with SLI (Southwood et al.).

4. Bilingual SLI results - a cross-linguistic comparison

Southwood, Frenette  
Messarre, Camille  
Kouba Hreid, Edith  
Saliby, Christel  
Sabine, Sarkis  
Łuniewska, Magdalena  
Haman, Ewa  
Stellenbosch University, South Africa  
Saint Joseph University, Beirut, Lebanon  
Saint Joseph University, Beirut, Lebanon  
Saint Joseph University, Beirut, Lebanon  
Saint Joseph University, Beirut, Lebanon  
University of Warsaw, Poland  
University of Warsaw, Poland

Bilingual children with specific language impairment (bi-SLI children) are claimed to have delayed development in their onset of first words and first word combination. They tend to start out as late talkers and the initial delay is usually not resolved. They typically exhibit lexical abilities below those of their bilingual typically developing (bi-TD) peers (Leonard, 1998; Rice, 2004).

Studies on lexical characteristics on bi-SLI children show slower rates of vocabulary growth with poor learning strategies, word finding difficulties, conceptual simplifications or lexical approximation errors. Bi-SLI children also show better abilities for nouns than for verbs (Simonsen, 2002; Bedore & Pena, 2008; Kambanaros et al., 2011).

Some of these characteristics are also observed in bi-TD children, which leads to underestimation of such children’s vocabulary when assessed in one language only (Bedore & Pena, 2008). Thus accurate measures of vocabulary size (word comprehension and production) and lexical processing using cross-linguistic tasks are necessary to highlight specific lexical patterns in bi-SLI children.

Within COST Action IS0804, cross-linguistic lexical tasks have been constructed in 17 languages so far. CLTs enable assessment of bilingual children’s vocabulary size and lexical processing. The tasks were designed in a way that makes it possible to compare results within language pairs in bilingual children but also across languages: in each language, the items were selected according to the same criteria (related to age of acquisition, complexity of the words and results of a cross-linguistic naming study).

This poster presents the result of CLTs administered to bi-SLI children. Data were collected from two different languages, Lebanese (16 bi-SLI children aged 5;8 to 7;8) and South African English (5 bi-SLI children aged 4;3 to 6;10).

Bi-SLI children perform below bi-TD children for expressive and receptive lexical skills. Bi-SLI children gave particular types of answers, such as gestures or onomatopoeia, not given by bi-TD peers. They also perform better on nouns than verbs. There were
significant differences between bi-TD and bi-SLI for noun comprehension and production and for verb comprehension and production. In conclusion, COST Action CLTs are reliable to help in identifying bi-SLI children among bilinguals at least in two different languages.

This poster is related to an oral presentation on the CLT construction rationale (Haman & Šuniewska) and to 3 other posters presenting CLT cross-linguistic results of typically developing monolinguals (Hansen et al.), bi-TD children (Łuniewska et al.) and monolinguals with SLI (Kapalkova et al.).

5. (In)Sensitivity of Serbian Version of CLT to SES

Živanović, Marko
Vuksanović, Jasmina
Bjekić, Jovana

University of Belgrade, Serbia
State University of Novi Pazar, Serbia
University of Belgrade, Serbia

In clinical practice, we tend to use assessment tools that are equally applicable to diverse populations of children, therefore tests we use have to be relatively culture-fair and insensitive to child’s social-economic status (SES). Child’s vocabulary assessment may be especially sensitive to different social and environmental influences because vocabulary knowledge taps crystallized abilities which depend on social and cultural stimulation, education, experience, etc. The aim of the current study is to examine sensitivity of Serbian version Cross-linguistic Lexical Tasks (CLT) to SES. A total of 44 typically developing monolingual children aged 4;6 to 6;8 years, divided into two SES groups (22 children of low SES and 22 of high SES) participated in the study. Groups were matched on age, gender, and fluid intelligence. The child’s SES status was indexed by educational level of both parents and average monthly sum of childcare expenses. Additionally, groups differed on total parents’ monthly income, type of kindergarten that are attending (private or public) and number of people in household. All children were tested using Serbian version of CLT, which consists 128 items divided into 4 subscales assessing child’s comprehension and production of verbs and nouns. Results have shown no differences between tested groups of children on CLT. Moreover, group differences did not emerge on any of the CLT’s subscales when analyzed separately. These results suggest that vocabulary assessment by Serbian version of CLT is insensitive to SES. This feature makes CLT appropriate vocabulary assessment tool for the use in clinical context.
6. Cross-Linguistic Lexical Task for Turkish: Comparison of SLI, Bilingual, and Monolingual Data

Ünal, Özlem  
Anadolu University, Eskişehir, Turkey
Ege, Pınar  
Ankara University, Turkey
Tunçer, Müge  
Anadolu University, Eskişehir, Turkey

Cross-linguistic Lexical Task (CLT) is a rapid screening test, which allows us to compare bilingual data across languages. The aim of this study is to compare monolingual SLI, Turkish-German bilingual and Turkish monolingual data.

For this purpose, Turkish version of the CLT was applied to 16 Turkish-German bilingual and aged matched Turkish monolingual children. Ages of participants ranged from 4;0 to 7;11. Ultimately 6 monolingual children with SLI were included to study. Each child participated in paper-based versions of the task. All the CLT guidelines were followed during application of the subtests.

Data of the Turkish monolingual children are still being collected. After data collection detailed statistical analysis will be done by comparison of the groups (bilingual, monolingual, SLI), tasks and soft versus strict scoring.

7. CLT results from bilingual Polish-Norwegian children compared to their monolingual peers

Hansen, Pernille  
University of Oslo, Norway
Ribu, Ingeborg  
University of Oslo, Norway
Chyl, Katarzyna  
University of Warsaw, Poland
Haman, Ewa  
University of Warsaw, Poland
Łuniewska, Magdalena  
University of Warsaw, Poland
Markiewicz, Stefan  
University of Warsaw, Poland
Simnonsen, Hanne Gram  
University of Oslo, Norway

Vocabulary size is an important predictor of grammatical development (Dionne, Dale, Boivin, & Plomin, 2003), literacy, and later school success (Biemiller, 2007; Lee, 2011). Since bilingual children tend to have smaller vocabularies in each of their two languages (Bialystok, Luk, Peets, & Yang, 2010) they might be at risk of falling behind their monolingual peers in language development. So far all lexical assessment tools have been created for monolinguals, not taking bilingual children’s total lexical skills into account. As part of the COST Action IS0804 (www.bi-sli.org), Cross-linguistic Lexical Tasks (CLT) have been developed to assess bilingual children’s lexical competence. The tasks
were constructed according to a specific procedure established for 34 languages, aiming to ensure full comparability of results both within each pair of languages in bilingual children as well as across all languages studied.

In this poster, we will present CLT results from a group of bilingual Polish-Norwegian children, compared to their monolingual Polish and Norwegian peers. The bilingual children live in Norway, and are aged between 3 and 6 years. Monolingual control groups were recruited in Poland and Norway and were matched for age and gender with the bilingual group. We assess both comprehension and production, analyzing correct performance as well as reaction time with respect to psycholinguistic factors such as Age of Acquisition and phonological and morphological complexity.

8. CLT in Norwegian: Data from BiTD, MoTD and MoSLI children

Bjerkan, Kirsten M. Statped, Norway
Ribu, Ingeborg University of Oslo, Norway
Hansen, Pernille University of Oslo, Norway
Simonsen, Hanne Gram University of Oslo, Norway

The ability to communicate is vital to all humans, and in order to participate fully, knowledge of the vocabulary of the given language is required. Language impaired children often have a limited vocabulary compared to their peers (Bishop and Leonard 2000). Both their comprehension and their production can be affected. Also bilingual children, even when they are typically developing, may have a smaller vocabulary in one or both of their languages than their monolingual peers (Lervig and Aukrust 2010). It can be difficult to determine if a bilingual child with a limited vocabulary has an underlying language impairment, or whether the limited vocabulary is part of a typical bilingual development (Paradis, Genesee and Crago).

As part of the COST Action IS0804 (www.bi-sli.org), Cross-Linguistic Lexical Tasks (CLT) have been developed to assess bilingual children's lexical competence. The tasks were constructed according to a specific procedure established for 34 languages, aiming to ensure full comparability of results both within each pair of languages in bilingual children and across all languages studied.

In this poster, we will present CLT results from monolingual Norwegian SLI-children, compared to their typically developing monolingual and bilingual (Norwegian-Polish) peers. We assess both comprehension and production, analyzing correct performance as well as reaction time with respect to psycholinguistic factors such as Age of Acquisition and phonological and morphological complexity. CLT data from the SLI children will also be compared to results from other tests from the same children.
9. Assessing Lebanese bilingual children: the use of specific lexicon tasks

Saliby, Christel
SarkisGhanem, Sabine
dos Santos, Christophe

Université Saint Joseph, Beirut, Lebanon
Université Saint Joseph, Beirut, Lebanon
Université François-Rabelais de Tours, France

Lebanon is known for its multilingual identity. Starting at a very young age, Lebanese children are immersed in this rich linguistic context that directly affects their language development more specifically their lexical skills. Since norms for vocabulary acquisition in Lebanese children do not yet exist, clinical evaluation based on normative data and appropriate tools remains difficult among speech and language therapists. Moreover, individual variations may exist between bilingual children due to factors such as age of acquisition and amount of exposure to languages. The aim of this study is to explore and compare lexical performances of typically developing Lebanese bilingual children (BI-TD) and those with SLI(BI-SLI), aged between 5 years 7 months and 7 years 10 months, using experimental lexical expressive and receptive tasks, originally designed by members of the COST Action IS0804, and specific to the Lebanese context. The first results show that typically developing children have better lexical skills, especially expressive, than their peers with specific language impairment. Furthermore, expressive and receptive performances of both groups of children depend on the grammatical category (nouns and verbs). In fact, Bi-TD children are more accurate at naming and designating verbs than the Bi-SLI group. Moreover, vocabulary skills vary with age of acquisition and amount of exposure to the languages. These lexical experimental tasks seem to show the nature of bilingual lexical variations and the similarities as well as the differences between both groups BI-TD and BI-SLI.

10. Receptive and expressive lexical abilities in Polish-English bilingual preschool children

Tarajko, Katarzyna
Łuniewska, Magdalena
Chyl, Katarzyna
Kacprzak, Agnieszka
Haman, Ewa

University of Warsaw, Poland
University of Warsaw, Poland
University of Warsaw, Poland
University of Warsaw, Poland
University of Warsaw, Poland

This study is a part of BI-SLI-PL project (http://www.psychologia.pl/bi-sli-pl) assessing linguistic and cognitive development of bilingual children at the school entrance age. We
present partial results of the project related to receptive and expressive lexical abilities in Polish-English bilingual preschool children aged 4;6-6;6 (N=33) using standardized tests enabling to assess word comprehension (OTSR; Haman & Fronczyk, 2012) for Polish and BPVS (Dunn, Dunn, Styles, & Sewell, 2009) for English and production (ZNO; Haman & Smoczyńska, 2010) for Polish and EVT (Williams, 2007) for English. The bilingual children’s performance in the picture identification and picture naming tasks in Polish was compared to the results for Polish monolingual group (aged 4;3-6;7, N=71) and to monolingual norms available for the tests in both Polish and English. Cross-linguistic comparisons involved the language dominance (including verification of parental report). Comparisons against norms involved possible delay in both receptive and expressive vocabulary as predicted by previous research (Bialystok, Luk, Peets, & Yang, 2010) in both languages of the bilingual children. Preliminary results show significantly lower scores on comprehension and production of Polish words in bilingual children in comparison to their monolingual peers. Polish-English bilinguals have better receptive than expressive lexical abilities in both languages. We found that parental report on language dominance is often incongruent with the results of standardized vocabulary tests of bilingual children.

11. The vocabulary development of Polish-speaking children in Iceland

Thordardottir, Elin ReykjavikurAkademian, Iceland
Jonsdottir, Frida B. Reykjavik’s Department of Education, Iceland
Miękisz, Aneta University of Warsaw, Poland
Kuś, Katarzyna University of Warsaw, Poland
Haman, Ewa University of Warsaw, Poland

Bilingual children’s vocabulary development is highly dependent on environmental factors, notably the amount of input received in each of the two languages. However, more research is needed on other factors that may also exert an influence, including the particular language combination, and the quality of the input. Recent research, for example, suggests that children raised monolingually speaking a heritage language (a language not spoken widely in the surrounding community) do not develop language at the same rate as children who acquire the majority language of their community, suggesting that incidental exposure outside the home plays an important part in addition to input received at home. This study examines the vocabulary acquisition of young Polish-speaking children born and raised in Iceland, and compares their Polish and Icelandic vocabulary respectively to that of monolingual children acquiring the languages in Poland and Iceland. Participants include 16 children raised in Polish-speaking homes in Reykjavik, Iceland, ranging in age from 18 to 36 months. The children were recruited through preschools in Reykjavik, and are thus exposed to Polish at home, and Icelandic at
Parents filled out the Polish version of the MacArthur-Bates Communicative Development Inventory (Smoczyńska, 1999), a parent report checklist, as well as detailed questionnaires on the child's general development and language exposure. Preschool teachers were asked to fill out the Icelandic version of the MacArthur-Bates CDI (Elin Thordardottir, 1998). Results will be presented on the children's total vocabulary and vocabulary composition. Their vocabulary development will be discussed in relation to their exposure to each language. In addition, this project is part of a larger study examining the Polish development if children in other European countries, including the UK (the Bi-SLI-PL project; http://psychologia.pl/bi-sli-pl/) and is also connected with the wide cross-linguistic comparison of bilingual children lexical development conducted within COST IS0804 program (Bi-SLI WG3, CDI study).

12. Early lexical development of French-Portuguese bilingual children: a CDI-adaptation study

**dos Santos, Christophe**  
Université François-Rabelais de Tours, France

**Kern, Sophie**  
Université de Lyon, France

This study is part of the CDI study carried out by WG3 within COST Action IS0804 and compares lexical development in a sample of 30 simultaneous French-Portuguese bilingual children between 24 and 36 months of age and living in France. We used the French (IFDC) and the Portuguese (IPDC) adaptations of the MacArthur-Bates Communicative Development Inventory (MCDI). These inventories are parental reports mainly used for assessing lexical development. For each child, one IFDC questionnaire, one IPDC questionnaire and an adaptation of the Questionnaire for Parents of Bilingual Children (PaBiQ) (COST IS0804, 2011) were collected. The adaptation of the PaBiQ was used to document the level of bilingualism and child development history. We only selected normal developing children who have at least one parent speaking European Portuguese on a regular basis. We excluded both preterms and multiple birth children. Data from the IFDC was compared to the available French monolingual norms. This comparison was not possible for the IPDC as its norms have not been published yet.

Our first hypothesis is that bilingual environment does not hinder lexical development between the ages of 24 and 36 months. Our data show that our subjects don’t exhibit any lexical development delay compared to their monolingual French peers. This result is also found when comparing the subgroup of our 18 children aged between 24 and 30 (t = 0.28, p = 0.77).

Our second hypothesis was that grammatical distribution of words was the same between monolinguals and bilinguals. The results confirm our hypothesis with no statistically significant difference between monolingual and bilingual. We explain this result by the type of bilingualism at work in our population: most of our children were born in France, live in a French speaking environment, and show more proficiency in
Across languages 50 spoken words or less at the age of 24 months has been proven to be of diagnostic value for indicating a risk for language development delay. It is not yet clear how this criterion holds for children growing up with two languages. The aim of the present study is to examine the early lexical skills as well as other risk factors for language delay (family history, frequent ear infections, parental concern, etc.) in Turkish-German children growing up in Germany.

23 children (10 female) aged 16-36 months (mean age 24.9 months, SD 6.3) were investigated using a German CDI-type questionnaire ELAN (Bockmann & Kiese-Himmel, 2006; 2012), the Turkish CDI TIGE (Acarlar et al., 2009), and the COST background questionnaire. Parental education levels were relatively low with over half of the parents having completed only secondary education. The mean frequency of exposure (on a scale 0-5, 5 being the highest) was 3.2 (SD 0.8) for Turkish and 1.6 (SD 0.7) for German.

The number of words spoken in Turkish was on average 178.4 words (SD 197.8) and in German on average 50.9 (SD 68.4). Total vocabulary (TV) was 229.4 (SD 231.5) and total conceptual vocabulary (TCV) was 207.3 (SD 211.2). This difference was significantly different (p < 0.003). None of the children at the age of 24 months or above showed a TV or TCV below 50 words, however, 54.5% showed less than 50 words in their L2 German. 12 children showed one or more risk factors but they did not differ from children without risk factors in any of the language measures.

Crucially, the data stresses the importance of combining both languages in the assessment of bilinguals. Longitudinal studies must follow up the 50-word criterion as well as the relevance of the other risk factors in bilingual children.
14. Early lexical production in children receiving Maltese-dominant exposure: outcomes of a parental report study

Gatt, Daniela  
University of Malta

This study is part of a cross-linguistic investigation within COST Action IS0804 that looks at early lexical production in children exposed to different language pairs, drawing on the premise that limited lexical expression in young children may be the first indicator of a language delay. In turn, the latter signals risk for persistent Specific Language Impairment (SLI). Among the numerous investigations addressing early lexical expression, very few have explored this aspect of language development in children exposed to more than one language. Moreover, assessment of productive vocabulary ability in the third year of life is highly relevant to the identification of language delay. The current study attempts to take these considerations into account by investigating the expressive vocabulary skills of 33 children aged 24 to 28 months whose language input was predominantly Maltese. The participants’ language environment was distinctive, in that they were also exposed sporadically to English through their caregivers’ language mixing. In addition, bilingualism was present at a societal level, offering further indirect exposure to English.

The children’s word production was measured through parental report, using a bilingual adaptation of the vocabulary checklist found in Fenson, Dale, Reznick, Thal, Bates, Hartung, Pethick and Reilly’s (1993) first edition of the MacArthur Communicative Development Inventories: Words and Sentences (CDI:WS). Minimum, maximum and mean vocabulary scores were derived, providing reference measures for the identification of language delay in the absence of normative data. Statistical effects of demographic and language exposure variables on vocabulary measures were examined. The influence of risk factors for language delay on the children’s lexicon size was also evaluated. The outcomes of these analyses will be discussed. The relevance of results to the identification of language delay in children receiving Maltese-dominant exposure will be explored.

15. The Irish-English Communicative Development Inventory: A longitudinal study of bilingual language acquisition in a minority language context

O’Toole, Ciara  
University College Cork, Ireland
Hickey, Tina  
University College Dublin, Ireland

Irish is now a threatened minority language in Ireland which is generally acquired in
a bilingual context with English and shows significant influence from English. For this reason, the adaptation of the MacArthur- Bates Communicative Development Inventories to Irish involved developing a single bilingual test in order to produce the most accurate and sensitive profile of children’s acquisition of Irish and English. Here we report on how children aged 17-36 months acquired vocabulary, including total vocabulary and total conceptual vocabulary across word classes, and how variables such as language environment and risk factors for language impairment influenced the outcomes. Of particular interest are the longitudinal data in this study which enabled us to assess the impact of the changing language environment (measured by the Developmental and Language Background Questionnaire created for the COST project) on the acquisition of Irish and English vocabulary in individuals over time. The results contributed to a larger crosslinguistic study on early vocabulary acquisition in bilingual children within Working Group 3 of the COST Action IS0804 the COST Action.

16. Assessment of grammatical and lexical skills of Polish bilinguals and monolinguals by Communicative Development Inventory

Sienkiewicz, Joanna
Miękisz, Aneta
Kuś, Katarzyna
Katsos, Napoleon
O'Toole, Ciara
Haman, Ewa

University of Warsaw, Poland
University of Warsaw, Poland
University of Warsaw, Poland
University of Cambridge, UK
University College Cork, Ireland
University of Warsaw, Poland

We present data gathered from 130 children: 70 Polish-English bilinguals and 60 Polish monolinguals (23-36 months). The study is a part of an ongoing investigation conducted within the framework of a Polish BI-SLI-PL project (http://www.psychologia.pl/bi-sli-pl) and COST Action IS0804 - WG3. Our project aims at assessing cognitive and linguistic development of Polish bilingual children in the UK and Ireland. In the current study, parents of bilingual children were asked to fill the CDI forms (Polish adaptation of the Communicative Development Inventory, Smoczyńska, 1999) as well as a detailed Parental Questionnaire prepared by the WG3 of the COST Action IS0804 (Gatt, O’Toole, Haman, 2011). Variables such as age, gender, type of exposure (simultaneous vs sequential), age of exposure to English, language input (% of Polish & English), and SES were controlled for. We report the preliminary results obtained for children who had both parts (the lexical and grammatical) of the Polish CDI forms filled in. The results indicate that monolingual children (MoL) outperformed bilingual children (BiL) in scores obtained for grammatical and lexical skills. The difference was statistically significant: Lexical part (t = 5.24; p < 0.001): MoL: M = 0.61, SD = 0.28; BiL: M = 0.35, SD = 0.28 and grammar (t = 5.18; p < 0.001): MoL: M = 0.61, SD = 0.24; BiL: M = 0.37, SD = 0.28. There was also an effect of gender: girls (monolingual and
bilingual) had significantly higher scores than boys in lexical and grammar part. There was high correlation between grammar and lexicon (Pearson correlations: rMoL = 0.85, rBiL = 0.75). The results support the call for more accurate assessment of language development of bilingual children. We should interpret the data with caution since the adaptation used in the study was designed for monolingual population and there is a great need for tools designed especially for bilingual population (Thordardottir, 2005; De Houwer, 2009).

17. A CDI study of Bilingual English-Hebrew children - why add comprehension?

Ohana, Odelya  Bar-Ilan University, Israel
Armon-Lotem, Sharon  Bar-Ilan University, Israel

The present study evaluates the lexicon of bilingual children in both language as a measure of bilingualism type (balanced or dominant) and typical bilingual development. The parents of 20 English-Hebrew bilingual children, ages 24-36 month (M=31.4, SD=4.3) were asked to complete the CDI in L1/English and L2/Hebrew. The parents were asked to give information on both production and comprehension and complete a background questionnaire. 16 children were simultaneous bilinguals, three were exposed to Hebrew by their first birthday and one at 18 month. Four parents reported family history of language impairment and four reported parental concern, but only one child figured in both groups.

Our findings show that while the group means for the two languages are identical, with 244 words produced in each language, the range is very wide. No correlations were found between L1 & L2 production, suggesting a different acquisition pattern for different children. While eleven of the children showed balanced bilingualism, and nine showed dominant bilingualism (five L1 dominant, of whom two were not simultaneous, and four L2 dominant). The cumulative vocabulary, measured by total number of concepts in both languages (M=416, SD=157.6) places the group within the monolingual mean for this age group, although some of children scored below the monolingual mean in one or both of their languages. L1 production nearly correlated with L1 comprehension (r=.434, p=0.056) while L2 production correlated with L2 comprehension (r=.794, p<0.0001).

Two children, both simultaneous bilinguals, were of a particular interest, since they had a score of more than 1SD below the group mean in both languages: one child (age 24 month) had no family history or parental concerns, but the other (age 32 month) was the child who had both family history and parental concerns. This difference was reflected in their comprehension, where the younger child was performing very well while the older child was again significantly below the mean of his group. That is, the latter child seems to be at risk for SLI.

Our findings reiterate the importance of evaluating vocabulary in both languages,
lend further support to using bilingual vocabulary score as part of language assessment, and show the additive value of testing comprehension and not only production.

18. A Bilectal Adaptation of the MacArthur-Bates CDI in Cyprus

Taxitari, Loukia  
Grohmann, Kleanthes  
Kambanaros, Maria

University of Cyprus
University of Cyprus
University of Cyprus

In Cyprus a very peculiar linguistic situation exists, where the dialect (Cypriot Greek) and the standard language (Standard Modern Greek) co-exist; infants raised in this linguistic community grow up as bilectals, acquiring two forms of the same language simultaneously. The current study involved the first data collection for the Cypriot Greek adaptation of the MacArthur-Bates CDI. In order to collect data for infants' language development an additional questionnaire was used: a Greek adaptation of the Developmental and Language Background Questionnaire. The latter included information about the amount of exposure infants had to the language(s), information about the family and the development of the infant. Both questionnaires were given to parents to complete at home at their own time and pace.

Twenty-two participants from 24-36 months of age were included in the study and none of them was exposed to any language other than Cypriot and Standard Modern Greek. Data for the infants' expressive vocabulary were calculated by assigning one point to each word the parent reported their infants say. Total vocabulary scores were calculated by summing up the points for all words, and total conceptual vocabulary was calculated by subtracting, from total vocabulary scores, points from words occurring in both varieties, both for the CDI as well as for each separate category. Percentage scores were also calculated from both total and conceptual vocabulary scores. Different factors which were predicted to affect vocabulary development were kept constant across infants (age, number of ear infections, birth weight, etc).

Descriptive statistics were computed for the above measures. The analysis showed an average Percentage Total Vocabulary Score of 76% of the CDI words and an average Percentage Conceptual Vocabulary Score of 75%. For the individual semantic categories it was observed that for almost all categories there was an increase in the percentage conceptual vocabulary scores as opposed to the total vocabulary scores (e.g. percentage total furniture and rooms - 69,7% / percentage conceptual furniture and rooms - 74,5%). This indicates that infants appear to use a single word for a concept at this point in development, and not words from both varieties. Implications of this will be discussed.
Nonword repetition (NWR) tasks have gained wide acceptance because they closely match the phonological component of word learning, and correlate with measures of phonological working memory, which is hypothesized to underlie specific language impairment (SLI). The aim of this study was to explore differences in NWR task performance between typically developing and SLI children, as well as discriminative power of NWR when used in clinical purposes. A total of 102 children aged 3;8 to 7;2 years participated in the study. Differences in NWR task performance were examined between three groups of children: 65 TD monolinguals, 21 TD Serbian-Hungarian bilinguals and 16 SLI monolinguals. A subsample of 16 TD monolinguals and 16 SLI children matched on age and fluid intelligence was used for NWR task's discriminative power assessment. Two quasi universal NWR tasks were used. First NWR task consisted of 16 non-words, which were 2 to 5 syllables long, with no consonant clusters. Second NWR task consisted of 40 non-words (2 to 5 syllables), with both consonant clusters and simple consonant-vowel structure. Both tasks were administrated using pre-recordings with Serbian prosody. Results of ANOVA showed main effect of group on both NWR tests ($F(2,99)=16.128$, $p<.001$; $F(2,99)=46.334$, $p<.001$). Post-hoc tests revealed that SLI group differs from both TD monolingual ($p<.001$) and TD bilingual group ($p<.001$) on NWR without consonant clusters as well as on NWR with consonant clusters ($p_{TD\text{mono-SLI}}<.001$; $p_{TD\text{bi-SLI}}<.001$). Discriminative analysis showed that using only NWR tests 88.6% of children are accurately classified into TD versus SLI group. These results suggest that NWR task can be a powerful tool to identify children with language impairment in clinical context.
20. Non-word repetition task as a feasible assessment tool for identifying children with SLI in the Lebanese bilingual context (L1 French or Armenian, L2 Arabic)

Abou Melhem, Nouhad          Université Saint Joseph, Beirut, Lebanon
Tuller, Laurie               Université François Rabelais de Tours, France
Ferré, Sandrine              Université François Rabelais de Tours, France
dos Santos, Christophe       Université François Rabelais de Tours, France

Studies have reported similarities between children with specific language impairment (SLI) and multilingual children with a typical development (TD), particularly in terms of phonological skills. Therefore, clinicians find it difficult to distinguish scores below the standards that are due to a true language disorder from those due to a late or insufficient exposure to that language. A recent study showed that the NW-Rep task is efficient for the identification of phonological disorders and SLI in the Lebanese context among children with Arabic as their L1. Does the NW-Rep task point out BI-SLI children with Arabic as a second language (L2)? And, if so, which structure types best differentiate them from their BI-TD peers? In order to provide an answer to this question, this document studies the effectiveness of a NW-Rep task in distinguishing Lebanese children with SLI from their TD peers in a particular multilingual context where Arabic is not the first language. We report results on NW-Rep task from bilingual children aged between 5 and 8 with Armenian or French as a L1.

21. Phonology, Multilingualism and Specific Language Impairment in Lebanon: Pilot Study on the Relevance of a Nonword Repetition Test

Attalah, Christel             Université Saint Joseph, Beirut, Lebanon
Abi Aad, Karine              Université Saint Joseph, Beirut, Lebanon
Ferré, Sandrine              Université François-Rabelais de Tours, France

In many bilingual countries, especially in Lebanon, Speech and Language Pathologists are often unable to distinguish scores below the standards that are due to a true language disorder from those due to a late or insufficient exposure to that language. This makes difficult the detection and assessment of Specific Language Impairment (SLI). With the perspective of facilitating the evaluation, and the fact that nonword repetition test is a solid tool for the diagnosis of phonological disorders and SLI, linguists of team 1 of the Inserm U 930 unit at the François-Rabelais University in Tours have developed
a phonological nonword repetition test "RepNM" which has the particularity of being language independent. Our pilot research aims to study the effectiveness of the RepNM test in distinguishing SLI subjects from their Typical Development (TD) peers in a population of bilingual Lebanese children. We evaluated the phonology and language of 35 bilingual children (Lebanese Arabic-French and/or English) with typical language development and 16 SLI bilingual children all aged between 5 and a half and 7 and a half years old. Analysis of obtained scores showed that the RepNM test is fully usable in the Lebanese context and efficient for the identification of phonological disorders and Specific Language Impairments. Furthermore, results analysis particularly highlighted phonological complexity criteria nonword length and presence and number of consonant clusters by item capable of discriminating between the two groups of children. This result leads us to say that the use of such a test could assess, reliably, the phonological level of a child in situation where the therapist cannot evaluate each of the languages of the child.

22. Clitic production and nonword repetition in early L2 and SLI acquisition of Italian: what do they reveal and how can they be useful?

Guasti, Maria Teresa, Università di Milano-Bicocca, Italy
Vernice, Mirta, Università di Milano-Bicocca, Italy

The production of clitics is an excellent clinical marker of SLI in Italian at 5 years (Bortolini et al., 2006) and at 7 years (Arosio et al., 2010). However, clitic production is problematic in other conditions (Leonini, 2006), one of which is early L2 acquisition. This is a serious problem for the identification of L2 children with SLI. It also raises the question of why clitics are vulnerable in both acquisition modes. This paper aims at providing a viable solution to the first problem and an explanation of the second question.

Participants. 20 early L2 Italian-Arabic children (M = 5;6 SD = 0;2, range 5;1 - 6;0,) and 18 early L2 Italian-Arabic children (M = 7;5, SD = 0;3, range 7;1- 8;0). Each group was matched with a group of monolingual Italian-speaking children matched for sex, age and SES.

Tasks. Children were administered: TCGB (Chilosi & Cipriani, 2006) to assess grammatical comprehension; Non word (NW) repetition (PRCR-2, Cornoldi, Miato, Molin & Poli, 1995) and direct object clitic production. NW repetition, like clitic production, is a good clinical marker of SLI in Italian (Bortolini et al., 2006).

Results. TCGB: Although there is a significant improvement from 5 to 7 years in both monolingual and L2 children, the former are better than the latter.

Non word repetition. There is an improvement from 5 to 7 years. This time, however, both at 5 and 7 years, L2 learners are better than monolingual.
Clitics. Monolingual are better than L2 children at 5, but at 7 years there is no longer any difference.

Discussion. L2 learners have a weaker general competence than their monolingual peers at 5 and 7 as assessed by the TCGB. Like children with SLI, they have problems with clitics at 5 years, but they catch up at 7 years. Unlike children with SLI, L2 learners are strong in the repetition of NW at 5 and 7 years.

Proposals. First, as NW repetition is an area of weakness in monolingual children with SLI at 5 years, one may conjecture that the combination of NW repetition and clitic production identify, among L2 learners, those affected with SLI. Second, clitic production involves a number of skills: phonological (clitics are weak syllables), morphosyntactic (clitics have case, number and gender features) and syntactic (they give rise to a non canonical word order SOV). Phonological skills are also involved in NW repetition. Thus, one may suggest that clitic production is taxing for children with SLI because of the complexity it involves at all linguistic levels (from phonology to syntax). By contrast, the difficulty for L2 learners stems from the morphosyntactic or syntactic complexity.

23. Toward a diagnostic profile of children with Specific language impairment: A comparison, of SLI, typically developing monolingual and bilingual children’s performance on Nonword repetition and Crosslinguistic lexical task

Živanović, Marko
Vuksanović, Jasmina
Bjekić, Jovana

University of Belgrade, Serbia
State University of Novi Pazar, Serbia
University of Belgrade, Serbia

The aim of this study was to evaluate discriminative power of two tasks developed within COST action IS0804: a Quasiuniversal nonword repetition task (NWR) which taps phonological processing, and Serbian version of Crosslinguistic lexical task (CLT) which assesses vocabulary through comprehension and production of verbs and nouns. A total of 54 children participated in the study: TD monolingual group consisted of 19 children age 5;1 to 6;6 (M=5;9); TD bilingual group consisted of 19 simultaneous Serbian-Hungarian bilingual children, age 5;1 to 6;6 (M=5;7); SLI group consisted of 16 monolingual children age 3;7 to 7;2 (M=5;5). Groups were matched on age, and fluid intelligence. All children were assessed using two tasks: NWR and CLT. Results have shown that SLI group performed less well than both TD monolingual (p<.01) and TD bilingual group (p<0.1) on NWR task. On CLT, TD monolinguals outperformed TD bilinguals (p<.01), while SLI children outperformed TD bilingual children (p<.05). Discriminant analysis (with two tasks used as predictors of group membership) resulted in two significant discriminant functions (F=41.39, p<.01; F=18.13, p<.01), one primary saturated with NWR (.974), and the other one with CLT score (.850), which can classify children into groups of SLI, TD monolingual, TD bilingual groups with 70% of accuracy.
Results suggest that TD monolingual children perform well on both tasks. On the other hand, SLI children perform less good on CLT and much worse on NWR task, while the opposite is true for TD bilinguals. These results indicate that these two tasks when combined are useful tools for diagnostic purposes.

24. Nonword repetition: a novel presentation method of recorded stimuli to young children

Polšenská, Kamila
Kapalková, Svetlana

University of Manchester, UK
Comenius University, Bratislava, Slovak Republic

Successful language assessments can reveal children’s basic processing and learning skills while minimising the influence of prior experience and/or environmental factors. Nonword repetition (NWR) tasks are seen as being less affected by environmental factors than traditional language tests (Campbell et al., 1997; Engel, Santos & Gathercole, 2008) and have also proven to be effective clinical markers for language impairment in a number of languages (Coady & Evans, 2008). A range of NWR tasks are used in research and clinical applications but compliance rates among young children remain low. Live presentation is usually employed in an attempt to improve compliance rates, but this lacks the consistency of recorded stimuli. The aim of this study is to examine if our novel delivery of NWR stimuli based on recorded material can provide improved compliance rates in young children, thereby reducing research bias.

The novel NWR task with 26 recorded items was administered to 391 typically developing Slovak-speaking children aged 2-6 years. Children were presented with a story that they could influence by repeating ‘magic’ words. The task was presented on a laptop and the session lasted about 5 minutes. From the recruited sample, 384 children completed the task, yielding a non-compliance rate of 1.79%. In line with previous research, no effect of gender or maternal education was found, but there was a significant main effect of age, syllable length and phonological complexity. Test-retest and inter-rater scoring showed high levels of reliability.

Our task offers an objective delivery of recorded stimuli that engages young children and still provides high compliance rates. The task is inexpensive, requires minimal training, can be adapted to other languages and is useful for clinicians and researchers.
Sentence repetition (SR) tasks were developed for Russian and Hebrew within COST Action IS0804 testing 56 sentences of different length and complexity based on SASIT-56 (Marinis, Armon-Lotem, Chiat, 2010). Shortened versions of the NWR tasks in Russian and in Hebrew (Armon-Lotem & Chiat, 2012) were used. The current study looked at the performance of bilingual children on NWR and SR in both languages (L1-Russian and L2/Hebrew).

Background: Nonword Repetition (Bishop, North, & Donlan, 1996) and Sentence Repetition (Conti-Ramsden, Botting, & Faragher, 2001) are two screening measures that have proven to be reliable markers for teasing apart monolingual children with and without SLI. The study aimed to examine the diagnostic accuracy of NWR and SR in Russian in sequential bilingual Russian-Hebrew speaking pre-school children.

Method: 28 bilingual children with TLD (ages 71-78 months) and 10 bilingual children with SLI (ages 71-85 months) participated in the study. The children in the sample met the inclusionary criteria for SLI (Leonard, 1998). Children were assigned to two groups - bilingual children with typical language development (biTLD) and bilinguals children with SLI (biSLI) - a) based on expressed parental concern and b) children’s language proficiency scores in L1 and L2. Children’s language proficiency (LP) in L1/Russian was measured on The Russian Language Proficiency Test for Multilingual Children (Gagarina, Klassert & Topaj, 2010) and in L2/Hebrew on the Goralnik Screening Test for Hebrew (Goralnik, 1995). The biSLI children scored severely below the norm in L1 and L2. The two groups were matched on LoE, AoO, mothers’ education and non-verbal IQ (as measured by The Raven’s Coloured Progressive Matrices non-verbal IQ test (Raven, 1998)).

Results: BiTLD performed significantly better on SR and NWR in both languages (in L1 and L2) than BiSLI. A strong association between children’s level of proficiency and SR performance was observed uniquely in each language. No correlations were detected between the tasks across the two languages. Better sensitivity, specificity and accuracy rates were yielded for SR in comparison with NWR with higher rates for tasks in L2/Hebrew. The diagnostic accuracy improved when LoE was taken into account.

Conclusions: NWR and SR seem to be potentially useful tools in teasing apart bilingual children with and without SLI.
26. Nonword repetition performance by Polish-English bilinguals and Polish monolinguals

Szewczyk, Jakub  
Jagiellonian University, Kraków, Poland

Witkowski, Michał  
Jagiellonian University, Kraków, Poland

Wodniecka, Zofia  
Jagiellonian University, Kraków, Poland

This study is a part of the BI-SLI-PL project (http://www.psychologia.pl/bi-sli-pl) assessing linguistic and cognitive development of bilingual children at the school entrance age. We present partial results of the project, in which we ask whether the development phonological skills is hampered in bilingual children, relative to monolingual children. To this end we tested a group of 20 bilingual Polish-English children, and compared them against a carefully matched group of Polish monolingual children. The two groups were tested with a Polish (L1) version of a non-word repetition (NWR) test. NWR tests were demonstrated to be good indicators of problems with phonological processing in children. A known confound in NWR tests is vocabulary size of children. The test used within this project was constructed such that its results are relatively independent of children’s vocabulary size. The results are currently under analysis.

27. The performance of bilingual Maltese children on a language-specific and a quasi-universal non-word repetition task (NWRT)

Calleja, Nadine  
University of Malta

Grech, Helen  
University of Malta

Non-word repetition tasks (NWRT) are used clinically as markers for language impairment. Specific features in the non-word can assist with differential diagnosis of communication disorders such as discrimination between the accuracy in repetition of typically developing (TD) children and children with specific language impairment (SLI).

The unique bilingual context in the Maltese Islands presents a challenge to clinicians particularly since standardized language related assessments are still being developed. This paper presents preliminary findings related to the construction of a NWRT for bilingual Maltese-English children. Data of responses of 30 typically developing (TD) Maltese bilingual children aged between 5;00 and 5;11 years for two language specific (based separately on Maltese and English phonotactic rules); and one quasi-universal non-word repetition task; are presented. The children in the study were all Maltese sequentially bilingual children. All children were exposed to both Maltese and English. 23 children spoke Maltese as their first language (L1), while 7 children used English as
There was little difference in performance between the Maltese-based and the English-based non-word tasks where no statistically significant difference in performance between the two tasks (t-test p=0.39) was identified. There was also little difference in performance between the quasi-universal lists with and without prosody.

The total errors produced in the language-specific and the quasi universal non-word lists were compared. The subjects were found to produce slightly more errors in the universal lists than the language specific lists.

More errors were produced in words that contained consonant clusters/sequences. This difference was more pronounced in the Maltese-based non-word list. In both language-specific and quasi-universal lists it was found that as the number of syllables increased, more errors were produced.

28. Multi NRT-Turkish and Quasi-Universal NRT: Comparison with TD, TD-BI and SLI children

Topbaş, Seyhun  
Anadolu University, Eskişehir, Turkey
Kaçar Kütükçü, Dilber  
Ankara University, Turkey
Kopkalli-Yavuz, Handan  
Ankara University, Turkey
Chiat, Shula  
City University, London, UK

The number of children growing up in a multilingual society has been increasing day by day. When these children come to school age, they have more than one language and a language pattern looks like those of children with Specific Language Impairment (SLI). In other words there is an overlap on the language features of bilingual and SLI children and it brings about a methodological and clinical ambiguity. The COST Action aims to profile bilingual specific language impairment (BI-SLI), make a network with research data coming from different multilingual societies and resolve this problem. Nonword repetition test is one of the tools that have been developed to evaluate and diagnose BI-SLI children. Research shows nonword repetition test is a task that makes a distinction between SLI children and their typically developing peers. Turkish Nonword Repetition Test and Quasi-Universal Nonword Repetition Test are developed as an assessment tool in COST Action.

The last version of Turkish Nonword Repetition Test (Multi-NRT-TR) consists of 16 nonwords (8 language like - 8 language unlike) with two, three, four and five syllables. While forming the non-words, frequencies of different syllable structures as well as the phonotactics of real Turkish words were taken into consideration. Quasi-Universal Nonword Repetition Test also consists of 16 nonwords with two, three, four and five syllables which was developed by Shula Chiat. The nonwords in the test involve the sounds that are common in all languages. The nonwords on both tests were recorded as sound file and then converted into a parrot animation on computer.
The purpose of this study is comparing the nonword repetition test performances of three groups on Turkish Nonword Repetition Test and Quasi-Universal Nonword Repetition Test. Groups are consisted of 15 monolingual typically developing children, 15 monolingual SLI children and 15 bilingual typically developing (BI-SLI) children ages between 5-7. Bilingual group’s L1 was Turkish while their L2 was German. Differences between groups on administered tests were analysed.

29. MultiSIT-Turkish: Comparison with TD, TD-BI and SLI children

Topbaş, Seyhun
Aydın, A.
Kazanoğlu, D.
TadihanÖzkan, E.
Anadolu University, Eskişehir, Turkey
Anadolu University, Eskişehir, Turkey
Anadolu University, Eskişehir, Turkey
Anadolu University, Eskişehir, Turkey

Research shows sentence imitation to be a useful method of assessing expressive morphosyntactic skills in children. One of the methods for studying language development is sentence repetition that is faster to implement and analysis than other procedures. The last version of Turkish Sentence Repetition Test (Multi-SIT-TR) consists of 33 sentences in accordance with children’s developmental abilities. It measures morphosyntactic abilities of children in three levels and its scoring system makes it possible to measure both lexical and morphosyntactic errors made by children. The aim of this study was constructing the final version of Turkish Sentence Repetition Test (Multi-SIT-TR) and measuring the performances of children between 5 and 7 years olds. Test of Early Language Development Third Edition: Turkish (TELD3:T) and Turkish Sentence Repetition Test (Multi-SIT-TR) were administered to three groups of children between the ages of 5 and 7 years: 15 monolingual children with typical development, 15 bilingual children with typical development and 15 monolingual children with SLI. Bilingual group’s L1 was Turkish while their L2 was German. Differences between groups on administered tests were analysed.
Questionnaire studies, interdisciplinary comparisons, education and literacy

30. Identification of Specific Language Impairment in Multilingual Contexts: Preliminary Validation of a Short Parental Bilingual Questionnaire in Lebanon

Kouba Hreich, Edith
Messaara, Camille
Prévost, Philippe

Université Saint Joseph, Beirut, Lebanon
Université Saint Joseph, Beirut, Lebanon
Université François Rabelais de Tours, France

Assessing children with Specific language Impairment (SLI) in multilingual contexts is challenging for speech language therapists given that language patterns in bilinguals and in children with SLI are often reported to be remarkably similar and that screening language tests are not standardized on bilingual populations. The present study aims to validate the use of a parental questionnaire focusing on early language development, the languages spoken by the child, the use of languages in his/her environment, and information on linguistic difficulties within the family, as a complement to language assessment in multilingual contexts. Thirty-three Lebanese/French bilingual children (16 with SLI and 36 with typical development) and their parents participated in this study in Lebanon. The parents were interviewed via the questionnaire while the children were administered standardized language tests in each language. Data analysis showed that the parents’ answers to the questionnaire were coherent throughout and that some variables of the questionnaire strongly discriminated between the two groups of children, in particular the age of the first words and first sentences. Moreover, although significant correlations were found with language test scores, the answers to the questionnaire allowed us to refine the interpretation of the performance on the standardized tests, thus demonstrating the value of the parental questionnaire as a complementary tool to clinical evaluation.

31. Adaptation to Lebanese of the battery ELO and standardization on Lebanese bilingual children aged 3 to 8

Zebib, Rasha
Kouba Hreich, Edith
Messaara, Camille
Henry, Guillemette

Université François Rabelais de Tours, France
Université Saint Joseph, Beirut, Lebanon
Université Saint Joseph, Beirut, Lebanon
Université Saint-Joseph, Beirut, Lebanon

Language measures are useful metrics for quantifying language developments and language
impairments in monolingual and bilingual children. A particular difficulty in assessment of language ability in bilinguals is the lack of standardized tests tools that are valid and reliable for that purpose. In Lebanon, informal assessment and the use of translation and test adaptation is very common for the assessment and the diagnosis of language impairments. Lack of normative data on typical language acquisition also affects accurate diagnosis. For this purpose, an adaptation of the battery "Evaluation du Langage Oral - ELO Khomsi.A; 2001, in Lebanese (ELO-L) is set up by the research unit of Institut supérieur d’orthophonie - Saint Joseph University. This battery measures language abilities in several oral language domains in both sides, receptive and expressive. Two Thousand Lebanese bilingual typically developing children, Lebanese-French and Lebanese-English, aged between 3 and 8 years old were assessed with five measures including evaluations of receptive vocabulary, oral comprehension, syntax in expression, expressive vocabulary and word repetition. The results showed that language acquisition evolves with age independently from sex and geographic area. A phenomenon of language attrition is reported and suggest a strong negative influence of the used of L2 for teaching on the retention and perfection of the L1. The use of ELO-l for the purpose of identification of language impairments shows important sensitivity of the battery in most of the measures especially word repetition and syntax in expression.

32. Verbal and nonverbal indicators for identifying specific language impairment in successive bilingual preschool children: a proposal

Lindner, Katrin  
Held, Julia  
Lapenko, Irina  
Wagner, Jennipher  
Gagarina, Natalia  
Lomako, Julia  
Valentik-Klein, Elena  
Weber, Oliver  
LMU, München, Germany  
LMU, München, Germany  
LMU, München, Germany  
LMU, München, Germany  
ZAS, Berlin, Germany  
ZAS, Berlin, Germany  
ZAS, Berlin, Germany  
ZAS, Berlin, Germany

It has often been observed that utterances of multilingual children may resemble those of monolingual children with specific language impairment. Such similarities may lead to wrong conclusions and decisions (e.g. Paradis 2005) in particular, if only one of the child’s two languages is considered in testing. The methodological consequences are that the diagnostic decision with regard to specific language impairment should include the child’s performance in both languages, but should not be based on linguistic evidence alone (cf. also Chilla 2008). This is (one of) the starting points for our research project. It aims at finding verbal and nonverbal indicators to identify language impairment in successive bilingual preschoolers with Russian L1 and German L2.

Research has shown that one of the most reliable indicators for specific language
impairment is children's limited processing capacity in phonological and musical working memory (e.g. Charest & Johnston 2011, Leonard et al. 2007; Jentschke et al. 2008; Sallat 2008). Therefore, we will examine children's achievements in nonword and sentence repetition tasks, in a working memory task as well as the pairwise comparison of melodies. As for linguistic indicators we will analyze language specific criteria like subject-verb and adjective-noun agreement and case marking both in comprehension and in production. In production, we will increase the demands on children's capacity in starting out with a description of one event on a picture (Klages & Kaltenbacher 2006), to supported and non-supported story telling (Schulz & Tracy 2012, Gagarina et al. 2012). A case marking task with increasing complexity will also be part of the test battery. All tasks involving language will be conducted in both languages.

Our project starts out as a cross-sectional study with two hundred 4 year olds. The subsequent longitudinal study will follow 90 children of this sample for another 18 months (three additional measuring points). The children will be selected according to their performance in both verbal and nonverbal tasks. 50 children with results in the lowest quartile – the children at risk – will be matched to 40 children who performed in the third quartile - the control children. Keywords: successive bilingual preschoolers, specific language impairment, working memory, Russian and German.

33. Language Support for Second Language Learners in German Elementary Schools - Chance or Risk?

Kern, Friederike  
Universität Bielefeld, Germany

Lütje-Klose, Birgit  
Universität Bielefeld, Germany

Mehlem, Ulrich  
Goethe-Universität Frankfurt am Main, Germany

Spaude, Magdalena  
Goethe-Universität Frankfurt am Main, Germany

Tausch, Christina  
McGill University, Montreal, Canada

The number of second language learners in Germany has dramatically increased over the last 10 years (Kemper & Weishaupt, 2011). In spite of significant efforts to develop and increase the number of language support programs, numerous studies show that bilingual children continue to face several disadvantages in the German educational system. The percentage of bilingual children labeled as children with special educational needs (SEN) is more than twice the average. Most students with this label still have to attend special schools for learning disabilities in spite of the current movement to more inclusive settings (PIRLS 2011; Kemper & Weishaupt, 2011; Werning & Löser, 2010).

Literacy and Interaction in Speech Language Support (LISFÖR) is an interdisciplinary study that examines the efficacy of a language support program for bilingual children from school entry until the completion of second grade. This presentation triangulates qualitative and quantitative data including language assessments, video analyses from three classroom lectures and an interview with a classroom teacher. It focuses on three...
children who entered first grade with very low German language skills and their slow progress acquiring German.

The poster addresses the following: a) different forms of specific classroom-based language support, b) how these children’s language differences can be compared to the other students in the classroom, and c) consequences for second language learners within the German school system with its preference for referring low achievers to special education and thus to different schools. The Interview with the classroom teacher reveals that she clearly differentiates between normal and atypical language development processes which leads to a delegation of responsibility for the labeled children, despite of the classroom-based support program.

Implications for language support programs are discussed, especially considering that official language assessments lead to labeling processes. Therefore, language support programs could be both a chance and a risk for the children.

34. Literacy in bilingual Spanish-Catalan children with Specific Language Impairment

Aguilar-Mediavilla, Eva  UIB, Palma de Mallorca, Spain
Buil-Legaz, Lucia  UIB, Palma de Mallorca, Spain
Adrover-Roig, Daniel  UIB, Palma de Mallorca, Spain
Pérez-Castelló, Josep  UIB, Palma de Mallorca, Spain

Our study analyzes the relation between cognitive abilities in bilingual Specific Language Impairment children (5 years) and the later development of reading abilities. Most children with speech and language problems have literacy problems too (Catts, 1993).

The sample was formed by 20 bilingual Spanish-Catalan children with SLI and 20 age controls. The cognitive processes (phonological working memory, rapid naming, phonological awareness and lexical retrieval) of these children at age of 5 was evaluated. Two years later, at age 7, their reading ability was evaluated through PROLEC (Cuetos, 2002).

The results show that children with SLI perform in reading below the controls at 7 years. The processes of decoding and syntactic comprehension seems to be the most affected so they show the smaller performance. The phonological awareness and lexical retrieval at age at age of 5 years seems to be the variables that better predict the performance in reading at age of 7.

These results were analyzed through a causal developmental model in which the roll of the phonological system was examined in relation with the development of the decoding and the text comprehension.
35. Assessment of linguistic and cognitive abilities in Polish-English bilingual preschool children: an interdisciplinary project

Haman, Ewa
University of Warsaw, Poland

Wodniecka, Zofia
Jagiellonian University, Kraków, Poland

Białecka-Pikul, Marta
Jagiellonian University, Kraków, Poland

Otwinowska, Agnieszka
University of Warsaw, Poland

Kuś, Katarzyna
University of Warsaw, Poland

Banasik, Natalia
University of Warsaw, Poland

Miękisz, Aneta
University of Warsaw, Poland

Szewczyk, Jakub
Jagiellonian University, Kraków, Poland

Cywińska, Maria
University of Warsaw, Poland

Kacprzak, Agnieszka
University of Warsaw, Poland

Karwala, Magdalena
Jagiellonian University, Kraków, Poland

Łuniewska, Magdalena
University of Warsaw, Poland

Mieszkowska, Karolina
University of Warsaw, Poland

The poster overviews an ongoing research project aimed at an exhaustive assessment of linguistic and cognitive abilities of Polish-English bilingual children aged 4;6 - 6;6 (Bi-SLI-PL; http://www.psychologia.pl/bi-sli-pl). The project is related to COST IS0804 scientific cooperation program (Bi-SLI; http://bi-sli.org/). We use a set of tools assessing the phonological, lexical, grammatical, narrative and cognitive abilities designed within Bi-SLI, as well as standardized tests (if available). Children are tested in both of their languages. The lack of normed tools in Polish prevents comprehensive SLI diagnosis of both monolingual and bilingual children speaking Polish. The tools used in Bi-SLI-PL project are specifically designed for distinguishing the typically developing bilingual children from the children at risk of SLI. The language tasks include: a non-word repetition task, vocabulary size and lexical processing tasks, a sentence repetition task, a test for reception of grammar, and telling and re-telling narrative tasks. The language tasks are accompanied by a series of tools measuring crucial cognitive functions such as executive and inhibitory control, verbal and non-verbal working memory and the theory of mind. Child’s nonverbal intelligence is controlled by Raven’s progressive matrices test. Hearing is controlled by an audiometric test. Family SES and child development history is controlled by parental questionnaire designed within Bi-SLI. We expect the tools to set a new standard to the assessment and diagnosis of language development in Polish monolingual and bilingual children. The poster presents preliminary results from 40 bilingual and 60 monolingual children, showing interrelations between various domains of linguistic and cognitive development.
36. Test of Skills at School Beginning

Kaczan, Radosław  
Educational Research Institute, Warsaw, Poland
Rycielski, Piotr  
Educational Research Institute, Warsaw, Poland

Test of Skills at School Beginning is a modern tool, developed at the Educational Research Institute and designed for testing the competences of children aged 5-7. The tool has three subscales:

- **Mathematical skills** scale which includes four content areas: 1. space and shape, 2. numbers, 3. measurement, and 4. relations and interrelations;

- **The reading scale** which includes three content areas: 1. linguistic-auditory skills, 2. visual-auditory skills, and 3. reading skills;

- **The writing scale** which includes four content areas: 1. calligraphy and writing skills, 2. visual-motor skills, 3. visual-spatial skills, and 4. auditory-language skills. The TUNSS test has been standardized on a Polish national sample of 3,769 children aged 5-7. The children had been recruited from kindergarten and preschool departments (0 Grade), and year 1 primary school classes. The entire test comprises 336 tasks of which 127 are designed to measure mathematical skills, 106 to measure the skills necessary to learn writing, and 103 are the reading-related tasks.

Due to the use of computerised adaptive testing algorithm and tablet computers - testing procedure takes only up to 20 minutes per child.

The information about the test, the options to make it available, and the results of the research conducted within the test are accessible at www.ibe.edu.pl
## Poster List

### Poster Session Day 1
Monday 27th May

### SYNTAX AND MORPHOLOGY

<table>
<thead>
<tr>
<th>No.</th>
<th>Authors</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Corinela Hamann, Esther Ruigendijk, Solveig Chilla</td>
<td>Sentence Repetition in Russian-German bilingual Children with/without Language Impairment</td>
</tr>
<tr>
<td>2</td>
<td>Layal Abboud, Laurie Tuller, Guillemette Henry, Selma Saad</td>
<td>Sentence repetition as a feasible assessment tool for identifying children with SLI in the Lebanese and French bilingual contexts</td>
</tr>
<tr>
<td>3</td>
<td>Nouhad Abou Melhem, Laurie Tuller, Philippe Prévost, Rasha Zébib</td>
<td>The reduced Sentence Repetition task as an efficient assessment tool for identifying children with SLI in the Lebanese bilingual context</td>
</tr>
<tr>
<td>4</td>
<td>Guillemette Henry, Selma Saad, Laurie Tuller, Philippe Prévost, Rasha Zébib</td>
<td>Using Sentence repetition in L2 Lebanese to identify SLI in L1 French and L1 Armenian children in Lebanon</td>
</tr>
<tr>
<td>5</td>
<td>Guillemette Henry, Selma Saad, Laurie Tuller, Philippe Prévost, Rasha Zébib</td>
<td>Using Sentence repetition in both L1 and L2 to distinguish Bi-TD from Bi-SLI children: the case of French-Lebanese bilingual children</td>
</tr>
<tr>
<td>6</td>
<td>Alice Fleckstein, Tania Crosnier, Philippe Prévost, Laurie Tuller, Rasha Zébib</td>
<td>Sentence repetition in French: A tool for Identifying Specific Language Impairment In English-French Bilingual Children</td>
</tr>
<tr>
<td>7</td>
<td>Natalia Banasik, Aneta Miękisz, Magdalena Smoczyńska, Agnieszka Bochińska, Małgorzata Foryś, Magdalena Końkańska, Ewa Haman</td>
<td>Sentence Repetition Task and Test for Reception of Grammar as measures of grammatical competence of monolingual and bilingual Polish children</td>
</tr>
<tr>
<td>8</td>
<td>Enkeleida Kapia, Anila Kananaj</td>
<td>Morphosyntactic features of Albanian in TD Albanian-English and Albanian-Greek children</td>
</tr>
<tr>
<td>9</td>
<td>Gisela Hakansson</td>
<td>Same, same but different. A meta-analysis of grammatical language impairment in 19 languages in the framework of Processability Theory</td>
</tr>
<tr>
<td>10</td>
<td>Bibi Janssen</td>
<td>Case production in Dutch-Russian bilinguals: implications for Bi-SLI</td>
</tr>
<tr>
<td>11</td>
<td>Dagmar Bittner1, Julia Siegmüller</td>
<td>The COST Subject-Verb agreement task in German monolingual TD and SLI children</td>
</tr>
<tr>
<td>12</td>
<td>Sharon Armon-Lotem, Sharon Garner, Irena Shnaiderman, Natalia Meir</td>
<td>Exhaustivity as a measure of typical development in the L2 of Russian-Hebrew children</td>
</tr>
<tr>
<td>13</td>
<td>Anna Gavarró</td>
<td>A test of grammatical maturity for Catalan</td>
</tr>
<tr>
<td>Poster Session Day 1</td>
<td>Monday 27th May</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td><strong>NARRATIVE, DISCOURSE, ORAL PRODUCTION</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Number</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Production and perception of narrative texts across languages and cultures: MAIN</td>
<td>Natalia Gagarina &amp; WG2 Members</td>
</tr>
<tr>
<td>15</td>
<td>Story structure in Croatian typically developing children and children with specific language impairment</td>
<td>Gordana Hržica, Ivana Vdović, Jelena Kuvač Kraljević, Melita Kovačević</td>
</tr>
<tr>
<td>16</td>
<td>Narrative assessment of Polish pre-schoolers: bilingual vs. monolingual language production in the telling and retelling modes</td>
<td>Agnieszka Otwinowska-Kasztelanic, Marta Białecka-Pikul, Marcin Opacki, Karolina Mieszkowska, Lisa Muller</td>
</tr>
<tr>
<td>17</td>
<td>Narrative language in Lithuanian TD and language-impaired children</td>
<td>Balčiūčienė, Ingrida</td>
</tr>
<tr>
<td>18</td>
<td>The Use of the COST Narrative Task within a Dynamic Assessment Context as a Tool for the Differential Diagnosis of SLI</td>
<td>Koula Tantele, Kleanthes Grohmann</td>
</tr>
<tr>
<td>19</td>
<td>Narrative production in 5-7 years old typically developing bilinguals</td>
<td>Maja Roč, Chiara Levorato</td>
</tr>
<tr>
<td>20</td>
<td>Comparison of Narrative Abilities in Monolingual and Bilingual Slovak Speaking Children</td>
<td>Michaela Halamová, Svetlana Kapalková</td>
</tr>
<tr>
<td>21</td>
<td>Narrative Skills of Turkish Monolingual, Turkish-German Bilingual Children and Their Peers with SLI</td>
<td>İlknur Maviş, Aylin Müge Tuncer</td>
</tr>
<tr>
<td>22</td>
<td>Narrative abilities in bilingual children</td>
<td>Svetlana Kapalková, Distlerová Lenka, Polišenská Kamila</td>
</tr>
<tr>
<td>23</td>
<td>Elicited Imitation in search of factors affecting development of young learners’ oral production</td>
<td>Dorota E. Campfield</td>
</tr>
<tr>
<td>24</td>
<td>Home language stimulation in children with SLI, a pilot</td>
<td>Mirjām Blumenthal, Susanne Voorn</td>
</tr>
</tbody>
</table>
## COGNITIVE DEVELOPMENT

### Poster Session Day 1  
**Monday 27th May**

<p>| 25 | Iris Duinmeijer | Working memory and inhibition in Dutch children with SLI |
| 26 | Kristine Jensen de López, Bjärke Sund Kronqvist, Line Engel Clasen, Hanne S. Knudsen, Valerie Reichardt, Natalia Gagarina | Non-verbal loaded visual WM predicts narrative comprehension in bilingual, but not monolingual children – is this a bilingual effect? |
| 27 | Magdalena Senderecka, Zofia Wodniecka, Marta Białecka-Pikul, Magdalena Karwala | Inhibitory control in bilingual children: evidence from the Stop-Signal and the Simon Says tasks |
| 28 | Stephan Sallat | Can we use musical working memory for SLI diagnostic? |
| 29 | Tuba Yarbay Duman, Seyhun Topbaş, Anne Baker | The processing of Turkish counterfactuals in SLI: the role of executive functions |
| 30 | Asbjørnsen, Arve, Torkildsen, Janne von Koss | Cognitive control in bilingualism: increasing inhibitory control following bilingual exposure? |
| 31 | Pascale M. J. Engel de Abreu, Anabela Cruz-Santos, Marina Puglisi | Executive functions in language minority children with specific language impairment |
| 32 | Aude Laloi, Anne Baker, Jan de Jong | Language and executive functioning in French monolingual and early-bilingual children with SLI |
| 33 | Tessel Boerma, Mona Timmermeister, Elma Blom | Cognitive development in the context of emerging bilingualism: Cultural minority children in the Netherlands |
| 34 | Marko Zivanovic, Jovana Bjekić, Danka Puric, Jasmina Vuksanovic | Diagnostic validity of different working memory measures on a Serbian sample of children with and without SLI |
| 35 | Ágnes Lukács, Ferenc Kemény, Enikő Ladányi, Kata Fazekas | Working memory and executive functions in Hungarian children with Specific Language Impairment |
| 36 | Kristine Jensen de López, Hanne S. Knudsen, Bjärke Sund Kronqvist, Karina Niss Jorgensen | Verbally loaded WM, but not Non-verbal loaded WM is challenging for Danish teens with SLI |
| 37 | Aviva Soesman, Joel Walters | Cross-language Differences and Locus of Codeswitching in a Sentence Repetition Task with Typically Developing and Language Impaired English-Hebrew Bilingual Children |
| 38 | Magdalena Karwala, Marta Białecka-Pikul, Zofia Wodniecka | Verbal and non-verbal working memory in bilingual and monolingual preschoolers |
| 39 | Joanna Kolak, Zofia Wodniecka, Marta Białecka-Pikul | Attentional functioning in monolingual and bilingual children: evidence from childANT |
| 40 | Radosław Kaczan, Piotr Rycielski | Working Memory Test |</p>
<table>
<thead>
<tr>
<th>Session</th>
<th>Presenters</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pernille Hansen, Jovana Bjekic, Katarzyna Chyl, Ineta Dabašinskie, Ewa Haman, Agne Kalninytė, Svetlana Kapalkova, Sari Kunnari, Magdalena Łuniewska, Ingeborg Ribu, Hanne G. Simonsen, Daniela Slancová, Frenette Southwood, Muge Tuncer, Özlem Unal, Anida Vrcic, Jasmina Vuksanovic</td>
<td>Monolingual CL T results - a cross-linguistic comparison</td>
</tr>
<tr>
<td>2</td>
<td>Magdalena Łuniewska, Jovana Bjekic, Katarzyna Chyl, Pinar Ege, Pernille Hansen, Edith Koubá-Hreich, Camille Messara, Lauren Onraet, Hanne G. Simonsen, Frenette Southwood, Muge Tuncer, Özlem Unal, Jasmina Vuksanovic, Marko Zvinovic, Ewa Haman</td>
<td>Bilingual CL T results - a cross-linguistic comparison</td>
</tr>
<tr>
<td>3</td>
<td>Svetlana Kapalková, Jovana Bjekic, Kristen M. Bjerkän, Pernille Hansen, Ingeborg Ribu, Hanne G. Simonsen, Daniela Slancova, Jasmina Vuksanovic</td>
<td>Monolingual-SLI CL T results - a cross-linguistic comparison</td>
</tr>
<tr>
<td>4</td>
<td>Frenette Southwood, Camille Messara, Edith Koubá-Hreich, Christel Saliby, Sarkis Sabine, Magdalena Łuniewska, Ewa Haman</td>
<td>Bilingual-SLI CL T results - a cross-linguistic comparison</td>
</tr>
<tr>
<td>5</td>
<td>Marko Zivanovic, Jasmina Vuksanovic, Jovana Bjekic</td>
<td>(In)Sensitivity of Serbian Version of CL T to SES</td>
</tr>
<tr>
<td>6</td>
<td>Özlem Unal, Aylin Müge Tuncer, Pinar Ege</td>
<td>Cross-Linguistic Lexical Task for Turkish: Comparison of SLI, Bilingual, and Monolingual Data</td>
</tr>
<tr>
<td>7</td>
<td>Pernille Hansen, Ingeborg Ribu, Katarzyna Chyl, Ewa Haman, Magdalena Łuniewska, Stefan Markiewicz, Hanne G. Simonsen</td>
<td>CL T results from bilingual Polish-Norwegian children compared to their monolingual peers</td>
</tr>
<tr>
<td>8</td>
<td>Kirsten M. Bjerkän, Ingeborg Ribu, Pernille Hansen, Hanne G. Simonsen</td>
<td>CL T in Norwegian: Data from BiTD, MoTD and MoSLI children</td>
</tr>
<tr>
<td>9</td>
<td>Christel Saliby, Sabine Sarkis Ghanem, Christophe dos Santos</td>
<td>Assessing Lebanese bilingual children: the use of specific lexicon tasks</td>
</tr>
<tr>
<td>10</td>
<td>Katarzyna Tarajko, Magdalena Łuniewska, Katarzyna Chyl, Agnieszka Kaćprzak, Ewa Haman</td>
<td>Receptive and expressive lexical abilities in Polish-English bilingual preschool children</td>
</tr>
<tr>
<td>Poster Session Day 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuesday 28th May</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LEXICON 2**

<table>
<thead>
<tr>
<th>Poster</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>The vocabulary development of Polish-speaking children in Iceland</td>
<td>Elin Thordardottir, Frida B. Jonsdottir, Aneta Miękisz, Katarzyna Kuś, Ewa Haman</td>
</tr>
<tr>
<td>12</td>
<td>Early lexical development of French-Portuguese bilingual children: a CDI-adaptation study</td>
<td>Christophe dos Santos, Sophie Kern</td>
</tr>
<tr>
<td>13</td>
<td>Assessment of early lexical skills in Turkish-German children: Evidence from L1 and L2</td>
<td>Tanja Rinker, Henriette Stoll, Marifet Kaya, Nora Budde, Stefi Sachse</td>
</tr>
<tr>
<td>14</td>
<td>Early lexical production in children receiving Maltese-dominant exposure: outcomes of a parental report study</td>
<td>Daniela Gatt</td>
</tr>
<tr>
<td>15</td>
<td>The Irish-English Communicative Development Inventory: A longitudinal study of bilingual language acquisition in a minority context</td>
<td>Ciara O’Toole, Tina Hickey</td>
</tr>
<tr>
<td>16</td>
<td>Assessment of grammatical and lexical skills of Polish monolinguals and bilinguals by Communicative Development Inventory.</td>
<td>Joanna Sienkiewicz, Aneta Miękisz, Katarzyna Kuś, Napoleon Katsos, Ciara O’Toole, Ewa Haman</td>
</tr>
<tr>
<td>18</td>
<td>A Bilectal Adaptation of the MacArthur-Bates CDI in Cyprus</td>
<td>Loukia Taxitari, Kleanthes Grohmann, María Kambanaros</td>
</tr>
<tr>
<td>Poster Session Day 2</td>
<td>Tuesday 28th May</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td><strong>PHONOLOGY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Jasmina Vuksanovic, Jovana Bjekic, Marko Zivanovic</td>
<td>Discriminative validity of non-word repetition task for children with SLI</td>
</tr>
<tr>
<td>20</td>
<td>Nouhad Abou Melhem, Laurie Tuller, Sandrine Ferre, Christophe Dos Santos</td>
<td>Non-word repetition task as a feasible assessment tool for identifying children with SLI in the Lebanese bilingual context (L1 French or Armenian, L2 Arabic)</td>
</tr>
<tr>
<td>21</td>
<td>Christel Attalah, Karine Abi Aad Sandrine Ferré</td>
<td>Phonology, Multilingualism and Specific Language Impairment in Lebanon: Pilot Study on the Relevance of a Nonword Repetition Test</td>
</tr>
<tr>
<td>22</td>
<td>Maria Teresa Guast, Mirta Vernice</td>
<td>Clitic production and nonword repetition in early L2 and SLI acquisition of Italian: what do they reveal and how can they be useful?</td>
</tr>
<tr>
<td>23</td>
<td>Marko Zivanovic, Jasmina Vuksanovic, Jovana Bjekic</td>
<td>Toward a diagnostic profile of children with Specific language impairment: A comparison, of SLI, typically developing monolingual and bilingual children’s performance on Nonword repetition and Crosslinguistic lexical task</td>
</tr>
<tr>
<td>24</td>
<td>Kamila Polisenska, Svetlana Kapalkova</td>
<td>Nonword repetition: a novel presentation method of recorded stimuli to young children</td>
</tr>
<tr>
<td>25</td>
<td>Natalia Meir, Sharon Armon-Lotem</td>
<td>Diagnostic Accuracy of Non-Word Repetition and Sentence Repetition Tasks in bilingual Russian-Hebrew Speaking Children.</td>
</tr>
<tr>
<td>26</td>
<td>Jakub Szewczyk, Michał Witkowski, Zofia Wodniecka</td>
<td>Nonword repetition performance by Polish-English bilinguals and Polish monolinguals</td>
</tr>
<tr>
<td>27</td>
<td>Nadine Calleja, Helen Grech</td>
<td>The performance of bilingual Maltese children on a language-specific and a quasi-universal non-word repetition task (NWRT)</td>
</tr>
<tr>
<td>28</td>
<td>Seyhun Topbaş, Dilber Kaçar-Kütükçü, Handan Kopkall?-Yavuz, Shula Chiat</td>
<td>Multi NRT-Turkish and Quasi-Universal NRT: Comparison with TD, TD-BI and SLI children</td>
</tr>
<tr>
<td>29</td>
<td>Seyhun Topbaş, A. Aydin, D. Kazanoğlu, E. Tadihan Özkan</td>
<td>MultiSIT-Turkish: Comparison with TD, TD-BI and SLI children</td>
</tr>
<tr>
<td>No.</td>
<td>Title</td>
<td>Authors</td>
</tr>
<tr>
<td>-----</td>
<td>----------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>30</td>
<td>Identification of Specific Language Impairment in Multilingual Contexts: Preliminary Validation of a Short Parental Bilingual Questionnaire In Lebanon</td>
<td>Edith Kouba-Hrech, Camille Messarra, Philippe Prévost</td>
</tr>
<tr>
<td>31</td>
<td>Adaptation to Lebanese of the battery ELO and standardization on Lebanese bilingual children aged 3 to 8.</td>
<td>Rasha Zebib, Camille Messarra, Edith Kouba-Hrech, Henry Guillemette</td>
</tr>
<tr>
<td>32</td>
<td>Verbal and nonverbal indicators for identifying specific language impairment in successive bilingual preschool children: a proposal.</td>
<td>Katrin Lindner, Julia Held, Irina Lapenko, Jennipher Wagner, Natalia Gagarina, Julia Lomako, Elena Valentik-Klein, Oliver Weber</td>
</tr>
<tr>
<td>33</td>
<td>Language Support for Second Language Learners in German Elementary Schools – Chance or Risk?</td>
<td>Friederike Kern, Brigit Lütje-Klose, Urlich Mehlem, Magdalena Spaude, Christina Tausch</td>
</tr>
<tr>
<td>34</td>
<td>Literacy in bilingual Spanish-Catalan children with Specific Language Impairment.</td>
<td>Eva Aguilar-Mediavilla, Lucia Buil-Legaz, Daniel Adrover-Roig, Josep Pérez-Castelló</td>
</tr>
<tr>
<td>35</td>
<td>Assessment of linguistic and cognitive abilities in Polish-English bilingual preschool children: an interdisciplinary project.</td>
<td>Ewa Haman, Zofia Wodniecka, Marta Białecka-Pikul, Agnieszka Otwinowska-Kasztelanic, Katarzyna Kuś, Natalia Banasik, Aneta Miękisz, Jakub Szewczyk, Maria Cywińska, Agnieszka Kacprzak, Magdalena Karwala, Joanna Kołak, Magdalena Łuniewska, Karolina Mieszkowska</td>
</tr>
<tr>
<td>36</td>
<td>Testing Skills at School Beginning.</td>
<td>Radosław Kaczan, Piotr Rycielski</td>
</tr>
</tbody>
</table>
Index

Ünal, Özlem, 55, 56, 60
Łuniewska, Magdalena, 15, 55, 56, 58, 60, 62, 83
Živanović, Marko, 49, 56, 59, 70, 73
Abboud, Layal, 10, 23
Abi Aad, Karine, 71
Abou Melhem, Nouhad, 24, 71
Abutbul-Oz, Hadas, 20
Adrover-Roig, Daniel, 82
Aguilar-Mediavilla, Eva, 82
Andreou, Maria, 12, 33
Armon-Lotem, Sharon, 11, 12, 20, 31, 33, 68, 75
Asbjøornsen, Arve, 46
Attalah, Christel, 71
Aydin, A., 78
Baker, Anne, 17, 46, 48
Balciojiunė, Ingrida, 12, 33, 36
Banasik, Natalia, 27, 83
Białecka-Pikul, Marta, 12, 33, 35, 44, 52, 53, 83
Bittner, Dagmar, 30
Bjekić, Jovana, 49, 55–57, 59, 70, 73
Bjerkan, Kirsten M., 57, 61
Blom, Elma, 48
Blumenthal, Mirjam, 41
Bochińska, Agnieszka, 27
Boerma, Tessel, 48
Böhnacker, Ute, 12, 33
Bryczynski, Ulrike, 12, 33
Budde, Nora, 65
Buil-Legaz, Lucia, 82
Calleja, Nadine, 76
Campfield, Dorota E., 41
Chiat, Shula, 14, 77
Chilla, Solveig, 22
Chyl, Katarzyna, 55, 56, 60, 62
Clasen, Line Engel, 43
Crosnier, Tania, 26
Cruz-Santos, Anabela, 47
Cywińska, Maria, 83
Dabašinskienė, Ineta, 55
de Jong, Jan, 48
Distlerová, Lenka, 40
dos Santos, Christophe, 14, 62, 64, 71
Duinmeijer, Iris, 43
Ege, Pinar, 56, 60
Engel de Abreu, Pascale, 47
Fazekas, Kata, 50
Ferré, Sandrine, 14, 71
Fichman, Sveta, 12, 33
Fleckstein, Alice, 26
Foryś, Małgorzata, 27
Gagarina, Natalia, 12, 33, 43, 80
Garner, Sharon, 31
Gatt, Daniela, 15, 66
Gavarró, Anna, 32
Grech, Helen, 76
Grimm, Angela, 14
Grohmann, Kleanthes, 12, 33, 37, 69
Guasti, Maria Teresa, 72
Håkansson, Gisela, 28
INDEX

Haiden, Matrin, 12, 33
Halamová, Michaela, 38
Haman, Ewa, 15, 27, 55, 56, 58, 60, 62, 63, 67, 83
Hamann, Cornelia, 22
Hansen, Pernille, 55–57, 60, 61
Held, Julia, 80
Henry, Guillemette, 10, 23–25, 79
Hickey, Tina, 66
Hržica, Gordana, 12, 33, 34
Iluz-Cohen, Peri, 17
Jørgensen, Karina Niss, 50
Janssen, Bibi, 29
Jensen de Lopez, Kristine, 17, 43, 50
Jonsdottir, Frida B., 63
Kačar Kütküçü, Dilber, 77
Kacprzak, Agnieszka, 62, 83
Kaczan, Radosław, 54, 84
Kalinyni, Agne, 55
Kambanaros, Maria, 69
Kanañaj, Anila, 12, 28, 33
Kapalková, Svetlana, 38, 40, 55, 57, 74
Kapia, Enkëleida, 12, 28, 33
Karwala, Magdalena, 44, 52, 83
Katsos, Napoleon, 67
Kaya, Marifet, 65
Kazanoğlu, D., 78
Kemény, Ferenc, 50
Kern, Friederike, 81
Kern, Sophie, 64
Kiebzak-Mandera, Dorota, 12, 33
Klop, Daleen, 12, 33
Knapp, Alfred, 12, 33
Knudsen, Hanne S., 43, 50
Kołak, Joanna, 53
Kochańska, Magdalena, 27
Kohnert, Kathryn, 8
Kopkalli-Yavuz, Handan, 77
Kouba Hreich, Edith, 19, 56, 58, 79
Kovačević, Melita, 34
Kronqvist, Bjärke Sund, 43, 50
Kuš, Katarzyna, 63, 67, 83
Kunnari, Sari, 12, 33, 55
Kuvač Kraljević, Jelena, 12, 33, 34
Lütje-Klose, Birgit, 81
Ladányi, Enő, 50
Laloi, Aude, 48
Lapenko, Irina, 80
Levorato, Chiara, 12, 33, 37
Lindner, Katrin, 80
Lomako, Julia, 80
Lukács, Ágnes, 17, 50
Marinis, Theo, 10, 18
Markiewicz, Stefan, 60
Maviš, İlknur, 12, 33, 39
Mehlem, Ulrich, 81
Meir, Natalia, 11, 12, 31, 33, 75
Messarra, Camille, 19, 56, 58, 79
Miąkisz, Aneta, 27, 63, 67, 83
Mieszkowska, Karolina, 35, 83
O'Toole, Ciara, 15, 66, 67
Ohana, Odelya, 68
Onraet, Lauren, 56
Oosthuizen, Helena, 12, 33
Opacki, Marcin, 35
Otwinowska, Agnieszka, 12, 33, 35, 83
Pérez-Castelló, Josep, 82
Pearson, Barbara Zurer, 9
Peristeri, Ellen, 12, 33
Políšenská, Kamila, 40, 74
Prévost, Philippe, 11, 19, 24–26, 79
Puglisi, Marina, 47
Purić, Danka, 49
Raith, Lina-Sofie, 12, 33
Reichardt, Valerie, 12, 33, 43
Reichenbach, Katrin, 12, 33
Ribu, Ingeborg, 55, 57, 60, 61
Rinker, Tanja, 65
Roch, Maja, 12, 33, 37
Ruigendijk, Esther, 22

93
INDEX

Rycielski, Piotr, 54, 84

Saad, Selma, 10, 23–25
Sabine, Sarkis, 58
Sachse, Steffi, 65
Saliby, Christel, 58, 62
Sallat, Stephan, 45
SarkisGhanem, Sabine, 62
Schuktomow, Regina, 12, 33
Schulz, Petra, 11
Senderecka, Magdalena, 44
Shnaiderman, Irena, 31
Siegmüller, Julia, 30
Sienkiewicz, Joanna, 67
Simonsen, Hanne Gram, 55–57, 60, 61
Skerra, Antje, 12, 33
Slančová, Daniela, 55, 57
Smoczyńska, Magdalena, 27
Soesman, Aviva, 51
Southwood, Frenette, 55, 56, 58
Spaude, Magdalena, 81
Stoll, Henriette, 65
Szewczyk, Jakub, 76, 83

TadihanÖzkan, E., 78
Tantele, Koula, 12, 33, 37
Tarajko, Katarzyna, 62
Tausch, Christina, 81
Taxitari, Loukia, 69
Thordardottir, Elin, 21, 63
Timmermeister, Mona, 48
Tokárová, Ol’ga, 57
Topbaş, Seyhun, 46, 77, 78
Torkildsen, Janne von Koss, 46
Tsimpli, Ianthi, 12, 33
Tuller, Laurie, 10, 18, 23–26, 71
Tunçer, Müge, 12, 33, 39, 55, 56, 60

Välimaa, Taina, 12, 33
Valentik-Klein, Elena, 80
Vdović, Ivana, 34
Vernice, Mirta, 72
Visser, Monique, 12, 33
Voorn, Susanne, 41

Vrčić, Anida, 55
Vuksanović, Jasmina, 49, 55–57, 59, 70, 73
Wagner, Jennipher, 80
Walters, Joel, 12, 34, 51
Weber, Oliver, 80
Witkowski, Michał, 76
Wodniecka, Zofia, 44, 52, 53, 76, 83
Yarbay Duman, Tuba, 46
Zebib, Rasha, 24–26, 79

94