



9th Congress of Baltic States SLTs'
UNDERSTANDING EACH OTHER
BOOK OF ABSTRACTS



12-13 April 2024

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Introduction

9th Congress of Baltic States SLTs' „Understanding each other“ 12-13 April, 2024

The congress brings together researchers, practitioners and students to discuss about how various professional groups and families collaborate to achieve positive outcomes.

The topic of the 2024 year's **Understanding Each Other** is derived from the relevant events and developments of the year – different language groups, transition to education in the national language in all Baltic States and foreign language clients in the therapy of elderly.

We based on the topic announced by European Speech and Language Therapy Association (ESLA) – Speech and Language therapists working with professionals and caregivers. Following this topic, the Baltic States' Associations of Speech and Language Therapists (Lithuanian and Latvian Logopedists' Associations, Estonian Logopedists' Union and Estonian Society of Medical Speech and Language Pathologists) in collaboration with Vytautas Magnus University Education Academy (Kaunas), Vilnius University Siauliai Academy (Siauliai) and University of Tartu (Tartu) is organising the 9th Congress of Baltic States' SLT's.

The main issues of SLT will be discussed in the plenary sessions of the Congress:

- * improving communication of bilingual and multilingual groups of clients (role of SLT-s direct services);
- * different groups of multilingual clients – interprofessional collaboration;
- * different collaborations involving parents.

Congress languages: English (with simultaneous translation to Estonian, Lithuanian, Latvian)

Congress venue: online Zoom platform

Contact e-mail: congress2024@sltbbaltic.eu

Welcome to 9th Congress of Baltic States SLTs'!

CONGRESS PROGRAMME



9th Congress of Baltic States SLTs

UNDERSTANDING EACH OTHER

12-13 April 2024

1. DAY PROGRAMME

12. april 2024

10.00-10.45	Opening Ceremony
10.45-11.45	Keynote Speech: Assessment of Developmental Language Disorder in Multilingual Children - Access Barriers to SLT Service Provision and Recommendations for Recommendations for Overcoming them Prof Wiebke Scharff Rethfeldt <i>Professor of SLT, director of Therapeutic Sciences in SLT program at the Hochschule Bremen, Germany</i> Moderators: Sarmīte Tūbele and Moonika Raja
11.45-12.00	Coffee break
12.00-12.30	Oral presentation: Effects of Age of Onset and Exposure on L2 Vocabulary in Sequentially Bilingual Children with TD and DLD Sini Smolander <i>MA, speech and language therapist, university teacher and PhD candidate in logopedics, Finland</i> Moderators: Baiba Trinite and Liga Janovska
12.30-13.00	Oral presentation: Assessment and intervention for bilingual children with DLD Eva-Kristina Salameh <i>SLP and a PhD (medical faculty), Sweden</i> Moderators: Baiba Trinite and Liga Janovska
13.00-13.30	Oral presentation: Sentence Comprehension and L2 Exposure Effects in 6-Year-Old Sequentially Bilingual Children with Typical Development and Developmental Language Disorder Sini Smolander <i>MA, speech and language therapist, university teacher and PhD candidate in logopedics, Finland</i> Moderators: Baiba Trinite and Liga Janovska
13.30-14.15	Lunch break

14.15-14.45	<p>Oral presentation: Development of reading and writing skills of heritage speakers of Russian in Finland – evidence from applied linguistic research Riikka Ullakonoja <i>PhD, Docent, Postdoctoral researcher at the Centre for Applied Language Studies at the University of Jyväskylä</i> Moderators: Sarmīte Tūbele and Simona Daniute</p>
14.45-15.15	<p>Oral presentation: Multilingualism in different societal contexts: Rethinking some key concepts in bilingualism and multilingualism Prof Elin Thordardottir <i>PhD, SLP – Audiologist, professor at McGill University in Montreal, an adjunct professor at the University of Iceland</i> Moderators: Sarmīte Tūbele and Simona Daniute</p>
15.15-15.45	<p>Oral presentation: Dynamic Assessment of Narrative Skills for Identifying Developmental Language Disorder in Monolingual and Bilingual French-Speaking Children Olivia Hadjadj <i>PhD student at the University of Geneva, SLT, Switzerland</i> Moderators: Daiva Kairienė and Simona Daniute</p>
15.45-16.00	<p>Coffee break</p>
16.00-17.00	<p>Keynote speech: Competencies SLPs Need to Work Effectively with Multilingual Individuals and Their Families Lemmieta G. McNeilly <i>PhD, Chief Staff Officer ASHA, CCC-SLP, FASAE, CAE, FNAP, USA</i> Moderators: Helje Möller and Sirli Pikk</p>

9th Congress of Baltic States SLTs

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2. DAY PROGRAMME

13. april 2024

10.00-10.30	<p>Oral presentation: Transition to Estonian-language education from the perspective of supporting pupils` language development Tiia Õun <i>PhD, Director of School of Education at Tallinn University, Estonia</i> Prof Reili Argus <i>PhD, Professor, Tallinn University, School of Humanities, Estonia</i> Moderator: Liis Themas</p>
10.30-11.30	<p>Workshop: KaLaKe: Developing a diagnostic tool for multilingual language assessment in Estonian Virve-Anneli Vihman <i>Associate Professor of Psycholinguistics at the University of Tartu's Institute of Estonian and General Linguistics, Estonia</i> Adele Vaks <i>PhD student at the University of Tartu's Institute of Estonian and General Linguistics, Estonia</i> Moderator: Liis Themas</p>
11.30-11.45	<p>Coffee break</p>
11.45-12.45	<p>Oral presentation: AAC and multilingualism: A Norwegian teenager with severe speech impairment and cerebral palsy Signhild Skogdal <i>SLT and associate professor at UiT the Arctic university of Norway</i> Carolina Caggiano <i>Mother of 4 children, the eldest of whom, Isabella, is an AAC-user, Norway</i> Moderators: Siiri Kliss and Ly Laane</p>

12.45-13.15	<p>Oral presentation: The epidemiology of stuttering and multilingual groups Prof Jóhanna Thelma Einarsdóttir <i>Professor and a program director at the University of Iceland, in School of Education and School of Health Science, Iceland</i> Moderators: Siiri Kliss and Ly Laane</p>
13.15-14.15	<p>Lunch break</p>
14.15-14.45	<p>Oral presentation: Speech Sound Disorders (SSD) in a bilingual context Sean Pert <i>Chair of the Royal College of SLT, Senior Clinical Lecturer at the University of Manchester, Consultant SLT for the Indigo Gender Service, UK</i> Moderators: Annika Suurküla and Eike Betlem</p>
14.45-15.15	<p>Oral presentation: Bilingualism and intellectual developmental disorders: heresy, utopia, or possible reality? Prof Annick Comblain <i>Professor of Speech and Language Therapy at the University of Liège, Belgium</i> Moderators: Annika Suurküla and Eike Belem</p>
15.15-15.45	<p>Oral presentation: Cognate Picture Naming in Bilingual Aphasia Abhijeet Patra <i>PhD, Senior Lecturer, Manchester Metropolitan University, UK</i> Moderators: Annika Suurküla and Eike Belem</p>
15.45-16.00	<p>Coffee break</p>
16.00-17.00	<p>Keynote speech: Contribution of procedural and declarative memory to multilingual language therapy Prof Emer Michel Paradis <i>PhD (McGill U.), PhD (U. de Montréal), Canada</i> Moderators: Aaro Nursi and Raili Vaidlo</p>
17.00-17.15	<p>Closing ceremony</p>

THE CONGRESS SPEAKERS AND ABSTRACTS:
ORAL PRESENTATIONS

Wiebke Scharff Rethfeldt, professor of SLT, director of Therapeutic Sciences in SLT program at the Hochschule Bremen, Germany

Dr. Wiebke Scharff Rethfeldt is a full Professor of Speech and Language Therapy and director of Therapeutic Sciences in SLT program at the Hochschule Bremen – City University of Applied Sciences, Germany. She received her professional certificate in Logopedics at the Hannover Medical School and has clinical experience in assessing and identifying developmental language disorders (DLD) in monolingual and multilingual children from diverse cultural backgrounds. She achieved her Masters at Newcastle University and completed her doctorate at Oldenburg University. Her teaching and research interests focus on early clinical assessment of DLD in multilingual children with or without migration or refugee background, and access to SLT services for children from minority and socially disadvantaged backgrounds.

Keynote speech: Assessment of Developmental Language Disorder in Multilingual Children: Access Barriers to SLT Service Provision and Recommendations for Overcoming them

Abstract

With multilingualism on the rise, speech-language therapists (SLTs) are increasingly challenged to provide valid and appropriate services for children with language disorders from a variety of multiple linguistic and cultural backgrounds. One of the most common neurodevelopmental disorders is Developmental Language Disorder (DLD), which affects up to 8% of all children. There are no clear estimates about the prevalence of DLD in multilingual children, as research has been confounded with the use of standardized language tests that are insensitive to non-monolingual language experience, leading to under- or overdiagnosis. Likewise, accurately identification and diagnosis of DLD in kindergarten and school-aged multilingual children is a continuously challenging issue in speech-language therapy (SLT). As with monolinguals, multilingual children with DLD present difficulties with grammar and vocabulary. However, linguistic abilities of typical second language learners may appear similar to those of monolingual children of the same age with DLD. Research has shown that there is a link between restricted environmental language input, social disadvantage, and functional language and communication skills, which is not only linked to age and cognitive development, but to the language exposure and learning opportunities. This poses a problem, since linguistic tasks are typically used in assessment procedures that are based on monolingual norm-oriented standardized procedures used by SLTs, pediatricians and teachers. Despite the change of the diagnostic label and criteria, suggesting that diagnosis should not be given based on a cut-off score and that determination of non-verbal IQ is not required anymore to give diagnosis, findings from current studies report that many children with DLD are underserved, with multilingual children being more likely to go without services.

The current literature and a recently conducted international survey on opinions about best assessment practices of multilingual children for DLD identified barriers to equitable access to SLT services that may arise even before assessment, at the

referral stage. Findings from the international web survey are based on clinical opinions of 354 participants from 44 countries surveyed by the Multilingual-Multicultural Affairs Committee of the International Association of Communication Sciences and Disorders (IALP). Findings show that most felt confident in assessing multilingual children for DLD using comprehensive procedures to assess and consider all languages.

The presentation will give an overview of best-practices in assessment for DLD in multilingual children, present identified factors acting as extrinsic and intrinsic barriers to access SLT service, and provide recommendations for overcoming them. Furthermore, implications for clinicians, graduate SLT programs, and policy makers to reduce inequities in service provision will be discussed.

Keywords: assessment, developmental language disorder, multilingualism, access barriers

References:

Bishop, D. V. M., Snowling, M. J., Thompson, P. A., Greenhalgh, T., & consortium, a. t. C.-. (2017). Phase 2 of CATALISE: a multinational and multidisciplinary Delphi consensus study of problems with language development: Terminology. *Journal of Child Psychology and Psychiatry*, 58(10), 1068-1080. <https://doi.org/https://doi.org/10.1111/jcpp.12721>

Santhanam, S. P., & Parveen, S. (2018). Serving Culturally and Linguistically Diverse Clients: A Review of Changing Trends in Speech-Language Pathologists' Self-efficacy and Implications for Stakeholders. *Clin Arch Commun Disord*, 3(3), 165-177. <https://doi.org/10.21849/cacd.2018.00395>

Scharff Rethfeldt, W., McNeilly, L., Laasonen, M., Meir, N., Abutbul-Oz, H., Smolander, S., Niegia Garcia Goulart, B., & Frances Hunt, E. (2023, Jul 27). Assessment of Developmental Language Disorder in Multilingual Children: Results from an International Survey. *Folia Phoniatr Logop*. <https://doi.org/10.1159/000533139>

Sini Smolander, MA, speech and language therapist, university teacher and PhD candidate in logopedics, Finland

She has clinical experience in assessing and identifying developmental language disorders in monolingual and multilingual children as a multidisciplinary team member at the Helsinki University Hospital clinic. Experience in working with interpreters and developing assessment in collaboration with them. Researcher in the Helsinki longitudinal SLI study (HelSLI), which investigates Developmental Language Disorder (DLD) at multiple levels of analysis and consists of five subprojects (genetic, EEG, cognitive, psychosocial and bilingual). Especially involved in HelSLI-bilingual, which investigates how bilingual children with DLD differ from their peers at the etiological (genetic and environmental), neural, cognitive, and behavioural levels of analysis, what are the risk and protective factors and how DLD children could be diagnosed more reliably. University teacher at the University of Eastern Finland.

Oral presentation: Effects of Age of Onset and Exposure on L2 Vocabulary in Sequentially Bilingual Children with TD and DLD

Abstract

Authors: Sini Smolander^{1,3,4} (the presenter), Marja Laasonen^{1,3}, Pekka Lahti-Nuutila^{1,2}, Eva Arkkila¹, Sari Kunnari⁴

¹ Department of Otorhinolaryngology and Phoniatics, Head and Neck Surgery, Helsinki University Hospital and University of Helsinki, Helsinki, Finland

² Department of Psychology and Logopedics, Faculty of Medicine, University of Helsinki, Helsinki, Finland

³ Department of Logopedics, School of Humanities, Philosophical Faculty, University of Eastern Finland, Joensuu, Finland

⁴ Research Unit of Logopedics, University of Oulu, Oulu, Finland

Objectives: For typically developing children, language exposure is one of the most important factors influencing bilingual vocabulary development. Despite this, there is a lack of knowledge in terms of exposure effects in children with developmental language disorder (DLD). In the Helsinki longitudinal SLI study (HelSLI), we investigated the receptive and expressive second language (L2) vocabulary performance and cross-sectional vocabulary development of sequentially bilingual typically developing children (BiTD) and bilingual children with developmental language disorders (DLD) to determine whether the groups could be differentiated based on their vocabulary performance. In addition, we examined how the age of onset (AoO) and exposure affected vocabulary performance.

Methods: 70 bilingual children with DLD and 82 bilingual children with TD were recruited in the HelSLI study from the Helsinki University Hospital clinic and kindergartens during the years 2013–2019. Children were 3–7 years old and had

varying AoO as well as amount of exposure to L2 Finnish language. The cumulative language exposure variable (CumLoE) was established by weighting language exposure in months since the AoO of L2 with proportion of L2. Parental questionnaire ALEQ (Alberta language environment questionnaire) was used to collect information about exposure patterns for proportion measure. The dependent variables were five vocabulary tests (two receptive and three expressive). The performance of BiTD and BiDLD groups was compared in separate vocabulary tasks, taking CumLoE and AoO into consideration. Groups were compared cross-sectionally but making assumptions of growth.

Results: The BiTD group outperformed the BiDLD group in all the vocabulary tasks. Exposure predicted performance whereas AoO did not have a main effect. Interaction Group \times CumLoE in receptive vocabulary showed steeper growth by cumulative exposure for the BiTD group. Effects of CumLoE were similar across the groups in expressive vocabulary, although the BiDLD group performed overall more poorly. AoO effect was found across the groups in one receptive vocabulary test but through interaction CumLoE \times AoO, suggesting that in both BiTD and BiDLD groups higher AoO might result in steeper growth by accumulating CumLoE.

Conclusion: The performance of the BiTD and BiDLD groups differ significantly in receptive and expressive vocabulary tasks in different phases of exposure. Minimal AoO effects suggest that parents have flexibility in terms of when to place their children into L2 immersion in this age range. Remarkably slow development in receptive vocabulary by CumLoE in the BiDLD group calls for targeted activities to broaden vocabulary in everyday life situations so that children with DLD would not leave even more behind their BiTD peers.

Keywords: vocabulary development, child bilingualism, sequentially bilingual, language exposure, age of onset of acquisition, developmental language disorder

References:

Smolander, S., Laasonen, M., Arkkila, E., Lahti-Nuuttila, P., & Kunnari, S. (2021). L2 vocabulary acquisition of early sequentially bilingual children with TD and DLD affected differently by exposure and age of onset. *Journal of Language and Communication Disorders*, 56(1), 72–89.

Blom, E. & Bosma, E. (2016). The sooner the better? An investigation into the role of age of onset and its relation with transfer and exposure in bilingual Frisian–Dutch children. *Journal of Child Language*, 43, 581–607.

Paradis, J. (2017). Parent report data on input and experience reliably predict bilingual development and this is not trivial. *Bilingualism: Language & Cognition*, 20, 27–28

Eva-Kristina Salameh, SLP and a PhD (medical faculty), Skåne University Hospital, Malmö, Sweden

She has for many years worked clinically with bilingual children with DLD at Skåne University Hospital along with lecturing as a senior lecturer at the SLP-program at Lund University, and also lecturing at the other SLP-programs in Sweden. Her research has mostly been about DLD in bilingual children, especially Swedish-Arabic children, both in preschool and school, aiming at assessment and intervention.

**Oral presentation: Assessment and intervention
for bilingual children with DLD**

Abstract

Objective: Developmental Language Disorder (DLD) is characterized by a slow development, where most language domains are affected. The challenge is to assess in a way that does not penalize the bilingual child. Assessment tools in the second language (L2) are based on monolingual children, and very few bilingual children will have comparable results. The objective of this talk is to highlight difficulties associated with assessment and intervention for bilingual children with DLD.

Method: A summary of scientific results and clinical experience, concerning societal, linguistic, and psychological factors.

Results: Bilingual children are an extremely heterogeneous group compared to monolingual children, e.g. regarding age when meeting L2, and quantitative and qualitative exposure to both their L2 and the language spoken at home (L1). Among other strongly impacting factors is socioeconomic status (SES). In a recent study, 80% of bilingual children in the first years of school scored under the limit for suspected DLD. A statistic survey showed that the main reason for this was not bilingualism, but socioeconomic status, which has also been confirmed in international research (Andersson et al. 2019). It is paramount to differ between DLD and insufficient exposure to L2. DLD affects *both* languages, which implicates the need for an assessment also in the L1. In many cases there is no child language research regarding L1, especially when it comes to non-western languages. One way to overcome this is to make an informal assessment, i.e. interviewing parents regarding language development in the L1, and assessing language abilities with the help of parents, bilingual staff, or an interpreter. The languages in a bilingual are strongly intertwined, and if the child is assessed only in the L2 regarding e.g. vocabulary, the result will not reflect the fact that the vocabularies in a bilingual child are distributed over two or more languages. Another way is to examine the *prerequisites* for language development, by using dynamic assessments, or look for *emergence*, when a grammatical structure first occurs, without looking for automatization. A recent study showed that even in 2.5-year-old children who are screened at Child Health Centers for language

development, the results are much more stable if both languages are screened (Nayeb et al. 2021).

Yet another challenge is to provide intervention in both languages. If intervention only targets the L2, it will provide results, but that it does not provide *enough* results, since it ignores the L1. Sometimes parental attitudes to intervention is a challenge. The SLP and the parents may have different views on how to interact with younger children. (Johnston & Wong 2002).

Conclusion: Knowledge of the development of all languages is necessary, to avoid both over- and underdiagnosing. To get parental consent and participation to the goals of intervention, the SLP needs to thoroughly explain the reasons behind, especially if something feels strange for the parents to participate in. Another important issue is to encourage the parents to use their own language. Monolingualism does not cure any language impairment – since bilingualism did not cause it.

Keywords: DLD, assessment, intervention, bilingual children

References:

Andersson, K, Hansson, K, Rosqvist, I, Lyberg Åhlander, V, Sahlén, B & Sandgren, O (2019) The contribution of bilingualism, parental education, and school characteristics to performance on the Clinical Evaluation of Language Fundamentals: 4th edition. *Frontiers of Psychology*, vol 10, <https://doi.org/10.3389/fpsyg.2019.01586>

Johnston, J & Wong, A (2002) Cultural Differences in Beliefs and Practices Concerning Talk to Children. *Journal of Speech, Language, and Hearing Research*, 45, 916-926

Nayeb, L, Lagerberg, D, Sarkadi, A, Salameh, EK & Eriksson, M (2021) Identifying language disorder in bilingual children aged 2.5 years requires screening in both languages. *Acta Paediatrica*, 110 (1), 256-272

Oral presentation: Sentence Comprehension and L2 Exposure Effects in 6-Year-Old Sequentially Bilingual Children with Typical Development and Developmental Language Disorder

Abstract

Authors: Sini Smolander^{1,3,4} (the presenter), Marja Laasonen^{1,3}, Pekka Lahti-Nuutila^{1,2}, Eva Arkkila¹, Elin Thordardottir⁵, Sari Kunnari⁴

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⁵ School of Communication Sciences and Disorders, Faculty of Medicine and Health Sciences, McGill University, Montreal, Canada

Objectives: Identifying developmental language disorder (DLD) in a bilingual setting can be challenging. Societal language is often the only mutual language of the child and the SLT. Studies have shown that substantial differences between disordered and typical development can be observed when measuring second language (L2) performance with tools designed for monolingual children. It is essential to gain a systematic understanding of the applicability of these available language tests, considering relevant factors in the bilingual setting, such as language exposure. Developmentally important yet little-studied sentence comprehension may be a particularly helpful domain in diagnosing DLD in bilingual children, since it may reveal cognitive deficits not related to accumulating language skills. In the Helsinki longitudinal SLI study (HelSLI), we examined sentence comprehension and second language (L2) exposure effects in sequentially bilingual typically developing children (BiTD) and bilingual children with DLD (BiDLD). In addition to group comparisons, we evaluated the classification accuracy of two L2 sentence comprehension tests considering several explanatory factors.

Methods: We recruited 100 6-year-old sequentially bilingual children from daycare centers and a hospital clinic. To investigate sentence-level comprehension in Finnish, two offline tests with multiple choice and act-out tasks were performed. TD and DLD group performance was compared using multiple regression analysis, considering relative lifetime exposure to L2. Covariate-specific receiver operating characteristic (ROC) analysis was used to estimate the thresholds for optimal sensitivity and specificity of the tests.

Results: In both sentence comprehension tests, typically developing bilingual children outperformed their peers with DLD. L2 exposure had a significant but small effect. Both groups were similarly affected by L2 exposure. It was found that both tests had good sensitivity and specificity. However, the accuracy of each test was greatly affected by the exposure.

Conclusions: Sentence comprehension in L2 is a promising language domain in enabling language difficulties detection in children with several first-language backgrounds. When interpreting the utility of an assessment tool, classification accuracy analysis, along with group comparisons, is important. Further, the model should include explanatory factors, like age and language exposure.

Keywords: sentence comprehension, child bilingualism, sequentially bilingual, language exposure, developmental language disorder, language assessment, classification accuracy

References:

De Cat, C., & Melia, T. (2022). What does the sentence structure component of the CELF-IV index, in monolinguals and bilinguals? *Journal of Child Language*, 49, 423–450.

Girbau, D. (2018). Direct object pronoun sentence processing in Spanish-English children with/without specific language impairment and adults: A cross-modal priming study. *Journal of Communication Disorders*, 72, 97–110.

Paradis, J., Schneider, P., & Sorenson Duncan, T. (2013). Discriminating children with language impairment among English-language learners from diverse

first-language backgrounds. *Journal of Speech, Language, and Hearing Research*, 56(3), 971–981.

Riika Ullakonoja, PhD, Docent, Postdoctoral researcher at the Centre for Applied Language Studies at the University of Jyväskylä, Finland

She is currently a post-doctoral researcher in a project 'Broken Finnish': Accent perceptions in societal gatekeeping (funded by the Research Council of Finland) at the Centre for Applied Language Studies at the University of Jyväskylä, Finland. She has obtained a title of Docent in Language learning, especially oral proficiency and multilingualism at the University of Turku.

Oral presentation: Development of reading and writing skills of heritage speakers of Russian in Finland – evidence from applied linguistic research

Abstract

In my presentation I will discuss the factors related to the development of reading and writing skills in Finnish and Russian by school children, who are heritage speakers of Russian in Finland. The presentation is based on the findings of Dialuki-project (Diagnosing reading and writing in second/foreign language) – a research project in applied linguistics involving a large-scale data collection in Finnish schools.

The aim of the project was to find predictors for reading and writing skills in second or foreign language. Possible predictors investigated in the project include cognitive skills, background factors, linguistic measures as well as the reading and writing habits and motivation of the pupils. The learners completed a set of linguistic measures including reading and writing tasks and replied to questions about motivation and reading and writing habits.

Elin Thordardottir, PhD, SLP – Audiologist, professor at McGill University in Montreal, an adjunct professor at the University of Iceland, Iceland

Jóhanna Thelma Einarsdóttir is professor and a program director at the University of Iceland, in School of Education and School of Health Science. She has been a Speech and language pathologist since 1987, and specialized in fluency disorders since 1994. Her research has focused on epidemiology of early stuttering measures and treatment of stuttering as well as general language acquisition, measurement of language development, bilingual studies and developmental language disorders.

Oral presentation: Multilingualism in different societal contexts: Rethinking some key concepts in bilingualism and multilingualism

Abstract

There have been major advances in the study of bilingualism and multilingualism in the last two decades. Research findings have shed light on the factors that most strongly influence multilingual development, notably the importance of the extent to which children are exposed to and practice talking each of the languages they are learning in comparison to factors such as the age of first exposure to bilingualism and the home versus school language. Studies highlighting the importance of exposure and practice over the age at which children are first exposed to bilingualism lead us to question time honored concepts such as that of simultaneous and sequential bilinguals and that of additive and subtractive bilingualism. Further, the close relationship between amount of exposure and proficiency leads us to reexamine the extent to which children can learn many languages simultaneously. Research conducted in environments with different cultural practice and language and school policies highlights the importance of the societal and policy context, underlining the fact that there is no such thing as multilingualism in a vacuum – rather, environmental conditions set the stage for learning opportunities. This talk will present specific research findings on bilingual and trilingual learning in different contexts, specifically in Montreal and Iceland, and will use these findings to discuss broader issues in how we conceptualize bilingualism and multilingualism and how multilingual development may be best supported.

Olivia Hadjadj, PhD student at the University of Geneva, SLT, Switzerland
After working as a speech and language therapist in France, she is currently a PhD student at the University of Geneva - Faculty of Psychology and Educational Sciences (Switzerland), where she works on the dynamic assessment of language abilities (morphosyntactic and narrative skills). She is also a member of the executive committee of the SLPhD network.

Oral presentation: Dynamic Assessment of Narrative Skills for Identifying Developmental Language Disorder in Monolingual and Bilingual French-Speaking Children

Abstract

Purpose: The microstructure of a narrative (i.e., the language complexity used to tell a story) can be impaired in both typically developing (TD) bilingual children and in monolingual or bilingual children with Developmental Language Disorder (DLD). Consequently, bilingual children are often misdiagnosed. To address these diagnostic challenges, we sought to determine whether a Dynamic Assessment (DA) task of narrative skills, following a pretest/teach/posttest procedure, could differentiate TD and DLD children, without disadvantaging bilinguals, as compared to monolinguals.

Method: An experimental group (benefiting from the teaching phase) and a control group (not benefiting from the teaching phase) were recruited. Specifically, the experimental group comprised 30 TD children (12 bilinguals) and 30 children with DLD (15 bilinguals), while the control group consisted of 58 TD children (27 bilinguals). During the pre- and posttest phases of the DA task, we asked children to produce a story based on pictures. During the teaching phase, we targeted macro- and microstructural elements, by asking 12 questions about the story. The stories produced in the pre- and posttests were scored based on the number of macro- and microstructural elements, and on the number of trained elements (TE) produced.

Results: The macrostructural score and the number of TE improved after the teaching phase for all groups of the experimental condition (TD and DLD), whereas there was no improvement for the control condition. Participants with TD and DLD differed on all measures (macro, micro, and number of TE) in the posttest, with no difference between mono- and bilinguals.

Conclusion: Our DA task led to both improved narrative skills and TD/DLD differentiation, with bilinguals not being disadvantaged. Our study thus supports the existing literature indicating that DA can be used to diagnose narrative deficits in DLD children.

Lemmietta G. McNeilly, PhD, Chief Staff Officer ASHA, CCC-SLP, FASAE, CAE, FNAP, USA

Dr. Lemmietta McNeilly serves as the Chief Staff Officer for Speech-Language Pathology at the American Speech-Language-Hearing Association (ASHA) and is responsible for Speech-Language Pathology Practices, Governmental Affairs and Public Policy, International Programs and Special Interest Groups. She is an ASHA Fellow, a Distinguished Scholar and Fellow of the National Academy of Practice, and a Fellow of the American Society of Association Executives.

Keynote speech: Competencies SLPs Need to Work Effectively with Multilingual Individuals and Their Families

Abstract

Speech-Language Pathologists (SLPs) need to possess specific knowledge and skills to provide culturally responsive and clinically competent services to multilingual individuals and their families. This session will include specific skills that SLPs need to work effectively with multilingual individuals; as well as descriptions of strategies for effectively assessing bilingual or multilingual children and methods of working effectively with interpreters using spoken and manually coded languages.

SLPs should exhibit competencies in responsiveness to the cultural and linguistic differences that occur in all clinical interactions including identification, assessment, treatment, and management of communication disorders. Bilingual SLPs need to be able to independently provide comprehensive diagnostic and treatment services for speech, language, cognitive, voice, and swallowing disorders using the client's/patient's language and preferred mode of communication.

SLPs must have the linguistic proficiency to

- describe the process of typically developing speech and language acquisition—for bilingual and monolingual speakers of that language,
- select, administer, and interpret formal and informal assessment procedures to distinguish between communication differences and communication disorders,
- apply intervention strategies for treatment of communication disorders in the language or mode of communication most appropriate for the needs of the individual.

There are five areas of competency that a bilingual SLP should possess. 1) Native or near-native proficiency in another language in the areas of vocabulary, semantics, phonology, grammar, and pragmatics. 2) Knowledge of typical language development for both monolingual and bilingual speakers of the language. 3) The ability to administer and interpret diagnostics in the other language and distinguish between a difference and a disorder. 4) The ability to provide treatment in the other language(s). 5) The ability to recognize cultural factors that may impact services. These specific skills can be attained by native and non-native language users.

As guidance, ASHA has outlined [language competencies](#) related to the necessary knowledge and skills. Bilingualism is not equal knowledge of two languages, and language ability is tied to language use (Grosjean, 1989). ASHA's Vision is making effective communication, a human right, accessible and achievable for all.

Keywords: bilingualism, multilingualism, competencies, culture, and language

Tiia Õun, PhD, Director of School of Education at Tallinn University, Estonia

Tiia Õun, PhD, Director of School of Education at Tallinn University. Her research has focused on the quality of education and innovation, mainly at preschool level. Tiia Õun participated in several research groups dealing with teacher professionalism, innovative learning and teaching methods, and the quality of education in the context of education policy. She has worked on the methodology of supporting early language learning and teacher skills to support the early language learning in preschool education.

Reili Argus, PhD, Professor of Estonian Language at Tallinn University, Estonia

The main field of her research interest is the acquisition of Estonian as a first language. She has studied the acquisition of Estonian morphology, as well as the acquisition of lexico-semantic and pragmatic categories. The secondary field of her research is connected with the acquisition of Estonian as a second language. She has studied the acquisition of Estonian morphology, vocabulary and narration skills of 8-10-years old Russian-speaking children and led a number of projects supporting the professional skills of Estonian teachers working in multilingual classrooms.

Oral presentation: Transition to Estonian-language education from the perspective of supporting pupils' language development

Abstract

In Estonia, everyone has the right to receive quality education in Estonian, irrespective of their native language or geographical location. Learning in Estonian prepares children and young people to learn in Estonian kindergartens and schools, integrating Estonian cultural space so that they do not lose their identity but broaden their options. The main goal is that all children and young people have better opportunities for further learning in high schools and for jobs. Transitioning all schools and preschools in Estonia to Estonian-language education is in the interest of the children and young people themselves (Transition to Estonian-language education, 2023).

To support the transition to Estonian-language education, the project "Professional Estonian-language teacher in kindergarten and school" was started in 2018. In the Russian-speaking kindergarten and school, supplementary Estonian-speaking teachers went to work, who spoke only in Estonian with children. In addition to training for teachers, the project also involved observing teachers' lessons and monitoring pupils' language skills. Methodical approach to language learning was based on the plurilingual and intercultural model (Coullier et al. 2015). The broader context of the research was based on the understanding that multilingualism is also an interdisciplinary phenomenon that can be studied from individual and societal perspective (Cenoz, 2013).

The aim of assessment of pupils' language skills was to identify which model of language learning in schools leads to faster language development. A total of 735 children took part in the monitoring of language skills in the school section of the project. The results of the truth judgment and elicitation test showed that the language skills of pupils who were more proficient at the beginning of the project improved faster. This may have been due to the fact that teachers paid more attention to beginners than to advanced learners. The best results were achieved in schools where tandem teaching was used in the classroom.

Kindergarten teachers assessed the language development of the children in their group and a total of 1,729 children from 76 Russian-speaking kindergarten groups participated in the study. Most of the children had good general communication skills and speech in their home language and in Estonian. Half of children who participated understood questions and orders in Estonian, could repeat simpler words and expressions and used polite expressions. It was the most difficult for the children to form questions and sentences and children needed support in pronunciation. Most of the children have not acquired the skills to read and write, which is appropriate for their age as half of the children were under the age of five.

Keywords: transition to Estonian-language education, pupils' language skill, school, kindergarten

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Virve-Anneli Vihman, PhD, Associate Professor of Psycholinguistics at the University of Tartu's Institute of Estonian and General Linguistics, Estonia

Virve-Anneli Vihman is Associate Professor of Psycholinguistics at the University of Tartu's Institute of Estonian and General Linguistics. She has conducted research on mono- and bilingual children's language development, leads a research group on youth language in Estonia and is raising two bilingual children. She is a co-investigator on the project 'Development of a toolkit for the assessment of bilingual children's language skills' (Principle Investigator, Marika Padrik, funded by the Education and Youth Board in Estonia (2021-2024)).

Adele Vaks, PhD student at the University of Tartu's Institute of Estonian and General Linguistics, Estonia

Adele Vaks is a PhD student at the University of Tartu's Institute of Estonian and General Linguistics. In her thesis, she looks into the Estonian skills of Estonian-Norwegian bilingual children, investigating the effects of language exposure and cross-linguistic influence on morphosyntax. She is involved in the project 'Development of a toolkit for the assessment of bilingual children's language skills' (Principle Investigator, Marika Padrik, funded by the Education and Youth Board in Estonia (2021-2024)).

Workshop: KaLaKe: Developing a diagnostic tool for multilingual language assessment in Estonian

Abstract

This workshop will give an overview of the KaLaKe (Kakskeelsete Laste Keeleoskus 'Bilingual Children's Language Skills') diagnostic toolkit for children aged 5-7, in development for researchers and educators in Estonia with funding from the national Education and Youth Board. We will discuss principles of assessment of bilingual children's language and reasons for the need for the diagnostic toolkit in Estonia, and we will describe the process of development of the toolkit, which is currently in the stage of being normed in collaboration with pre-schools across Estonia. The toolkit consists of a Cross-Linguistic Lexical Task, a Nonword Repetition Task and a Sentence Repetition Task, all inspired and adapted from tools developed by the LITMUS network. We will show how each of the tests looks and demonstrate the testing process.

Keywords: bilingual development, diagnostic tools, vocabulary measurement, nonword repetition, sentence repetition

Signhild Skogdal, SLT and associate professor at UiT the Arctic university of Norway, in Tromsø, Norway

She leads, teaches and do her research at the SLT master program. Skogdal's SLT interests concern stuttering, DLD, but first of all AAC. AAC is also the topic in her ph.d., with the title "Participation in school for students who use AAC" (2017). Skogdal has had several presentations at national and international SLT and AAC conferences.

Carolina Caggiano, Mother of 4 children, the eldest of whom, Isabella, is an AAC-user, Norway

Carolina is the mother of 4 children, the eldest of whom, Isabella, is an AAC-user. When Isabella was 9 months old, the family moved from Buenos Aires to Norway. We are a multicultural family. Carolina's great involvement in Isabella's AAC sparked an interest that also led to university studies and professional work in the field.

Oral presentation: AAC - a bridge to multiple languages for Norwegian teenager with cerebral palsy

Abstract

Augmentative and alternative communication (AAC) is multimodal ways and strategies of communication (e.g. graphical- and alphabetical symbols, and body language) for people who have reduced or no functional speech, with or without intellectual disability. AAC is about communication, speech, and language – the core of the field of SLT. Therefore, SLTs should always be part of a collaborative AAC team. SLTs can contribute with special competence on development and disorders concerning assessment and facilitation of vocabulary, grammar, dialogue/pragmatic, reading and writing, language disorders, mono- and multilingualism.

The world becomes increasingly multilinguistic, which also includes children who use AAC. AAC is beneficial for monolingual children (especially for those with a language delay/late talkers), and multilingual children (especially for new inhabitants in a country). AAC can support all children's receptive and expressive language, and literacy development.

A language promoting environment in kindergarten and school includes graphical AAC symbols but must also focus on language comprehension. The amount of time on each language is crucial to become multilinguistic. However, children who use AAC and live in multilinguistic families often get AAC intervention in school only on the dominant language in the society. Thus, they miss the opportunity to become multilinguistic.

The Norwegian-Spanish-English family Tengsareid-Caggiano represents a success story on how to facilitate for daily communication with the use of AAC in all

languages. Thus, their daughter Isabella (14 years old) with cerebral palsy (CP) can communicate with all family members, using AAC as bridge to Norwegian, Spanish and English language.

The Tengareid-Caggiano family's experiences exemplify the benefits from supporting and encouraging the development of multiple languages, and how it can lead to independence in young AAC-users. Providing parents with the necessary tools, not only enhances communicative competence but also empowers both AAC children and their families in the journey towards linguistic proficiency.

Keywords: AAC, multilingualism, bilingualism

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Jóhanna Thelma Einarsdóttir, PhD, professor and a program director at the University of Iceland, in School of Education and School of Health Science, Iceland

Jóhanna Thelma Einarsdóttir is professor and a program director at the University of Iceland, in School of Education and School of Health Science. She has been a Speech and language pathologist since 1987, and specialized in fluency disorders since 1994. Her research has focused on epidemiology of early stuttering measures and treatment of stuttering as well as general language acquisition, measurement of language development, bilingual studies and developmental language disorders.

Oral presentation: The epidemiology of stuttering and multilingual groups

Abstract

Objective: Childhood stuttering is a neurodevelopmental disorder that typically emerges when children are young, around three years of age (Yairi & Ambrose, 2005). Identifying early stuttering is particularly challenging in multilingual context or when speech-language pathologists (SLPs) don't share the same language as the children. The incidence of early stuttering is high among young children, with many recovering within a few months of onset (Yairi & Ambrose, 2005). The aim of this presentation is to explore the identification and recovery of early stuttering in monolingual and multilingual children, considering factors influencing recovery.

Method: The method involves a comprehensive examination of criteria used in previous studies to identify common features for stuttering identification. These features will be discussed in the context of monolingual and multilingual children, considering the language proficiency of clinicians. The literature will be reviewed to identify factors associated with the recovery of stuttering with or without treatment, relevant to both with mono and multilingual children.

Results: Based on previous literature, stuttering identification relies on evaluating the speech of the children as well as general agreements of the parents and clinicians (Einarsdóttir et al., 2020). Regardless of language(s) spoken by the children and clinicians, information on the stuttering onset and the variability is crucial. Criteria for evaluating children's speech, including types and frequency of stuttering exemplars are discussed. Recovery is examined concerning the age of the children, duration of stuttering, and overt or covert stuttering behaviors. Previous literature shows different recovery rates, the mean is around 60% with most recoveries happening during early childhood although late recovery is also observed.

Conclusion: Very few studies have explored the identification of stuttering in multilingual contexts. Studies on the identification of stuttering in an unknown language have shown controversial results. The recovery of stuttering is a complex concept and needs to be clarified. This is important to consider in relation to therapy

methods and therapy effectiveness. Further epidemiological factors are needed on the development of stuttering and stuttering in multilingual context.

Keywords: early childhood stuttering, multilingual, identification, recovery, epidemiological

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Sean Pert, Chair of the Royal College of SLT, Senior Clinical Lecturer at the University of Manchester, Consultant SLT for the Indigo Gender Service, UK

Dr Sean Pert is the Chair of the Royal College of Speech and Language Therapists. Sean is also a Senior Clinical Lecturer at the University of Manchester, and Consultant Speech and Language Therapist for the Indigo Gender Service. Sean has almost 30 years clinical experience and led a Service for children and young people before moving to academia in 2014. Sean teaches IPA transcription, Speech Sound Disorders, Bilingualism and Voice and Communication Therapy. Sean has published textbooks and research papers on Speech and Language Disorders in a Bilingual Context and VCT and has been awarded the Sternberg Award for Clinical Innovation an unprecedented three occasions.

Oral presentation: Speech Sound Disorders (SSD) in a bilingual context

Abstract

Speech sound disorders (SSD) affect 3.4% of children aged 4 years of age, with a high comorbidity of language disorder and poor pre-literacy skills (Eadie et al., 2015). Careful assessment is required to identify the level(s) of breakdown in the speech sound system and reach a differential diagnosis. This then facilitates the selection of an effective, evidence-based therapy, or succession of therapy packages (Dodd, 2005). Dodd's categorisation of SSD identifies three sub-categories of Phonological Disorder, psycholinguistic disorders with no obvious aetiology: Phonological Delay, Consistent Phonological Disorder and Inconsistent Phonological Disorder (IPD). Along with Articulation Disorder, these are the most commonly encountered SSD (Broomfield & Dodd, 2004). By comparison, Childhood Apraxia of Speech (CAS) is a rare, but serious and pervasive SSD (Royal College of Speech and Language Therapists, 2024). Other SSD including dysarthria and generalised dyspraxia may be associated with congenital or acquired conditions such as Cerebral Palsy or Brain Injury. Cleft lip and palate directly affect the vocal tract structure and movement of articulators.

Although bilingualism does not cause SSD, bilingual children are at least as likely to experience SSD (Stow & Pert, 2006). Children who speak languages other than English (LOTE), in a monolingual, bilingual or multilingual context present with the same type of error patterns, although the error patterns in each language may differ, supporting the universality of Dodd's categorisation (Holm & Dodd, 2001; Holm, Dodd, Stow, & Pert, 1999; Hua & Dodd, 2000). Developmental data from one population will not be applicable to other populations or languages due to significant cultural and linguistic differences.

To successfully identify and remediate SSD in a language the Speech and Language Therapist (SLT) does not share with the child and family, it is not sufficient to work in only one language, such as the language of education. Both or all languages must be assessed (Pert, 2022; Royal College of Speech and Language Therapists, 2022), and if a phonological disorder is identified, treatment in one language will not generalise to the child's other language(s). SLTs must therefore work in both/all the

child's languages to ensure good outcomes and avoid the negative impact of persisting SSD including literacy problems.

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Annick Comblain, Professor of Speech and Language Therapy at the University of Liège, Belgium

Annick Comblain is Professor of Speech and Language Therapy at the University of Liège (Belgium). For some thirty years, her teaching and research have focused on language acquisition and development of children with neurodevelopmental disorders (including genetic syndromes of intellectual disability and autism spectrum disorders), and on bilingual development, particularly that of children attending immersion schools in French-speaking Belgium. For some years now, she has been combining the two fields of research and is interested in the bilingual education of children with neurodevelopmental disorders. She is very active in promoting bilingual and multilingual education in Belgium.

**Oral presentation: Bilingualism and intellectual developmental disorders:
heresy, utopia, or possible reality?**

Abstract

The idea that learning two languages can have a negative effect on language development, particularly in children with developmental disorders, has long prevailed in the scientific literature and is still firmly entrenched in the collective mind. In this context, the association of intellectual development disorders (IDD) and bilingualism may seem incongruous. Compared with the growing body of research on the bilingual development of neurotypical children, few studies have focused on bilingual education in IDD. Most of these studies are case or small group studies, which makes it difficult to generalise the results to a larger population. Nevertheless, the conclusions of these studies all seem to converge, and two important points should be noted: (1) children with IDD are able to achieve effective bilingualism and (2) knowledge of a second language does not have a negative impact on the development of the first language or on the non-linguistic profile of the children. In this presentation, we will review the current state of knowledge in this field and present some empirical studies conducted in our research unit with young children with IDD with or without autistic features.

Abhijeet Patra, PhD, Senior Lecturer, Manchester Metropolitan University, UK
Abhijeet Patra is a speech and language therapist and a senior lecturer in speech and language therapy at the Faculty of Health and Education, Manchester Metropolitan University, UK. He is interested in understanding how different cognitive processes influence language processing in the healthy and communication-disordered population (e.g., bilingual aphasia). He utilizes mixed methods approaches including behavioural and electrophysiological methods.

Oral presentation: Cognate Picture Naming in Bilingual Aphasia

Abstract

Cognate effects in picture naming – differences in accuracy and/or RT between cognate and non-cognate words – has been extensively studied to understand the bilingual lexical system. Despite clinical utility of understanding the influence of shared structure in bilingual aphasia, there remains limited research with no consensus regarding whether cognate words facilitate or interfere with naming. We investigated cognate effects in bilingual aphasia in the context of language dominance and executive control abilities. Picture naming data from cognate and non-cognate words were collected from seven Bengali-English bilinguals with aphasia and matched controls from both languages, along with executive control measures for inhibitory control, shifting abilities and working memory. Results revealed cognate facilitation for accuracy in the non-dominant language for bilingual aphasia. Individuals with poorer executive control demonstrated larger cognate facilitation. The findings highlight that individuals with stronger executive control may receive less benefit from shared structures between languages.

Keywords: cognate, picture naming, executive control, bilingual, Bengali, aphasia

Michel Paradis, PhD (McGill U.), PhD (U. de Montréal), Canada

Emeritus Professor, McGill University; founding member of the Cognitive Neuroscience Center, Université du Québec à Montréal and of the Center for Research on Language, Mind and Brain, McGill University. Chair of the Aphasia Committee of the International Association of Logopedics & Phoniatics (IALP) for four consecutive mandates 1989-2001. Relevant publications: The Bilingual Aphasia Test (BAT) (<https://www.mcgill.ca/linguistics/research/bat>) Paradis, M. (2004). A neurolinguistic theory of bilingualism. Amsterdam: John Benjamins. Paradis, M. (2009). Declarative and procedural determinants of second languages. Amsterdam: John Benjamins. Paradis, M., & Libben, G. (2014). The assessment of bilingual aphasia. New York: Psychology Press, Paradis, M. (2021). Afasia en bilingües: características, principios de evaluación, y la importancia de la memoria declarativa y procedimental. In S. Rubio-Bruno & A. Ardila (eds.), Afasia por expertos (pp. 383-417). Buenos Aires: Akadia.

Keynote speech: Contribution of procedural and declarative memory to multilingual language therapy

Abstract

The distinction between implicit linguistic competence and metalinguistic knowledge should be taken into account in the assessment and treatment of bilingual language impairments.

In order to guide language therapy, all languages previously spoken by a patient should be assessed with a linguistically and culturally *equivalent* instrument. The translation of standard aphasia batteries would not be adequate. Instead, corresponding items in another language should be selected so as to tap the same information as the original, in accordance with the rationale that motivated the construction of the items in the first place.

Acquisition and learning (as defined) and their respective outcomes (competence and knowledge) are qualitatively different. They are sustained by different types of memory systems (procedural and declarative), which are themselves subserved by different neural substrates: cerebellum, striatum, other basal ganglia, and perisylvian cortical areas *versus* hippocampal system, parahippocampal gyri, mesial temporal and anterior cingulate cortices. Therefore, patients should be assessed with instruments that tap both ILC (online tasks, natural, spontaneous) and MLK (offline tasks, transformations). Results are to be interpreted in light of the patient's language appropriation history (including amount of L1 MLK)

Because ILC is modular, i.e., task specific, its structure does not influence, nor is it influenced by, anything external to it, and conversely, two pieces of MLK can interact and influence each other, hence there are more effects between L2 and L3 than between L1 and either L2 or L3. Namely, because cerebral processing is more

similar among later-learned languages than between them and the native language, there is more transfer of therapy benefits between L2 and L3 than between L1 and L2 or L1 and L3.

More generally, language therapy may take advantage of preserved MLK and help patients use it as a compensatory strategy (as well as RH-preserved pragmatics). Depending on the nature, location and size of the neural damage, the degree of MLK possessed in each language, the age of appropriation and age at assessment, the use of implicit or explicit method may be more beneficial in therapy. Metalinguistic knowledge may serve as a compensatory strategy.

ABSTRACTS OF E-POSTERS PRESENTATIONS

Impact of age, gender, and stimulus complexity on neutral voice recognition accuracy

BaibaTrinite, Anita Zdanovica, Daiga Kurme,
Evija Lavrane, Ilva Magazeina, Jansone Anita
Voice and Speech Research Laboratory, Liepaja University, Latvia

Abstract

Objectives: The study investigated the impact of listeners' age and gender, as well as the duration of voice samples, on the ability to recognize neutral voice tones when they are played alongside expressive ones.

Methods: Thirty-two age-matched listeners listened to 270 semantically neutral voice samples produced in neutral (90), happy (90), and angry (90) intonation by ten professional actors. The participants were required to categorize the auditory stimulus using a customized tablet web interface based on three options. The analysis focuses on the recognition accuracy of neutral voice stimuli and the factors impacting it. The acoustic analysis determining fundamental frequency (F0), F0 standard deviation (SD), sound level intensity (INT), and INT SD of neutral voice stimuli was carried out utilizing PRAAT software.

Results: The study found that 73.2% of the neutrally expressed voice samples were correctly identified. According to the Mann-Whitney U test, there was no significant gender difference in recognizing neutral emotions ($U = 128.5$, $p = .985$). However, a weak, positive correlation was observed between listeners' age and ability to accurately discriminate neutral voice stimuli ($r_s = .374$, $p = .035$). Statistically significant differences in discrimination accuracy of neutral voices between paragraphs ($Mdn = 90.0$, $IQR = 40.0$) and words ($Mdn = 76.3$, $IQR = 31.9$) ($p = .037$) and paragraphs and phrases ($Mdn = 72.5$, $IQR = 31.9$) ($p = .001$), but not between words and phrases (Friedman test with Bonferroni corrections). There were weak correlations between age and discrimination accuracy of neutral emotions in words ($r_s = .367$, $p = .039$).

Conclusions: The accuracy of neutral emotion discrimination is affected by the listeners' age and the complexity of the syntactic units presented. Continuing this research trajectory, the forthcoming study phase will delve into the neural mechanisms underlying the processing of perceived voice stimuli. The neural processing of female and male voices and normophonic and dysphonic voices will be done using electroencephalography.

Funding: This work was supported by the Latvian Science Council [grant number lzp-2021/1-0159] and was conducted in the research project "Affective and disordered vocal stimuli neural processing during mobile tasks."

Keywords: voice, perception, gender, age, words, phrases, text

The development of differentiated recommendations for ensuring pre-referral intervention

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Liepaja University, Latvia

Abstract

The study aimed to develop differentiated recommendations for pre-referral intervention implementation for children with high and moderate risk of speech and language disorders.

Methods: The Early Childhood Development Screening Toolkit (Raščevska et al., 2024) was used to screen expressive and receptive language, speech sound disorders, and speech fluency in children from 12 months to 6 years. Surveys included in the screening toolkit were completed by 545 parents for 545 children, 95 preschool education teachers for 438 children, and seven general practitioners and seven nurses for 128 children. The evidence-based recommendations for parents, teachers, and general practitioners were developed based on the literature review to provide immediate speech and language facilitation before formal speech and language assessment.

Results: The recommendations cover the support structure for speech and language development, including an overview of skills, identification of difficulties, and consideration of additional developmental risks. Objectives of recommended support, collaboration, and consultations are outlined, along with tailored methods based on the environment (family, preschool, health care). Follow-up assessments and diverse intervention methods are suggested.

Conclusions: (1) For children whose language skills correspond to the 5th or 16th percentile, it is necessary to initiate early intervention before the diagnosis is determined; (2) The recommendations should be specified according to the stakeholders, percentile obtained in the screening, and type of possible speech and language disorder.

Keywords: pre-referral intervention, screening, recommendations

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Empowering learners: combination of flexible learning environments, the role of the educator and educational support

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Abstract

In the context of an educational transformation that empowers every learner, with their unique abilities, strengths as well as difficulties and learning needs, it is important to have the right combination of the appropriate environment, support from specialists, and the educator acting as a "guide" for the learner. The updating of the content of the curriculum also leads to changes in the interaction between the teacher and the learner in the teaching/learning process. The process of scaffolding, aimed at overcoming barriers to learning, is becoming crucial to the success of each learner in learning to the best of his or her ability (Bishop et al., 2020).

Modeling a flexible and intuitive learning space is crucial to protect some learners from being separated in the learning process. This ensures a successful participation of each child in the overall learning process by eliminating barriers in the learning environment through a variety of educational methods and tools. The diversity of children in educational institutions covers linguistic, cultural, social, health and other differences, as well as special educational needs. Empowering learners to act in the educational environment and to use the knowledge they have acquired develops the ability to anticipate, achieve, monitor progress and use experience in different contexts. A well-designed and planned learning environment is a learning tool in the service of the learning process, not the other way around (Bernacki et al., 2021).

Our research focuses on understanding and supporting children with Autism Spectrum Disorder (ASD) in inclusive primary school. It explores personalized learning approach that can facilitate engagement with autistic students and enhance their learning outcomes. This study explores learners with ASD in primary schools due to their vulnerability to exclusion (Pettersson-Bloom & Holmqvist, 2022).

The object of the research is empowerment of the learner in inclusive classroom.

The study employs elements of action research methodology, including *case analysis, observation, interviews, and document analysis*, conducted in an inclusive school in Lithuania with the participation of teachers and educational support specialists experienced in educating students with ASD.

Results of the research revealed that while educational support specialists tend to be more knowledgeable about ASD, teachers often lack sufficient understanding of the disorder. Collaborative efforts involving teachers, students, parents, and specialists from other institutions are critical in understanding the children and fostering their learning-to-learn skills. The study also identified various methods that can empower autistic children in their learning, such as artistic or physical activities, individual conversations, group work, and motivational activities. Creating an autistic-friendly environment within the school was also highlighted as crucial for promoting the learning capabilities of these students.

The findings underscore the importance of not only recognizing the disorder but also understanding the child as an individual learner. Recommendations for

personalized approaches in education, crafted by practitioners themselves, are seen as valuable contributions to educational practice.

Keywords: personalization, collaboration, learner

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Screening / assessment in preschool children who stutter LogTest 4

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Abstract

Aims

The aim of this paper is to present the screening tool *Screening for preschool children who stutter* (Faściszewska, 2022), which can be used for differential diagnosis of children with natural disfluencies and stuttering, as well as, to identify children at risk for persistent stuttering.

Short introduction

Early childhood stuttering is a common fluency disorder, which involves from 5 to 8% of children. The first symptoms of stuttering are usually observed by parents, caregivers or teachers between the ages of 2 and 5 (Yairi, Ambrose, 2013; 2020). For SLTs and other professionals it is challenging to identify children with risk factors for persistence of the stuttering. Early intervention is very important, because it helps to prevent the negative impact of the stuttering to the child and family.

Methods

The form *Preschool screening for stuttering children* (Faściszewska, 2022) is translated into Ukrainian, English, Lithuanian etc. This screening can be completed by parents during the session or sent them by SLT via email. The average time to complete the questionnaire is about 15 minutes. The data using this screening form is collected and implementation to practice is in progress.

Results

Results of the questionnaire provides the therapist information for further actions, such as monitoring, consultation, referral for diagnosis, initiation of indirect or direct therapy (ASHA, 1994, 2005; Pertijs, 2014).

Conclusion

This screening tool can be easily implemented in SLT practice and helps determine the risk for developing, persistence stuttering in preschool children.

Keywords: stuttering, preschool children, screening

The Key Role of Collaboration between Specialists and Families in Speech Therapy for Multilingual Children

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Abstract

Aims:

- Examining specialist-family collaboration in multilingual children's speech therapy and its impact on therapy effectiveness.
- Integrating family involvement in multilingual children's speech therapy: best practices and strategies, challenges, and opportunities.
- Role of family involvement in supporting multilingual children's speech development.
- Benefits of collaborative approach for diverse needs of multilingual children.

Methods: Analysis of scientific research data

Introduction: This article examines collaboration between speech therapy specialists and families of multilingual children, emphasizing the importance of understanding cultural aspects, language preferences, and life circumstances. It highlights successful interactions, such as utilizing family resources and jointly developing language development strategies. The partnership between specialists and families is underscored for achieving optimal therapy outcomes.

Results:

1. **Tailored Cultural Collaboration:** Specialists assess family language and culture for personalized therapy, prioritizing cultural competence and linguistic diversity.
2. **Collaborative Support Sessions:** Active family involvement promotes natural skill development through joint learning and support sessions with specialists.
3. **Parental Resource Utilization:** Specialists help families utilize resources like books, games, and cultural practices for home language development.
4. **Transparent Communication:** Open and compassionate communication between specialists and families is vital for discussing expectations, progress, challenges, and overcoming obstacles.
5. **Feedback and Evaluation:** Specialists offer regular feedback on therapy progress, sustaining parental motivation, and adjusting therapy plans based on evolving child needs.
6. **Empowered Parental Support:** Equipping families with information and training to implement daily strategies for their child's speech and language development is crucial.
7. **Collaborative Goal Setting:** Specialists and families should define therapy goals together and devise action plans to achieve them.
8. **Transitional Support:** Specialists can help families during transitions, such as educational or cultural changes.

9. **Technological Integration:** Utilizing modern technologies like mobile applications and online resources can enhance collaboration between specialists and families.
10. **Psychological Support:** Addressing parental stress is essential for active participation in therapy. Specialists can help in managing stress and adapting to therapy-related changes.

Conclusion:

The research emphasizes the necessity of collaboration between speech therapy specialists and families of multilingual children to optimize therapy outcomes. Tailoring therapy programs to understand cultural nuances, language preferences, and unique family circumstances is crucial. Effective interactions, like leveraging family resources and crafting joint language development strategies, demonstrate practical benefits. Ultimately, the study underscores the pivotal role of partnership between specialists and families in ensuring effective speech therapy interventions for multilingual children.

Keywords: speech therapy, multilingualism, bilingualism, language development, linguistic diversity, parental involvement, intervention strategies

The impact of mouth breathing on voice aerodynamic and acoustic properties in primary school-aged children

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Abstract

Aims: To find out the impact of mouth breathing on voice aerodynamic and acoustic properties in primary school-aged children.

Short introduction: Breathing plays a vital role in a person's overall well-being. Mouth breathing can cause many problems impacting the person's health, such as posture problems, speech sound distortions, and decreased cognitive performance. According to studies, mouth breathing impacts around 10–15% of all children. However, the prevalence varies depending on the region. Mouth breathing causes an incorrect position of the tongue and vocal folds mucosa dryness, which impacts voice aerodynamic, acoustic properties, and speech sound articulation.

Methods: Two groups of primary school-aged children were formed – 20 children with and 20 without mouth breathing. The Maximum Phonation Time (MPT) measurements were carried out to all participants. Each measurement was done three times. The vocal samples were recorded using the Apple smartphone app Voice Memos. Voice acoustic analysis with program Praat v. 6.3.09 was provided with the purpose of determining Jitt, Shim, and the first three formants (F1, F2, F3).

Results and conclusions: The results showed statistical significance in MPT measurements between both groups ($p = 0.01$). Mouth breathers' average MPT was 10.7 seconds, and nasal breathers 14.2 seconds. The results showed no statistical significance in Jitt and Shim measurements ($p = 0.47$; $p = 0.26$). The mean Jitt value for the mouth breathers was 0.5 %, but for the nasal breathers 0.6 %. Mouth breathers average Shim was 5,6 %, but nasal breathers 6.7 %. The results showed no statistical significance in the first three (F1, F2, F3) formants measurements. Mouth breathers' average F1 was 840 Hz, but nasal breathers 877 Hz. Mouth breathers' average F2 was 1498 Hz, but nasal breathers 1428 Hz. Mouth breathers' average F3 was 2788 Hz, but nasal breathers 2810 Hz. As statistical significance was observed in only one measurement (MPT), the proposed hypothesis "Mouth breathing in children of primary school age negatively affects the aerodynamic and acoustic properties of the voice" was partially confirmed.

Keywords: mouth breathing, Maximum Phonation Time, voice acoustics

Levels of language acquisition in preschool children

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Abstract

Introduction. Research on early language learning and language acquisition has been more or less formal for several decades. Many children have delayed language development and need early professional help to catch up with their peers. Language, speaking and communication work together to communicate effectively. The ability to concentrate, listen and understand speech are among the main skills of a child learning to communicate and communicate. Language acquisition is a complex, sequential and dynamic process. Many scientists from various countries and fields were interested in language learning and language acquisition. Based on scientific research, it is proposed to divide language development into several of language acquisition.

The aim is to reveal the language acquisition levels of preschool children based on scientific research.

Methods. Analysis of scientific literature sources.

Results. In the periodizations of language development presented by scientists, different levels of language acquisition are indicated, and the stages of language development are named differently. For example, the first level of language acquisition is usually called pre-linguistic. or the period of beginning meaningful language expression, when they begin to understand language, although they do not yet use it. The second level, when children use combinations of sounds or words - one-word, two-word phrases, is called the stage of sentences, and there are no rudiments of the grammatical system. The third stage of language acquisition is the most important for the development of vocabulary and grammar, because the vocabulary develops intensively, and the grammatical system of the language begins to form. This stage is also called the stage of the first word combinations or the early stage of the formation of the grammatical system. This level of language acquisition is the most important in the child's language development, because the child begins to understand and use the grammatical forms of words depending on their syntactic meaning in a sentence. Some researchers distinguish the stage of formation of the later grammatical system. The fourth level of language acquisition is often called the stage of sentence or linguistic communication, sentence development, when integrated extended sentences are used, the grammatical system of the language is improved.

Conclusions. When children's language development is delayed, unusual, atypical, the presented levels of language acquisition are more complex, each level takes longer and differs in quality. With different speech and language disorders, each stage of language acquisition has unique characteristics and a different duration. Scientists describe in detail each level of language acquisition not only by the type of sentences characteristic of it, the number of words in a sentence, but also by the levels of acquisition of grammatical categories and pronunciation of sounds.

Keywords: language acquisition, levels of language, preschool children.

The Concept of the Phonological Disorder: Questionnaire-based Survey of Lithuanian Speech and Language Therapists

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Abstract

Short introduction. Phonetic and phonological disorders are the most common disorders in pre-school (10–15%) and school age (6%) children (Enderby et al., 2009; McLeod, Harrison, 2009; Lof, 2015). In the international context, an obvious progress in research on speech sound disorders of children in English is observed (Roddam, McCurtin, Murphy, 2019; Baker, McLeod, 2011b). Despite that, cross-linguistic research studies still too little emphasise the highlight specific characteristics of phonological disorder of other language groups (e.g. Baltic, Slavic, Finno-Ugric etc.). Moreover, relevance of this topic is substantiated by the situation of the recent decade of intensive search for common definitions of speech and language disorders throughout the European Union countries (Dokoza et al., 2015).

The research aim. To identify structural components of the concept of the phonological disorder and manifestation of them.

Methods and research sample. An authentic online questionnaire-based survey designed by the researchers was used. Descriptive statistics, multi-dimensional statistical methods were employed: exploratory factorial analyses, second order factor analysis (Varimax rotation). 162 of Lithuanian speech and language therapists (SLTs) from Lithuania took part in the research. The research sample was formed by probability sampling; simple random sampling was applied.

Main results and conclusions. When differentiating and identifying the phonological disorder, the following features are significant by opinion of Lithuanian SLTs: difficulties of the phonological awareness, speech and adjacent difficulties in learning; consistent errors in substituting, omitting, assimilating sounds; alterations in speech motor skills; difficulties in the use of sound in speech and syllables, repetition of words. These features and their characteristics will be discussed in more detail way. To sum up manifestation of them, the respondents assessed difficulties in the use of sounds and syllables, repetition of words and phonological awareness in highest scores. The lowest scores were given to speech motor skills, i.e. alterations of breathing, voice, phonation and prosody as well as structure and functions of the apparatus of articulation.

Keywords: phonological disorder, speech sound disorders, survey of speech and language therapist

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