Publisher:
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This folder is co-financed by the EU from the European Social Fund as part of the project. Quality and effectiveness of education – strengthening of institutional research capabilities
Introduction

The Conference is entirely devoted to Specific Language Impairment (SLI), which is manifested through selective language impairment with no other deficits. According to study results, the prevalence of SLI in children is 7.4%, which means that on average in every school class or in any preschool group there is one child or there are two children with SLI. The impairment has serious consequences for the child’s development, education and the whole life, as it generates numerous difficulties, including social exclusion. This is why it is crucial for teachers, psychologists and speech and language therapists to have access to the latest knowledge on SLI.

A group of Polish researchers, psychologists and speech and language therapists, representing the leading Polish universities and scientific associations decided to call an international Conference on the topic, inviting researchers from the leading institutes in Europe, the United States and Canada in order to reflect on possible ways to help Polish children with SLI. Our aim is to decide what needs to be done to make sure the children are properly and reliably diagnosed, that they receive the appropriate treatment and that the education system is equipped with tools that meet their special educational needs.

Searching for support for the initiative, we were offered help from the Ministry of National Education. It was them who referred us to the Educational Research Institute, where feasible possibilities to implement the project were created. The idea was also welcomed with interest and benevolence by the Spouse of the President of Republic of Poland, Mrs Anna Komorowska, who took the patronage over our Conference. We would like to cordially thank her for that. Thanks to the support that we have received from various places, we now have the impression that we are about to open a new chapter which will bring us forward and move us closer to the systemic solution of the problem faced by the children with SLI and their parents. We are very thankful to the prominent group of our plenary speakers, the specialists from all over the world who have generously agreed to accept our invitation. Their lectures will set the stage for the Saturday plenary discussion about the possible solutions that could be implemented in Poland.

The Conference is organized by the Educational Research Institute with the cooperation of the Ministry of National Education and with the team of the initiators of the Conference, who now are the Programme Committee. Following the Conference, within the Team of Early Education, the Institute is starting a research project which aims at developing language tests for
the Polish preschool and early school children, which will make it possible to diagnose SLI. We will also study the possibilities of providing help to children with SLI or children at risk of the impairment prior to the start of school education. This will be done through appropriate training provided to preschool teachers and educators. We will also be working on the concept of adapting the system for our education institutions and professional counseling for special needs of the children. Higher education and study programmes which educate specialist staff should also be included.

We would like to thank the Polish specialists: speech and language therapists, psychologists, and doctors for the enormous interest that they showed in our Conference. It means that there is readiness in the community to face new challenges. We trust that together with academic institutions and with local authorities we will be able to produce appropriate tools and procedures which will enable us, if not to solve the problem of SLI, then at least to create better chances for development for the children affected. We would like to call the parents and the public opinion for joining the initiative: let us help children with SLI!

The Head of the Organizing Committee
Professor Magdalena Smoczyńska
Thursday, July 5, 2012

9.00 – 11.00 registration
11.00 – 12.00 opening: Krystyna Szumilas, Minister of National Education
12.00 – 13.30 lecture: J. Bruce Tomblin (University of Iowa, USA), What is Specific Language Impairment and why should we be concerned about it?
13.30 – 14.30 lunch break
14.30 – 16.00 wykład: James Law (University of Newcastle, UK), The child with speech, language and communication needs in the UK: the emerging evidence base and its implications for policy
16.00 – 16.30 coffee break
16.30 – 18.00 wykład: Catherine E. Snow (Harvard University, USA), Preventing language poverty and supporting language & literacy development in children
18.00 – 19.00 wykład: Laurence B. Leonard (Purdue University, USA), Specific Language Impairment across languages – VIDEOCONFERENCE

Friday, July 6, 2012

9.00 – 10.00 wykład: Leslie A. Rescorla (Bryn Mawr College, USA), Late talkers: identification, characteristics and outcomes
10.00 – 10.30 wykład: Magdalena Smoczyńska (Jagellonian University & Educational Research Institute, Poland), Late Language Emergence, SLI and Dyslexia in Polish speaking children: A follow-up study
10.30 – 11.00 wykład: Patricia A. Eadie i Sheena Reilly (University of Melbourne & Murdoch Children’s Research Institute, Australia), Prevalence, pathways, and co-morbidities of Late Talking and Language Impairment in a community cohort (2–7 years)
11.00 – 11.30 coffee break
11.30 – 12.00  wykład: STEPHANIE ORLOSKI (Speech and Language Therapist, Warsaw, Poland), Differentiating profiles of late-talking children and children with autism

12.00 – 12.30  wykład: ELŻBIETA SZELAG (Nencki Institute of Experimental Biology, Warsaw, Poland), The application of training in temporal information processing in children with SLI

12.30 – 13.30  wykład: ELIN THORDARDOTTIR (McGill University, Canada), Specific Language Impairment in Icelandic, English, French and in bilingual children: Differences and similarities

13.30 – 14.30  lunch break

14.30 – 15.30  wykład: ESTHER DROMI (Tel Aviv University, Israel), A developmental model for the evaluation of communication, language and speech disorders in very young children

15.30 – 16.30  wykład: MARILYN NIPPOLD (University of Oregon, USA), Reading comprehension and syntactic deficits in children with SLI. Implications for the classroom

16.30 – 17.00  coffee break

17.00 – 18.00  poster session

18.00 – 19.00  wykład: DOROTHY BISHOP (Oxford University, UK), How language impairment affects literacy? – WEBINAR

Saturday, July 7, 2012

9.00 – 10.00  wykład: MONIKA PAWŁOWSKA (University of North Dakota, USA), What's in a language test? An overview of diagnostic language tests and measures

10.00 – 11.00  wykład: NAN BERNSTEIN RATNER (University of Maryland, USA), Phonological and fluency characteristics of children with SLI

11.00 – 11.30  coffee break

11.30 – 12.30  wykład: PHILIP DALE (University of New Mexico, USA), What twin studies can tell us about why preschool language abilities predict later reading

12.30 – 13.30  wykład: SHULA CHIAT & PENNY J. ROY (City University, London, UK), The impact of socioeconomic disadvantage on young children’s language

13.30 – 14.30  lunch break
14.30 – 15.00  wykład: LAURENT DANOUD-BOILEAU (Université Paris Descartes, France), How can we help a child acquire his/her mother tongue?

15.00 – 16.00  Discussion panel: HOW TO HELP CHILDREN WITH SLI IN POLAND? part 1. Diagnosis of SLI, identification of children from risk groups

16.00 – 17.00  Discussion panel: HOW TO HELP CHILDREN WITH SLI IN POLAND? part 2. SLI Therapy, Early Intervention

17.00 – 17.30  przerwa kawowa

17.30 – 18.00  Discussion panel: HOW TO HELP CHILDREN WITH SLI IN POLAND? part 3. Children with SLI in preschool and school

18.00 – 19.00  Discussion panel: HOW TO HELP CHILDREN WITH SLI IN POLAND? Wrap-up: Systemic solutions. Closing of the conference

Sunday, July 8, 2012

Workshop: Presentation of Hanen programs with particular focus on the Learning Language and Loving it program. The workshop will be led by JANICE GREENBERG (Hanen Centre, Toronto, Canada)

9.00-10.30  Hanen workshop, part I
10.30-11.00 coffee break
11.00-12.30  Hanen workshop, part II
12.30-13.30 lunch break
13.30-15.00  Hanen workshop, part III
Programme Committee

Dr. Marta Białecka-Pikul
Professor Marta Bogdanowicz
Professor Barbara Bokus
Professor Anna Brzezińska
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Professor Elżbieta Szelag
Dr. Zofia Wodniecka
Professor Tomasz Woźniak

Organising Committee

Magdalena Smoczyńska – przewodnicząca
Ewa Haman
Renata Olech
Aneta Ganeczko
Plenary Speakers

Professor Dorothy Bishop – Professor of Developmental Neuropsychology at the Department of Experimental Psychology, Oxford University, Oxford, Great Britain; She investigates the neurological and genetic basis of SLI and the relation between SLI and dyslexia; She is author of several language development diagnostic tools (e.g. Test of Reception of Grammar – TROG-2).

Professor Shula Chiat – psycholinguist, professor at the Language & Communication Science Division, City University London, Great Britain; she specializes in early assessment and diagnosis of language disorders. Co-author of diagnostic tools for assessing language development (e.g. The Preschool Repetition Test)

Professor Philip Dale – psychologist, professor and chair of the Department of Speech & Hearing Sciences, University of New Mexico, Albuquerque, USA; co-developer of the MacArthur-Bates Commnunicative Development Inventories; co-author of numerous experimental studies on language development, language disorders, and intervention, including twin studies of genetic and environmental influence conducted in the United Kingdom.

Professor Laurent Danon-Boileau – Professor in linguistics and psycholinguistics at Département des Sciences de Langage, Université Paris Descartes and researcher at Centre National de la Recherche Scientifique, Paris, France. He is also a psychoanalyst and conducts therapies with children with speech disorders and autism spectrum disorder; an author of books about children who do not speak. (The Silent Child O.U.P 2001, Children without speech O.U.P 2005)

Professor Esther Dromi – School of Education, Tel Aviv University, Israel. Professor Dromi specializes in early communication, language and speech development, and in language impairments in young children. She published studies on children with various developmental disorders (SLI, deafness, and Autistic Spectrum Disorders). Professor Dromi is working within the developmental theoretical framework and therefore highlights the need to consider each child within his/her family, and to develop individual intervention programs to be implemented in the clinic and in the educational settings.
Dr Patricia EADIE – Speech Pathologist & Senior Lecturer in the Department of Audiology & Speech Pathology, University of Melbourne. Her research focuses on the early identification of children with language impairment, the developmental pathways to SLI and measurement & reliability issues in the assessment of language skills. She is one of the senior investigators conducting the Early Language in Victoria Study (ELVS), a longitudinal investigation of the emergence of language and literacy disorders in a community cohort of children from birth to 7 years. Dr Eadie will represent the team of investigators when presenting data from the ELVS Study – Prof Sheena Reilly (Principal Investigator), Edith Bavin, Lesley Bretherton, John Carlin, Anne Castles, Patricia Eadie, Margot Prior, & Melissa Wake.

JANICE GREENBERG, B.Sc., D.S.P., is a speech-language pathologist and Director of Early Childhood Education Services at The Hanen Centre. She has co-authored Learning Language & Loving It (Weitzman & Greenberg, 2002) and ABC and Beyond: Building Emergent Literacy in Early Childhood Settings (Weitzman & Greenberg, 2010). Ms. Greenberg is an experienced leader of Hanen Programs and provides training to teachers and speech-language pathologists worldwide. She has also been a co-investigator in several research studies on the impact of Hanen Programs.

Professor JAMES LAW – linguist and speech and language therapist and Professor of Speech and Language Science in the School of Education, Communication and Language Sciences, University of Newcastle. Newcastle-upon-Tyne, Great Britain; principal author of the Cochrane Review of interventions for children with speech and language delays/disorder and co-author of a number of papers analysing data from long-term epidemiological studies of early language disorders; currently member of a team developing social policy strategy for diagnosis and intervention in speech and communication disorders.

Professor LAURENCE B. LEONARD – Professor of Speech-Language Pathology, Department of Speech, Language & Hearing Sciences, Purdue University, West Lafayette, Indiana, USA; the author of Children with Specific Language Impairment (1998), which was translated into Polish and published by Gdańskie Wydawnictwo Psychologiczne: Specyficzne zaburzenie rozwoju językowego (2006); conducts numerous experimental studies, his area of focus is the study of grammatical disorders in SLI.
Professor Marilyn Nippold – Professor of Communication Disorders and Sciences at the University of Oregon (USA) where she specializes in later language development, literacy, language disorders, and stuttering. A speech-language pathologist, Professor Nippold has published 5 books and over 100 journal articles and book chapters and is a Fellow of the American Speech-Language-Hearing Association (ASHA). Currently, she serves as Editor-in-Chief of Language, Speech, and Hearing Services in Schools.

Ms Stephanie Orloski – speech and language pathologist. Graduated from University of Maryland, worked as a research fellow in Yale Child Study Center’s Autism Program, and as a speech and language therapist and clinical supervisor in Maryland and Virginia. She now lives in Warsaw and provides therapy and school-based consultation for English-speaking children with autism spectrum disorder, dyslexia, and language impairment.

Professor Monika Pawłowska – Department of Communication Sciences & Disorders, University of North Dakota, Grand Forks, North Dakota, USA; linguist, graduate of English philology of Adam Mickiewicz University in Poznan (Poland), where she also pursued her Ph.D. degree; she has worked in the USA in professor Leonard’s team in Purdue for a several years, currently a professor at the University of North Dakota.

Professor Nan Bernstein Ratner – Professor of Speech-Language Pathology, Chair of the Department of Hearing & Speech Sciences, University of Maryland, College Park, Maryland, USA; recognized specialist in speech fluency (stuttering); together with Jean Berko Gleason, who was her mentor, she is the author of the texts Psycholinguistics (translated and released in Poland by Gdański Wydawnictwo Psychologiczne in 2000 as „Psycholingwistyka”) and The Development of Language (8th edition).

Professor Leslie A. Rescorla – profesor psychologii, kieruje Child Study Institute, Bryn Mawr College, Bryn Mawr, Pennsylvania, USA; prowadziła przez 15 lat badania podużne dotyczące dzieci późno mówiących, autorka kwestionariusza rodzicielskiego LDS (Language Development Survey), narzędzia badawczego do diagnozy zaburzeń ekspresji mowy u dzieci między 18 a 35 miesiącem.
Professor Penny J. Roy – developmental psychologist, professor in the Language & Communication Science Division, City University, London, Great Britain; specializes in research on language disorders, early language deprivation and the influence of socioeconomic status on language development. Co-author of diagnostic tools for assessing language development (e.g. The Preschool Repetition Test)

Professor Magdalena Smoczyńska – psycholinguist, professor at Institute of Education Studies (Instytut Badań Edukacyjnych) in Warsaw; for many years worked at Jagellonian University in Cracow. She is an author of publications on language development of Polish-speaking children and of Polish adaptation of McArthur-Bates Communicative Development Inventories, an assessment tool for early language development. She conducts research on late talkers and develops tools to diagnose SLI in Polish.

Professor Catherine E. Snow, Patricia Albjerg Graham professor at the Graduate School of Education, Harvard University, Cambridge, Massachusetts, USA; psycholinguist, recognized researcher of child language and literacy development, focusing on children placed at high social or academic risk. She has published on child-directed speech, reading books with children, development of narrative skills, development of discussion skills in classrooms, qualities of excellent early childhood education, and the relation of language skills to reading comprehension. Together with Brian MacWhinney, she is the co-founder of the international CHILDES database.

Professor Elżbieta Szeląg – Professor in Neuroscience and Head of the Laboratory of Neuropsychology at the Nencki Institute of Experimental Biology in Warsaw; she also holds the Chair in Neurorehabilitation at the University of Social Sciences and Humanities (SWPS) in Warsaw. Professor Szeląg has been involved in research on neuropsychological mechanisms of human cognition and neuropsychological rehabilitation; she has worked clinically in speech therapy specialist centres both in Poland and abroad. Since 2010 she has been the Vice-Chair of the COST Program TIMELY (6th FP EU).

Professor Elin Thordardottir – speech and language pathologist, professor in the School of Communication Science & Disorders, McGill University, Montreal, Canada; she specializes in studying language disorders in French-, English- and Icelandic speaking children. Author of new diagnostic methods and intervention programmes.
Professor BRUCE TOMBLIN – Professor of communication sciences and disorders, director of the Child Language Research Centre, Iowa University, Iowa City, Iowa, USA. His research has concentrated on the causes and consequences of poor language development children with specific language impairment (SLI), autism, and hearing loss. He has also conducted research on the genetic bases of language development and disorders.
Abstracts of lectures

Thursday, July 5, 2012

**J. Bruce Tomblin (University of Iowa, USA), What is Specific Language Impairment and why should we be concerned about it?**

The acquisition of spoken language for most children occurs without effort or instruction from caregivers. However, some children find language acquisition to be challenging for a variety of reasons, such as: language deprivation, hearing loss or severe intellectual disability. Some children face difficulties in language development without these challenges. These children are now described as having specific language impairment (SLI). This presentation will provide an overview of the prevalence, epidemiological and developmental features of SLI and the evolving diagnostic issues surrounding SLI. I will argue that many of these diagnostic issues require that we consider the outcomes associated with poor language. Within this perspective a diagnosis of SLI is intended to express concern regarding the child’s future. I will use data from a ten-year longitudinal study, to show that language skills during the school years are highly predictable and that individual differences are very stable. I will also present descriptions of relationships between early language and later academic, social and personal outcomes through childhood and early adulthood that can be used to construct guidelines for determining the level of early risk due to poor language.

**James Law (University of Newcastle, UK), The child with speech, language and communication needs in the UK: the emerging evidence base and its implications for policy**

Over the past ten years there has been a growing interest in children with speech, language and communication needs (SLCN) and the services that are available to meet those needs. The term SLCN covers children identified as having specific language impairment but is not restricted to this group. Of particular importance is the British government report known as the Bercow Review of services to children with SLCN. The talk will begin by outlining the recommendations of this review and the initiatives that followed it including ‘The Better Communication Research Programme’ a £1.5m programme designed to address some of the issues coming out of the Bercow. I will then go on to outline the key messages coming out of the research programme which was finished in March 2012. The programme included five specific projects: best evidence for the effectiveness of interventions, an analysis of national datasets, cost effectiveness, a prospective study comparing the
experiences and outcomes of children with autism and specific language difficulties and finally a study of the outcomes which are most important to the parents of children with SLCN and the children themselves.

**Catherine E. Snow (Harvard University, USA), Preventing language poverty and supporting language & literacy development in children**

There is enormous variability among normally developing children in their vocabulary sizes. This variability can to a large extent be explained by their access in the first four years of life to language rich experiences – opportunities to discuss topics of interest, to hear their own simple utterances responded to and elaborated, to discuss books read aloud, and to engage in narratives, explanations, and discussions. Children in language-rich environments learn more, and thus have richer linguistic and conceptual resources at their disposal for acquiring literacy and acquiring knowledge about abstract and academic topics. Children with language disorders in particular need richer-than-average language environments, as extra meaning-rich scaffolding for accessing morphological and syntactic structures.

**Laurence B. Leonard (Purdue University, USA), Specific Language Impairment across languages**

In every language studied, children with specific language impairment (SLI) perform below the level of both typically developing same-age peers and younger typically developing children matched on some language measure such as mean length of utterance, vocabulary size, or language test score. However, the particular details of language that cause such extraordinary difficulty for these children are not the same from language to language. There is dramatic cross-linguistic variation. In this presentation, the most salient symptoms of SLI in a wide variety of languages will be reviewed. Differences across major language groups (e.g., verb-second languages, null-subject languages, tone languages) will be discussed as well as differences between languages within major groups (e.g., German vs Swedish vs English). The alternative explanations of grammatical deficits in SLI will be evaluated in light of the cross-linguistic differences. Although no explanation is yet able to accommodate all of the profiles of grammatical difficulty seen across languages, two principles will be singled out that may have some utility across languages and that can be incorporated into language treatment activities. These principles are the strengthening of structural ties in complex sentences, and increasing the diversity of lexical items used with inflections.
LESLIE A. RESCORLA (Bryn Mawr College, USA), Late talkers: identification, characteristics and outcomes

Expressive language delay is one of the most common reasons that young children are referred for evaluation. When children age 18 to 36 months are slow to talk in the absence of any other condition presumed to be primary (such as intellectual disability, autism spectrum, or hearing impairment), they are usually referred to as late talkers. Some late talkers have a combined receptive/expressive delay and others have an expressive delay only. Outcomes vary among late talkers, but children with combined receptive/expressive delay tend to have poorer outcomes than children with expressive delay only. Most children with only an expressive delay catch up to normative standards, but they have somewhat weaker language skills through adolescence than peers from the same backgrounds with typical language histories. This talk will address three major topics: (a) what are the best assessment procedures for identifying late talkers from 18 to 36 months; (b) what are the characteristics of late talkers; and (c) what are the outcomes of late talkers in the preschool, school age, and adolescent periods.

MAGDALENA SMOCZYŃSKA (Jagellonian University & Educational Research Institute, Poland), Late Language Emergence, SLI and dyslexia in Polish speaking children: A follow-up study

The outcomes of 42 Polish-speaking late talkers are reported up to the age of 10. At the age of 2;0 the screening was performed in which the Polish version of MacArthur-Bates CDI ‘Words & Sentences’ was used to assess the productive vocabulary of each child. Children below the 12th percentile formed the clinical group of late talkers (LT) and a control group of children representing ‘the good norm’ (between 25th and 75th percentile) was matched. Each group consisted of 42 children, who were further seen at the Jagellonian University Child Language Lab at the ages of 2;6, 3;6, 5;6, 8;0, 8;6. Recently the last follow-up session took place at the age of 10;0.

A tentative diagnosis of SLI was performed at the age of 5;6. It was tentative, because there are no standardized language tests in Poland. The children were given five experimental language tasks, such as nonword repetition, sentence repetition, sentence modelling, sentence comprehension and an inflection task. One third of the group failed 4 to 5 out of 5 tasks, by solving them at a level of at least 1.25 SD lower than the average performance of the control group. These children were assumed to have SLI. Another third was composed by those who haven’t failed any of the tasks or have failed just one of them. They were considered to be those who have recovered from their
original language delay (late bloomers). The remaining third of the original
late talkers was formed by those who have failed 2 or 3 tasks. They were
labeled ‘undetermined group’. This result alone, showing that children who
undoubtedly recover from language delay are a minority (ca. 30%), points at
the necessity of providing late talking children with appropriate therapy and
stimulation right at the preschool period.

Subsequent experimental sessions included many tasks related to literacy in
addition to the language tasks. As far as the language tasks are concerned,
further development has shown that children in the undetermined group
continued to demonstrate language problems, and sometimes manifested
more severe language deficits than those that could be seen at the age of 5;6.
However, contrary to expectations, in the early school years (sessions at 8;0
and 8;6) there was no clear link between SLI and the risk of dyslexia, at least
not at the level of simple decoding, thus the co-morbidity of both impairments
known from the literature was not confirmed. The last experimental
session will hopefully clarify whether SLI children will also show reading
comprehension problems.

The initial and final parts of the research was supported by two grants from the Polish
Ministry of Higher Education. The last part of the project is run in collaboration with Dr. Marcin
Szczerbiński, Cork University College, a specialist in literacy development.

**PATRICIA EADIE & SHEENA REILLY (University of Melbourne & Murdoch
Children’s Research Institute, Australia), Prevalence, pathways, and
co-morbidities of Late Talking and Language Impairment in a community
cohort (2–7 years)**

The Early Language in Victoria Study (ELVS) is a prospective longitudinal
study of a community cohort of 1900 children born in Victoria, Australia. ELVS
has investigated the prevalence and developmental pathways of language,
including the early predictors and co-morbidities of language impairment
(LI) and specific language impairment (SLI). Participants were recruited at 8
months and at 7 years approximately 1200 children were still being followed
via a combination of parent report questionnaires (completed annually) and
face-to-face speech and language assessments completed at 4, 5 & 7 years.
This presentation will focus on the prevalence of LI and SLI in the ELVS cohort
as well as the developmental pathway for the children identified as late talkers
at 2 years of age. 20% of participants in ELVS were classified as late talkers
at 2 years. The prevalence of LI at 4 years (20.6%) and 7 years (18.2%) was
similar. 46% of the late talkers at 2 years were classified as LI at 4 years.
The incidence of LI co-occurring with other communication, behaviour &
developmental difficulties (e.g., speech sound development, emerging literacy
skills, gross & fine motor skills) was generally higher than for the children with
typical language. The stability in the prevalence rate across the time points masked substantial movement in and out of LI/SLI categories. ELVS findings reflect the complexity of measuring language skills at different ages and suggest that developmental pathways for language remain fluid into the school years. Patricia Eadie is representing the ELVS team of investigators for this presentation, coauthored by Sheena Reilly.

**Stephanie Orloski (Warsaw, Poland), Differentiating profiles of late-talking children and children with autism**

Delayed emergence of language in toddlers is a common problem. Indeed, 10–15% of otherwise typically developing children fail to reach language milestones within expected time frames. Many of these children have an expressive language delay only and they often test in the normal range on standardized language measures by school age. However, for other children, language delay is an early indicator for parents and professionals of a broader developmental issue. These children are at greater risk of persisting language-learning and reading difficulties, developmental disabilities, and social and behavioral problems. Investigations of children with early language delay have sought, in part, to determine characteristics that are associated with other impairments, such as global developmental delay and autism. As effective early intervention requires a targeted approach based on accurate diagnosis, differentiating these groups of children is especially important. This talk will present current research on characteristics of ‘pure’ late talkers versus late talkers who also demonstrate features of autism. In addition to traditional speech and language measures, the groups will be compared across social, emotional, nonverbal and behavioral dimensions. Implications for assessment and intervention will be discussed.

**Elżbieta Szelać (Nencki Institute of Experimental Biology & Warsaw School of Social Sciences and Humanities, Warsaw, Poland), The application of training in temporal information processing in children with SLI**

There is a body of neuropsychological evidence indicating that temporal processing is one of the most fundamental principles of human cognition. The empirical support for such a statement comes for example from our studies on two different levels of temporal processing, namely on high frequency processing (i.e. tens of milliseconds range) and low frequency processing (i.e. a few seconds time range). The central role of timing in mental functioning led to the observation that many neurodevelopmental or neurodegenerative disorders are accompanied by deficient temporal processing. Recent studies conducted in our Laboratory indicated that disordered timing can be improved by a specific training. Results of our challenging discovery suggested that
after such training, a transfer of improvement can be observed from the trained time domain to the untrained language (in aphasic patients), attention, short term memory or new learning ability (normal healthy volunteers). On the basis of these results, as well as on the basis of our research of many years and patented technology, we have recently developed an innovative temporal training addressed to children with SLI. We present both the theoretical background and the program of the training, considering the specific temporal information processing disorders characteristic for SLI.

Supported by the NCBiR grant INMET

**Elin Thordardottir** (McGill University, Canada), *Specific Language Impairment in Icelandic, English, French and in bilingual children: Differences and similarities*

The talk will present studies on Specific Language Impairment (SLI) in monolingual children who speak Icelandic, English, and French, and in bilingual children with and without SLI, focusing on the manifestation of SLI across languages, language specific and common developmental patterns, and methods for the identification of SLI. A newly developed identification protocol for French-speaking children will be presented.

Deficits in grammatical morphology have long been seen as a prominent characteristic of the language of children with SLI, and as potential clinical markers of the disorder – a finding originally based on observations of English-speaking children. Another characteristic of the language of children with SLI is that it tends to resemble that of younger children speaking the same language. Our normative data on French and Icelandic speaking children reveal developmental patterns in morphosyntax that differ substantially from those of English-speaking children. Our subsequent studies of children with SLI speaking these languages confirm a different manifestation of SLI across the languages, but with linguistic patterns in each case more similar to those of younger children with typical development speaking the same language.

Data on the linguistic performance of bilingual children shed further light on the linguistic specificity of developmental patterns within the same child, showing how amount of input in each language affects the level of performance reached in each language, with implications for the factors underlying such different patterns as similar patterns can arise in children with SLI and in bilingual children receiving low levels of input in one language. Similarities were also found across languages. Consistent with previous findings on English, Icelandic-speaking, French-speaking, and bilingual children with SLI were found to have deficits in tasks involving linguistic processing, such as nonword repetition and sentence imitation in contrast to
their counterparts without SLI, suggesting that such tasks have diagnostic utility for the identification of SLI across languages, and also indicating that the languages vary in which aspects require the most resources and are most vulnerable when the task at hand exceeds these resources.

ESTHER DROMI (Tel Aviv University, Israel), A developmental model for the evaluation of communication, language and speech disorders in very young children

An original model that was developed for the assessment of communication and early language will be presented. The model is based on a set of assumptions of the Dynamic System Theory that highlight the importance of developing tools for evaluating fine changes overtime in behavior. The following principles become realized in the model: (a) slow underlying changes in the representation of knowledge generate emergent abilities; (b) observation in naturalistic contexts allow the accumulation of rich data; (c) close examination of details allow for generalization of findings; (d) emphasis on interaction and co-construction of knowledge; (e) a developmental assessment will lead to a Naturalistic-Developmental Intervention (NDI). The model has five modules representing the emergence of speech as an outcome of internal re-organizations. The modules are: relation/emotion, communication, cognition/representation, language comprehension, motor planning/sensory integration, and speech production. The application of the model in real life clinical situations will be demonstrated with examples on how goals for intervention with are selected and enhanced during therapy with very young children with severe communication and language impairments and their parents.

Marilyn Nippold (University of Oregon, USA), Reading comprehension and syntactic deficits in children with SLI. Implications for the classroom

As children progress through school, their academic success increasingly depends upon the ability to read and comprehend sophisticated textbooks, often written in the expository genre. In particular, once they have moved beyond the early grades (K-3), they are often assigned by their teachers to read challenging material in areas such as science, history, and social studies. In addition to difficult vocabulary, these textbooks typically contain long and complex sentences with multiple subordinate clauses (e.g., ‘Tornadoes are created when the warm air of a giant storm system rises and hits a current of downward-moving cool air’; ‘Line graphs are powerful tools because they allow you to estimate values for conditions that you did not test in the experiment’). In this presentation, I will discuss a longitudinal investigation (Nippold, Scott, & Tomblin, 2012) that examined the role of syntax (SYN) in
relation to reading comprehension (RDC) in children with SLI (n = 102) at 4th grade (age 10) and again at 8th grade (age 14). A control group of children with typical language development – TLD (n = 247) also participated. At both points in time, the TLD group outperformed the SLI group on SYN and RDC, and SYN was a strong predictor of RDC. Implications for language intervention relevant to the demands of the classroom will be discussed.

DOROTHY BISHOP (Oxford University, UK), How language impairment affects literacy?

For many years, research on language impairment proceeded quite separately from research on dyslexia and literacy skills. In part this was the consequence of professional boundaries that meant that children’s language impairments were the domain of speech and language therapists, whereas literacy came under the purview of education and psychology. In addition, until the 1980s, it was widely believed that dyslexia was a visual problem, having to do with perceptual confusions between letters. It has, however, become increasingly clear that this division is unhelpful: most children with language problems also have literacy problems, and most literacy problems are rooted in phonological rather than visual difficulties. I will discuss the similarities and differences between specific language impairment and developmental dyslexia, and consider how knowledge of their common features affects approaches to intervention.


Saturday, July 7, 2012

MONIKA PAWŁOWSKA (University of North Dakota, USA), What’s in a language test? An overview of diagnostic language tests and measures

The goal of this presentation is to provide a brief overview of diagnostic tools available to speech language pathologists and researchers who need to identify children with SLI. The presentation will include the more traditional standardized language tests and language sample measures, as well as the more recent processing measures and the concept of dynamic assessment. Factors involved in the selection of diagnostic measures to be used, including developmental considerations and evidence of diagnostic accuracy, will also be discussed.
NAN BERNSTEIN RATNER (University of Maryland, USA), Phonological and fluency characteristics of children with SLI

This session will review what is known about related conversational abilities in children with SLI, specifically their phonological abilities, and fluency characteristics of their expressive language. Using data from Rescorla’s original cohort of late-talking children, as well as language-delayed children followed by Peter Jusczyk and colleagues, we will describe phonological inventory limitations in language-impaired children, and possible profiles of lexical selection and avoidance based on phonological limitations. We will also explore clinical ramifications of these findings, including guidelines for selecting an initial target vocabulary for unintelligible late-talking children. As late-talking children and children with SLI master more complex grammar, we are increasingly aware that their speech fluency may be noticeably impaired. In fact, some children with SLI have sufficient numbers of disfluencies in complex language formulation tasks that they may be mis-diagnosed as children who stutter. The emerging literature on this issue will be summarized, and guidelines for differential diagnosis of stuttering and language formulation-induced disfluency will be provided. Treatment ramifications will be offered.

PHILIP DALE (University of New Mexico, USA), What twin studies can tell us about why preschool language abilities predict later reading

Longitudinal research, when conducted within a genetically sensitive design (the twin study), can provide deep illumination of the grounding of literacy development in early speech and language development along with nonverbal development. This information in turn can inform the design of assessments for the prevention and/or identification of literacy problems, and the choice of targets for intervention. In this talk I will draw primarily on evidence from the Twins Early Development Study (TEDS), a large, UK population-based study of language, cognitive, and academic development, supplemented by selected other evidence, to (a) identify the most important predictors from oral language development to literacy, (b) trace specific connections between aspects of language development to specific aspects of literacy, and (c) determine the balance of genetic and environmental factors responsible for both continuity and change in those connections. There will also be some consideration of the extent to which these issues are dependent on the structure of the particular oral language, the orthography of the written language, and the organization of early literacy education in the society.
SHULA CHIAT & PENNY J. ROY (City University, London, UK), The impact of socioeconomic disadvantage on young children’s language

It is widely accepted that SLI affects about 7% of children, but this is not evenly spread: children from low socioeconomic backgrounds are at higher risk of SLI, while in more advantaged groups, the proportion of children with SLI is much lower. It is also known that assessments of receptive and expressive language that are used to diagnose SLI depend on a range of knowledge and experience, so if children from low SES backgrounds perform poorly on these assessments, this could be due to limited experience rather than language disorder. Recently, it has been suggested that tests of basic language processing are less dependent on experience and may help to distinguish language disorder from poor performance due to social disadvantage. In this paper, we will report two studies investigating performance of children from different socioeconomic groups on standard tests of receptive and expressive language and tests of basic language processing. The first study involved preschool children who were referred to clinical services with concerns about their language. The second involved a large community sample of children attending preschool provisions in a very low SES area. We will present the findings of these studies, and discuss the implications for differentiating language disorder from language disadvantage and for appropriate targeting of intervention.

LAURENT DANON-BOILEAU (Université Paris Descartes, France), How can we help a child acquire his/her mother tongue?

The reasons why a child cannot speak are varied. Yet careful observation of the child’s attitude and behaviour in natural interaction can provide hypotheses concerning the entanglement of cognitive and affective reasons that bar his/her way towards speech and communication. But one cannot teach a child his or her mother tongue. One can only put the child in a situation in which language can be acquired. To obtain this result one has to try and figure what the child experiences when he/she does not understand others and is not understood. One also has to appreciate the impact of language impairment on the whole of the child’s psychic life. At last, one must have a clear idea of what can foster the child’s pleasure to speak and express himself/herself.
JANICE GREENBERG (Hanen Centre, Toronto, Canada), Hanen Programs:
Involving educators in young children’s language development
(workshop)

Speech, language and communication difficulties can have a profound and
lasting effect on children’s lives. Young children with speech and language
impairments are at risk for continued communication problems, as well as
associated cognitive, academic, behavioral, social and psychiatric difficulties.
Moreover, the residual effects of speech and language disorders may be
life-long with the impact of the frustration, anxiety, peer rejection and lack of
confidence associated with communication challenges escalating over time
and leading to significant difficulties into adulthood.

Research shows that we can boost young children’s language development
and increase the likelihood of future academic success by focusing on the
interactions that occur between children and the important adults in their
lives: their parents and educators. In fact, empirical studies have shown
positive short- and long-term outcomes from children’s participation in high
quality early education settings, in which children experience responsive and
cognitively stimulating interaction with adults.

The Hanen Centre supports and trains parents and educators in their efforts
to help young children develop the best possible language, social and literacy
skills. Based on a social interactionist model of language development, The
Hanen Centre’s evidence based programs and resources reflect a child-
centered approach that can be implemented within everyday activities
and conversations in home and preschool settings. Hanen Programs draw
extensively on what is known about how adults learn best, recognizing that
the learner, rather than the trainer, has the most important role in the learning
process.

This presentation will primarily focus on the important role early childhood
educators/teachers can play in the facilitation of language development of
all preschool-aged children, including those who are at risk for language
delays, those who have language disorders, those who are second language
learners and those who are typically developing. Videotapes will illustrate how
educators are taught to adopt a child-centred approach to interactions with
the child by following the child’s lead, encouraging extended interactions and
providing language that is fine-tuned to the child’s developmental stage.
Upon completion of the morning sessions, participants will be able to:
1. explain the rationale for involving parents and educators as language facilitators;
2. describe specific strategies taught in Hanen Programs to facilitate language development in early childhood settings during daily activities.

Upon completion of the afternoon session, participants will be able to:
1. list and explain the principles of adult learning that underlie quality learning experiences for educators;
2. describe a model of collaborative consultation that supports educators to change their interactive behavior with children;
3. explain why videotaping and feedback experiences play such an important role in supporting behavior change in educators.
Poster 1 A

MONIKA BIAŁA

1 Psychological and Pedagogical Counseling Centre No. 7, Warsaw, Poland

Several years’ psychological care over a boy with SLI in a psychological and pedagogical counseling center. The proposal of a psychological care model

In Poland, the first psychological institutions where a child and the family are directed to and where they can report different kinds of problems, including speech impairment, are usually psychological and pedagogical counseling centers. Considering quite a large number of SLI cases, also in Poland, it is important to create psychological care methods which could be used by the ‘family psychologist’.

The poster presents the experience of psychological care over a schoolboy with SLI who has been in the care of a clinical psychologist in a psychological and pedagogical counseling center since 2008. The first and a very important step to ensure proper help for the boy and his parents was to diagnose the child’s problems with the co-operation of a neuropsychologist. Next, long-term psychological action directed at the boy, his parents and school was undertaken. The intervention methods included:

• weekly therapeutic sessions with the boy and his parents,
• explaining to the teachers the characteristics of the child’s problems,
• co-operation with pedagogues leading the therapy of school problems,
• lectures on SLI for teachers, psychologists and pedagogues.

Expanding the ‘therapeutic area’ over all of the child’s environment made creation of the holding environment in his family and school possible.
Poster 2 A
LUCYNA RUPACZ¹, LIDIA CISOWSKA²
¹ Speech therapy and pedagogic therapy clinic LOGOP, Bydgoszcz, Poland
² Speech therapy clinic LogoLid, Bydgoszcz, Poland

Is it SLI? – Difficulties in the differential diagnosis of disorders in children at risk (delayed development of speech)

This paper compares two cases of children aged 4.5 with delayed speech development of unknown etiology. The boys in the study regularly attended speech therapy, speech eurhythmics and activities of sensory integration for 2 years. Therapeutic work has brought visible, very positive results. The same in both boys – in the area of motor efficiency and articulation, feeling of one’s body schema, understanding single words and simple grammatical structures of speech and expression in the phonetic and lexical context. They exhibit significant differences in the areas of understanding of syntax, speech expression level of sentence structure and grammatical forms. Reduced efficiency in these areas significantly impairs the pragmatic ability in one of the boys, and this leads to communication problems in the preschool group. He has had early stuttering, disordered emotional processes (lack of emotional control, excessive focus on himself, exaggerating the failures), and behavioral disorders. His parents want to finish the treatment because their son “already forms short sentences”.

Poster 3 A
AGNIESZKA MARYNIAK¹, ANNA SĘDEK¹
¹ The Children’s Memorial Health Institute, Poland

Why is SLI often diagnosed as Asperger syndrome?

Although the criteria for Asperger syndrome (AS) contain a point excluding the diagnosis when the patient has “clinically significant general delay in spoken or receptive language” (ICD–10), the clinical practice shows that in Poland relatively often children with SLI are treated as patients with AS. For example, among 74 patients in whom neuropsychological examination indicated SLI, 33 were already diagnosed with AS, and 18 were in the course of diagnosis in this direction.

Difficulties in the differential diagnosis are due to:

• co-occurrence of symptoms: verbal communication deficits in patients with AS, difficulties in social functioning and tendency to develop peculiar interests in children with SLI;
• the presence of numerous questions about the language functioning in questionnaires supporting the diagnosis of AS (CAST, ASDI, ASAS);
propagation of knowledge of AS among professionals and parents, and lack of information about SLI;

inclusion of AS and omission of SLI in educational and social legislation.

Wrong diagnosis deprives children of proper therapy, leads to mistaken perception of their behavior, and to formation of “identity of Asperger syndrome” in the patient, which can result in escalation of difficulties in social relations.

Poster 4 A

Magdalena Kaczorowska¹, Dorota Domańska-Pakieła¹, Agnieszka Maryniak², Anna Sędek²

¹ Department of Neurology and Epileptology, The Children’s Memorial Health Institute, Poland
² Developmental Neuropsychology Laboratory, The Children’s Memorial Health Institute, Poland

SLI from the child neurologist perspective

Children with language disability are a significant population visiting child neurologists. They represent patients with several neurological entities, among which SLI diagnosed by psychologists is not widely recognized by neuropaediatricians. Our goal was to examine the group of children diagnosed with SLI in order to 1. look for pediatric or neurologic signs and symptoms shared by SLI children; 2. search for neurological diseases responsible for poor language skills; 3. have the data enabling us to prepare tips on possible intervention; 4. get familiar with the condition.

The children were recruited from the Laboratory of Developmental Neuropsychology. We have examined 11 children (8 boys, 3 girls). What we examined were: detailed medical history including prenatal, basic anthropometrics, co-morbidities, general pediatric and neurologic physical examination, awake and/or sleep EEG.

We found nothing in the medical history indicating common factor triggering language disability. One boy had macrocephalia, one focal signs on neurological examination. One girl had focal changes on EEG, two boys generalized paroxysmal changes. These boys are waiting for neuroimaging examination.

It seems that medical counseling in SLI patients should focus on excluding neurological causes and reinforcing the good patients’ sides.
Therapy of childhood difficulties in using the language code

The poster will present methods of therapy of Specific Language Impairment (SLI) – which arose from therapeutic practice. They are addressed to children at early school age. They concern the type of linguistic communication which occurs at school during working with texts and talking about what is not directly available.

In these circumstances, when the verbal information is devoid of natural situational and pragmatic context, the sense is recognized solely on the basis of the linguistic code, that is the meanings of words, grammatical structures of words and sentences, and the information structure within the sentence. Children with SLI have severe difficulties with that.

The proposed methods of treatment concern the cognitive and behavioral level of the disorder. They consist of facilitating the acquisition of language skills and the subconscious or conscious knowledge of the language in the absence of socio-pragmatic context. The methods are based on the suggestions of children’s intelligence development classics: J. Piaget, J.S. Bruner and L. Wygotski.

The methods include: identifying a sentence as a complete utterance, recognizing the rules of syntax, using syntax in order to paraphrase sentences, recognizing the relation between the grammatical structure and prosody in a sentence, identifying parts of speech, transforming the word because of its variable function in speech, attempts to identify and formulate the rules of spelling and the hierarchy of information within a sentence.

Selective Mutism – a new conceptualization and treatment approach

Selective Mutism (SM) is a disorder which causes children to avoid talking to people except close family members. The disorder is viewed as a form of social phobia. However, this leaves the following phenomena unexplained:
• It does not decrease as a result of desensitization;
• Many SM children can communicate non-verbally;
• Some SM children are able to perform without fear on stage in front of an audience if the performance does not require talking;
• Adults who had been SM as children remember that they did not talk for fear of saying the wrong thing.

In our opinion the anxiety does not constitute a cause of SM, but occurs as a result of very high need for precision in interpersonal communication coupled with the conviction that achieving such precision is impossible. This understanding of SM affects therapeutic goals as follows: Goal 1: lower the importance of precision. Goal 2: convince the patient that he/she is able to achieve precision sufficient to communicate successfully with others. We achieve the above goals using an integration of behavior, cognitive and play therapy, which increases patients’ belief in their ability to achieve sufficient precision and decreases perception of importance of precision.

Poster 7 A
MARLENA KUROWSKA¹
¹ Department of Speech Pathology and Voice Emission, University of Warsaw, Poland

A case study of a patient with underdeveloped speech of cortical origin

The research is a case study of a boy whose difficulties in natural language and speech acquisition were recorded at the stage of word formation. The study was longitudinal and lasted from 1998 to 2010. The first tests were conducted at the age of 7 and consisted of two elements. The first part was the specialist examination – medical: phoniatric audiological, neurological – EEG, CT, genetic and psychological testing. The second part included own study – experimental – speech-therapy whose aim was to determine the degree of assimilation of linguistic structures (image description, picture stories narration, comprehending and speaking words such as nouns, verbs and adjectives) and checking the anatomic-functional conditions for language and speech development (the construction and efficiency of the articulatory apparatus, functioning of phonemic hearing, articulatory kinesthesia). On the basis of the results obtained from the research it can be concluded that the boy had a remarkable difficulty in building even one- or two-syllable words. The reason for that was a small number of formed and retained tonal and articulatory sound patterns. The only anatomical-functional factor disturbing the normal development of the boy’s speech was the change in the temporo-parietal-occipital regions revealed in the left hemisphere of the brain. The disorder diagnosis was formulated – underdeveloped speech of cortical origin of mixed type (aphasia, early childhood aphasia). In 2010 – at the age of 19 – comparative research was conducted: the study of the anatomical structure and function of the brain (CT, fMRI) neuropsychological testing and
own speech-therapy tests. The studies led to establishing the current level of functioning of the patient’s language and the brain structures responsible for this process. An atypical, right-hemisphere pattern of dominance for language functions was noticed in the boy.

Poster 8 A

Ewa Haman¹, Zofia Wodniecka², Marta Białecka-Pikul², Dorota Kiebzak-Mandera², Jakub Szewczyk², Aneta Miękisz¹, Anna Marzecova², Agnieszka Otwinowska-Kasztelanic¹, Natalia Banasik¹, Joanna Kołak², Katarzyna Kuś¹, Magdalena Łuniewska¹, Paweł Mandera²

¹ University of Warsaw, Poland
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A new set of tools for assessing language and cognitive development in Polish children

We present a set of measures developed within the framework of European research network COST IS0804/Bi-SLI. The aim of the Polish team within the network is to create and evaluate an exhaustive set of tools for assessment of phonological, lexical, grammatical, narrative and cognitive abilities of Polish children. This new set of tests and tasks based on the state-of-the-art latest scientific achievements in psycholinguistics aim at providing speech therapists & psychologists with reliable measures of monolingual and bilingual language performance. Specifically, the tools are designed for distinguishing typically developing bilingual children of Polish background from children at risk of SLI. The tasks include: a non-word repetition task, vocabulary size and lexical processing tasks, a sentence repetition task, and telling and re-telling tasks. The language tasks are accompanied by a series of tools measuring crucial cognitive functions such as executive and inhibitory control, working memory and the theory of mind. The tools, piloted and administered to Polish monolingual children, 4–7 years of age, proved their validity and reliability. They are currently being administered to a population of Polish-English bilinguals. We expect these tools to set a new standard to the assessment and diagnosis of language development in Polish children.
Picture Vocabulary Test: new tool to assess vocabulary size in Polish preschool children

Vocabulary size is claimed to be bidirectionally linked to grammatical competence (Dionne, Dale, Boivin & Plomin, 2003), to predict ability to learn to read (Biemiller, 2007) and to influence school readiness (Forget-Dubois et al., 2009). Thus there is a substantial need for effective methods of vocabulary assessment for both scientific and educational/clinical purposes. Vocabulary size is affected in late talkers and in specific language impairment (SLI) (Leonard, 2006) and so it should be controlled in SLI diagnosis process.

We present a new tool: Obrazkowy Test Słownikowy – Rozumienie (OTS–R; Picture Vocabulary Test – Comprehension), designed and standardized to enable quick and efficient assessment of receptive vocabulary size in Polish preschool children. In OTS–R the child is expected to answer a series of questions on target words (nouns, verbs or adjectives) by pointing to appropriate picture accompanied with 3 distractors. Distractors reflect semantic, thematic or phonetic relation to the target word. The test was standardized on a sample of 2000 children age 2;0–6;11.

IRT analysis revealed that OTS–R is insensitive to guessing since 2-parameters model fits the data better over 3-PL. The linear logistic test model (LLTM; Fischer, 1972) was used to test the construct validity and revealed that frequency and length of the target word explained the Rasch model’s item difficulty parameters.

OTS–R results show moderate correlation with non-verbal intelligence tests (Raven Matrices, r = 0.54 ; Columbia, r = 0.68 ); strong correlation with corresponding picture naming task (r = 0.87).

It is expected that OTS–R can serve as one of the tools supporting diagnosis of SLI in Polish.
Analogue reasoning in building derived structures

My experience in working with children and adults suffering from speech disorders (especially the ones with literacy difficulties) shows that in some instances morphological errors persist for quite a long time. It was assumed that discovering grammatical rules is based on using analogical forms (Smoczyński 1955), that children acquire language rules according to their needs and abilities, and the erroneous forms they build may result from either creativity or impairments (Smoczyńska 1997). The purpose of the research was to analyze how school-children use word-formation rules. Students of various ages were asked to play a game which consisted in building derived word forms based on given proportions. One proportion required the formation of a diminutive forms, whereas the other one required the formation of masculine and feminine forms. The group studied consisted of 1000 students of at the primary, secondary and university levels. The analysis of morphological structure of produced word forms demonstrate that students with learning difficulties and speech disorders stand out in all age groups. They were quite willing to play the game, but they often ignored its rules, did not take into account semantics and made unrestricted use of word-formation rules. In writing they revealed orthographic and graphomotor problems, had shown difficulties with identifying morphemes and comprehending the structure of words. The gaps in the proportions prove that making up a form depends on the students’ language awareness and their ability to apply rules. This way of gathering material made it possible to identify differences in the performance of students from various age groups and various types of schools.

Understanding of indirect instructions by children with SLI

We can find ample information on the expressive language of children with SLI. Much less is known about the competencies associated with the reception of speech by individuals with specific language impairment. The main objective of this study was understanding the indirect instructions formulated as questions about the opportunity to perform the operations by children with SLI.
The study was conducted using an authored method for the diagnosis of indirect instructions. The clinical group consisted of 76 children with specific language impairment (SLI) aged 4;0 to 6;11. The control group consisted of 136 children of the same age.

These results suggest that the process of understanding the indirect instructions by children with SLI and children with typical development of speech has a comparatively different course. The results show that respondents from both group do not differ in understanding indirect instructions in accordance with the intention of the sender, but children with typical development of speech more often than children with SLI perceive the directives literally, although the trend decreases with age.

Poster 12 A

**Anna Skoczylas**¹, **Monika Lewadowska**¹, **Zdzisław Marek Kurkowski**¹.², **Anna Lus-Sałdyka**¹

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**Central Auditory Processing Disorders and their influence on speech and language development**

Central Auditory Processing Disorders (CAPD) are defined as difficulty in using auditory information to communicate and learn in the presence of normal peripheral hearing. More precisely the CAPD includes problems with: 1. sound localization, 2. auditory discrimination, 3. auditory pattern recognition, 4. temporal aspects of audition, i.e. gap detection and temporal ordering, 5. perception of speech or nonverbal sounds in the presence of another signal, e.g. noise (including dichotic listening), 6. auditory performance with degraded acoustic signal (ASHA, 1996).

On the basis of variability of deficits presented by CAPD patients, we may distinguish different profiles of auditory processing, i.e. a decoding deficit, a prosodic deficit and an integration deficit. These profiles may contribute to adjust the therapy to the individual patient’s abilities and influence the communication skills.

In this paper the abovementioned auditory processing profiles will be presented with the reference to therapeutic approach.
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The assessment of language & literacy skills of the Polish six-year-old first form pupils after the first year of school education

At the moment, Poland is in the process of introducing a reform of education system, which is aimed at lowering the regular school age for children from age seven to six. The main goal of the research conducted from May to September 2011 was the assessment of language & literacy skills of the children who started their education in the first form as six-year-olds. Their results were compared with the analogical results of seven-year-old first form students, who have been educated according to the former system, with the control group being matched in gender and parents’ education level.

Sixteen experimental tasks were conducted, researching both into comprehension and production of language at all levels (phonology, morphology, vocabulary, syntax, narrative skills), by means of various techniques (production, repetition, modeling and elicitation techniques). The tasks assessing the level of reading and writing skills included i.a. familiarity with letters; technique, speed and accuracy of reading; reading comprehension, spelling in a dictation task and graphomotorics.

The experimental group consisted of 43 six-year-olds from first forms of two different schools in Krakow. The children from both schools came from different backgrounds, residential vs. working class area, with various socioeconomic status.

The results have not indicated significant differences between the two age groups, however, the group of six-year-old first form students with low socioeconomic status achieved significantly lower results in most tests, which points at a relatively stronger impact of the socioeconomic factors than age of starting education itself.
Program of the Good Start Method: *From Word to Sentence, from Sentence to Text* for children with language developmental delay

The main idea of The Good Start Method is to stimulate the psychomotor development of a child during specific play experiences. The aim of this method is to develop hearing and language functions, visual-spatial, kinaesthetic-motor functions and their coordination in order to prepare children to learn reading and writing and to learn letters or numbers with using multisensory approach.

GSM has been developed since 1967 by Marta Bogdanowicz with use of some ideas from Théa Bugnet’s *Le Bon Départ*. Many years of experience made it possible to elaborate some versions of the GSM (with geometrical patterns or letters, with songs or poems) for different groups of children (3–10 years old) as well as children with special educational needs (SEN). Last years we elaborated a program *From Word to Sentence, from Sentence to Text* for children with language developmental delay and with hearing impairment. It could be used for SLI children as well (Bogdanowicz & Szewczyk, 2007).

The GSM is a sensorimotor approach in work with children because three elements – visual, auditory, motor and their integration – are involved here:

- the visual-spatial element: graphic models (the geometrical patterns, letters or numbers);
- the auditory-language element: songs or rhymes;
- the motor element: movement during reproducing graphic models harmonised with the rhythm of a song.

The rhythm in GSM is a basic element which allows to do synthesis of all the elements of this approach.

GSM kick-starts the reading and writing process, but also helps fix handedness, establish body awareness, spatial concepts, left–right orientation in body schema and space. Numerous studies confirmed the effectiveness of this method.
A study of grammatical deficits in Chinese-speaking children with SLI

In the study of grammatical deficits in children with SLI, the major focus to date has been on their developmental characteristics of the acquisition of inflectional morphemes. However, studies on the acquisition of the non-inflectional language of Chinese-speaking children with SLI have been quite limited. The aim of this study is to find out the grammatical items that Chinese-speaking SLI children are weak in and to provide theoretical explanations. Three groups of children, totaling 36, from 4 cities in China (n = 12 in each group), preschool children with SLI, typically developing same-age peers, and typically-developing younger children matched with SLI children in Mean Length of Utterance, participated in the study. Drawn on our knowledge of the language development of Chinese typically-developing children and findings obtained by researchers abroad, the test items include the ones supposed to be underdeveloped for children with SLI. Their language performance has been rated in terms of language production, language comprehension and sentence repetition through elicited experiments. Grammatical deficits have been found with their use of ditransitives, pivotal constructions, topicalization, relative clauses and aspect marker le. It has been maintained that the argument structure and syntactic movement might account for the observed deficits.

A semantic-field-dependent lexical intervention for Chinese-speaking children with Specific Language Impairments

Children with Specific Language Impairments (SLI) are reported to be late in acquiring their first words. By the time they begin to produce multi-word utterances, their lexical abilities are not so easily characterized as matching those of younger normally developing children (Leonard, 2000). This study aims at improving expressive lexical ability of Chinese-speaking children with SLI by a semantic-field-dependent lexical intervention. Three Chinese-
speaking SLI children participated in a three-month focused stimulation intervention program, a weekly one-hour intervention program characterized with individualized instruction, multi-media input, semantic-field dependent contextualized presentation, and follow-up review practice. The children’s use of each target form was encouraged by means of arranging events that had a high likelihood of promoting an utterance requiring the use of the target form. After the intervention, the lexical abilities of the three children with SLI were found to be considerably improved. The mechanism for such an improvement is tentatively suggested within the current theoretical framework of the delay/deficits seen in SLI both in terms of linguistic-based and processing (perceptual- or cognitive-based) accounts. Limitations of the study and future directions are also discussed.

Poster 17
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Diagnostic issues for bilectal children with SLI: The Case of Cypriot Greek

This study investigates the linguistic development of Greek Cypriot children with SLI. It is important to investigate Greek Cypriot children to avoid the confusion between language variation attested in dialectal situations and that resulting from language impairment, similarly perhaps for bilingual children. This project assesses the utility of existing tools in the diagnosis of SLI in Cypriot Greek. Thus, a set of existing non-standardized tools was used to identify children with SLI which at the same time were examined in terms of specificity and sensitivity. This battery of tests comprised tools that were available in (Standard) Modern Greek: the Developmental Verbal IQ Test, the Peabody Picture Vocabulary Test, the Bus Story Test, vocabulary and phonemic discrimination of the Athina Test, and the Word-Finding Test. Two groups of “monolingual, bilectal” Greek Cypriot children participated in this study: 15 children with SLI aged 5 to 9 and 25 age-matched typically developing children.

Results showed that the existing tools can be successfully used to identify Greek Cypriot children with SLI. Tests cannot only measure what they set out to do, but they are also sensitive enough to distinguish children who are language-impaired. The study can serve both theoretical and clinical purposes.
Poster 18
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Telling and retelling narrative tasks in SLI: Differences across monolingual and bilingual children in Cypriot Greek

Preliminary results of the administration of the Cypriot Greek version of the Telling–and–Retelling narrative tool for specific language impairment (SLI) from COST Action IS0804 in bilingual and monolingual children show differences in the two tasks that are similar across all groups. Due to similarity in scripts and pictures of the tool, one can assume that the differences observed are due to the nature of the administration method itself.

6 monolingual children with typical language development (TLD), 2 bilingual with TLD (Cypriot Greek L1, XL2), and 2 bilingual children with SLI, all living in Cyprus, were tested. Ages ranged from 6 to 8 years old.

Results show differences between telling and retelling tasks, across children both in macro- and micro structure. Specifically, measures of discourse coherence in macrostructure as well as the number of complete episodes, T-Units, coordinated and subordinated clauses, and number of different words were found to be higher for retelling than telling. At the same time hesitations seem to increase during retelling.

It is suggested that a Telling–Retelling–Telling scheme of such controlled stories could allow differential diagnosis of SLI children within the scope of dynamic assessment and measures of modifiability (Peña 2000).

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Clitic production in Greek Specific Language Impairment

Research on the acquisition of direct object clitics in SLI has shown conflicting results, leaving open the question whether clitic production can be a clinical marker for this disorder (c.f. Paradis, Crago, and Genesee, 2003; Bortolini et al., 2006; Bedore and Leonard, 2001). Some studies in Greek SLI report significant clitic omission (Tsimpli and Stavrakaki, 1999; Tsimpli, 2001; Smith, 2008), while other studies disconfirm this finding (Varlokosta, 2002; Terzi, 2007; Stavrakaki et al., 2011; Manika et al., 2011). The present study investigates the acquisition of direct object clitics in Greek SLI children with the use of an elicitation task, which was developed within the European project COST A33. Six SLI children (aged from 4;11 to 7;10, mean age: 6;4) and eighteen TD children matched on expressive vocabulary (aged from 3;6
to 4;11, mean age: 4;1) participated in the study. Our results show that even though the SLI group produced less target clitics compared to the TD group, the difference was not significant (p > .05). Therefore, we conclude that at least in some clitic languages, clitic production cannot always be used as a legitimate clinical marker of language impairment, since clitic omission does not always differentiate SLI children from their TD pairs.

Poster 20
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Acquisition of aspectual distinctions in children with Specific Language Impairment: Evidence from Modern Greek

It is well-documented that children with specific language impairment (SLI) have problems in tense and agreement morphology (e.g. Leonard et al., 1997; Clahsen & Dalalakis, 1999; Rice & Wexler, 2001). However, research on the acquisition of aspect has revealed conflicting results. Leonard et al. (2003) found that aspect seems to be less impaired than tense and Owen (2010) showed that aspect concordance is intact. Nevertheless, recent studies support the view that SLI children have difficulties selecting the appropriate aspectual marking in past tense contexts (Fletcher et al., 2010; Leonard & Deevy, 2010; Leonard et al., 2012).

In this study we examine the comprehension and production of aspectual distinctions in past tense contexts in Greek-speaking children with SLI. Six children with SLI, 18 age-matched TD children (AM) and 18 TD children matched on receptive vocabulary (LM) participated in a task designed within COST Action A33 (van Hout et al., in preparation). Results showed that the SLI group performed significantly worse compared to their age-matched peers concerning both comprehension (p = 0.05) and production (p = 0.11), but it did not differentiate from the LM group. These findings are consistent with previous studies suggesting that the acquisition of grammatical aspect seems to be impaired in SLI.
**Specific Language Impairment and slow information processing**

The major aim of the present study was to investigate if SLI children are different in auditory and visual processing as compared to their normal peers. The subjects were two Persian speaking school aged-children, aged 8 and 9. The (WISC-R) test was administered on both children and they were in the normal intelligence range, for full scale IQ, as well as verbal IQ. Despite general development, and lack of major sensory-motor deficit, they showed language impairment in comparison to their age-matched peers.

They were evaluated using a combination of linguistic tasks developed for mono-lingual Persian speaking SLI children, samples of descriptive speech and auditory and visual processing tasks.

The results indicated that SLI children showed significant disadvantage in a number of linguistic subtests. In their descriptive speech they showed disadvantage in total number of words, total number of content words, function words, number of utterances, mean length of utterance (MLU), type-token ratio (TTR), and number of derivational morphology.

They showed slower performance in the visual and auditory tasks as compared to their age-matched peers. The data were also suggestive of a correlation between processing speed and severity of language impairments in SLI children.

**Different categorization skills in SLI and normal children**

The purpose of this study is to compare conceptual categorization as a cognitive ability between SLI school-aged children and their normal peers.

Materials and Method: The subjects consisted of 16 SLI and 16 normal Persian speaking children as the control group selected from educational Centers. SLI children were screened based on discrepancies in their verbal and non-verbal performance on WISC-R. Their linguistic behavior
was assessed using SLI local test developed for Persian children. The categorization task was a word definition test consisted of 14 high frequency nouns from seven different categories (fruits, animals, jobs, places, eating utensils, vehicles, and body organs). Both groups participated in the task and their behavioral data were compared.

Results: SLI children’s most frequent formal definitional skill was for place category with 41%. They were not able to use super-ordinates of vehicles and body organs in their formal definition. The overall behavior in the application of formal word definition for different categories in SLI children was 15% while in their peers was more than twice (36%).

Conclusion: The findings indicate that formal definition of different categories has the potential as a diagnostic as well as intervention measure in SLI children.

Poster 23

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Noun morphology in Finnish-speaking children with SLI

Accounts of Specific Language Impairment (SLI) as reflected in languages other than English suggest that noun morphology can have considerable theoretical importance. These languages provide a means of determining whether agreement problems in children with SLI extend beyond the well documented deficits in subject-verb agreement.

In the present study, Finnish-speaking children with SLI (mean age 5;2, n = 15), a group of same-age typically developing peers (TD-A, mean age 5;2, n = 15) and a group of younger typically developing children (TD-Y, mean age 3;8, n = 15) were compared in their use of accusative, partitive, and genitive case noun suffixes. The children’s use of these grammatical cases was assessed through specifically designed probe tasks.

The results indicated that Finnish children with SLI were significantly less accurate than both groups of TD children in the grammatical case suffix task employed in this study, suggesting that their difficulties with agreement extend beyond subject-verb agreement. However, these children were also less accurate in making the phonological changes in the stem
needed for suffixation. This second type of error suggests that problems in morphophonology may constitute a separate problem in Finnish SLI.

Poster 24

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Narrative retell and verbal working memory in children with Specific Language Impairment: Data from Finnish

Narrative retelling is a widely used elicitation method in the study of narration. However, data from Finnish, and Finnish children with SLI, is scarce. It has been suggested that there is a correlation between narrative retelling and verbal working memory (WM) assessed by sentence repetition, probably because both tasks combine handling of information with high processing demands.

In this study, a group of Finnish-speaking children with SLI (mean age 6;0, n = 14) and a group of age-matched controls (mean age 6;1, n = 14) were compared in narrative and WM tasks. Additionally, the relationship between these tasks was investigated in these groups. Retelling skills were measured by the Bus Story test using only the information scores. WM was evaluated by the sentence repetition task from NEPSY-III.

The results showed that children with SLI have difficulties in narration. They scored significantly lower than their controls on the information scores. Similar results were obtained in the WM task. However, a significant correlation between these two measures was found only in the control group. There was considerably less variation in the narrative task scores than in the WM task scores for children with SLI. This could possibly explain the lack of correlation in the SLI group.

Poster 25

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Multi-functional intervention resources for speech therapy

Language impairments have a significant impact on children’s success and well-being in all social and academic daily activities. To increase the success of impaired children, they should receive adequate help at the earliest possible stage from both professionals and non-professionals in teaching and home environments. This can be effectively accomplished by using adequate remediation resources. This poster aims to present the new interactive on-line and multi-functional intervention resources for speech
therapy in Estonian, German, Lithuanian and Slovenian. The resources are developed to facilitate children’s comprehension and production of different language skills: grammar, syntax, vocabulary, phonology and narration. The methodology used ensures that the tasks are designed to be motivating, user-friendly, entertaining and amusing, it is expected that this will make intervention process more enjoyable and less stressful both for children, their teachers and parents. The on-line materials include tasks for speech therapy in a form of games, as drag-and-drop games, lotto, domino, matching of pictures, puzzles and picture stories. The developed resources aim to help such children receive the adequate language therapy at the earliest stages of their education (from 5 to 8 years of age), which will allow them to benefit from education and later develop their careers.

Poster 26
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Different forms of implicit learning in typical development and SLI

The studies to be presented test different forms of implicit learning in typical development and in Specific Language Impairment (SLI) using 1. the Serial Reaction Time Task (SRT) testing the learning of motor sequences, 2. Artificial Grammar Learning (AGL) testing the extraction of regularities from auditory sequences and 3. Probabilistic Category Learning in the Weather prediction task (PCL-WP), a non-sequential categorization task.

We tested 16 children with SLI (mean age 11.3, SD: 1.3) and 16 age-matched typically developed children. All children with SLI had normal IQ, no hearing problems, no history of neurological impairment. They also scored at least 1.5 SDs below age norms on two or more of four language tests. Results show an impairment in the SLI group on AGL and PCL-WP, with intact sequence learning on the SRT. The deficit is not restricted to either linguistic or to sequential information (as it was also evident in the PCL-WP, a non-linguistic, non-sequential task). They also show that the deficit is not evident in all implicit learning tasks, not even when sequence learning is involved, as shown by results of the SRT tasks. This pattern argues for stimulus and task-specific effects in implicit learning and its deficit in SLI.
Variability in native Voice Onset Time (VOT) in Hungarian-speaking children with Specific Language Development (SLI)

This presentation focuses on the variability in VOT values for word-initial stops (/p,b/ and /t,d/) in production of Hungarian-speaking monolingual children with SLI. 15 children between the ages of 5;6 and 7;7 were asked to name 19 pictures involving at least 4 different ones for each segment tested. VOT values as represented both in wide-band spectrograms and in oscillograms were measured on each of the audio-recorded utterances to examine variability among and within children. Results show that phonetic realisation of voicing agree with that found for Hungarian (i.e. short lag VOT for voiceless and prevoicing for voiced segments, by Gósy-Ringen, 2010), however the mean VOT values differ from that, and are more variable, especially those for voicing consonants. The main factor contributing significantly to variability is the phonetic correctness, as well as significant interaction was found for age and correctness and phonetic context (e.g. after age 7 years, mean VOT values for correct voiced segments decrease abruptly). Furthermore, variability can be partly accounted for by context effects others than the adjacent vowel height. Finally, within-child pattern of VOT measures draws an individual pattern of difficulties facing a child trying to acquire voicing.

Identifying linguistic markers of SLI and/or developmental dyslexia in Romanian

Aim: to investigate whether object clitic (OC) production and relative clause (RC) comprehension/production are linguistic markers of SLI and/or dyslexia in Romanian, a language for which the linguistic profile of the two deficits is almost unknown.

Method: For OC a drawing-based task was used. For RCs, we used an elicitation task, a replica of the preference task in Novogrodsky, Friedmann (2006), and a binary picture selection task.

Participants: 6 SLI children (103.5 months, SD 20.0673), 6 age-matched TD controls (mean age range 103.8 months, SD 20.9610), 22 dyslexic children (8;9, SD 1.47), 22 age-matched TD controls (8;9, SD 1.43).
Results: OCs are problematic for both SLI and dyslexia, but they are more vulnerable in SLI. OC production provides a possible discriminating tool between the two deficits. Omission rate, avoidance strategies and rate of agreement errors differ in the two groups. For RCs, the responses of the SLI children differed significantly from those of the dyslexic and of the TD groups, in both comprehension and production. The rate of correct answers was below chance in this group. The data reveal no significant difference between the dyslexic children and the age-matched controls in the comprehension task. In the production task, however, the dyslexic children produce significantly fewer subject relatives than the TD group, who performed almost at ceiling.

Poster 29

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Consequences of early language problems in literacy in children with Specific Language Impairment (SLI)

Most children with speech and language problems have literacy problems too (Catts, 1993). By the other hand some children identified as dyslexic have had a history of speech and language delay (McGuiness, 2004; Perfetti, 1999). Our study analyzes the relation between language delay (5 years), in SLI, and the later development of reading abilities.

The sample was formed by 20 bilingual Spanish-Catalan children with SLI and 20 age controls. The language and speech of these children at age of 5 was evaluated by the PLON-R (Aguinaga, et al., 2005) and the AREHA (Aguilar & Serra, 2003). 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 speech level at age of 5 years seems to be the variable 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.
Poster 30

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Referential communication in children with Specific Language Impairment (SLI)

To date, there is still a lack of conclusive information regarding the origin of poor communication effectiveness in children with Specific Language Impairment (SLI) as measured by referential communication tasks. We aimed at identifying both the core processes underlying communication efficacy and also its consequences in children with SLI in order to better understand how it might be improved. We present data on 15 children with SLI as a speaker (emitter) and as a receptor (receiver), while comparing their performances with 15 age-matched controls. Our results suggest communication deficits in SLI as compared to control children; children with SLI were more error prone and were more ambiguous in elaborating messages (as a speaker) and showed a marked deficit in the processing ambiguous messages (as a receiver). Thus, an impairment in general processing might be underlying communicative inefficacy during referential communication tasks in children with SLI.

Poster 31

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Failure in the perceptual salience inhibition in the images description in LI children

The purpose for this presentation is to verify if LI children organize correctly the information in the flow from perceiving to talking. The task investigated consists in the (re)ordering of the arguments to be expressed describing a slightly distorted image, where the Object is bigger and in the foreground compared with the Subject of the action. The visual analysis of the image has been eye tracked and the expression of the pictured event video recorded. Ten SLI children (strict criteria and 5–7 years olds) with their age controls participated in it. The visual results of the image analysis do no manifest important differences. There is only a slight delay in the inhibition of the ‘big Object’ visual inspection moving into the ‘small Subject’ visual area. The LI verbal results, showed that the first stated word was more often the misleading ‘big Object’, which had to be then displaced from the Subject slot (‘The balloon… The girl has a big balloon’) The TD group had no problem in inhibiting the salience of the Object
when expressing the event of the picture. Organizing the information is an interesting area of study in order to comprehend the difficulties of LI children.

Poster 32

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**Development of a Maltese-English non-word repetition test and emerging trends**

The aim of this study was to develop a non-word repetition test based on Maltese and English phonotactic rules, and subsequently identify trends of responses in 22 typically developing (TD) children aged 7;00 to 9;11. Two non-word repetition lists were developed. One list was based on Maltese words while the other, on English words.

The characteristics on which the lists were based included syllable length, presence / absence of consonant clusters, and high vs low word-likeness.

Both lists presented using a diagnostic audiometer at 50 dBHL. Parental report showed 11 children used Maltese as their first language, 8 used English, while 3 had no preference to which language they used.

There was little difference in performance between the Maltese-based and the English-based non-words. All age groups performed equally in both lists. All age groups produced more errors in words that contained consonant clusters. More errors were produced in 4 syllable non-words when compared to 2 syllable non-words, except for the Maltese based non-words in the 7;00-7;11 group, who performed equally in all syllable lengths. The 9;00-9;11 group performed equally in both high and low WL. The younger groups were produces more errors in the words of high WL.

Poster 33

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**Nonword repetition in Slovak-speaking children: Comparison of the scoring methods**

Background: Nonword repetition (NWR) tasks have been found to correlate with language skills and to discriminate between groups of typically developing (TD) children and children with SLI across languages. The main
The aim was to develop a cheap, easily-administered NWR screening test which could discriminate between Slovak-speaking TD children and children with SLI. The second aim was to explore novel scoring methods for NWR tasks.

Methods: Study 1 compared the performance of 60 TD children (age range 3;0–5;11, mean age 4;5) on a new NWR task and five types of scoring methods were examined (whole item, number of syllables, syllable structure, consonants and vowels). Study 2 compared performance on NWR across three groups: children with SLI (n = 16, age range 4;2–5;6, mean age 4;10), a TD age-matched group and a TD language-matched group.

Results: Study 1 found an age effect in the TD sample for three out of five of the tested scoring methods. Study 2 showed that all of the scoring methods discriminated between: i) children with SLI and the TD language-matched sample and ii) children with SLI and the TD age-matched group. The two scoring methods which appear to be the most informative for Slavic languages are identified and discussed.

Poster 34

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Appraisal of the situation of Icelandic children and young people with speech-language and communication needs.

Children and young adults with speech-language and communication needs (SLCN) are challenging to the health and educational system (Lindsay, Dockrell, Desforges, Law & Peacey, 2010). The British appraisal on the resources and policy regarding services to children with SLCN has emphasize the importance of a joint healthcare and education provision (Bercow, 2008; Gross, 2011).

The aim of this project was to examine the policy and available resources to Icelandic children and young adults with SLCN.

Participants (n = 1917 ) parents, teachers, psychologists, SLPs and local authority representatives answered a questionnaire with both closed and open ended questions about organization of services, knowledge about communication and continuing education possibilities of staff, quality, accessibility, policy making on a national and municipal level, financial distribution, responsibility, surveillance and the need for amelioration of services.

The main conclusion was that parents criticized the system intensively and thought it lacked flexibility and joint professional approach. The teachers, nonetheless, thought they were providing the children good services. Local
authority representatives were convinced that the organization of services was effective and productive. Analysis on law and policies revealed that the structure around services was not transparent and almost unsympathetic to children and young adults with SLCN and needs to be simplified.

Poster 35

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Predictors of Language Delay at 5 years. Longitudinal data from the Norwegian Mother and Child Cohort Study.

It is widely accepted that there is a group of children whose language skills emerge late and/or slowly in the first years of life. ‘Late talkers’ are identified at 2 years but by 5 years, approximately half will no longer present with language delay. Understanding of what factors influence language growth during this time is limited. Longitudinal studies are best placed to provide information about this complex question.

The Norwegian Mother and Child Cohort Study (MoBa) is a large longitudinal study of mother-child pairs recruited through 1999–2008. MoBa collects information on the health and development of the women and their children through questionnaires during pregnancy, postpartum, and during childhood (to date 6, 18 and 36 months). Parent report of language development is documented using questions from the Ages & Stages Questionnaire (Bricker & Squires 1999) Communication Scale and omnibus questions of language development (Dale et al., 2003). Logistic regression models identify factors associated with language delay at 5 years (n ~ 15,000). Preliminary analysis at 5 years suggests that a combination of neurobiological and genetic factors were associated with risk for language delay. Replication of this analysis at 5 years will be done, mapping developmental trajectories of children with and without language delay at 3 years for a better understanding of developmental pathways to persistent delay.
**Lexical organizations in bilingual children with Language Impairment**

An increasing number of bilingual children are referred for language assessment. Earlier studies have underscored the importance of differentiating between problems caused by insufficient exposure or by language impairment (LI). Problems with lexical breadth in their second language can be seen in bilinguals compared to monolinguals regardless of language problems.

The aim of this study is to examine whether lexical depth has the potential to distinguish between bilingual children with and without LI.

17 Swedish-Arabic children with LI and 17 age-matched Swedish-Arabic children with typical development completed a set of lexical test in both languages. Both lexical breadth and depth were examined. Lexical depth was examined through associations. Associations were rated as semantic, clang, other or no answer.

Relative to typical developing bilingual children, bilingual children with LI gave significant fewer semantic associations in both languages. For repeated associations in Swedish the children with LI gave the same type of responses across associations while semantic association decreased in the group of typical developing children. In Arabic there were significant differences between the groups across all associations.

Word association can be a useful tool for speech-language pathologist to differentiate between language impairment and insufficient exposure, especially if both languages are tested.

**Time-course analysis of eye gaze in referential communication**

Background: The use of eye tracking in natural conversation unveils important details on the structure of multimodal interaction. In a comparative study we explore the time-course of gaze behavior in relation to the verbal exchanges...
in a picture description task requiring collaboration between children and adolescents with hearing impairment (HI) and normal-hearing (NH) peers. Our aim is to gain better understanding of online language processing in a normal-hearing environment and thereby improve intervention protocols.

Method: 10 HI-NH dyads and 10 NH-NH dyads completed a referential communication task requiring the description of faces. The participants were fitted with head-mounted eye trackers, recording gaze focus. Important verbal events were used to predict gaze focus area.

Results: HI spent more time looking at the partner than NH controls. The verbal exchange was found to reliably predict gaze focus area. Both groups were found to gaze at the partner in association with questions and back channeling, however HI to a higher extent.

Conclusions: HI displays heightened attention to visual cues from the partner, indicating a greater dependency on visual cues during language processing. Ongoing studies include SLI dyads and detailed analyses of the verbal and nonverbal interactions in successful dyads for improved intervention design.

Poster 38

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Problem-based learning as a means for training psychology students how to use Dynamic Assessment to intervene with SLI children

Dynamic Assessment (DA) has been argued beneficial for children with LI but there have been but few studies on the subject. A study by Hasson and Botting suggests that DA with expressive grammar is valuable for use as a dynamic measure.

Our aspiration was to further develop the context and method of working dynamically with 6 to 12-year-old children with DCD in a University setting with master students. The program consisted of 7 sessions, each planned for the individual child, though adjustable throughout the course of intervention.

The therapist focused on mediating in three areas: language, working memory and narratives. In addition to this we have been working with a reflective team seated behind a one way screen. This setup combined with DA has, to our knowledge, not yet been seen in any study concerning children with DCD.

This construction has provided the therapist with the opportunity of getting online feedback, the reflective team with the option of instant intervention and
participation during sessions and the students experience multiple roles as psychologists.

References:

Poster 39

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**Dynamic Assessment and intervention of language and working memory: a pilot study of Danish children with SLI**

Dynamic Assessment (DA) has been argued to be beneficial for children with LI, but there have been but few studies on the subject. This poster presents a three-month study of DA on four 6 to 10-year-old children with DCD conducted by master students in a university Clinic of Developmental Communication Disorders.

The assessment took place over a period of 7 sessions; a pretest followed by five sessions of mediating in the areas of language, working memory and narratives and finally a posttest.

The test battery used consisted of three tests; The CELF-IV was chosen due to its wide assessment of language and memory in children; Odd One Out was chosen to supplement the working memory subscale of CELF-IV and narratives were assessed by COST materials scoring micro- and macrostructure. Furthermore we collected data during each session, consisting of both narratives and observations for each task from the reflective team.

The data collection of the posttest will take place in June and quantitative as well as qualitative results will be presented at the conference.

Poster 40

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**Hebrew language assessment measure for pre-school children**

Purpose: To apply the Katzenberger Hebrew Language Assessment for Pre-School Children (henceforth: the KHLA) to a group of children who were...
independently defined by their SLPs as having specific language impairment (SLI) and to find whether the KHLA distinguishes between typically developing (TDL) and language impaired children. The assessment included 6 areas: Auditory Processing, Lexicon, Grammar, Phonological Awareness, Semantic Categorization and Narration of Picture-Series. The study focuses on the psychometric aspect of the test.

Method: Participants included 454 (383 TDL; 71 SLI) mid-high SES, monolingual native speakers of Hebrew, aged 4;0–5;11 years.

Results: The KHLA was found useful for distinguishing between TDL and SLI when the identification is based on the total Z-score or at least two of the area-specific Z-scores in -1.25 SD cutoff points. The results provide a ranking order for assessment: Grammar, Auditory Processing, Semantic Categorization, Narration of Picture-Series/Lexicon and Phonological Awareness.

Conclusions: The main clinical implications of this study point to the need to consider the optimal cutoff point of -1.25 SD for diagnosis of SLI children and to apply the entire test for assessment. In cases when the clinician may decide to assess only two or three areas, it is recommended that the ranking order as described in the study be applied.

Poster 41
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Pragmatic abilities in children with Specific Language Impairment
Little experimental research focuses on the pragmatic abilities of children with specific language impairment (SLI). We investigate two pragmatic phenomena, a very early one: pointing, and a more sophisticated one: metaphor. Pointing production and metaphor understanding are examined in 15 children with SLI (3;6–4;0) and compared to two groups of typically developing children: one of age-matched peers, and another one of younger children matched on language abilities.

Study 1: pointing gestures of children and their caregiver are examined in a ‘decorated room’ containing colourful objects and pictures – following the procedure of Liszkowski and colleagues for pre-verbal children (Liszkowski & Tomasello, 2011; Liszkowski et al., 2012). The frequency and quality of pointing and verbalizing in the interaction will be evaluated. Study 2: metaphor comprehension is tested using a simple act-out task. Children must hand one of two toys referred to with a metaphorical expression – following the method developed for 3-year-olds (Pouscoulous & Tomasello, in prep.).
We propose that a subset of children with SLI display impaired pragmatic abilities which cannot be accounted for as a consequence of more basic limitations. The findings will offer some general insight in the pragmatic abilities of children with SLI.

Poster 42
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The impact of executive functions on verb inflection in SLI: The processing of Turkish counterfactuals

Counterfactuals are thoughts about ‘what might have been’; imagining what might have happened, but did not. For example, “if he had won the lottery, he would have been rich”. Thus, a different event and a different outcome is considered. Understanding counterfactuals requires three abilities: 1. ignoring what has happened; 2. holding two different possibilities in mind; 3. shifting between those possibilities. Children can understand counterfactuals correctly by the age of five. These abilities have been related to development of the EF, namely 1. inhibition, 2. working memory, and 3. cognitive flexibility respectively (e.g. Beck, Riggs & Gorniak, 2009; Guajardo et al., 2009) by the same age.

Children with SLI have problems with both language and these EF (e.g. Im-bolter et al., 2006), which suggests that there may be a link between the two. 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 and without counterfactual interpretation was developed. Conditionals in Turkish are marked by a conditional suffix on the main verb -(y)sa) ‘if’, which occurs to the right of the past tense marker in factuals (temporally past) and to its left in counterfactuals. SLI children performed significantly worse on counterfactuals than factuals unlike typically developing (TD) children. Besides, SLI and TD children could repeat both morpheme orders equally well in a sentence repetition task, indicating a similar stage of syntax acquisition for both. There are two main conclusions. First, children can think counterfactually when their EF are well-developed. Second, counterfactuals seem to be particularly difficult for SLI since they have problems with EF. Accordingly, EF impact verb inflection in SLI.
Second language children can help us understand Language Impairment

Verb inflection development in children who learn English as their second language (L2) is influenced by age, L2 exposure and properties of the first language. Age, exposure and first language refer to resources that facilitate the development of verb inflection. But do L2 children with a language impairment (L2-LI) who have persistent difficulties acquiring verb inflection use these resources in the same way as their peers with typical development (L2-TD)? To answer this question, we analyzed data from 24 English L2 children with LI, ages five and six, and 24 English L2-TD peers. Children were individually matched on age, exposure, and first language typology. Verb inflection use was measured with the Test of Early Grammatical Impairment; we examined use of 3SG -s and past tense -ed. Mixed logistic regression and classification procedures revealed that an older age of exposure to the L2 is beneficial for L2-LI. L2 children with LI were found to make less efficient use of L2 exposure and profit less from their first language experience than L2-TD. We conclude that these findings support the hypothesis that verb inflection difficulties in children with LI are caused by limitations in processing and associating linguistic information.

The case of Specific Language Impairment in deaf children developing proficiency in American Sign Language (ASL)

There is evidence of a population of deaf children who exhibit SLI in sign language (Mason, Rowley, Marshall, Atkinson, Herman, Woll & Morgan, 2010; Morgan, Herman & Woll, 2007). We present results of a study on the use of a standardized test of American Sign Language (ASL) for identifying SLI in deaf children acquiring ASL. The study involved 20 deaf signing children (6–12 years) referred by teachers. As described by the teachers using predetermined criteria, 10 of the children evidenced typical and 10 atypical ASL abilities. We assessed the 20 deaf children’s performance using a standardized test of ASL across three linguistic domains: 1. phonology and lexicon (phonological parameters, fingerspelling, lexical meaning); 2. morphology (classifier constructions, verb agreement) and Syntax (negation, sign order, conditionals); and 3. Semantics/Pragmatics/Discourse.
(perspective shift, turn taking). The results were compared to performance on tests of non-verbal intelligence and motor ability. We found the atypical deaf children evidenced significant language impairment unrelated to reduced cognitive and/or motor abilities or insufficient exposure to ASL. We delineate specific patterns of test responses and linguistic errors in ASL performance and describe profiles of SLI children. Finally, we discuss theoretical and practical implications for SLI in deaf and hearing children.

Poster 45

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Is SLI specific to the language domain? Evidence from learning an artificial morphological rule

Whether SLI stems from a deficit specific to the language domain or from a deficit in the general domain is still of considerable debate. In an attempt to address this question, the present study was designed the current research was designed to characterize the course of learning a new linguistic skill in children with SLI (CSLI) as compared to typically developing controls (TDC), while examining the contribution of the general (procedural and declarative) memory systems to the learning process. We followed the learning process of an artificial morphological rule (AMR) over multiple sessions, in 10-year-old CSLI and their age-matched peers, using behavioral measures (RT; % correct). The AMR consisted of phonological transformations of Hebrew verbs expressing a semantic distinction: whether the preceding noun was animate or inanimate. Participants were trained to judge and produce repeated and new (generalization) items of the AMR. The results showed that learning to apply the AMR to repeated items and generalizing the phonological aspect to new items demonstrated characteristics of procedural learning. Correct generalization of the AMR to new items was dependent on the explicit discovery of the semantic aspect of the AMR, and demonstrated characteristics of declarative learning. Both types of learning were found to be inferior in CSLI compared to TDC. Altogether, our results suggest that deficits in the procedural and declarative memory system may explain some of the language difficulties encountered by CSLI.
The Educational Research Institute has a long tradition. Its main mission is to carry out basic research and studies to be applied in education. This work includes developmental research, analysis and other work relevant to educational policy and practice. The institute employs over 130 researchers – sociologists, psychologists, educators, economists, political scientists and representatives of other scientific disciplines – experts in their fields with a broad range of professional experience, not only involved with scientific research but also teaching itself.

**Passionate about Education**

Between April 2009 and June 2015, the Educational Research Institute is leading a broad major study "Teaching quality and school effectiveness – building tools for research". ‘Passionate about Education’ is aimed at improving the quality of education and educational research in Poland.

**This project involves**

- research into change and conditions in Polish education. Findings will enable evidence based decision-making.
- The study covers all stages of the education system,
- reinforcing modern approaches to education policy and practice,
- empowering teachers by free access to practical tools to aid their work,
- strengthening Polish education science and conditions for informed debate,
- international exchange of know-how and scientific knowledge.

**This project will benefit:**

- teachers, heads of schools and education-related organisations,
- local authorities,
- pupils, parents, students and post-graduates,
- government administration and legislative authorities – the results of the research will initiate changes to raise the quality of education
What does the Educational Research Institute study?

Research conducted at the Institute is divided into five major areas:

• The curriculum and development of subject teaching methods – this will be a diagnosis of the quality of education in particular school subjects (Polish, mathematics, science, history and foreign languages), and the creation of new tools for teachers.

• Effectiveness of early education and research into individualized learning.

• The sociological and legal aspects of education – the aim of this research is to provide information that will help improve the school environment. Research into hours and working conditions, factors in teacher education and training, and the teacher labour market will be a focus.

• The economics of education – public and private expenditure and education-related markets – the Educational Research Institute will examine the economic aspects of education, financial and material costs, timeinvestment, expenditure incurred by individuals, by local authorities and administrative districts, as well as the dilemmas faced by local authorities, individual schools and families.

• Education and the labour market – the aim of this research is to strengthen the link between the effects of education and the needs of the labour market. A systematic analysis of supply and demand of competencies will be assessed, by tracing the paths of educational and professional careers and by household surveys.

The benefits of the project

• Interdisciplinary research – surveys focused on the functioning of school programmes and pupils’ achievements, thinking abilities, i.e. such skills as critical thinking and reasoning, working hours and conditions of teachers, the cost and effectiveness of education and diagnosis of the state of Polish education and creation of useful tools for teachers.

• A report on the state of education – the first such comprehensive document in Poland, including the results of nationwide research, with reference to the research conducted in other countries and international research, along with supporting data.

• Support tools for teachers and pupils: – tasks, exercises, lesson scenarios and descriptions of good practice. All tools available free via the project web site.

• National and international cooperation – a network will be created for co-operation between national and international institutions and the creation of a common perspective for progress.
• The monitoring of research at home and abroad – an Information Database on Education Research (BIBE) details of research carried out in Poland and data sets for independent analysis.

• The web site www.eduentuzjasci.pl will be the source of project findings and a databank of the tools produced during the project.

European-style qualifications

Between 2010 and 2013, the Educational Research Institute is conducting a project entitled "The development of terms of reference for the implementation of the National Qualifications Framework and the National Qualifications Register for lifelong learning ".

Resulting from this work a Polish Qualifications Framework will be created, i.e. a coherent system for describing and verifying qualifications. This Polish Qualifications Framework will facilitate the comparison of qualifications awarded at different times, in various places and forms and will make it possible to adapt qualifications and the educational system to the needs of the labour market. This will promote mobility in the labour market.

Goals of this project:

• to describe the effects of learning. This will be the main reference describing graduates' competences,

• to clarify information supplied by people seeking work in the open European market that potential employers will understand,

• to improve competences by means of education and long-term training courses, and document competence acquired along various learning paths,

• to set up a Polish Qualifications Framework web site, including all relevant information to Polish Qualifications System.

"Passionate about Education" and "European-style qualifications" are projects co-financed by EU funds within the framework of the European Social Fund.
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