Programme at a glance and abstracts

WELCOME TO THE CHILD LANGUAGE SYMPOSIUM 2025

Dear conference delegates, colleagues

We are delighted to be hosting the **Child Language Symposium 2025** at the University of Reading. The conference traditionally brings together researchers from different parts of the world in an open forum to share and discuss recent findings, developments and innovations in the field of child language research, to inspire and pave the way for new discoveries through collaborations and open dialogue. We received over 160 abstracts from 20+different countries, a reflection of the international reach of the event and the breadth and depth of the field. We are honored to have as our guests five distinguished keynote speakers: Cristina McKean (University of Oxford, UK), Cat Davies (University of Leeds, UK), Rowena Garcia (Leibniz-Centre General Linguistics, Berlin, Germany), Jacopo Torregrossa, Goethe University of Frankfurt, Germany) and Chloe Marshall (UCL, UK).

We are particularly excited that we are hosting the Child Language Symposium in a year in which we celebrate 50 years of speech and language therapy and 60 years of Linguistics at the University of Reading.

If you have any questions during the conference, feel free to contact anyone on the Organising Committee or one of the student helpers, and we will do our best to help. We hope that you enjoy this year's CLS as well as your stay in Reading and in the UK.

Organising committee

Vesna Stojanovik (chair)	Yaling Hsao	Carmel Houston-Price
Emma Pagnamenta	Sylvia Jaworska	Jane Setter
George Pontikas	Ludovica Serratrice	Holly Joseph
Ian Cunnings	Fraibet Avelado	

The University of Reading

The University of Reading's educational heritage dates back to the end of the 19th century. In 1860 the Schools of Art and Science were established and in 1892 these two schools merged to form Universtiy Extension College Reading, which was an extension college of Christ Church, the University of Oxford. The University received its Royal Charter in 1926, and it was the only university to be awarded its royal charter between the two world wars. It is based on 4 campuses: Whiteknights, London Road, Greenland, and University of Reading Malaysia. With a student population of approximately 26,000 and a staff of around 4,000, the University makes a significant contribution to the town of Reading.

The University of Reading is one of the UK's top 30 universities. It has won many awards, and it is a five-time winner of the Queen's Anniversary Prize for Higher Education, first in 1998, and then in 2005, 2009, 2011 and 2021. The university is home to 35 research divisions, many of which are recognized internationally for their research excellence. The University offers a wide range of courses in pure and applied sciences, languages, humanities, social sciences and fine art.

We are delighted that 2025 marks our 50th anniversary since the establishment of our first undergraduate speech and language therapy programme at the Universityof Reading and 60 years of Linguistics. Both milestone events are celebrated on 10th September between 13:30 and 18:00 in the Palmer Building.

PROGRAMME AT A GLANCE

Disclaimer: The information printed in this booklet is accurate at the time of going to print. Any later changes to the programme or order of presentations may not be reflected.

	Day 1: 8/9/2025 (Monday)		
Time	Session 1 (Room G.10))	Session 2 (Room 1.02)	Session 3 (Room 1.03)
8:45 - 9:30	***Registration (Palmer Building Foyer)***		
9:30 - 10:30	Plenary: Cristina McKean (G.10)		
10:30 - 11:30	Oral presentations **Bilingualism & Heritage Language 1**	Oral presentations **Down Syndrome**	Oral presentations **Language Environment**
11:30 - 11:45	*Break*		
11:45 - 1:00	Symposium **The role of iconicity in language development**	Symposium **The acquisition of Celtic Languages: A study of phonology, vocabulary and morphosyntax**	Symposium **Enabling parents/families to deliver speech/language/communication intervention programmes**
1:00 - 2:30	Lunch (G01-G05)/Poster presentations (Room 1.04)		
2:30 - 3:30	Oral presentations **Bilingualism & Heritage Language 2**	Oral presentations **Language and Cognition**	Oral presentations **Literacy**
3:30 - 3:55	*Break*		
4:00 –4:40	Lightning talks **Language Acquisition & Development**	Lightning talks **Bilingualism, Language Disorder**	Lightning talks **Syntactic and Semantic Processing**
4:45 - 5:45	Plenary: Cat Davies (G.10)		
6:30 PM		Conference Dinner: Meadow Suite (University of Reading)	

	Day 2: 9/9/2025 (Tuesday)		
Time	Session 1 (Room G.10)	Session 2 (Room 1.02)	Session 3 (Room 1.03)
8:30-9:00	***Registration (Palmer Building Foyer)***		
9:00 - 10:00	Plenary: Jacopo Torregrossa (G.10)		
10:00 - 11:00	Oral presentations **Lexical development and interventions**	Oral presentations **Interventions 1**	Oral presentations **Narrative development**
11:00 - 11:15	*Break*		
11:15 - 1:00	Oral presentations **Language Development 1**	Oral presentations **Language Disorders 1**	Oral presentations **Word Learning & Processing**
1:00 - 2:30	**Lunch (G01-05)/ Poster presentations (Room 1.04)**		
2:30 - 3:45	Symposium **Enhancing deaf children's language in bilingual settings**	Symposium **The interaction of perception and production in early vocal development**	Symposium **Words in the mind: a workshop on word processing**
3:45 - 4:00	*Break*		
4:00 - 5:00	Oral presentations **Cross-Linguistic Perspective**	Oral presentations **Interventions 2**	Oral presentations **Shared Reading**
5:00 - 6:00	Plenary: Rowena Garcia (G.10)		

	Day 3: 10/9/2025 (Wednesday)		
Time	Session 1 (Room G.10)	Session 2 (Room 1.02)	Session 3 (Room 1.03)
9:00 - 10:40	Oral presentations **Language Development 2**	Oral presentations **Language Disorders 2**	Oral presentations **Grammar Learning & Processing**
10:40 - 10:55	*Break*		
10:55 - 11:55	Oral presentations **Phonology**	Oral presentations **Social Communication and Pragmatic Language Skills**	
11:55 - 12:55	Plenary: Chloe Marshall (Room G.10)		
12:55 - 1:00	Closing Remarks		

PLENARY SPEAKERS

Professor Christina McKean (University of Oxford, UK)

Title: Creating the conditions for robust early language development

Language development in the early years sets the stage for education, health, and wellbeing into adulthood. There are substantial individual differences in children's language progress over childhood with around 8% having persisting difficulties which affect the quality of their social relationships, and learning. There is also a clear social gradient in language abilities. Of all the socio-economic inequalities in child health and development, none is larger than those related to language. Any approaches to the promotion of robust early language development must therefore consider the social determinants of these inequalities.

Language learning takes place in all aspects of a child's daily life and from infancy to adulthood. To support language development for all children and ameliorate the problems of those with language difficulties, support and interventions must be able cut-across contextual and age-related boundaries. The services which support children and families in the early years, are often complex ecologies, of voluntary, statutory, and private bodies, with variable and distributed funding structures and delivered by a mix of health, education, and social care professionals.

This lecture will outline a body of work which aims to define optimal methods to support children's language development within these complex ecologies and contexts of inequalities. This includes studies conducted in the UK and internationally, which examine longitudinal cohort data, develop and evaluate early interventions, explore optimal relational practices for professional collaboration and develop frameworks for local implementation of current best evidence. Drawing on these, the characteristics of a public health framework for early language will be proposed and future priorities for research identified.

Professor Cat Davies (University of Leeds, UK)

Title: COVID-19 effects on young children's language development: who was affected and who was protected?

The Covid-19 pandemic disrupted early childhood experiences and adversely affected development across multiple domains, including physical, cognitive, socioemotional, and language skills. Statutory data on children under five from each of the UK nations indicate that a greater proportion of children did not meet expected developmental milestones between 2020 and 2022 compared to pre-pandemic levels. For example, in Scotland, concerns around speech and language development in children aged 27–30 months increased from 9.7% in 2019/20 to 13% in 2022/23 (Public Health Scotland, 2024). Survey data further underscore concerns expressed by teachers and parents about the effects of reduced social interaction and disruptions to early education and other children's services during the pandemic (e.g. Hobbs & Bernard, 2021; Kindred Squared 2020-25; Walsh et al., 2021).

These impacts have been especially pronounced among the least privileged in society, with children from socioeconomically disadvantaged backgrounds and those with additional needs falling further behind their peers (EPI, 2025; Hunt et al., 2023). While social inequalities were already widening before the pandemic, measures implemented to prevent the spread of Covid-19 appear to have exacerbated these disparities. Despite targeted fiscal and pedagogical efforts to support educational recovery, data since the onset of the pandemic suggest limited progress in closing these gaps, particularly for the most affected groups.

A body of evidence points to significant disruptions in children's language-learning environments, with variability across the socioeconomic spectrum. Studies report declines in expected trajectories for language development, including social communication, vocabulary, morphosyntax, literacy, and broader communication skills. These delays have also affected school readiness and other areas of academic progress (Zuniga-Montanez et al., 2024). This presentation will explore the mechanisms underlying these impacts, examine mitigation strategies, and offer recommendations for supporting children as they continue their developmental journeys.

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Zuniga-Montanez, C., Davies, C., Ligoxygakis, L., Kašćelan, D., and Gonzalez-Gomez, N. (2024). Annual Research Review: How did COVID-19 affect young children's language environment and language development? A scoping review, *Journal of Child Psychology and Psychiatry*. Available at: https://doi.org/10.1111/jcpp.14102

Professor Jacopo Torregrossa (Goethe-Universität Frankfurt, Germany)

Title: Rethinking the bilingual advantage: How dual language activation enhances cognitive and linguistic abilities in bilingual children

The question of whether bi-/multilingual children exhibit cognitive and metacognitive advantages over their monolingual peers has sparked ongoing debate in the literature. While some studies report such advantages, other fail to replicate these findings.

This talk proposes a new perspective: the bi-/multilingual advantage may only become visible at the individual level when children are encouraged to engage their full linguistic repertoire, rather than being limited to just one of their languages. I will present results from a series of experiments based on a within-participant design in which the same bi-/multilingual children performed tasks in both unilingual and bi-/multilingual modes. These experiments targeted domains such as metalinguistic awareness, text integration during reading comprehension, and creative thinking. They were conducted across diverse educational contexts, including bilingual schools in Europe and government primary schools in India.

The findings consistently show that children's performance improves when tasks are presented in a bi-/multilingual mode compared to a unilingual one. I will explore why the activation of multiple languages appears to enhance cognitive and metacognitive processes and offer a reinterpretation of previous research on the bi-/multilingual advantage in light of these findings. Finally, I will outline the educational implications of these results, advocating for curriculum designs that systematically activate and integrate children's full linguistic repertoires.

Dr Rowena Garcia (Leibniz-Centre General Linguistics, Germany)

Title: Addressing the lack of diversity in child language research

In this talk, I will present data on our current evidential base for child language research, highlighting that our understanding is predominantly shaped by studies on English and a few other Indo-European languages, and by research primarily conducted in the Global North. I will discuss the scientific, ethical, and cultural costs associated with this lack of diversity. Finally, I will talk about potential strategies to broaden linguistic coverage and promote a more inclusive discipline.

Professor Chloe Marshall (UCL, UK)

Title: Understanding the relationship between language acquisition and working memory development (and why it matters)

In this talk I will consider the empirical question of how language acquisition and working memory development are related. This question has a long history, and the answer(s) matter for education, language support, and theories of development. Drawing on my own research and that of many others, I discuss (1) the history of this research, (2) the ways in which conceptualisations of the relationship between language and working memory have been tested in different groups of children (including deaf children who use a sign language, and children with developmental language disorder), (3) what the current evidence suggests, (4) the implications for educational practice and language support, and (5) avenues for future research.

ABSTRACTS

The abstracts appear in the order in which they are listed on the programme.

ORAL PRESENTATIONS

Monday 8th September - Oral Presentations 10.30 - 11.30

Session 1: Bilingualism & Heritage Language 1

[50] Yichun Kuo (National Chiayi University), Wen-Hsin Yao (National Chiayi University) and Han-Chun Lin (National Chiayi University)

The Impact of Lexical Properties on the Lexical Development of English-Chinese Bilingual Children

Most research on lexical development focuses on monolinguals. A cross-linguistic study of monolingual children across 17 languages found moderate to strong negative correlations between age of acquisition (AoA) and lexical development, while the complexity index showed only weak or inconsistent correlations (Wonderen & Unsworth, 2021)

The present study examines how lexical properties, unpacked from complexity index, influence lexical development in English-Chinese bilingual children. Participants completed the Cross-linguistic Lexical Tasks in American English (Łuniewska et al., 2019) and Mandarin Chinese (Kuo, 2025), assessing comprehension (picture selection) and production (picture elicitation) of nouns and verbs. Each task included two practice trials and 30 test trials. Results showed that children performed better in Mandarin than English, in comprehension than production, and in noun than verb tasks, with statistically significant differences as determined by repeated measures analysis. The better performance in nouns than verbs provides bilingual evidence in support of the universal noun bias hypothesis (Gentner,1981) from both comprehension and production perspectives.

Additionally, loanwords correlated negatively with production but positively with comprehension in both languages, suggesting that phonetic similarity aids recognition but hinders production. Word length (in phonemes) and initial friction showed no significant correlations in either comprehension or production. Frequency of exposure showed a weak positive correlation with Chinese comprehension but not English, to which participants was not exposed out of the classroom.

These findings contribute to our understanding of bilingual lexical development, highlighting the role of lexical properties in shaping language acquisition across different linguistic contexts.

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Łuniewska, M., Wodniecka, Z., Miller, C.A., Smolík, F., Butcher, M., Chondrogianni, V., Haman, E. Age of acquisition of 299 words in seven languages: American English, Czech, Gaelic, Lebanese Arabic, Malay, Persian and Western Armenian.*PLoS ONE*, 14(8): e0220611(2019).

Wonderen, E. V., & Unsworth, S. (2021) Testing the validity of the Cross-Linguistic Lexical Task as a measure of language proficiency in bilingual children. *Journal of Child Language* 48, 1101-1125

Monday 8th September - Oral Presentations 10.30 - 11.30

Session 1: Bilingualism & Heritage Language 1

[159] Libo Zhang (Macquarie University), YiXun Li (The Education University of Hong Kong), Jun Wang (Macquarie University), Tiffany Jones (Macquarie University) and Hua-Chen Wang (Trinity College Dublin)

L1 Metalinguistic Awareness and L2 English Reading in Bilingual Children: A Systematic Review and Meta-analysis

Background. Metalinguistic awareness - the capacity to analyse phonological, morphological and orthographic structure - has been linked to second-language (L2) reading, yet the strength of this cross-linguistic transfer and its moderators remain disputed. This meta-analysis (a) quantifies the overall association between children's first-language (L1) metalinguistic awareness (i.e., phonological awareness – PA, morphological awareness – MA, orthographic awareness – OA) and their English reading and (b) tests how that association varies across L1 languages, writing systems and key learner- and context-level factors.

Method. Comprehensive searches of eleven databases and grey-literature sources (1990–2024) identified 92 studies reporting 458 independent effect sizes from 15 L1s written in five writing systems (N = 12,433 bilingual children, ages 4–12). Moderator analyses examined language (e.g., Spanish, Mandarin), script type (alphabetic, abjad, alphasyllabary, morphosyllabic), age, bilingual language proficiency and classroom language of instruction.

Results. Overall, L1 PA showed a moderate correlation with English word-reading accuracy (r = .34), while MA and OA each displayed small-to-moderate associations (r = .28 and .26, respectively). Script similarity significantly moderated PA, with alphabetic L1s showing a stronger PA association to English reading compared to morphosyllabic L1s. In contrast, MA and OA did not show the same pattern. Balanced bilinguals outperformed L2-dominant peers across all facets, and older children showed slightly larger effects. Language of instruction did not moderate transfer.

Conclusions. Results support the Facilitation Model for PA: greater L1–L2 phonological similarity enhances transfer. MA and OA appear more typology-stable. Results refine theoretical accounts and inform targeted interventions in bilingual reading development.

Monday 8th September - Oral Presentations 10.30 - 11.30

Session 2: Down Syndrome

[139] Sofia Hryniv (Centre for Human Developmental Science, School of Psychology, Cardiff University, UK), Elian Fink (School of Psychology, University of Sussex, UK), Merideth Gattis (Centre for Human Developmental Science, School of Psychology, Cardiff University, UK) and Hana D'Souza (Centre for Human Developmental Science, School of Psychology, Cardiff University, UK)

Everyday language environments of young children with Down syndrome

Children with Down syndrome (DS) often show language difficulties relative to typically developing (TD) children, but the extent of this can vary greatly. Understanding the sources of variability in language abilities in children with DS can inform both theory and practical applications. As most language learning opportunities occur at home, it is crucial to explore variability in children's everyday language environment, how the environment might change over time, and how it may differ in children with DS and TD children. Automated technology such as Language ENvironment Analysis software (LENA) can facilitate such research.

LENA data was collected for 71 children with DS (chronological age from 2;11 to 11;5 years;months). Preliminary results examined how LENA measures may change with age. Contrary to existing TD findings, neither adult word count nor child vocalisations were predicted by chronological age, suggesting that the language experiences and interactions of children with and without DS may differ, potentially contributing to differences in language profiles. Surprisingly, neither LENA measure predicted parent reports of language ability using the Vineland Adaptive Behavior Scales questionnaire. Adult word count also did not predict LENA estimates of child vocalisations, again contrary to existing TD findings. An exploratory hierarchical regression analysis on other features of children's daily environments highlighted the importance of sensorimotor interactions with the environment for language development.

The study used a uniquely large sample to cross-sectionally explore language environments of young children with DS using LENA, compare the results to existing TD findings, and discuss how researchers collect language-related data.

Monday 8th September - Oral Presentations 10.30 - 11.30

Session 2: Down Syndrome

[89] Ciara O'Toole (University College Cork), Deirdre Flynn (Down syndrome Ireland), Susanna Stokes (Down syndrome Ireland) and Pauline Frizelle (p.frizelle@ucc.ie)

A customised, intensive parent-child interaction therapy for children with Down syndrome: Findings from a real-world pilot effectiveness study

Background: Parent-child interaction therapy (PCIT) is a key aspect of early communication intervention for children with Down syndrome. To date, there has been limited evidence for its effect on child language outcomes within this population. Some research has indicated that more intensive, individualised intervention yields better outcomes but many children receive less than the optimal dosage of intervention. This study piloted an intensive PCIT intervention incorporating key-word signing (JEMT+Sign) with four parent-child dyads delivered via a hybrid in-person and tele-practice model.

Methods: Parents and children took part in twice-weekly hybrid intervention sessions over 11 weeks. We used a multiple baseline, individual case series design to measure the effects on parents and children and gathered parent and practitioner views on the intervention. Researchers coded behaviours at baseline, during and following the intervention.

Results: Using structured visual analysis, we found that the intervention resulted in an increase in parental accuracy and frequency of JEMT+sign strategy use, with variation in both parental behaviour and child responses. Clinicians noted that the intervention worked for the intervention families, but may not be feasible for all families. The parents valued more intensive and individualised intervention and flexibility of delivery, while recognising the role of their existing relationship with the clinician.

Conclusions: It was possible and feasible to implement this intensive intervention for children with Down syndrome in this Irish setting. Further research is needed to determine the longer-term effects and the suitability of the intervention for other families, including child and parent readiness to take part.

Monday 8th September - Oral Presentations 10.30 - 11.30

Session 3: Language Environment

[73] Emma Pagnamenta (University of Reading), Tabitha Bukusi (University of Reading), Ugochi Peace Nwosu (University of Reading), Sara Fincham Majumdar (University of Reading), Vishnu Nair (University of Reading), Katherine Pritchard (University of Reading), Ludovica Serratrice (University of Reading) and Holly Joseph (University of Reading)

Family language policy and professional advice on heritage language use in the context of communication disability

Family language policy has been understudied with families of children who have communication disability. Understanding how parents apply professional advice on heritage language use and their attitudes and ideologies is crucial for supporting children's language development.

Aim: To gather perspectives on parental attitudes, ideologies and strategies on the use of heritage languages and on professional advice on heritage language use in the context of communication disability.

Method: Public involvement with three multilingual parents informed our study design and methodology. We worked with community researchers to recruit parents of children with communication disability. One-to-one semi-structured interviews, carried out with interpreters as needed, were transcribed verbatim and analysed using reflexive thematic analysis.

Results: 11 multilingual parents of diverse ethnicities representing different communities and 13 different languages participated. Parents value using heritage languages but there are complex family language policies in the context of communication disability. Some parents make decisions to only use the societal language, often relating this to the complexity of language acquisition, school and support received only in English. Some parents of older children experienced changes to language policy to include heritage language later in their child's life. Professionals advice that families receive varies but is often aligned with subsequent family language policies.

Conclusions: Family language policies in the context of communication disability are dynamic, reflecting the nature of the communication needs of the child, support and professional advice received. Professionals need to embed exploration of family language policies and education about multilingual language development in the support they provide.

Monday 8th September - Oral Presentations 10.30 - 11.30

Session 3: Language Environment

[124] Imme Lammertink (Radboud University), Elise de Bree (University of Amsterdam) and Marie Rickert (Radboud University)

The Peer Language Environment of Children with Developmental Language Disorder: A Mixed Methods Approach

Children's home language environment plays an important role in language acquisition, with language input (LI) and communicative experiences (CE) being key factors [1,2]. Surprisingly, while LI and CE likely shapes children's (continued) language acquisition in other contexts, such as the education context, little is known about their impact [2]. Particularly for children with Developmental Language Disorder (DLD) supportive language environments are essential.

Therefore, we are constructing a peer language corpus of children with DLD in mainstream and special education. The corpus consists of transcribed audio-, and video recordings of peer interactions (3 children per interaction) while they play games and tell a story. Additionally, we collect information on the number of peer interaction moments during a regular class day and children's language proficiency.

Using a mixed methods approach we will assess differences in peer LI (lexical diversity, syntactic complexity, [morpho]syntactic and grammatical errors [3]) and CE (conversational turns, communicative feedback [4], repair and co-construction practices [5]) across the children with DLD in the two educational settings. We also explore associations between LI, CE and language outcomes.

By September 2025, we expect to have data from 20 peer groups (10 mainstream; 10 special education). During the conference we will present preliminary findings and discuss future research directions. This study contributes to our understanding of language context in (a)typical language acquisition [2, 6], and it addresses a frequently heard – but never empirically tested – concern that peer language in special education may provide less consistent and fewer CE than in mainstream education.

References

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[3] MacWhinney, B. (2000). *The CHILDES Project: Tools for analyzing talk*. Third Edition. Mahwah, NJ: Lawrence Erlbaum Associates.

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Monday 8th September - Oral Presentations 10.30 - 11.30

Session 3: Language Environment

[82] Anna Gowenlock (University College London), Jennifer Rodd (University College London), Beth Malory (University College London) and Courtenay Norbury (University College London)
Comparing the Lexical Features of Children's Video Media to Child-Directed Speech

Children's vocabulary knowledge is linked to the quantity and quality of language input they experience. By studying the lexical properties of different language sources, we can understand more about how children develop important vocabulary skills that support their success at school and beyond. Research focusing on children's literature suggests that children who are exposed to books from a young age will encounter new and sophisticated vocabulary that they are unlikely to experience in everyday conversations with caregivers[1]. In this project we extended this work to another important type of language input: video media. We compared a newly created corpus of programmes that are popular among 3-5-year-olds (~230,000 words) to a corpus of child-directed speech (CDS) data from the CHILDES database (~2,590,000 words). In each corpus we examined features of lexical richness that are important to vocabulary acquisition. We found that children's video media had greater lexical diversity, was richer in meaning, and contained a higher proportion of rare words than CDS, mirroring results about book language. We also compared a set of keywords from each corpus on their psycholinguistic properties. We found that video keywords are acquired later than CDS keywords but that there was no difference in concreteness between the two keyword sets. These findings support the idea that features of lexical richness may arise as a property of storytelling and topic diversity, rather than being tied to a particular medium.

Reference

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Monday 8th September - Symposia - 11.45 - 13.00

Session 1 Symposium: The role of iconicity in language development

[58] Catherine Laing (Department of Language and Linguistic Science, University of York), Suzanne Aussems (Department of Psychology, University of Warwick), Mingtong Li (Department of Psychology, University of Warwick) and Kirsty Green (Department of Psychology, University of Warwick)

Introduction: A growing body of literature indicates an iconic bootstrapping effect in language development (Imai & Kita, 2014; Perniss & Vigliocco, 2014). A central aspect of this theory is that non-arbitrary form-meaning correspondences help children navigate the complexity of caregiver input. In this symposium, we will explore the nuances of this effect through four presentations, examining which aspects of caregiver input are iconic and how children's word learning is influenced by iconicity. Our central question is how and when iconicity supports language development. Iconicity occurs in various forms of multimodal human communication (Karadöller et al., 2025). Our symposium reflects this diversity by considering a range of iconic forms, including onomatopoeia (spoken forms resembling real-world sounds, e.g., "meowmeow" for a cat noise), prosodic sound symbolism (where pitch and speech rate correspond to size of objects and speed of actions), and iconic gesture (manual gestures representing meaning, e.g., hand-span indicating object size). We also discuss the developmental significance of iconicity, exploring its role in word learning from infancy through adulthood. This symposium thus provides a comprehensive evaluation of how diverse iconic forms in caregiver input influence word learning across the lifespan, offering valuable insights into the developmental role of iconicity in language acquisition.

Presentation 1: Do 14-17-month-old infants use iconic pitch and gesture cues to interpret word meanings?

Iconicity is the resemblance between a sign's form (e.g., word, gesture, or symbol) and its meaning, creating an analogy between them. Recent research suggests iconicity aids infants' language acquisition, as early vocabularies are more iconic, and this effect declines over time. This pre-registered experimental study tested whether infants use iconicity in speech and gesture to interpret word meanings. Specifically, we tested infants' sensitivity to size sound symbolism and iconic gesture cues and asked whether combining these cues in a multimodal fashion would enhance infants' sensitivity in a superadditive manner. A total of 36 14-17-month-old infants participated in a preferential-looking task in which they heard a spoken non-word (e.g., "zudzud") while observing a small and a large object (e.g., a small and a large square). All infants were presented with an iconic cue for object size (small or large) in 1) the pitch of the spoken non-word (high vs. low), 2) in gesture (small or large), or 3) congruently in both pitch and gesture (e.g., a high pitch and a small gesture indicating a small square). Infants did not show a preference for congruently sized objects in any iconic cue condition. Bayes Factor analyses showed moderate to strong support for the null hypotheses. In conclusion, 14-17-month-old infants did not use iconic pitch cues, iconic gesture cues, or iconic multimodal cues (pitch and gesture) to associate speech sounds with their referents. These findings challenge theories that emphasize the role of iconicity in early language development.

Monday 8th September - Symposia - 11.45 - 13.00

Session 1 Symposium: The role of iconicity in language development

Presentation 2: Size sound symbolism in mothers' speech to their infants

Six-month-olds infer object size based on pitch: high-pitched sounds map onto smaller objects and low-pitched sounds onto larger objects (Fernández-Prieto et al., 2015). This might support early understanding of correspondences between words and their meanings; by drawing on iconic pairings between prosodic/phonological cues in language and their corresponding referents, infants can begin to develop their understanding of word-referent associations, first through iconic cases and later for more arbitrary ones. For this to be useful in word learning, size-pitch associations must be present in the input. Here, we analyse mother-child interactions to test this. In a pre-registered study, 40 mother-infant dyads engaged in 3 tasks to test whether mothers produced smaller object labels with a higher pitch, and larger object labels with a lower pitch. Our tasks varied in the extent to which size contrast was highlighted (none/somewhat/strongly) and the real-world expectation of object sizes (congruent/incongruent). See Table 1 for examples. Vowel quality was controlled across object labels. The mean pitch of the vowel in the stressed syllable of each object label was analysed. Bayes factor analysis showed moderate support for the null hypothesis. Our results do not support the presence of size sound symbolism in mothers' speech, except when size contrast is salient (i.e. Task 3). Size sound symbolism may be a useful contrastive cue used to differentiate between two different instances of the "same" object, but it is not part and parcel of the input regularly available to the language-developing child.

Presentation 3: Do 3-year-olds, 5-year-olds, and adults use speed-related iconic prosody to select verb referents?

Iconicity in speech has been studied through sound symbolism, where segmental properties of words (e.g., vowel quality) systematically map onto features of a referent, such as shape. While much research has focused on segmental cues, less is known about how prosodic cues can be iconic. Prosodic features like speech rate structurally resemble the temporal dynamics of actions, particularly action speed, making them a strong yet underexplored cue for conveying verb meanings. This pre-registered experimental study investigates whether prosodic cues, specifically speech rate, can serve as iconic cues for action speed and help children and adults select verb referents. We will examine how 3-year-olds, 5-year-olds, and adults use speed-related iconic prosody cues to interpret verb meanings and how this ability develops with age. We will test 108 participants (N = 36 per age group) in a two-alternative forced-choice task using a verb referent selection paradigm. Participants will hear a novel verb spoken at either a fast or slow speech rate, while watching two videos of an action performed at fast or slow speeds. They will be asked to select the action that best matches the verb. If participants use iconic speed-related prosody for verb referent selection, they should associate fast speech rates with fast actions and slow speech rates with slow actions. Data collection is complete for adults and ongoing for children. We will present the results in the symposium. The findings will show whether iconic prosody supports early language development, providing the first evidence for its role in verb comprehension.

Monday 8th September - Symposia 11.45 - 13.00

Session 2 Symposium: The acquisition of Celtic languages: A study of phonology, vocabulary and morphosyntax

[84] Ciara O'Toole (University College Cork), Vicky Chondrogianni (University of Edinburgh) and Enlli Thomas (Bangor University).

This symposium brings together research in the areas of language development in children and adults learning Celtic languages spoken on the British Isles and in Ireland, namely Scottish Gaelic, Welsh, and Irish. The session will open with an outline of the sociolinguistic context in which the languages are acquired, and then review how three core language areas- phonology, vocabulary, morphology and syntax- are acquired by bilingual speakers with different degrees of dominance in the minority language as well as 'new speakers', who have managed to reach a level of language competence in adulthood. Papers will summarise decades of research involving innovative methods to measure speaker competency and proficiency in the languages. The symposium draws on the expertise of leading scholars in the different acquisition areas to allow for comparisons within and across languages. The presentations will explore how theories of language acquisition can be informed by data from the acquisition of Celtic languages and how they relate to the acquisition of the majority English language in these bilingual contexts. The symposium will close with suggestions for future research on the acquisition and maintenance of these heritage minority languages. The papers are published in a 2025 edited book by Cambridge University Press.

Paper 1: *Acquisition of Phonology*

Authors: Martin J. Ball[1], Rhonwen Lewis[2], Robert Mayr[2], Jonathan Morris[3], Nicole Müller[4], Claire Nance[5]

([1] Bangor University, [2] Cardiff Metropolitan University, [3]Cardiff University, [4] University College Cork, [5] Lancaster University)

Research on Scottish Gaelic phonological acquisition has mainly focused on production of sonorants, palatalisation, plosive pre-aspiration, and prosody. Work with children and adolescents indicates small or no differences between young people from different home language backgrounds by later childhood. High proficiency adult second language users manipulate phonological variation according to first language background but also personal accent aim. No research so far has investigated the acquisition of Gaelic perception, or phonological acquisition in children or adults with additional support needs. Research on the phonological acquisition of Irish, on the other hand, demonstrates how few the studies in this area are. Because of this small number, it is not useful to discuss methodological approaches in detail, nor theoretical viewpoints. Nevertheless, two of the studies noted can be described as small number diary studies, and one is a longitudinal study with somewhat larger numbers of participants. Common aspects of phonological acquisition and substitution are noted, together with a brief description of acquisition in the context of 'New Irishes'.

Research on phonological acquisition in Welsh has predominantly focused on speech development in the first two years of life and in preschool/school-aged children. The former line of enquiry documented how children establish a phonological system during the one-word stage, while the latter showed that preschool/school-aged children from Welsh-speaking homes acquire many consonants and clusters earlier than bilingual children from English-speaking homes, especially Welsh-specific sounds. No work to date has examined the development of vowels and prosodic features in children acquiring Welsh.

Monday 8th September - Symposia 11.45 - 13.00

Session 2 Symposium: The acquisition of Celtic languages: A study of phonology, vocabulary and morphosyntax

Paper 2: *Acquisition of Vocabulary*

Authors: Virgina C. Mueller Gathercole[1], Vicky Chondrogianni[2], Ciara O'Toole[3]

([1] Florida Atlantic University, [2] University of Edinburgh, [3] University College Cork)

The acquisition of Welsh, Irish and Scottish Gaelic vocabulary occurs in contexts where English is the dominant language. Comparison across these languages can help inform acquisition theories for bilinguals regarding child-level factors, such as age of exposure, quantity/context of exposure, and SES, as well regarding the contribution of item-level factors, such as estimated age of acquisition of a word, word frequency/complexity to vocabulary learning. In all three contexts, novel approaches for vocabulary assessment have been developed to answer these questions. The three Celtic languages differ in their sociolinguistic contexts, with Welsh having the greatest number of L1 speakers, while Scottish Gaelic, nowadays, is almost exclusively acquired as an L2. Irish shows rapid change due to English takeover. These differences in age of onset to the minority language affect how child-level and item-level factors interact, as well as how English influences acquisition outcomes. In terms of linguistic properties, all three languages involve morphophonological mutations that change the word stem and can make word variations hard to recognise. Scottish and Irish have opaque writing systems compared to the phonemic system of Welsh, which can affect later vocabulary acquisition through literacy activities. Comprehension and production studies have shown that even when the minority language starts out as dominant, over time the balance in vocabulary knowledge generally shifts to English. The production-comprehension gap is wider in the minority language than in English, with nouns eliciting higher comprehension/production accuracy than verbs. This comparative study highlights theoretical and empirical contributions and identifies areas for future research.

Monday 8th September - Symposia 11.45 - 13.00

Session 2 Symposium: The acquisition of Celtic languages: A study of phonology, vocabulary and morphosyntax

Paper 3: *Acquisition of Morphosyntax*

Authors: Hanna Binks[1], Vicky Chondrogianni[2], Morag Donaldson[2], Ciara O'Toole[3], Enlli Thomas[4], Tina Hickey, Thea Cameron- Faulkner

([1]Aberystwyth University, [2]University of Edinburgh, [3]University College Cork, [4]Bangor University)

Welsh, Irish and Scottish Gaelic are characterised by unique morphosyntactic features, all acquired under the influence of English. In all three languages, syntactically triggered morphophonological properties, such as mutation and palatalisation marking gender and plural marking on nouns, have been extensively studied and show that their acquisition is strongly influenced by input and grammatical complexity. L1 Welsh- and Irish-speaking children demonstrate greater knowledge of Welsh/Irish morphology in comparison to 2L1 and L2 Welsh/Irish children, with L1 Welsh/Irish speakers performing below ceiling on complex grammar by the end of formal schooling. In Scottish Gaelic, where most speakers are early or late L2 learners, who learn Gaelic as an L2 through Gaelic-medium education, morphophonological properties remain challenging well into the later school years. All three Celtic languages have a strict VS(O) word order, a property that differs from the majority language, English (SVO). However, studies targeting syntactic phenomena related to word order, and complex clauses, such as wh-questions and relative clauses, remain a few. The limited evidence from Scottish Gaelic and Welsh suggests that the VS word order is early acquired. However, learning in tandem the morphophonological intricacies that are syntactically triggered during VS(O) sentence formation remain challenging. Across the three contexts, acquisition trajectories are strongly influenced by amount of input; complex morphophonological and syntactic aspects require rich and consistent input over extended periods to be required. This comparative study offers new insights into the bilingual acquisition of morphosyntactic phenomena that remain relatively understudied beyond Celtic languages and highlights future research directions.

Monday 8th September - Symposia 11.45 - 13.00

Session 3 Symposium: Enabling parents/families to deliver speech/language/communication intervention programmes

[113] Vesna Stojanovik (University of Reading), Kelly Burgoyne (University of Manchester), Emma Pagnamenta (University of Reading), Kirstie Hartwell (University of Manchester), Rebecca Baxter (University of Reading), Mirjana Jeremic (University of Reading), Sue Buckley (DownsEd International), Jill Titteringdon (The Speech Doctor NI), Naomi Leafe (Ulster University), Mark Donnelly (Ulster University), Laurence Taggart (Queens University Belfast) and Katherine Pritchard (University of Reading).

Parents and families are uniquely placed to support their child's development, particularly in the early years. Parent-led or parent-mediated support programmes and interventions are becoming more popular and well-established ways of delivering early interventions. This symposium puts together four papers which focus on how parents/families can be empowered and enabled to support their children's speech/language/communication development by working collaboratively with researchers and clinicians. Study 1 and 2 focus on children with Down syndrome. The first study reports on the process of co-adaptation of a parent-delivered early language intervention programme for children with Down syndrome aged 3 to 5 years. The second study reports on the process of co-designing a parent-delivered shared book reading intervention for 2–4-year-old children with Down syndrome. The last two studies focus on children with speech sound disorders. Study 3 reports on the co-production of a digital tool which parents could use with their children at home while study 4 reports on how parents work together with speech and language therapists to implement home practice for children with speech sound disorder.

Presentation 1: The Power of Family-Researcher Partnership in Adapting an Early Language Intervention for Children with Down Syndrome

Kelly Burgoyne, University of Manchester, Kirstie Hartwell (University of Manchester), Vesna Stojanovik (University of Reading), Emma Pagnamenta (University of Reading)

Background: Parents are uniquely placed to support their child's development. This is particularly pertinent for parents of children with neurodevelopmental conditions that are associated with particular developmental strengths and challenges. This paper will report on work that we carried out in partnership with families to adapt an evidence based early language programme for children with Down syndrome.

Methods and Procedures. Six families with a 3-5 year old child with Down syndrome participated in this mixed methods exploratory study. Guided by aspects of Community Based Participatory Research and Design Based Research, iterative cycles of design, implementation, analysis, and re-design were used to produce an adapted language intervention programme. Data were collected using record forms, surveys, observations, and focus groups. The data from the focus groups were analysed using qualitative content analysis.

Outcomes and Results. Findings showed many aspects of the original programme were acceptable and feasible for families, however important adaptations were identified including enhancing repetition and consolidation, reducing time pressures, tailoring to individual needs, smaller steps for learning, supporting engagement, and increasing visual support. Adapting the programme in these ways enhanced adherence, enjoyment and the child's active engagement.

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Session 3 Symposium: Enabling parents/families to deliver speech/language/communication intervention programmes

Presentation 2: Shared book reading with young pre-school children with Down syndrome: Working with parents to co-design a parent-mediated language intervention

Mirjana Jeremic[1] Emma Pagnamenta1 Vesna Stojanovik[1] Kelly Burgoyne[2] Sue Buckley[3]

[1]School of Psychology and Clinical Language Sciences, University of Reading, Reading, UK; [2]Manchester Institute of Education, University of Manchester, Manchester, UK; [3]Director for Science and Research; Down Syndrome Education International; Emeritus Professor of Developmental Disability; Dept Psychology, University of Portsmouth, UK

Background: Empowering parents of children with Down syndrome (DS) to support their language development is essential. Shared book reading (SBR) has been identified as a promising, naturalistic approach, yet few studies have explored the potential of parent-child SBR interactions for language development in young children with DS. Co-creating interventions with parents ensures they are practical and family-centred. This study reports on the co-creation of a parent-mediated language intervention for young preschool children with DS.

Method: We recruited 10 parents of 2- to 4-year-old children with DS, who completed a home literacy and demographic questionnaire before joining online workshops (3–6 parents per session). Workshops followed a progressive structure, initially gathering parental insights on SBR, materials and guidance needed to carry out the intervention at home to inform development of training materials, a manual and videos. These were then reviewed and adapted collaboratively with parents.

Preliminary results: Parents frequently engaged in SBR but varied in their use of SBR strategies. They emphasised the need for flexibility in accessing guidance, they asked for video demonstrations of the SBR strategies, and sought practical advice on SBR materials and environment with the aim of enhancing their existing SBR practices. They expressed preference for interactive materials and asked for access to specialist support such as a speech and language therapist.

Conclusions: Our intervention was initially developed based on the evidence-base and adapted to meet the specific needs of parents and young children with Down syndrome. Parental input led to refinements in the intervention, with the goal of improving its practicality and real-world applicability. This study highlights the importance of involving parents in co-creation, ensuring that interventions are both research-driven and contextually relevant.

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Session 3 Symposium: Enabling parents/families to deliver speech/language/communication intervention programmes

Presentation 3: Co-production of a parent-implemented digital intervention to increase intensity of intervention for children with severe speech sound disorder

Naomi Leafe (Ulster University), Jill Titterington (The Speech Doctor NI), Emma Pagnamenta (Reading University), Mark Donnelly (Ulster University), Laurence Taggart (Queens University Belfast)

Background: If untreated, children with severe speech sound disorder (SSD) are at risk of poor outcomes at school, difficulties making friends, poor mental health and restricted life opportunities. Evidence shows that the right intervention approach, speech sounds targeted and intensity are essential. However, the research-practice gap means that therapy is often ineffective and inefficient. This paper shares how parents, speech and language therapists (SLT) and children co-produced a digital tool (the Parent-Power Pod (PPP)) to support provision of evidence-based intensity of parent-implemented intervention for children with severe SSD alongside direct therapy.

Method: Co-production involved 3 workshops with parents/carers (n=4) and SLTs (5) combined, and 3 individual child play sessions.

The parent/carer-SLT workshops reviewed evidence and theory about why and how parent-implemented digital interventions support increased intensity of speech practise work, in which circumstances, with whom (Leafe et al. in submission). The acceptability and applicability of the prototype PPP app (using APEASE criteria), and how to deliver this in practice were considered iteratively across sessions.

Three individual child workshops used games from the prototype PPP to trigger child views through drawing, rating of pictures, character selection, and emoji rating tasks.

Outcomes:

- A core set of user requirements operationalised underpinning theoretical and evidence-based thinking.
- A refined and finalised logic model captured how the intervention would work.
- Children's perspectives were noted, and focal point analysis of pictures was used to inform subsequent user requirements.

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Session 3 Symposium: Enabling parents/families to deliver speech/language/communication intervention programmes

Presentation 4: How Speech and Language Therapists and Parents of Young Children with Speech Sound Disorder work together

Katherine Pritchard (University of Reading), Jill Titterington (The Speech Doctor Northern Ireland), Emma Pagnamenta (University of Reading), Vesna Stojanovik (University of Reading)

Background: Speech sound disorder (SSD) that persists into the school years can negatively affect academic outcomes and well-being. Speech and language therapists (SLTs) and parents consider working together as important for a child's progress. Little is known about what SLTs do to support parents to deliver effective home practice, what parents believe works well or how SLTs build relationships with parents. The aim of the current study is to explore perspectives of SLTs and parents of children with SSD ≤ 5;1 on their experiences of working together to support and implement home practice.

Methods: Fifteen SLTs and nine parents participated across two studies in interviews and focus groups. Sessions were recorded, transcribed verbatim and analysed using Reflective Thematic Analysis.

Results and conclusion: Four themes were developed from the focus groups with SLTs and another four themes were developed from the focus groups with parents. The results of the thematic analyses highlight the importance of relationship building as the foundation to parental engagement with SLT and home practice. In line with theories of adult learning, SLTs and parents agree that support needs to be multi-modal and individualised to ensure parents become skilled implementors of intervention. SLTs need to be clear and explicit in their expectations, being aware of the impact of their skills and knowledge. SLTs' and parents' views and attitudes towards collaborative working and the role of home practice can impact motivation.

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Session 1: Bilingualism & Heritage Language 2

[119] Sara Košutar (UiT The Arctic University of Norway), Judith Schlenter (University of Cologne), Natalia Mitrofanova (UiT The Arctic University of Norway) and Serge Minor (UiT The Arctic University of Norway)

Cross-linguistic influence in the acquisition of verbal aspect by Croatian-German and Croatian-Italian heritage bilingual children

Cross-linguistic influence is a widely attested phenomenon in bilingual language acquisition, though its nature is not fully understood ([1]). This study investigated the role of cross-linguistic influence in the acquisition of verbal aspect by 6–12-year-old Croatian heritage speakers in Germany and Italy. We hypothesized that the Croatian-Italian group would outperform the Croatian-German group due to the structural similarities between Croatian and Italian, which mark grammatical aspect in contrast to German (see [2], [3]).

The Croatian-Italian (N=29) and Croatian-German (N=38) groups were closely matched for age, and children's exposure was measured. We adopted the experiment from Minor et al. [4]. Children selected pictures that matched sentences with verbs in Imperfective or Perfective aspect (Figure 1). We assessed the accuracy of responses based on the selection of Ongoing and Completed event pictures for the Imperfective and Perfective aspects, respectively.

The accuracy scores follow a bimodal distribution in both groups of participants (Figure 2). Finite mixture models were applied to analyze between-speaker heterogeneity ([5], [6]). We identified a high-accuracy cluster with 81.3% predicted accuracy and a low-accuracy cluster with 55.9% predicted accuracy. Logistic regression revealed a marginally significant positive effect of cumulative exposure to Croatian (B=0.04, z=1.81, p=0.07), and an effect of Group (B=1.81, z=2.25, p=0.02), with Croatian-Italian bilinguals being more likely to belong to the high-accuracy cluster.

Between-speaker heterogeneity suggests categorical acquisition of verbal aspect in heritage Croatian (versus incremental item-by-item acquisition). Croatian-Italian bilinguals seem to achieve higher accuracy, which is consistent with the prediction of facilitative cross-linguistic influence from Italian.

Figure 1. Example of experimental stimuli

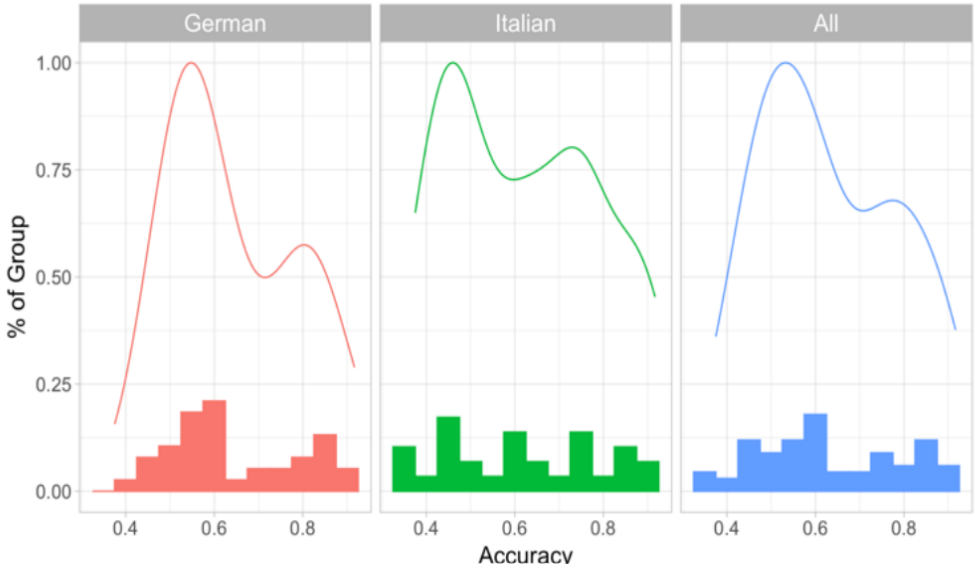
Ongoing Event

Completed Event

Preamble
Bio je vikend.
be.IMP-PTCP-M.SG be.PRS.SG weekend
'It was the weekend.'

Target sentence
Baka je pekla/ispekla fini kolač.
grandma be.PRS.SG bake.IMP/PFV-PTCP-F.SG delicious cake
'Grandma was baking/baked a delicious cake.'

Figure 2. Distributions of accuracy scores on the picture selection task by Group



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Session 1: Bilingualism & Heritage Language 2

[153] Zainab Sani-Danmallam (Sheffield Hallam University) and Javier Aguado-Orea (Sheffeild Hallam University)

Differences between the monolingual acquisition of Hausa and its bilingual (Hausa-English) counterpart: the role of sentence structure

Hausa and English share the same canonical word order structure, Subject-Verb-Object (SVO). However, subjects are sometimes omitted in Hausa (compared to English, where they are always realised), and there is a higher degree of freedom for SVO structure in Hausa (Newman, 2000). This study aims to find links between the different levels of flexibility adopted by either monolingual or bilingual speakers and the acquisition of grammatical knowledge. It is based on data collected from over 300 participants in two phases, including adults and children living in Northern Nigeria. The study is also interested in the potential role of onset, exposure (Cohen & Clark, 2025; Unsworth, 2013; Unsworth et al., 2014), grammatical complexity (Apriana & Sutrisno; 2022; De Clercq & Housen, 2017; De Clerq & Housen, 2019), and the relative frequency of alternative constructions (Ambridge et al., 2015) in both languages. Both monolingual and bilingual speakers have been asked to rate a series of words and sentences for grammaticality. They also rated their perception about the relative frequency of use of some constructions. In phase 2, an online sentence repetition task was run with the participation of adults and three to five-year-old children.

Results show the interlink between onset factors (when children start speaking English or Hausa), exposure factors, frequency, and grammatical complexity. This indicates that bilingual speakers adopt a stricter approach to word order than monolingual speakers in Hausa. The implications regarding the grammatical knowledge assumed for either monolingual or bilingual speakers are discussed.

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Session 1: Bilingualism & Heritage Language 2

[57] Saoirse Lally (University of Galway), Stanislava Antonijevic (University of Galway), Natalia Banasik-Jemielniak (The Maria Grzegorzewska University) and Ewa Haman (University of Warsaw)

How to support clinicians to complete language assessment with children whose heritage languages they do not speak themselves

Introduction

Best practice for diagnosing Developmental Language Disorder (DLD) in multilingual children requires assessing all languages they use. However, many Speech and Language Therapists (SLTs) do not speak children's heritage languages. While the use of interpreters offers a potential solution, they are typically not trained in conducting assessments and there is lack of standardised procedures for interpreter-mediated evaluations.

Method

LITMUS Sentence-repetition (SRep) tasks in English (Marinis & Armon-Lotem, 2015) and Polish (Banasik et al., 2012) were administered to twenty-seven Polish-English bilinguals (aged 5–8) in Ireland. Twelve children with suspected DLD were recruited via clinical services, and 15 typically developing children via schools. An English-speaking SLT, who does not speak Polish, administered pre-recorded tasks. Responses were recorded and scored using a novel schema detailing each word's syntactic category and grammatical features. Polish SRep was scored collaboratively with an interpreter and compared with scoring by Polish linguists (Lally et al. 2025).

Results

A highly significant correlation indicated that both scoring methods for Polish SRep produced comparable scores. However, qualitative analysis revealed discrepancies: Polish linguists scored responses as if produced by children in Poland, while the interpreter noted that certain errors are typical among Polish-English bilingual children in Ireland.

Discussion & Conclusion

The scoring schema provided a standardized procedure for scoring of pre-recorded LITMUS SRep tasks in collaboration with interpreter. Qualitative analysis of errors emphasizes the need to adjust scoring allowances for specific language combinations to address crosslinguistic influences, with future research identifying distinct error types distinguishing DLD from reduced language exposure.

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Session 2: Language and Cognition

[33] Katrin Skoruppa (Institut des sciences logopédiques, Université de Neuchâtel), Salomé Schwob (Institut des sciences logopédiques, Université de Neuchâtel) and Letizia Volpin (Institut des sciences logopédiques, Université de Neuchâtel)

Monolingual and bilingual French-speaking toddlers are sensitive to mispronunciations at 21 months

Current research paints a complex picture of bilinguals' early lexical development: Although they reach first major milestones around the same age as monolinguals, some studies report delays, others advantages, in the development of fine-grained phonological representations in the early lexicon (see Grosjean & Byers-Heinlein 2018 for a review).

Here, we set out to clarify the abilities of mono- and bilingual toddlers to detect subtle word-initial mispronunciations in French, and to investigate how these early skills are connected to later language abilities.

Thirty-six monolingual and 33 bilingual French-learning 21-month-olds participated in a looking-while-listening eye-tracking paradigm (see Table 1 for demographics). During 24 trials, they saw yoked pictures of familiar and unfamiliar objects (e.g. a foot and an uncommon tool) and heard the label of the familiar object, either correctly pronounced (e.g. pied [pje] 'foot') or mispronounced (here, vied [vje]). Both groups showed significantly higher proportion of target looking (see Figure 1) after hearing a correct name than after hearing a mispronunciation ($F=4.78$, $p = .03$, no other effects or interactions), demonstrating equal sensitivity to phonological details in familiar words.

We are currently following up our participants' later language abilities via parental questionnaires at 24 months and 30 months, as well as standardized tests at the age of 3 years. The latter assess receptive and productive vocabulary and sentence comprehension in both languages, as well as non-word repetition. By the time of the symposium, we will be able to present and discuss the results of these longitudinal analyses as well.

Table 1. Participants' demographic details.

Sex	34 boys, 35 girls
Parental education	monolinguals: 3.6 / 4 (SD 0.4) bilinguals: 3.7 / 4 (SD 0.4)
Bilinguals' exposure to French	61 % (SD 23 %)
Bilinguals' other languages	(Swiss) German n=11 Portuguese n=9 Spanish n=8 Italian n=5

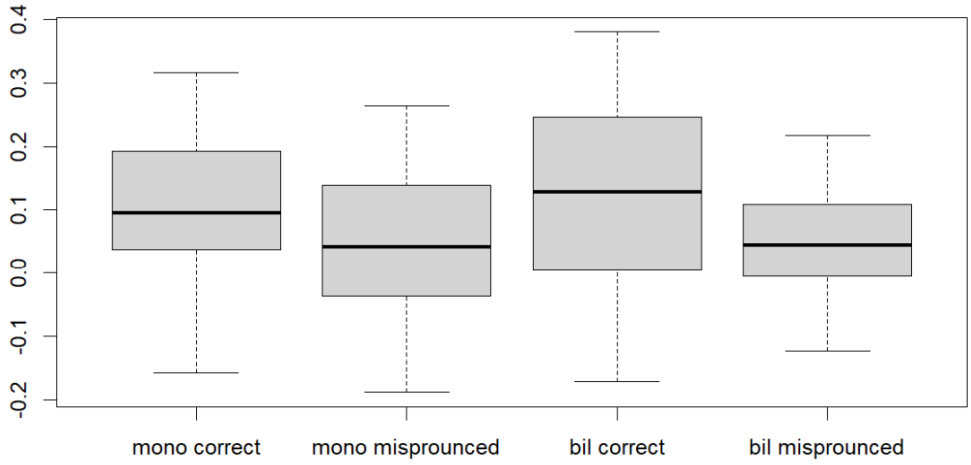

Figure 1. Difference scores (proportion of target looks during the post-naming phase minus proportion of target looks during the pre-naming phase) for monolingual ('mono') and bilingual ('bil') toddlers, for correctly ('correct') pronounced and mispronounced words.

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Monday 8th September - Oral Presentations 14.30 - 15.30

Session 2: Language and Cognition

[5] Dorota Gaskins (King's College London), Verinder Poonian (King's College London) and Jill Hohenstein (King's College London)

Generating a metaphorical mindset in four-year-olds

Metaphors are key to children's ability to engage with abstract topics in the curriculum, which is varied already at the start of primary schooling (1). To gauge the need for, and effectiveness of, a potential intervention programme, we are currently testing UK-based four-year-olds, focusing on metaphors in which a concrete notion facilitates the understanding of an abstract notion.

Before an analogical metaphor (e.g., You're my treasure) becomes a fixed element of the lexicon, its basic and metaphorical notions (treasure = child, treasure = gold) are aligned and compared via skills of analogy (2); the repeated extraction of metaphorical meanings from these conventional structures should thus strengthen children's ability to process any novel ones. We expect that children's comprehension of novel metaphors can be explained by their comprehension of conventional metaphors, not just by their lexicon size and skills of analogy, the two contributing factors highlighted in previous work (3, 4) and also tested in this study.

To show whether the metaphorical mindset can thrive on mere exposure to metaphoric expressions, or whether it needs to be primed with tasks built around metaphor reasoning, we have divided children into an active (n = 51) and passive group (n = 51). We expect that children prompted to explain the meaning of each metaphor (active) will experience greater advantages than those who merely hear metaphors being explained to them in the intervention programme (passive). Thus, the former will outperform the latter in the post-test, where they are asked to explain novel metaphorical meanings.

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Monday 8th September - Oral Presentations 14.30 - 15.30

Session 2: Language and Cognition

[126] Natalia Rakhlin (Wayne State University) and Nan Li (University of Texas Rio Grande Valley)

"Outside-In": Acquisition of Emotion Concepts and Its Implications for the Theory of Emotions

Development of emotion concepts relates to the broader issues of the nature of emotions and the relationship between language and conceptual development. There is disagreement regarding the basic categories needed to characterize our rich and varied emotional experience. The universal basic emotion view posits 5-6 basic emotions[1], innate culture-free constructs mapped onto distinct physiological mechanisms, uniformly scaffolding the acquisition of the corresponding emotional terms across languages/cultures. Under a constructivist approach[2], the universal core includes undifferentiated affective states characterized by dimensions: valence (positive-negative) and arousal (approach-withdrawal)[3], interpreted as specific emotions via a language-specific lens of emotion concepts, acquisition of which guides emotional development. A distinction may also be drawn between affective responses primarily to physical (fear/disgust) versus social stimuli (happiness/sadness/anger).

We tested predictions of these approaches using Wordbank data[4] from 16–30 month-old children across 27 languages. We used the proportion of children producing each word in each language at each age to examine cross-linguistic growth curves of emotion words: uni(versal)-lemmas happy, sad, scared, angry, yucky, and establish their order of acquisition based on a "used-by-at-least-50%" criterion. Multilevel modeling results indicated cross-linguistic quantitative differences in the growth patterns across languages despite overall qualitative similarities. There was evidence for distinct acquisition patterns of "physical" (scared and yucky) versus "social" emotion terms (happy, sad, and angry): the use of the former increased linearly, while the latter followed an accelerating growth pattern. The "approach" terms tended to emerge earlier than "withdrawal" terms. These findings support a dimensional approach to the theory of emotions.

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Monday 8th September - Oral Presentations 14.30 - 15.30

Session 3: Literacy

[81] Sanne van der Kleij (University of Birmingham), Jessie Ricketts (Royal Holloway, University of London) and Laura Shapiro (Aston University)

Exploring how parents' reading motivation is related to their children's reading in middle childhoodIn our highly literate society, being good at reading is essential for thriving in education and employment, and developing 'a love of reading' has been an important focus of the UK's National Curriculum. Yet, in 2023 only 2 in 5 of 8-to-18-year-olds in the UK indicated they enjoy reading, with reading enjoyment declining with age. Previous research has shown that parents' own reading motivation is associated with reading enjoyment in young children, but far less is known about how this affects children's motivation for reading beyond the early years.

Data from a longitudinal study in Birmingham, UK was used to model the influence of parents' and children's reading motivation on children's reading and vocabulary development. Children's reading development was tracked from age 4 to 16. We used data from 295 participants who completed measures of reading motivation and reading habits, word reading, vocabulary and reading comprehension at several time points between ages 10 to 16. Parents completed a reading habits questionnaire when children were 10 years of age.

Results showed that parents' reading motivation, but not their time spent reading for pleasure, was associated with children's reading motivation and reading habits. Children's reading motivation was in turn indirectly associated with later reading comprehension, via word reading and vocabulary. We will discuss implications of how parent reading motivation and children's own reading enjoyment and reading habits in middle childhood affect reading and vocabulary development.

[40] Meriem Amer-El-Khedoud (City St Georges University of London) and Juhayna Taha (University College London - IOE)

The Practices, Views, and Needs of Speech and Language Therapists in Supporting Children with Literacy Difficulties: A UK Survey

Abstract. Background & Aim: Oral language underpins reading, writing, and spelling development, with children with speech, language, and communication needs (SLCN) being at higher risk of literacy difficulties [1-5]. Speech and Language Therapists (SLTs) play a crucial role in supporting these children. This study explores UK SLTs' practices, views, and needs in literacy support and influencing factors.

Method: An online, national survey—adapted from [6]—collected data on UK SLTs' caseloads, training, literacy assessment and intervention practices, views, confidence, and professional needs with relation to supporting literacy skills.

Findings: Respondents were 182 SLTs working with primary and/or secondary school-aged children across the UK and with varying experience and education levels. Around 70% reported that over half of their caseload had literacy difficulties. While many SLTs focused on oral skills supporting literacy, such as phonological awareness (80%), oral narratives (92%), and comprehension (67%), fewer than 20% addressed writing skills, including print conventions, alphabet recognition, spelling, and letter formation. On average, SLTs rated their literacy knowledge 4.91 out of 10, and nearly 60% reported low confidence and uncertainty about their role in supporting literacy. Most agreed that spoken and written language are linked, and 93% expressed a need for further professional development in this area. Analysis of influencing factors is still ongoing.

Conclusion: Preliminary findings indicate potential gaps in UK SLTs' literacy practices and confidence, highlighting the need for clearer guidelines and training on their role in supporting written language skills. Further qualitative research is recommended to explore barriers to effective literacy support for children with SLCN.

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[71] Hannah Dostal (University of Connecticut), Kimberly Wolbers (University of Tennessee), Kelsey Spurgin (Ball State University), Leala Holcomb (University of Tennessee) and Elizabeth Martinez (University of Tennessee)

The written language of deaf secondary students.

Analyzing the writing of deaf students is critical for developing effective instructional practices and fostering meaningful academic growth. Writing provides insights into students' language development, syntactic knowledge, and ability to organize and express ideas. For deaf students, these insights are particularly valuable, as their writing reflects the complex linguistic resources shaping their unique idiolects.

This presentation draws from two studies. The first involved automated scoring of 75 deaf high school students' writing samples across six traits (e.g., idea development, sentence fluency, word choice) to examine patterns related to expressive language variables. The second involved a qualitative analysis of the lowest- and highest-scoring samples to better understand students' strengths and needs.

We used thematic analysis (Braun & Clarke, 2006; Corbin & Strauss, 2014) within a descriptive qualitative research framework (Creswell, 2012) to classify writing traits (e.g., idea development, organization, style) and language conventions (e.g., word choice, fluency). We also coded additional observations, such as students' use of American Sign Language linguistic resources. For this presentation, we highlight four students—two high- and two low-scoring— presenting biographical data, language data, and trait scores, and examining their narrative writing and language traits. Findings from the larger study and the subset of four students highlight the diverse writing skills of deaf secondary students, revealing wide differences in development. Lower-scoring samples showed a need for increased clarity, while higher-scoring samples showed more complexity and genre awareness. Across samples, students demonstrated various strengths and needs, emphasizing the need for a range of responsive instructional support.

Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 1: Language Acquisition & Development

[27] Rajalakshmi Madhavan (University of York), Charlotte Blake (University of York), Florence Oxley (University of York) and Catherine Laing (University of York)

Evaluating 4.5-month-old infants' preference for self-vocalisations during vocal play.

Infants' babble production and contingent sensory experiences (i.e., sensorimotor feedback) shape their speech perception, and, potentially, first words (DePaolis et al., 2011; McCune & Vihman, 2001). Sensorimotor mapping itself may begin during 'vocal play', around four months, when infants start to explore elements of their vocal productions (e.g., pitch, volume; Vihman, 2014) . Infants around this age also preferentially listen to infant-like over adult-like vocalisations, but also prefer age-matched peers' vocalisations compared to their own (Legestree et al., 1998; Polka et al., 2022). However, the impact of spontaneous pre-linguistic (compared to involuntary and non-linguistic, e.g., coughs) vocalisations on these infant preferences has not yet been explored.

This study examines whether infants' preferential attention to vocalisations made by either themselves or same-age peers is shaped by the voluntary nature of the vocalisation. Sixty 4-5.5-month-old infants and their families (1) complete a day-long home recording to capture voluntary vocalisations (vocal play), and involuntary non-linguistic sounds (coughs); (2) participate in an online listening preference study, measuring infants' looking times to previously recorded self- and peer-vocal play vocalisations and cough sounds.

Data collection is ongoing; we predict that infants will (1) listen longer to vocal play vocalisations compared to coughs overall, and (2) differentially listen to peer vocalisations compared to their own.This pattern of results would indicate that infants are attending to and learning from their own vocal play in early development, suggesting that sensorimotor feedback shapes learning from the very first spontaneously produced voluntary vocalizations.

Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 1: Language Acquisition & Development

[94] Jérémy Genette (Universiteit Antwerpen), Steven Gillis (Universiteit Antwerpen) and Jo Verhoeven (City St George's, University of London)

The acquisition of intrinsic vowel pitch from babbling to first words: a large-scale longitudinal study.

This contribution investigates Intrinsic Vowel Pitch (IF0) in speech production before the age of two. IF0 is the phenomenon by which high vowels, such as /i/ and /u/, exhibit a higher F0 than low vowels, such as /a/ and /ɑ/. Two hypotheses have been formulated to explain IF0: (1) a biomechanical account, which characterizes IF0 as an inevitable, physiologically driven process; and (2) an enhancement account, which attributes IF0 to speakers' deliberate effort to render the distinctiveness of high and low vowels more salient. Both hypotheses make different predictions about the emergence of IF0 in children's speech. The biomechanical account predicts that IF0 already occurs in prelexical vocalizations, while the enhancement account suggests that IF0 gradually emerges during the lexical stage.

The present study uses a longitudinal corpus of monthly recordings of 30 children's spontaneous speech between the ages of 6 and 24 months to observe which hypothesis is supported by the data. This corpus contains approximately 37,000 high and low vowels in prelexical vocalizations and early words. Those vowels were acoustically analysed for F0.

This study shows that IF0 is already present in early vocalizations, suggesting a likely physiological origin of the phenomenon. However, the results show that the size of IF0 gradually increases as children's vocabulary increases.

In conclusion, these findings suggest that IF0 is probably biomechanical in origin but that children learn to use it as an additional cue to enhance the contrast between high and low vowels.

Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 1: Language Acquisition & Development

[99] Michela Vella (University of Malta)

Maltese First Language Acquisition of Morphosyntax: Nominal Inflection & Agreement

First language acquisition has been studied extensively both in individual languages and cross-linguistically through diverse theoretical frameworks. Yet, research on Maltese First Language Acquisition (MFLA) is lacking. This study seeks to address this gap by investigating the developmental trajectory that characterises MFLA from a morphosyntactic perspective, focusing on nominal inflection and agreement, whilst also considering other morphosyntactic features that develop concurrently.

The research project employs a combined longitudinal and cross-sectional design to capture the language development of Maltese-dominant children aged 18-60 months. Eight children, aged 18-36 months at the study's onset, were recruited and visited 5 times over a period spanning 20-25 months. Both naturalistic data (through free-play) and controlled data (through comprehension and production tasks) were collected during 45-minute video-recorded sessions. The resulting dataset comprises over 30 hours of Maltese child language data, transcribed orthographically and annotated according to established conventions.

Through morphosyntactic analysis, a number of stages in the typical emergence and development of noun phrase morphology are identified from the data alongside other features. Findings are compared to: a) child language acquisition studies of Arabic varieties, which like Maltese are characterised by a hybrid morphology (e.g., Saiegh-Haddad et al., 2012), b) morphosyntactic studies conducted with Maltese-speaking adults (e.g., Nieder et al., 2021), c) bilingual FLA research, in consideration of the bilingual background of the children in this study (e.g., Nicoladis & Marchak, 2011), and d) developmental stages describing FLA of well-studied Indo-European languages, such as English and German (e.g., Brown, 1973).

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Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 1: Language Acquisition & Development

[49] Alžběta Bohme Ryšková (Masaryk University, Brno)

Bilingual First Language Acquisition in Context: A Czech-Spanish Case Study on Linguistic Environment and Bilingual Development

Longitudinal qualitative case studies have played a crucial role in Bilingual First Language Acquisition (BFLA) research, offering detailed, in-depth insights into language development over time and allowing for the tracking of individual linguistic trajectories. Since the pioneering studies of Ronjat (1913) and Leopold (1939), numerous case studies have documented bilingual development in diverse language pairs (e.g., De Houwer 1990; Deuchar & Quay 2000; Cruz-Ferreira 2006; Štefánik 2000).

This study contributes to this body of research by examining the language development of two Czech-Spanish bilingual siblings, thus introducing a previously unexplored language combination into BFLA case study literature. Building on De Houwer's (2009) call for a holistic approach to BFLA—one that integrates linguistic environment analysis and language output assessment—this study investigates the sociolinguistic dimensions of bilingual development. Specifically, it examines family language policies, caregiver input, and language dynamics over time, exploring how these factors shape bilingual trajectories.

The findings indicate that family language strategies evolve over time, adapting flexibly to changing circumstances. Moreover, the quality and nature of parental input fluctuate, influencing the children's linguistic development. Notably, despite being raised in the same bilingual environment, the two siblings exhibit distinct language learning strategies and divergent linguistic outputs, underscoring the individual variability in BFLA.

This study advances BFLA theory by emphasizing the caregiver's role and the interplay between linguistic input and output in bilingual development. The findings provide practical implications for fostering balanced bilingualism and underscore the need for holistic, context-sensitive approaches in language acquisition research.

Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 2: Bilingualism, Language Disorder

[45] Sini Smolander (University of Eastern Finland, University of Oulu), Rosa González Hautamäki (University of Oulu, University of Eastern Finland), Jade Plym (University of Helsinki), Pekka Lahti-Nuuttila (University of Helsinki), Eva Arkkila (Helsinki University Hospital), Sari Kunnari (University of Oulu) and Marja Laasonen (University of Eastern Finland).

Classification accuracy of language measures in the identification of DLD in mono- and bilingual children: a HelSLI substudy

Background and aim:

It is vital to know how accurately the second language (L2) tests can differentiate typical development (TD) and developmental language disorder (DLD) in sequential bilingual children. We assessed the classification accuracy of language measures and the importance of different tasks in the classification. We also wanted to see whether the order of importance differs between monolingual and bilingual children and whether the data trained with the monolingual children would fit the classification of bilingual children.

Methods:

In total, 364 5–7-year-old mono- and bilingual children with either TD or DLD were recruited from a hospital clinic and daycare centres. A set of expressive and receptive language tasks were administered. In addition to direct assessments in the L2 for bilingual children, a parental interview addressing early developmental milestones in L1 was included. We investigated the DLD classification accuracy of the tasks using a machine learning approach, namely Random Forest (RF).

Results and conclusions:

Classification accuracy of the linguistic tasks was good (~90 %) in 5–7-year-old bilingual children, but for the monolingual children, the accuracy was only fair (~82 %). The best classifiers were variables corresponding to expressive language in monolingual children and receptive language as well as L1 early milestones in bilingual children. The monolingual classification model did not identify DLD in the bilingual group. Receptive language and L1 parental reports of L1 development should be prioritized in assessing bilingual children in the early years. Monolingual children as a comparison group are not suitable for bilingual children.

Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 2: Bilingualism, Language Disorder

[135] Maryam Awawdeh (Bangor University), Eirini Sanoudaki (Bangor University) and Athanasia Papastergiou (Manchester University)

The Experiences of Speech and Language Therapists (SLTs) Working with Bilingual/Multilingual Children with Developmental Language Disorder (DLD)

This study aims to provide insight into the experiences of Speech and Language Therapists (SLTs) working with bilingual and multilingual children with Developmental Language Disorder (DLD). Previous research has explored SLTs' experiences with bilingualism (Sharpe & Perovic, 2023) and with DLD (Thomas et al., 2019), yet there is limited research that addresses both simultaneously.

A mixed methods survey was distributed to SLTs, including student and trainee SLTs, in the UK with questions on assessment, diagnosis, and opinions on bi/multilingualism and DLD. Preliminary analyses show that most SLTs noted advantages of bilingualism in children with DLD, for example improved communication opportunities and word retrieval benefits, though others suggested bilingualism could mask DLD.

Furthermore, SLTs highlighted the lack of developmental norms and multilingual resources. One SLT noted the difficulty in assessing children in other languages required reliance on interpreters. Other SLTs mentioned that limited knowledge of DLD, cultural differences and distinguishing between language difference and disorder contributed to problems faced when assessing this group.

Many SLTs recommended that parents/carers join support groups, apply for individualised education plans, and use sign language, Makaton or Augmentative and Alternative Communication (AAC). While most SLTs had attended training on DLD, fewer had training specific to bi/multilingualism.

The results indicate the need for more multilingual resources and targeted training and support for SLTs working with bi/multilingual children with DLD.

References:

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Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 2: Bilingualism, Language Disorder

[86] Sara Fincham-Majumdar (University of Reading), Emma Pagnamenta (University of Reading) and Tom Loucas (University of Reading, UK)

Measuring child and parent characteristics in parent-mediated intervention for preschool autistic children: a mixed methods feasibility study

Parent-mediated intervention (PMI) for autistic preschoolers leads to changes in parent-child interaction and improved receptive language skills. Yet individual response to PMI is variable; identifying moderators of outcomes could enhance personalised support.

This mixed-method study aimed to evaluate the feasibility and acceptability of measuring parent and child characteristics and outcomes in a clinical setting offering PMI for preschool autistic children and children awaiting autism assessment, to refine and inform a future phase of work.

Methods: Study 1: eight children and their parents were recruited to a parent-mediated intervention program. Parent and child characterisation measures were collected at baseline (e.g. sensory pre, parent stress) alongside outcome measures at three time points (see figure 1).

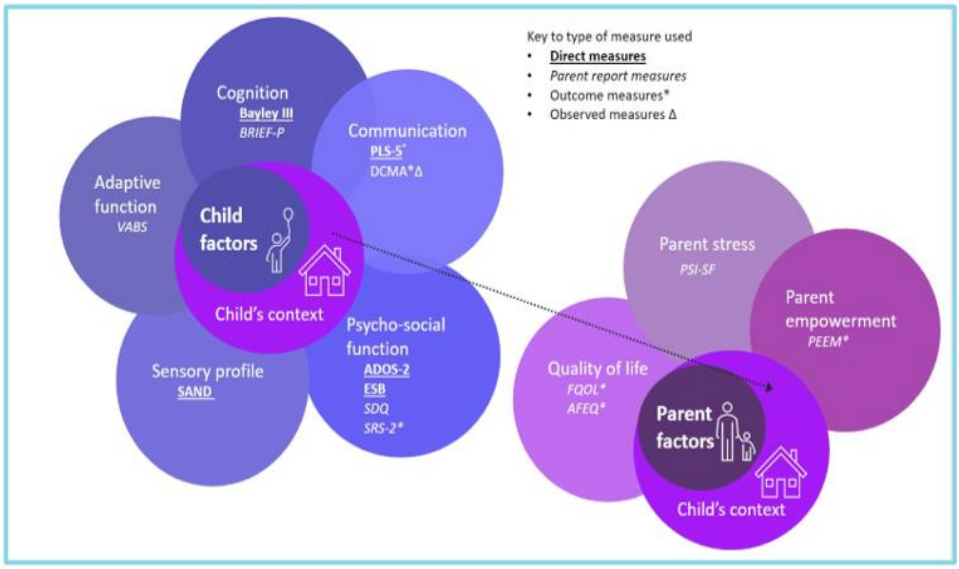
Study 2: five parents consented to a semi-structured 1:1 interview with a research assistant not involved in delivering PMI. The topic guide explored parents' perceptions of the acceptability of the assessment protocol. Interview data was analysed using framework analysis.

Results: Most measures were administrable; reasons for non-completion are outlined. Measures indicated variation across participants and were sensitive to change.

Overall, parents found the assessment process acceptable, though opinions differed across measures. Parents appreciated a deeper understanding of their child's developmental profile and felt enabled to share findings with others. However, parents highlight the practical and emotional burden when completing parent report measures and observing assessments.

Conclusions: Based on the feasibility and acceptability of the assessment protocol, a future study to explore potential moderators of PMI outcomes is warranted, and adaptations to the protocol will be made.

Figure 1. Characterisation and outcome measures



Autism Diagnostic Observation Schedule, Second Edition **(ADOS-2)** / Autism Family Experience Questionnaire **(AFEQ)**/ Bayley Scales of Infant and Toddler Development, Third Edition (**Bayley-III**)/ Behavior Rating Inventory of Executive Function- Preschool version **(BRIEF-P)** /Dyadic Measure of Autism Communication (**DCMA**)/ Early Sociocognitive Battery **(ESB)** / Family Quality of Life **(FQOL)**/ Parent Empowerment and Efficacy Measure **(PEEM)**/ Parent Stress Index (PSI) / Sensory Assessment for Neurodevelopmental Disorders observation **(SAND)**/ Social Responsiveness Scale **(SRS-2)** / Strengths and Difficulties Questionnaire **(SDQ)**/ Vineland Adaptive Behavior Scales **(VABS) .** Child and parent demographic factors

Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 2: Bilingualism, Language Disorder

[154] Agnieszka Dynak (University of Warsaw), Katarzyna Bajkowska (University of Warsaw), Michalina Szczęsna (University of Warsaw), Joanna Kołak (University College London), Grzegorz Krajewski (University of Warsaw), Magdalena Krysztofiak (University of Warsaw), Magdalena Łuniewska (University of Warsaw) and Ewa Haman (University of Warsaw)

Linking Parental Beliefs to Children's Language Outcomes in Multilingual Contexts

Child-directed speech is crucial for language development, with parental knowledge and beliefs shaping the quantity and quality of language input [1]. In multilingual contexts, these beliefs can also influence language choice [2].

To better understand the role of parental knowledge in multilingual development, we developed a criterion-referenced questionnaire on early language development, multilingualism, and supportive parenting behaviors. After reviewing existing tools and literature, we created an initial pool of 88 items, which were pilot-tested with 98 participants (93F, 5M).

Based on the pilot results, we refined the questionnaire to 31 items, eliminating those with high difficulty, poor reliability, or redundancy. The final version shows moderate difficulty (M = 1.47 on a 0-2 scale) and good reliability (alpha = 0.825). It covers key areas of language development, including preverbal communication, communication milestones, input quantity and quality, parentese, multilingualism, and child media exposure.

We are now collecting data from 100 Polish-speaking parents in the UK to explore the relationship between parental responses and children's language outcomes. We will examine whether higher scores on the questionnaire correlate with better language outcomes (measured by CDI-II: Words and Sentences [3]) in both Polish and English. This research aims to establish whether parental beliefs and knowledge are directly linked to children's language development.

References:

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Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 3: Syntactic and Semantic Processing

[38] Silvia Curti (University of Milano-Bicocca), Desiré Carioti (University of Milano-Bicocca) and Maria Teresa Guasti (University of Milano-Bicocca)

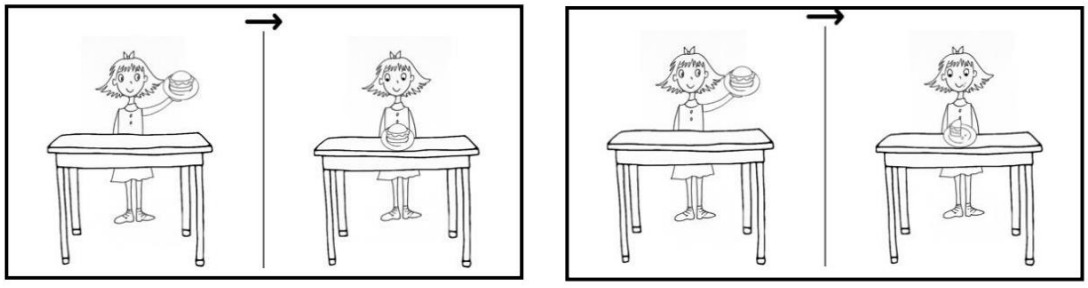
Do children have different verb representations than adults? Investigating event culmination in typically developing monolingual Italian children

Cross-linguistic research on the acquisition of event culmination shows a high acceptance rate of telic-perfective sentences as descriptions of 'non-culminating' events [1,2], a pattern considered non-adultlike. Indeed, traditional analyses claim that telic-perfective sentences entail event culmination [3,4]. Nevertheless, different verbs seem to trigger different acceptance rates of 'non-culmination' [1], and it is unclear whether this acceptance is consistent across verb classes. This experimental study aims to contribute to this debate through the lens of Italian language acquisition. Specifically, we ask whether Italian-speaking children accept 'non-culminating' readings, whether this reading varies across verb classes, and whether children interpret telic-perfective sentences differently than adults (we previously tested adults).

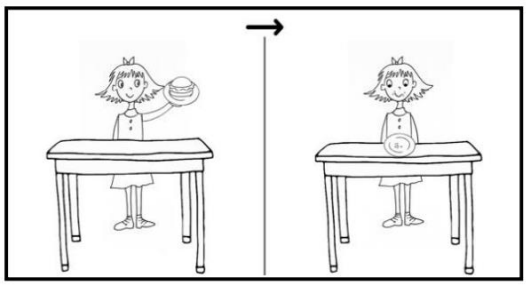
We tested 86 monolingual Italian children (F = 38; M = 48; age range = 4.25-7.25; SD = 0.85) using a TVJT. Participants judged recorded telic-perfective sentences describing images of 30 events, grouped into three verb classes: 10 punctual change of state, 10 durative change of state, and 10 incremental theme verbs. Images depicted 'no result,' 'partial result,' and 'full result' scenarios. The crucial condition is the 'non-culminating' situation.

Logistic mixed model analysis revealed significant interactions, including a three-way interaction (verb_type*degree_of_event*education, $p < .001$). Children accepted 'partial result' scenarios for CoS_D and Incr_T but not for CoS_P verbs, mirroring adult responses. Moreover, these patterns are consistent across school grades. It seems that the over-acceptance of 'non-culminating' readings mentioned in the literature may not indicate a non-adult-like interpretation of telic-perfective sentences since, according to our analysis, Italian children seem to behave as adults do.

Figure 1. Example of the experimental item 'eat the sandwich' in the 3 scenarios.



Item 1 - No Result **Item 1 - Partial Result**



Item 1 - Full Result

Figure 2. 'Partial Result' scenario: acceptance rate of 'non-culmination' reading. Children VS adults

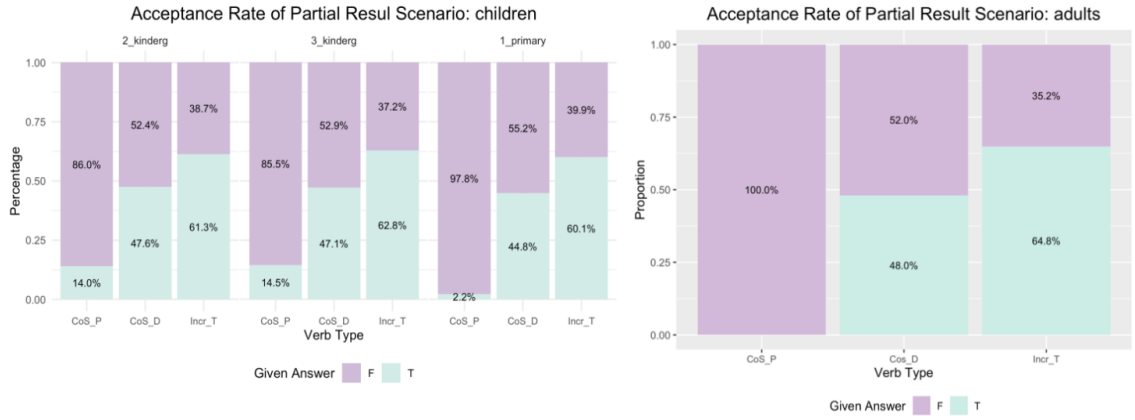


Table 1. Examples of Items and Target Sentences for each Verb Class investigated.

Verb Type	Item	Target sentence
Durative change of state verb	Empty the box	Il bambino ha svuot**ato** la scatola the boy AUX empty.**PAST.PERF** the box
Punctual change of state verb	Pop the balloon	La bambina ha scoppi**ato** il palloncino the girl AUX pop.**PAST.PERF** the balloon
Incremental Theme verb	Eat the sandwich	La bambina ha mangi**ato** il panino the girl AUX eat.**PAST.PERF** the sandwich

Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 3: Syntactic and Semantic Processing

[91] Chiara Saponaro (University of Milano-Bicocca), Desiré Carioti (University of Milano-Bicocca) and Maria Teresa Guasti (University of Milano-Bicocca)

Ambiguous paths to meaning: A developmental gap in production

How do children approach semantic ambiguity? This study explores how preschoolers and second graders interpret sentences with dual meanings and how they learn to resolve ambiguity through linguistic expressions. We focus on sentences like "the girls are carrying a ladder", which can have a collective interpretation (all girls carrying the same ladder) or a distributive one (each girl carrying a different one). Previous literature shows that children interpret such sentences differently from adults in comprehension (1,2). In production, a recent study with Italian-speaking participants found that preschoolers rarely use disambiguating expressions like ciascuno ("each") or insieme ("together") to describe pictures like Figure 1, often leaving sentences ambiguous (3). In contrast, second graders behave like adults, clearly distinguishing between the two readings.

Here, we investigate the linguistic and cognitive factors behind this developmental gap. We tested 31 preschoolers (age M=5.4) and 44 second graders (M=7.5) on tasks assessing their ability to recognize the double interpretation of ambiguous figures (4; Figure 2), take another's perspective (5), shift between categorization rules (6), and their linguistic competence (7). We found that children who are better at resolving perceptual ambiguity or understanding others' perspectives are more likely to produce disambiguating markers. Other cognitive and linguistic factors did not have a significant impact. This suggests that pragmatic skills play a key role in recognizing the need to resolve ambiguity through explicit marking. Interestingly, the link between perceptual and semantic ambiguity hints at a domain-general ability for handling ambiguity, though further research is needed to confirm this.

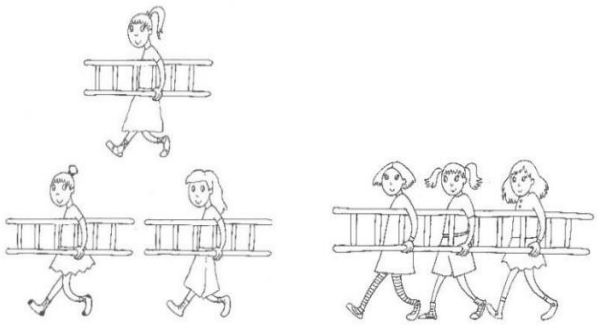


Figure 1: Example trial: distributive and collective pictures representing *girls carrying a ladder.*

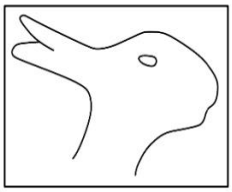


Figure 2: Example stimulus for the Ambiguous Figures task: rabbit/duck

Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 3: Syntactic and Semantic Processing

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Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 3: Syntactic and Semantic Processing

[108] Brechje van Osch (Arctic University of Norway (uiT)), Jason Rothman (Lancaster University) and Terje Lohndal (Norwegian University of Science and Technology)

The processing, production and interpretation of grammatical gender in child heritage speakers of Spanish

Research shows that monolingual children as young as 3-4 can use gender to predict upcoming nouns (Lew-Williams & Fernald, 2007), as do adult Spanish heritage speakers (HSs) (e.g. Fuchs, 2022). Much less is known about gender in child HSs, in particular when it comes to online processing. The research questions for this study are the following:

1. Do child HSs of Spanish use gender cues for interpretation, and if so, do they do so immediately upon hearing the morphological cue?

2. How do linguistic and extra-linguistic variables affect the production, interpretation and processing of gender agreement?

30 monolingual children from Chile and 60 HSs of Spanish (age 6–15) from the Netherlands and the UK completed i) a gender production task, ii) a picture selection task including eye-tracking (example 1), iii) a Spanish proficiency task, and iv) the Q-BEx questionnaire (DeCat et al., 2021). The analysis, which is still ongling, reveals that all children struggle with gender interpretation in terms of offline responses in picture selection (figure 1), and they also show a delayed response in terms if they eye-gazes (figure 3). Interestingly, their ceiling responses with filler items targeting number agreement indicate that this was not a task effect. Accuracy in offline performance in the bilinguals was affected by noun transparency and gender (figure 2) as well as age of onset of the societal language and HL use (figure 4). Future analyses will reveal whether the same variables affect online processing and production.

Example 1:

Mira, **este.M** es para poner en mi habitación
Look, this (one) is to put in my bedroom

Espejo.M (*mirror*)

silla.F (*chair*)

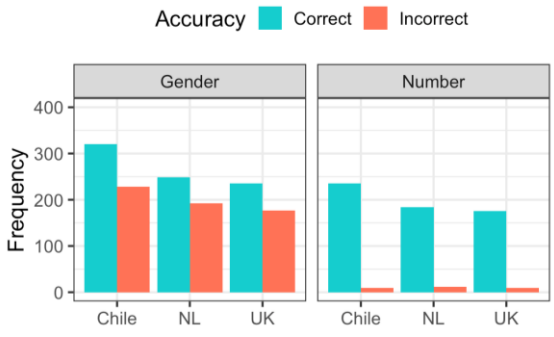

Figure 1: Accuracy for offline responses in the gender interpretation task

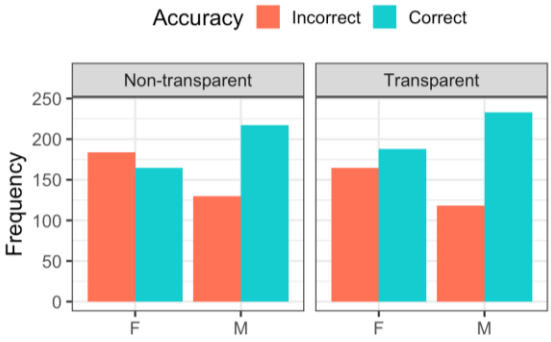

Figure 2: effects of transparency and gender in offline interpretation

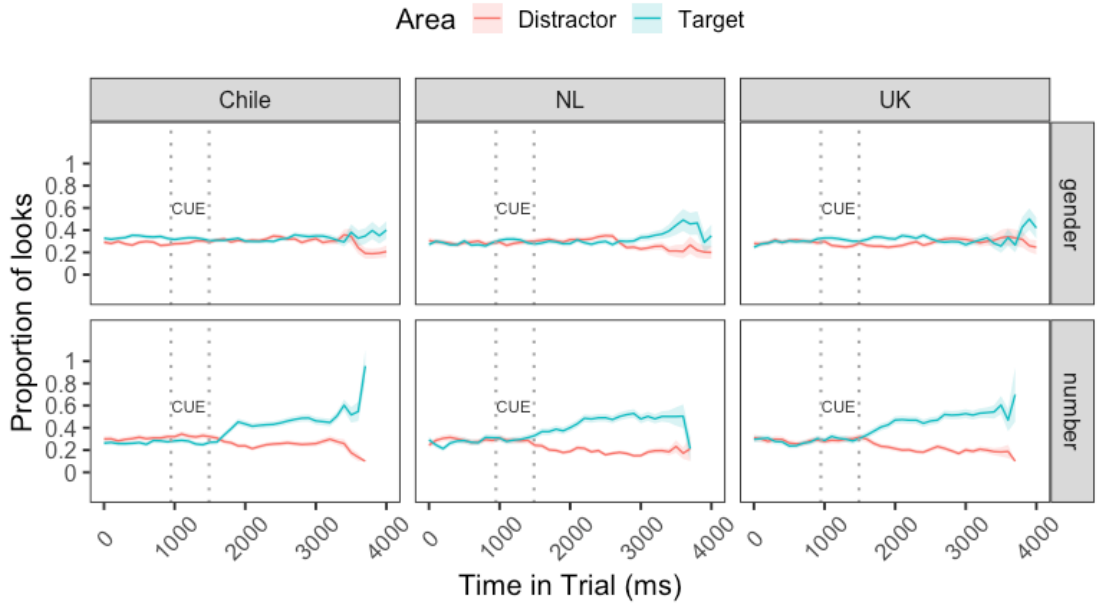

Figure 3: Eye-tracking data for corrent responses

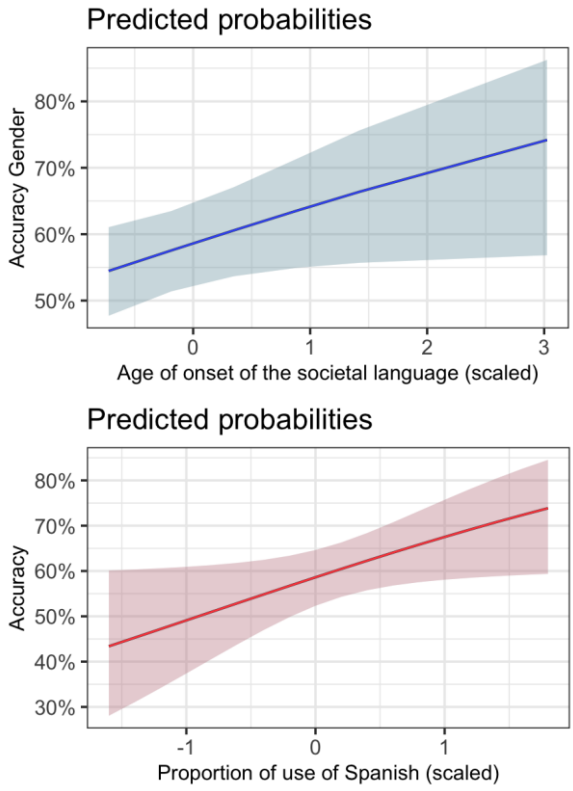

Figure 4: Effects of age of onset and proportion of use on accuracy in the offline responses.

References

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Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 3: Syntactic and Semantic Processing

[51] Tommaso Sgrizzi (IUSS Pavia), Giacomo Presotto (Goethe-Universität Frankfurt) and Jacopo Torregrossa (Goethe-Universität Frankfurt)

Structural Complexity and Featural Intervention: Extending the Growing Trees Hypothesis Beyond Infancy

INTRODUCTION: The Growing Trees Hypothesis (GTH) [1] proposes a maturation-based model of syntactic development, where acquisition proceeds bottom-up through three implicationally related clausal stages. While the GTH has been studied in early acquisition (typically up to 2;5 years), it remains unclear whether older children's comprehension and production are still shaped by these progressive stages. Investigating this question allows us to examine how syntactic complexity, as defined by the GTH, interacts with other sources of complexity, such as featural intervention ([2]; [3]; [4]; [5]; a.o.).

DATA: We analyzed a repetition task performed by 42 Spanish monolingual children (age 4;4–7;1), testing structures across GTH stages (Fig. 1). We derived the cartography of the Spanish left periphery (Fig.2), positioning WhP as the boundary between stages 2 and 3 ([5]), and drawing from recent results for the acquisition of restructuring verbs ([6]) and imperatives ([7]).

RESULTS: A generalized linear mixed-effects model showed a significant effect of stage (Fig.3): children were less accurate with stages 2 and 3 than stage 1, but no difference emerged between stages 2 and 3. Accuracy increased with age, particularly for stage 3 structures (Fig.4). Without intervention, stage 3 was less accurate than stage 2, consistent with the GTH. Intervention further reduced accuracy, especially for stage 2 (Fig.5).

DISCUSSION: Our findings validate the GTH beyond early childhood, showing that structural complexity continues to shape syntax in older children. The interaction between hierarchical stages and featural intervention underscores the need to consider both structural and featural complexity in syntactic development.

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FIELD	CATEGORIES
TP	locative PP, SV, SVO, adjective-noun agreement, locative adverb, temporal adverb, complex DPs, TP-coordination, copular sentence, demonstratives, infinitives in monoclausal structures, modal verbs, imperatives, post-verbal subjects, quantifiers, reflexive verbs, sentential negation, passive
LOW CP	preposed modifiers, bare-wh questions, CLLD
HIGH CP	causal complement, control, clausal comparatives, finite complements, clausal coordination, subject/object relatives, lexically restricted subject/object wh-questions (in HIGH CP following Rizzi 2018)

Figure 1: Coding of the syntactic structures of the repetition task and the relative GTH stages.

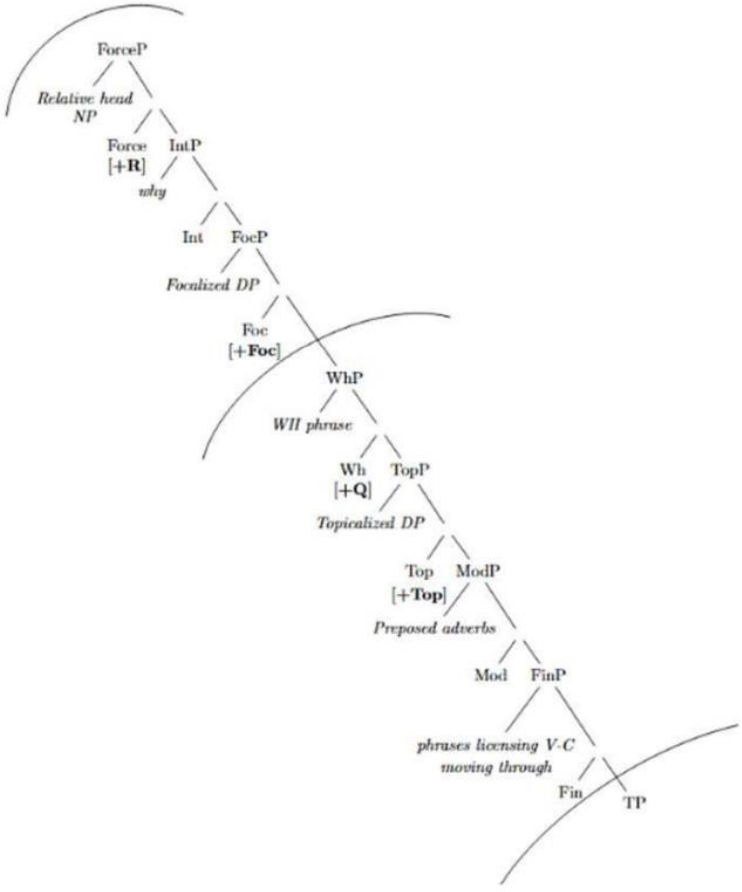

Figure 2: The Spanish LP and the GTH's 3 stages

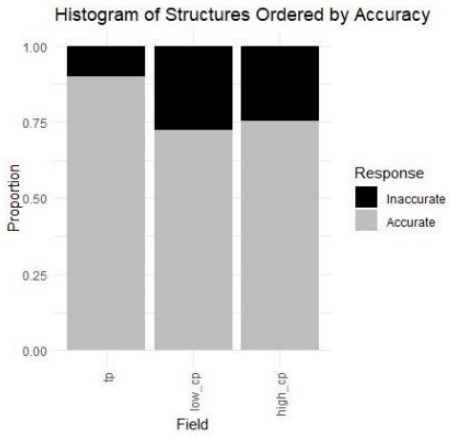

Figure 3: Proportion of accurate repetitions across the three syntactic stages

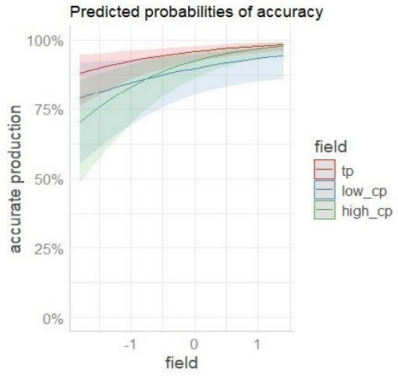

Figure 4: Predicted probability of accurate repetition for each stage as a function of age (age values are centered)

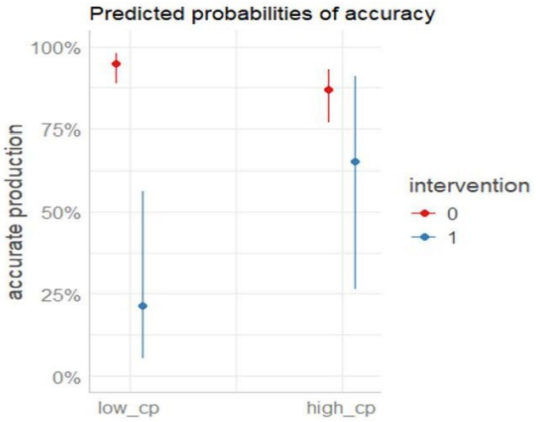

Figure 5: Predicted probability of accurate repetition as a function of the syntactic zone and the presence (1) or absence (0) of intervention

Monday 8th September - Lightning Talks - 16.00 – 16.40

Session 3: Syntactic and Semantic Processing

[54] Tommaso Sgrizzi (IUSS Pavia)

Crosslinguistic Variation in Root Infinitives: A Unified Analysis of Feature Inheritance and Labeling Theory

Root Infinitives (RIs) are a widely attested phenomenon in early language acquisition, though absent in languages such as Italian. RIs typically lack subjects or exhibit erroneous case marking, are incompatible with tense/modal markers, and disappear as null subjects in non-null-subject languages decrease (Fig.1). While previous accounts have linked RIs to labeling difficulties in {XP,YP} structures at TP ([1]), they fail to explain why RIs are restricted to specific languages and syntactic environments.

We propose a Split-Feature-Inheritance approach ([1],[2]), arguing that RIs arise from the partial inheritance of ϕ- and EPP-features from C to T during acquisition. Following [2;3], we suggest that children, to simplify featural computation ([4]), occasionally retain features in the phase head rather than fully transmitting them (cf. [5]; Fig.2). This predicts that failure in ϕ-sharing results in default non-finite morphology), whereas successful inheritance allows finite forms iff the computation successfully ϕ-labels {XP,YP} at T ([1]; Fig.3;4). Null-subjects in RIs/finite environments are derived through Truncation ([6]).

We also account for the absence of RIs in languages like Italian. If T in these languages is inherently strong ([7];[8]), labeling does not rely on {ϕ, ϕ} checking via Spec, preventing RI emergence. We address RI incompatibility with wh-questions by proposing that the extra wh-feature on T provides sufficient evidence for labeling the structure, overcoming the parametric difference in T between ϕ-labeling and Case-labelling ([9]).

This study provides a unified analysis of RIs, reconciling crosslinguistic variation and acquisition data with recent developments in minimalism, particularly feature transmission and labeling theory.

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Phenomenon	Example and Glosses	Language and Source
Null subject RIs	Voir l'auto papa 'See.INF the car daddy'	French; Wexler (1994)
Erroneous case marking for the subject	Him fall down	English; Schütze & Wexler (1996)
Unattested Wh-RIs	(*) Was Hans essen? 'What Hans eat.INF'	German; Weissenborn (1992)
Subject drop in finite contexts	Va sous le tabouret 'Goes under the stool'	French; Crisma (1992)

Figure 1: Examples of Root Infinitives and related phenomena

a. [Fin EPP [Subj [T_φ
b. [Fin [Subj$_{EPP}$ [T_φ

Figure 2: Partial Inheritance (a) and Full Inheritance (b) of features as proposed by Citko et al. (2018)

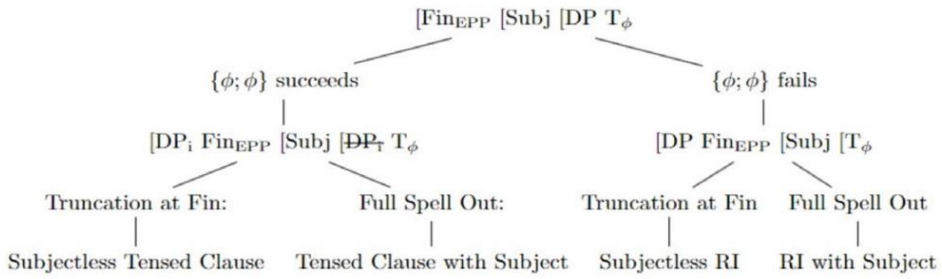

*Figure 3: Logical possibilities arising from **the Partial Inheritance** of features from Fin to T, considering all factors involved (ϕ-labeling and Truncation)*

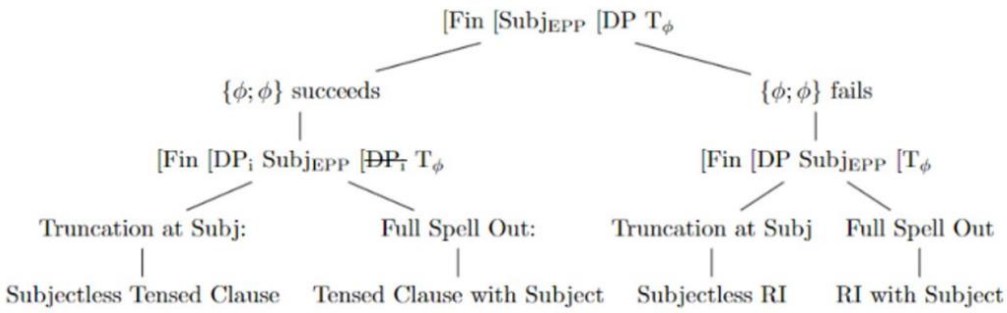

*Figure 4: Logical possibilities arising from **the Full Inheritance** of features from Fin to T, considering all factors involved (ϕ-labeling and Truncation)*

Tuesday 9th September - Oral Presentations 10.00 - 11.00

Session 1: Lexical development and interventions

[96] Rama Kanj (University of Reading), Ludovica Serratrice (University of Reading), Sherine Bou Dargham (American University of Beirut) and Vesna Stojanovik (University of Reading)

Measuring Conceptual Vocabulary in a Group of Arabic-Speaking Bilingual Children With and Without DLD.

A child's vocabulary size is a robust predictor of language, literacy skills, and academic performance [1]. In the case of bilingual children, the issue is what represents a fair measure of vocabulary. This is because bilingual children have been shown to exhibit varying levels of proficiency in their languages due to differences in word learning experiences and cognitive processes [2] which can add a layer of complexity to a diagnosis of Developmental Language Disorder.

The study focuses on investigating the effectiveness of conceptual scoring in improving classification accuracy between typically developing and DLD in children using the Lebanese Picture Naming Test [3]. The present study involved administering the LPNT to a sample of 50 Lebanese bilingual children (M = 5.88 years, SD = 1.29) twice: once in their native language, Lebanese Arabic, utilizing total scoring, and a second time using conceptual scoring (Lebanese Arabic, French and English). Additionally, participants completed tasks assessing nonword repetition, sentence repetition, and responded to a questionnaire aimed at understanding their language exposure to confirm the diagnosis of DLD in children presenting with a history of speech and language disorders. Preliminary findings reveal a significant difference between the two scoring methods across age groups, with conceptual scoring yielding higher scores compared to testing in the native language ($p < .001$). Further analysis is underway to explore the influence of sociodemographic factors and classification on expressive vocabulary development, particularly among children identified as typically developing and those potentially presenting with developmental language disorder.

References:

[1] (Bleses et al., 2016; Catts et al., 2015; Duff et al., 2016; Jansky and Hirsch, 1972; Katz, 1986)

[2] (Bialystok & Martin, 2004; Bialystok et al., 2008; Hoff et al., 2012; Kohnert, 2010; Marchman et al., 2010; McMillen et al., 2020; Paradis, 2011; Thordardottir, 2011)

[3] (Kanj & El-Hassan, 2021)

Tuesday 9th September - Oral Presentations 10.00 - 11.00

Session 1: Lexical development and interventions

[64] Kelly Burgoyne (University of Manchester), Kirstie Hartwell (University of Manchester), Rebecca Baxter (University of Reading), Emma Pagnamenta (University of Reading) and Vesna Stojanovik (University of Reading)

Outcomes from a Feasibility Randomized Controlled Trial of Parent-Delivered Early Language Intervention for Children with Down syndrome

Introduction: PACT-DS is a novel, parent-delivered early language intervention programme which has been developed in collaboration with parents of young children with Down syndrome: This paper reports data from a feasibility randomized controlled trial of the programme.

Method: Thirty children with Down syndrome aged 3-6 years were randomly allocated to intervention (PACT-DS oral language programme) and control groups. Parents in the PACT-DS group were trained to deliver the programme in daily 20-minute sessions over 30 weeks. Assessments of language, early literacy, and executive function skills, the HLE, and measures of parent wellbeing, quality of life, and knowledge skills and confidence, were completed before intervention (t1), after 30-weeks of intervention (t2) and after a delay of 4 months (t3).

Results: 100% of the proposed sample were recruited to take part. Parents delivered intervention as intended, completing 96% of the programme with high quality of implementation. Almost all families (90%) remained in the trial providing data at all time points. Data indicate variable effects on assessment measures at immediate (effect sizes ranging from -.50 to 1.64) and delayed post-test (-.49 to .81).

Discussion: Findings from the feasibility trial support progression to a definitive trial, and indicate potential benefits for parents and children.

[34] Evangelia Kyritsi (National and Kapodistrian University of Athens)

Speech processing in Greek-speaking individuals with hearing loss: Evidence from lexical errors

Orthography and phonology play a critical role in speech processing, which overall is achieved by means of bottom-up and top-down skills (Stackhouse & Wells, 1997). Individuals with hearing loss often have significant vocabulary and language deficits and they rely on orthographic information more than on phonological information to perform linguistic tasks (James et al., 2009; Kyle et al., 2016). Lexical errors offer a window to the psycholinguistic processes that underlie word recognition (Felty et al., 2008). Focusing on lexical errors, this presentation aims to investigate factors that influence spoken and written word recognition in Greek-speaking individuals with hearing loss. The paper presents the results from two studies. In Study 1, participants were bilingually educated students who attended a special high school for Deaf/Hard of Hearing students. Participants were given a list of written words and they were asked to define the words orally and/or in sign language. In Study 2, participants were children, adolescents and adults, who were orally or bilingually educated. Speechreading ability for words and sentences was assessed. In both studies incorrect responses were analyzed.

The results showed that incorrect responses were influenced by phonological and orthographic similarity to the target item. Notably, they were also influenced by participants' background knowledge (vocabulary, world knowledge and experiences). These findings suggest reliance on bottom-up and top-down skills on speech processing tasks. It is concluded that this interplay should guide the design of intervention approaches and that attention should be paid to the role of experience in child language development.

Tuesday 9th September - Oral Presentations 10.00 - 11.00

Session 2: Interventions 1

[20] Katherine Shobbrook (UCL), Rosie Miller (St George's NHS Trust), Shybah Yunis (St George's NHS Trust), Suzanne Beeke (UCL) and Wendy Best (UCL)

"Why aren't we fighting our case?": speech and language therapists' perspectives on intervention for preschool children with oral comprehension difficulties

Oral comprehension difficulties are prevalent amongst preschool children with language needs and are related to academic, social and emotional outcomes. Speech and language therapists (SLTs) frequently deliver comprehension intervention to preschool children, yet little is known about the influences underpinning clinical decisions and how these align with evidence-based practice (EBP).

We investigated how SLTs apply the principles of EBP to intervention with preschool children with oral comprehension difficulties through semi-structured interviews with 14 UK-based SLTs, representing a range of years of experience, work settings and employment models (NHS and independent). Data was analysed using Reflexive Thematic Analysis (Braun & Clarke, 2022).

The overarching theme 'Flexibility and Constraint' described how intervention for preschool children with oral comprehension difficulties is a complex and challenging process whereby SLTs respond to sometimes conflicting influences from external drivers, the needs of the child and adults around them, perspectives on who has responsibility for effecting change, and their own perceptions of clinical autonomy. We report a wide variety of practice, with some elements aligning with principles of EBP and theories of language development and disorder, and others deviating from this. The need to be flexible and responsive was frequently in conflict with constraints, most commonly the lack of time, affecting the delivery of individualised intervention. Implications include how SLTs promote the ways in which they are evidence-based practitioners, how they exercise professional autonomy, and how the speech and language therapy profession advocates for its specialist role with preschool children with comprehension difficulties.

References

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Tuesday 9th September - Oral Presentations 10.00 - 11.00

Session 2: Interventions 1

[21] Penny Levickis (The University of Melbourne), Hannah Bryson (The University of Melbourne), Patricia Eadie (The University of Melbourne) and Jon Quach (The University of Melbourne)

Preliminary Evidence of 3-Year-Old Preschool's Impact on Child Language Outcomes: Insights from the Educational and Developmental Gains in Early Childhood (EDGE) Study

Introduction: Current evidence suggests that high-quality preschool programs can benefit children's language development [1-3]. The Educational and Developmental Gains in Early Childhood Study is evaluating the rollout of universal, free 3-year-old preschool in Victoria, Australia, aiming to contribute to international evidence on the impact of two years of preschool on children's developmental outcomes. This paper reports preliminary findings on the benefits of funded 3-year-old preschool to children's language outcomes.

Methods: Using a cohort design, we examined associations between preschool factors and children's language outcomes at the end of 3-year-old preschool. Primary language outcomes were measured using Woodcock Johnson IV subtests (letter-word identification; picture vocabulary; understanding directions). Analysis: Preschool factors, such as funded 3-year-old preschool hours, quality of teacher-child interactions, teacher qualifications, and service-level socioeconomic status were included. The cohort was split into those who scored >1 standard deviation above the mean and those who did not on language outcomes. Logistic regressions were used to examine associations between preschool factors and child outcomes.

Results: Children (n=780) with access to 10-15 hours of funded preschool were four times more likely to score high on Understanding Directions, than those with access to fewer hours. Higher teacher-child interaction quality ratings were associated with higher scores across all subtests.

Conclusions: The study provides promising evidence that both the hours and quality of 3-year-old funded preschool programs are associated with children's oral language skills. Further analyses incorporating detailed attendance data will provide more variability, potentially revealing additional associations between preschool exposure and child outcomes.

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Tuesday 9th September - Oral Presentations 10.00 - 11.00

Session 3: Narrative development

[140] Rosalind Herman (City St George's, University of London), Charlotte Enns (University of Manitoba) and Vera Kolbe (Pädagogische Hochschule Freiburg)

Comparing Narrative Development Across Sign Languages: British Sign Language (BSL), American Sign Language (ASL) and Deutsche Gebärdensprache (DGS).

Background: Narratives involve the recounting of real or imagined events and are an important feature of everyday language interactions. Narrative skills are educationally significant and are associated with reading, mathematics and school success (e.g. Khan et al., 2021). Constructing a narrative is complex and involves a range of skills that develop across the childhood years. Narratives are therefore of value when assessing language acquisition, and assessments are available in many languages, including signed languages. One test of narrative development, the British Sign Language (BSL) Production Test (Herman et al., 2004), has been successfully adapted to other sign languages. Samples elicited in a variety of languages using the same story stimulus offer a unique opportunity to explore crosslinguistic development. This presentation reports the first data on crosslinguistic development of narrative skills in sign languages with a focus on the structural aspect of children's narratives and specific grammatical features.

Method, analysis and research questions: Data were collected using the video story from the BSL Production Test and its adaptations to DGS (NaKomDGS, Kolbe & Becker, 2023) and ASL (ASL EST, Enns et al., 2019). Stories were video recorded from 63 BSL, 81 ASL and 90 DGS users. All participants were deaf, aged 4-11 years, with native or early exposure to a signed language and no additional difficulties impacting language development.

Data were coded for narrative organisation (story structure) and the following grammatical features: depicting verbs, indicating verbs, manner and role shift. Group data were analysed using a generalized additive model (Wood, 2017) to address three research questions:

1. How does the development of narrative structure compare across languages?

2. How do components of narrative structure emerge crosslinguistically?

3. How do specific grammatical features develop with age across languages?

Results and conclusion: Preliminary findings revealed similarities in group mean scores for story structure at each age group across languages. Differences between languages narrowed with age, and variability in scores reduced as children grew older. In line with other research, role shift emerged relatively late, was a predictor of complex development in all languages and use was variable even within the oldest age group. Analyses of the development of depicting verbs, indicating verbs and manner is currently underway and will be included in the presentation.

This information is of value to sign linguists and to professionals working with signing deaf children, including children acquiring more than one sign language, in order to support the development of narrative skills and components of sign language grammar. Further research is needed on the development of other sign languages and across different narrative genres to investigate whether similar patterns are found.

Tuesday 9th September - Oral Presentations 10.00 - 11.00

Session 3: Narrative development

[148] Yanka Bezinska (University of Caen Normandy)

Development of the encoding of conceptual information in speech-gesture relationEvidence from Bulgarian oral multimodal narratives.

Multimodal storytelling is now well-established within the field of research (Berman and Slobin 1994, McNeill 1992, 2005, Capirci et al. 2011, Reig Alamillo et al. 2012, Kunene Nicolas et al. 2016). However, to our knowledge, this issue has never been explored in relation to an analytical, satellite-framed language like Bulgarian.

We investigate age-related changes in the way children and adults conceptualize discursive behavior, both in narrating and gesturing. This allows us to better assess the relative weight of social and cognitive factors in narrative development (Berman 2004). 30 typically developing Bulgarian children aged 5-6 to 9-10 and adults (10 subjects per age group) participated in our study. Each participant watched a speechless short cartoon twice on a laptop. He/she was then asked to retell the story, providing an oral monologue discourse (Colletta et al. 2009). All narratives were annotated for gesture (category, function, temporal synchrony to speech, form, representational strategy), and for language complexity (clause length and type).

Research findings are as follows. First, the length of Bulgarian speakers' narratives increases with age. However, pure narratives are gradually replaced by other discursive practices, such as commenting, interpreting and explaining. Second, average gesture production also improves with age. Nevertheless, when compared with previously reported results, Bulgarian speakers used gestures less frequently in their narratives (adult participants achieved 25 gestures). Third, the strategies observed in gestures (e.g. size and shape, path and manner, handling) also vary according to age group, with gesture metaphors being predominantly utilized in adult speakers.

Tuesday 9th September - Oral Presentations 10.00 - 11.00

Session 3: Narrative development

[155] Eleftheria Geronikou (University of Patras)

The Development of Narrative Retelling in Greek-Speaking Preschoolers: Relationships with Language Skills and Short-Term Memory

Abstract. Narrative retelling reflects a child's ability to comprehend, retain, and reproduce information, playing a key role in communication. Its development relies on linguistic and cognitive skills, yet the relationship between narrative retelling, broader language abilities, and short-term memory remains underexplored.

This study examined the development of narrative skills in preschool-aged Greek-speaking children and their relationship with (a) language comprehension and production skills and (b) measures of short-term memory.

Two groups of typically developing children (ages 3;0–3;5 and 4;6–5;0) were assessed at three time points, six months apart. Narrative skills were evaluated using a Greek adaptation of the Renfrew Bus Story Test. Language skills were assessed using the Diagnostic Test of Verbal Intelligence (DVIQ), including subtests for comprehension, morphosyntactic production, and sentence repetition. Vocabulary was measured with the Renfrew Word Finding Test, and elicited language production with the Renfrew Action Picture Test. Short-term memory was assessed through word list repetition tasks.

Results: Repeated measures ANOVA showed significant development in narrative retelling and language skills over time. Pearson's correlations indicated significant associations between narrative skills, elicited language production, expressive vocabulary and morphosyntactic accuracy. A significant correlation between comprehension and narrative performance was found only in younger children. No significant correlations were observed between narrative skills and performance on short-term memory tasks.

These findings suggest that narrative retelling is strongly related to language production, particularly vocabulary and morphosyntax. Implications for intervention emphasize strengthening linguistic skills to enhance narrative performance.

Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 1: Language Development 1

[85] Ciara O'Toole (University College Cork), Máire Mhic Mhathúna (Technological University Dublin), Deirdre Horgan (University College Cork) and Jennifer Uí Dhuibhir (University College Cork)

Developing Minority Language Immersion Education Modules for Early Years Educators: A Model from the Irish Language Context

Abstract. Early childhood education in a minority language is an important part of maintaining and transmitting heritage languages (Baker & Wright, 2021). However, it also presents unique challenges for educators to cater for L1 heritage speakers who require mother-tongue support and enrichment and L2 learners in the same setting (Hickey, 2021). The overarching aim of this study was therefore to develop a training programme for educators in a minority immersion setting.

The first phase established the views and needs of educators, parents and children in early immersion settings (naíonra) across Ireland. We then took these views and developed a pilot online training programme based on Teacher Talk: (Greenberg & Weitzman, 2002) from the Hanen centre in Canada and drawing on the literature relating to developing a heritage language. 12 EYEs took part in three group-based sessions and one individual video-feedback coaching session related to interaction and language development. We rated before and after changes in their interaction and language promoting strategies using the Teaching Interaction and Language Rating Scale (Girolametto, Weitzman & Greenberg, 2000) from video data and gathered qualitative feedback. Data collection will be complete by the end of March 2025.

Preliminary data indicates that the educators improved how they interacted and promoted language development, but wanted more specific information on how to encourage minority language development, particularly for children with language delays. We will use the results to further refine the programme and increase the training for early year's educators in Irish immersion language contexts.

Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 1: Language Development 1

[144] Sandra Mathers (University of Oxford), Keeley Dobinson (University of Oxford), Elizabeth Hewitt (University of Oxford), Wendy Lee (Lingo) and Julie Dockrell (University College London, Institute of Education)

Capturing and coding adaptive language-supporting practice in early years settings

Early language underpins later learning but many children (particularly disadvantaged children) start school with below average language skills. Supporting Early Years Practitioners in fostering language development is crucial to address these gaps. Adult input, including interactive, linguistic, and conceptual elements, promotes language growth (Rowe & Snow, 2020). However, evidence shows current early years practice may be inadequate to nurture child language skills. While in-service professional development (PD) shows promise in improving practice, current programmes are inconsistent in quality and impact. There is a pressing need for more evidence-based PD and to understand the mechanisms of change through PD. The Talking Time intervention aims to meet this need, offering evidence-based activities for children and PD for educators. It is being evaluated via a randomised controlled trial (n=123 settings). Recordings of small group activities are being gathered and coded at pre-/post-test and during delivery to establish current practice in English settings and the impact of Talking Time.

Findings will help inform workforce development priorities and guide future PD design. Most current fine-grained coding studies assess practice through counts of specific techniques (e.g. open questions) associated with improved child outcomes. While useful, this does not capture whether such practices were appropriately applied or whether educators adjust the level of challenge in response to the children. Building on the work of pioneers in the field (e.g. Deshmukh et al. 2022), we aim to extend methodology in assessing adaptive language-supporting practice. In this talk we will present the findings of our development and pilot work.

Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 1: Language Development 1

[25] Laura Chambers (Durham University), Qi Xiaofei (Durham University), Victoria Menzies (Durham University), Nadia Siddiqui (Durham University), Dandan Chen (University Of Edinburgh) and Rowan Van Muysen (Northumbria University)

Using the WellComm Early Years Tool kit to Assess the language and communication skills of two to three year old children as part of the evaluation of Early Years Conversation Project.

Introduction: The Early Years Conversation Project (EYCP) is a professional development programme supporting early years practitioners to promote children's language and communication skills (James, 2022). The efficacy of the EYCP is being evaluated in a two-armed cluster randomised waitlist-control trial (Qi et al., 2023). The effect of EYCP on the language skills of two- to three-year-old children is measured using the WellComm Early Years Toolkit (GL Assessment 2012).

The WellComm screening tool is norm referenced and provides a measure of the language children (from 0-6 years) use and understand through direct testing and practitioner report. It is one of few holistic language assessments designed for 2-year-olds which can be administered at scale. There is limited evidence of its validity, reliability and suitability in a research process.

Methodology: Using a grounded theory approach, we examine data collected during and following the assessment of more than 400 children (2-3-year-old) (test item responses, fieldwork observations and interviews with assessors).

Results and discussion: Results emerging in three areas will be discussed:

The validity and reliability of the WellComm Toolkit as a measure of young children's language and communication skills including consideration of the use of test stimuli, and cultural appropriateness.

The suitability of the WellComm Toolkit as a tool for research particularly considering the scoring differences across different sections of the assessment.

Challenges associated with conducting formal assessments with this population which include the physical environment, reluctance of children to engage with researchers and involvement of practitioners with the assessment.

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Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 1: Language Development 1

[22] Patricia Eadie (The University of Melbourne) and Penny Levickis (The University of Melbourne)

Educational Outcomes and Post-School Aspirations in the Early Language in Victoria Study Cohort

Background: Describing the educational outcomes of a diverse group of children with a range of language abilities can map potential pathways and identify necessary school supports. This presentation draws on longitudinal data from a community-based cohort of Australian children followed from infancy to adulthood.

Method: Participants were categorised into two groups based on performance on the CELF-4 receptive and/or expressive scales at 7- and/or 11-years:

1) Low Language (LL) group: standard scores >1.25 SD below the mean

2) Typical Language (TL) group: standard scores ≤1.25 SD above the mean

Academic performance at the end of secondary school (SS) and post-school aspirations were compared between these groups.

Results: Most young people completed SS (N=374; 96%). A chi-square test showed the proportion of young people who completed SS was greater for the TL group (97.0%) than the LL group (88.6%; p=.03).

Self-reported ATAR scores (rank of overall SS academic performance of Victorian students) averaged 79.4 for the TL group and 71.7 for the LL group (p=0.05), both above the state average (70).

University aspirations were higher in the TL group (74.4%) than the LL group (48%). A larger proportion of the TL group (83.8%) reported receiving university offers compared to the LL group (63.3%). Additionally, 25% of the LL group reported being offered vocational training post-school.

Conclusion: Despite slightly lower SS outcomes, the LL group performed relatively well academically. Similar proportions of both groups pursued further education/training, highlighting positive outcomes for young people with LL and the value of diverse post-school pathways.

Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 1: Language Development 1

[93] Nicola Botting (City St George's, University of London), Chelo Del Rosario (City St George's, University of London), Jane Flynn (City St George's, University of London), Catherine Davies (University of Leeds), Nayeli Gonzalez-Gomez (Oxford Brookes University), Alexandra Hendry (University of Oxford), Elisabeth Hill (City St George's, University of London), Michelle McGillion (University of Warwick), Rebecca Moss (City St George's, University of London), Reimers Stian (City St George's, University of London), Laura Shapiro (Aston University) and Lucy Henry (City St George's, University of London)

Language and executive functioning in 4-year-old children who were born-in-lockdown: Preliminary data from the BICYCLE study.

Some research has indicated that young children who were growing up (or born during) the COVID-19 pandemic lockdowns may be experiencing longer-term impacts on their language skills (Zuniga-Montanez et al., 2024). Less is known about pandemic-related effects on executive functioning in young children, although indicative evidence suggestive of difficulties is emerging (Hendry et al., 2022; Lopez et al., 2024; Polizzi et al., 2021).

The Born in Covid Year – Core Lockdown Effects (BICYCLE) study investigates language and executive functioning outcomes in children born in England during the most stringent lockdown (Spring to early Summer 2020). This group experienced unprecedented disruption to their early social and communicative experiences over the first year of life.

This presentation will report on findings from the born-in-lockdown sample of the BICYCLE study. It will consider a range of standardised measures that assessed expressive and receptive language, non-verbal IQ, as well as parent-reported executive functioning and motor skills. Results will be based on data from 200 children born-in-lockdown at 4 years of age, who have been assessed both online and in person. Comparisons between this group's scores and expected population norms will be considered at an individual and a group level. The findings will be interpreted with respect to the concept of 'vulnerable classrooms'.

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Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 2: Language Disorders 1

[117] Helen Spicer-Cain (City St George's, University of London), Nicola Botting (City St George's, University of London) and Abigail Moran (City St George's, University of London)

Communication Skills of Children at Increased Likelihood of Language Impairment in Infancy and at School Age

Background

There is a large previous literature focusing on the development of communication skills in children who have autistic family members; however, less attention has been given to children who have family members with a history of language and/or literacy disorders. Previous research suggests that communication skills may be an area of difficulty for at least some children in this group, but more information on their skills is needed, to allow for early identification of children who have may need intervention to support communication development. This early identification is an important part of preventing potential negative sequalae associated with communication difficulties.

Methods

Twenty-three infants at increased likelihood of language and/or literacy disorder were recruited at age 8-22 months, and 20 of the children were assessed again at the age of 6-8 years. Their results on a range of standard measures of language and communication skills are compared to a group of average likelihood children also recruited in infancy and followed up at early school age.

Results

Differences between increased likelihood and average likelihood children were limited in infancy, but typical associations between language and social communication measures were absent. In addition, although typical range language skills as measured by formal assessment were seen in the increased likelihood group at school age, parents reported greater levels of communication difficulties on questionnaires than for the average likelihood group.

Conclusion

The potential communication profiles of this group will be discussed, along with recommendations for clinical practice and future research, including the need to consider parental concerns as well as formal assessment information.

Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 2: Language Disorders 1

[12] Faidra Faitaki (University of Oxford), Sophie Liggins (University of Essex) and Victoria Murphy (University of Oxford)

Is a drama-based oral language intervention successful and effective? A pilot study

Children's oral language skills at the earliest stages of education can determine their success at school later on (Haley et al., 2017). This issue is particularly important for children with English as an Additional Language (EAL), who tend to lag behind their monolingual peers in terms of oral language (Demie, 2018). Developing oral language is achievable through targeted intervention (e.g., Dixon et al., 2022; Fricke et al., 2017; West et al., 2024). Drama can be a suitable intervention medium, but its potential has not been extensively evaluated to date. This paper focuses on a pilot study conducted to assess the success and potential effectiveness of an eight-week drama-based intervention for improving EAL and non-EAL children's skills in English. 41 children in Years 1-3 (between 6-8 years old) took part. Of these, 21 (12 of whom had EAL) completed the intervention, while 20 acted as a control group. Quantitative data (i.e., oral language assessments administered before and after the intervention) and qualitative data (i.e., interviews held before and after the intervention and observations held during the drama workshops) were collected. No significant differences in the oral language assessments were found between EAL and non-EAL learners, or between the intervention group and the control group at the end of the intervention. However, the qualitative measures suggested that the workshops were enjoyable and helped children develop their confidence, self-expression, and leadership skills. Based on these findings, a drama-based intervention can be arguably successful, but more evidence is required to ascertain its effectiveness.

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Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 2: Language Disorders 1

[69] Helena de Vries (University of Amsterdam), Caitlin Meyer (University of Amsterdam), Alla Peeters-Podgaevskaja (University of amsterdam) and Judith Rispens (University of Amsterdam)

Can children with DLD count on their linguistics abilities? The relation between numeral acquisition and morphosyntactic cues in DLD.

Various studies have shown that grammatical number marking and derivational rules (i.e., six-th, six-ty) help children discover the productive counting procedure and meanings of ordinals and cardinals (e.g., Almoammer et al., 2013; Schneider et al., 2020; Meyer, 2019). As children with Developmental Language Disorder (DLD) often have difficulties with morphosyntax, it is likely that they cannot use these linguistic cues to the same extent as TD peers. The present study tested this hypothesis by comparing the performance of 27 Dutch-speaking kindergartners with DLD (4;04-6;09) to those of 42 TD peers (4;03-6;04) on four number tasks: rote counting, Next Number (e.g., Schneider et al., 2020), Give Me (Wynn, 1992), and Tell Me (Meyer, 2019). Additionally, we explored to which extent non-verbal and verbal background measures predicted number abilities in both groups. Results replicated previously reported difficulties with counting in children with DLD (e.g., Cross et al., 2019), and revealed that they also experience significant delays in the acquisition of ordinals. Group differences were mediated by scores on phonological processing, grammatical abilities and passive vocabulary. Furthermore, our qualitative analysis identified distinct error patterns in the two groups. Most notably, children with DLD often interpreted ordinals as cardinals, an error rarely made by TD peers, and similar differences were observed in production. We argue that these patterns suggest that children with DLD do not benefit from morphosyntactic cues as much as TD children when learning numerals. As such, the present study contributes to our understanding of verbal numeracy deficits associated with DLD.

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Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 2: Language Disorders 1

[111] Nicola Dawson (Moor House School/University of Oxford), Hilary Nicoll (Moor House School), Helena Osana (Concordia University), Anne Lafay (Université Savoie Mont Blanc), Mélanie Barilaro (Concordia University) and Susan Ebbels (Moor House School)

Linguistic simplification strategies for maths word problem solving in children and adolescents with developmental language disorder (DLD).

Mathematical word problems are common in materials used for teaching and assessing maths ability and are among the most challenging problem type that children encounter (Daroczy et al., 2015). The linguistic complexity of word problems means that they are likely to pose considerable difficulties for children with developmental language disorder (DLD). We investigated how different strategies for simplifying the language of maths word problems supports children and adolescents with DLD in identifying and solving problem structures. We examined how these effects are influenced by the alignment between the problem structure and the terminology used in the question (e.g., whether 'more' signals an addition or subtraction operation). Children and adolescents with DLD (n = approximately 150; age range 7-19 years) were recruited from a specialist educational setting. Eligible participants who passed an initial arithmetic screener completed 12 word problems, each presented four times to incorporate three cumulative language simplifications. Outcome measures were 1) ability to identify the numerical problem to be solved and 2) accuracy in solving the problem. Accuracy on both outcome measures will be analysed using generalised linear mixed effects models. We will investigate effects of cumulative language simplifications on accuracy and examine whether this varies according to the alignment between the problem structure and terminology. We will also report the relative contribution of each simplification strategy and combination of strategies. Our findings will inform both theory and practice regarding the challenges faced by children with language disorders when completing maths tasks that contain complex verbal content.

Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 3: Word Learning & Processing

[9] Berit Sander (University of Cologne) and Martina Penke (University of Cologne)

The influence of a sensorineural hearing impairment on the acquisition of verbal agreement inflection in German-speaking children.

Children with a perinatal bilateral sensorineural hearing loss have only limited access to spoken language input, which results in difficulties in spoken language acquisition. Regarding language perception, high-pitched sounds have gained increasing attention over the past decades (Monson et al., 2014; Stelmachowicz et al., 2004), and research has shown that the production of high-pitched morphological markers is affected (Hammer & Coene, 2016; McGuckian & Henry, 2007). Along with this, previous research on German-speaking children has reported selective deficits of the verbal agreement markers –st and –t (2nd and 3rd person singular) in contrast to the better perceivable 3rd plural affix –n (Penke et al., 2016). However, the reported data mainly cover the acquisition of verbal agreement inflection in young monolingual German-speaking children, aged three-to-four years, who are using hearing aids.

Here we present data from a more diverse group of German-speaking children to expand the available data base:

- 16 monolingual children treated with bilateral hearing aids aged 5-to-8 years,
- 22 monolingual children using bilateral cochlear implants,
- 17 bilingual hearing-impaired children aged 4-to-7 years

The data show that the previously reported selective problems in producing verb forms inflected with the suffixes -st and -t characterises the performance in each of the three groups of tested children (see table 1).

This suggests a deficit that characterizes the acquisition of verbal agreement inflection in monolingual as well as in bilingual German-speaking children with a sensorineural hearing impairment, independent from the treatment with hearing aids or cochlear implants. We will show that this deficit is related to the perception of word-final, high-pitched obstruents and discuss implications for treatment.

Table 1: Overview of data

Group	*N*	sex	Mean I.Q.* (range)	Mean age at testing (range)	AT in dB (range)	Mean age at HA fitting (range)	Mean correctness for affixes *-st* and *-t*	Mean correctness for affix *-n*
Mono-HA	16	6 m, 10 f	104 (83–120)	6;10 (5;1–8;0)	30 (19–43)	1;10 (0;4–4;0)	84.8%	95.9%
Mono-CI	22	9 m, 13 f	106 (80–134)	5;2 (3;8–7;1)	30 (21–38)	1;3 (0;4–3;10)	62.3%	93.6%
Bilingual	17	8 m, 9 f	98 (81–123)	5;10 (4;2–7;1)	30 (19–40)	1;10 (0;4-6;1)	35.9%	70.5%

Note. HA: hearing aid; CI: cochlear implant; AT: aided thresholds; I.Q.*, value corrected for the Flynn effect; age information given as year;month

Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 3: Word Learning & Processing

References

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Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 3: Word Learning & Processing

[37] Alina Villalva (FLUL, CLUL, The Word Lab) and Carina Pinto (IPSetúbal, IPleiria, ciTechCare, CLUL, The Word Lab)

Morphological Knowledge in Lexical Access in School-Age Children: Evidence from a Word Association Test and a Lexical Decision Task

This study investigates the role of morphological knowledge in lexical access among school-age children using a word association test (Villalva & Pinto, submitted; Villalva et al., submitted) and a lexical decision task. These tests included five series of nouns, matched for syllable length and distributed across three frequency levels. Results indicate that simple agentive nouns (e.g., palhaço 'clown') had the weakest performance in both establishing semantic or morphosemantic relationships with other words and in reaction time. In contrast, denominal agentive nouns (e.g., pedreiro 'bricklayer') showed the best performance, with stronger word associations and faster reaction times, followed by attested (e.g. patinador 'skater') and unattested (e.g., chorador 'weeper') deverbal agentive nouns. Among the derived nouns, plant names formed with a homophonous suffix (e.g., tomateiro 'tomato plant') had the weakest results, though still outperformed simple nouns. These correlations remained consistent across the three age groups, with improvements attributed to schooling. The findings suggest that lexical access within the same semantic field (agentive nouns) is facilitated by the presence of a derivational suffix. Furthermore, prior word knowledge appears to have little impact, as attested and unattested words exhibited similar behavior. Finally, an item-by-item analysis revealed that validated responses to simple stimuli were predominantly semantic, whereas responses to derived stimuli were primarily morphosemantic—except in cases where stimuli appeared lexicalized, leading to an increase in semantic responses. To ensure robust control, a group of adults was also included to qualitatively assess the development of lexical and morphological processing.

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Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 3: Word Learning & Processing

[48] Julia Carroll (University of Birmingham), Tanvir Ahmed (Coventry University) and Sian Alsop (Coventry University)

Developing a new Expressive vocabulary measure for Early Years: the Informal Definitions task.

We know that vocabulary is one of the most important predictors of later language and literacy attainments, and that storybook reading is a source of wider vocabulary than is typical of spoken language directed to preschool children.

It is vital to have a sensitive measure of vocabulary growth during the preschool phase, and aligning this to storybook language is also useful. Standard measures of preschool vocabulary tend to involve picture naming tasks (e.g. the Expressive Vocabulary Test) or picture recognition tasks (e.g. the British Picture Vocabulary Scale). This limits vocabulary testing to words that can be unambiguously pictured (typically nouns and a few verbs). However, many of the most useful words children learn in this period do not fall into these categories, including prepositional words (e.g. under, behind, through) and adjectives (e.g. tiny, lonely, scary).

This presentation describes our work to create an expressive vocabulary measure for this age group using the framework of Hadley et al.'s (2016) Informal Definitions task.

This measure asks children to express word meanings through gestures, actions, verbal descriptions and examples, allowing us to include a wide range of words. Responses are recorded and scored on a scale of 0 to 2. The words used in this expressive measure were selected through corpus analysis of commonly used storybooks in Early Years settings, covering verbs, prepositions, adjectives, and nouns. The measure underwent a two-stage standardisation process, focusing on item selection and construct validity respectively.

The new informal definitions task exhibited satisfactory internal and test-retest reliability and construct validity. We will discuss the benefits and limitations of using this task in comparison to existing standardised measures of vocabulary.

Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 3: Word Learning & Processing

[61] Ivan Au (University of Oxford), Elizabeth Wonnacott (University of Oxford) and Victoria Murphy (University of Oxford)

The Developmental Trajectory of Polysemy And Its Impacts On Children's Linguistic Development: A Systematic Review

Polysemy, the phenomenon where a single word carries multiple different but related meanings, makes evident our ability to use words flexibly by extending their meanings. There is evidence that knowledge of polysemy benefits comprehension and production, and an ability to align polysemous senses into patterns and coin novel senses expands children's vocabulary depth (Nation, 2022) and facilitates lexical development (Srinivasan et al., 2019). However, research has documented individual differences in relation to polysemy types and children's language status (e.g., English as an additional language (EAL) and English monolinguals (EL1)). While learning a polyseme offers children the advantage of using more than one meaning (Pouscoulous, 2023), others reported weaknesses in making generalisations to new contexts (Booton et al., 2022; Carston & Yan, 2023). This pre-registered systematic review is the first to gather cross-disciplinary contrasting evidence by examining the extent and nature of research investigating the developmental trajectory of polysemy as well as the impact(s) of interventions which include a focus on polysemy. 23 eligible studies were identified following database searches and dual-reviewer screening. Our narrative synthesis and quality appraisal indicate that children's polysemy comprehension is more extensively studied than production. There is an EL1-over-EAL advantage and a trend, starting at the age of 2, whereby children demonstrated a better mastery of polysemy with meanings that follow generalisable patterns (e.g., metonyms) than those that may not (e.g., metaphors). The heterogeneity and lack of quality research on the teaching of polysemy point to a need for more robustly designed intervention and replication studies.

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Tuesday 9th September - Oral Presentations 11.15 – 13.00

Session 3: Word Learning & Processing

[87] Sophie Lund (Lancaster University), Charlotte Rothwell (Manchester University), Padraic Monaghan (Lancaster University) and Calum Hartley (Lancaster University)

A meta-analysis of word learning in autistic and neurotypical children: Distinguishing noun-referent mapping, retention, and generalisation

Autism is often characterised by significant language comprehension impairments. Differences in how autistic children learn words – including noun-referent mapping (unambiguous and referent selection), storage in long-term memory (retention), and extension of labels to novel referents (generalisation) – may explain their difficulties acquiring language. The present meta-analysis serves to profile the nature of differences between autistic and neurotypical children's word learning and elucidate whether these differences are predicted by variations in experimental design, participant characteristics, or sample matching. A systematic literature search identified 40 studies investigating novel noun learning, containing 217 effect sizes, representing data from 1221 autistic children and 1445 neurotypical children. Multilevel models revealed that autistic children were significantly less accurate in their word learning than neurotypical children (Hedges' g = 0.26, CI[0.08…0.43]). However, when analysing processes individually, a significant difference was detected for referent selection (Hedges' g = 0.31, CI[0.08…0.55]), but not unambiguous noun-referent mapping (Hedges' g = 0.08, CI[-0.05…0.21]), retention (Hedges' g = 0.38, CI[-0.41…1.17]), or generalisation (Hedges' g = 0.28, CI[-0.05…0.60]). Additionally, group differences in word learning were moderated by task requirements, participant characteristics, and sample matching. There was inconsistent evidence regarding publication bias for referent selection and retention, and some evidence of methodological bias for some measures. Our findings suggest that autistic children may principally struggle with disambiguating novel word meanings, presenting a clear target for interventions. Differences between autistic and neurotypical children were also smaller under specific environmental factors, providing direction for future research exploring how educational environments can influence autistic children's vocabulary acquisition.

Tuesday 9th September Symposia 14.30 – 15.45

Session 1 Sympoisum: ***Enhancing deaf children's language in bilingual settings: contributions from Education, Speech-Language Therapy and Linguistics.***

[98] Felipe Venâncio Barbosa (University of São Paulo) and Maria Mertzani (University of Campinas).

The way languages are used is central to discussions about deaf children's education. Since the 19th century, professionals in Education, Linguistics, and Health have engaged in debates about which languages should be made available to deaf children and how they should be implemented in teaching and learning processes. This symposium brings together perspectives from these fields to explore effective approaches for supporting language development in deaf children within bilingual educational environments. To this end, it features four papers by researchers from Brazil and Italy, which present innovative ways of teaching languages to deaf children, along with a critical discussion on educators' training for bilingual deaf education.

Paper 1: Signed picturebooks and early sign language literacy in deaf education

Maria Mertzani, Ivanice Dornelles Ferreira

Law 14.191/2021 supports bilingual education for deaf children in Brazil, requiring Brazilian Sign Language (Libras) as the first language (L1) and Portuguese as the second (L2). However, the absence of a national curriculum has resulted in Libras being taught primarily within Portuguese classes, often without appropriate educational resources. This study conducted in a special school in the city of Santa Cruz do Sul, in the State of Rio Grande do Sul (RS) to examine the teaching and learning of sign language literacy (Mertzani, 2022; Mertzani & Barbosa, 2024) of four deaf students in an early literacy classroom of primary education. Data were collected through 13 semi-structured interviews with the hearing teacher - interpreter in Libras and classroom logs (September–December 2024). The study utilised a series of signed picturebooks developed during the "Libras em primeiro" project (2022 - 2024), funded by FAPERGS (in Portuguese, A Fundação de Amparo à Pesquisa do Estado do Rio Grande do Sul), within the Language Postgraduate Program at the University of Santa Cruz do Sul. Findings indicate that the teacher implemented direct, explicit instruction, using "read-alouds" of Libras to promote early skills (e.g., vocabulary, comprehension). Based on this instruction, children frequently displayed behavior involving the target vocabulary (e.g., imitating and signing the target signs, noticing signs in print). Also, children's pre- and post-test results suggest the potential benefit of incorporating literacy activities into the early literacy classrooms. The study highlights the importance of structured Libras instruction and specialised resources in early literacy classrooms.

Keywords: Sign Language Literacy. Bilingual Deaf Education. Libras. Emergent literacy.

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Tuesday 9th September Symposia 14.30 – 15.45

Session 1 Sympoisum: ***Enhancing deaf children's language in bilingual settings: contributions from Education, Speech-Language Therapy and Linguistics***

Paper 2: Metalinguistics to teaching Portuguese as a second language in a bilingual intervention program for deaf learners

Felipe Venâncio Barbosa, Ivani Rodrigues Silva

The Brazilian legislation for Deaf Education recognizes the importance of ensuring the teaching of Portuguese as a Second Language for deaf children. Nevertheless, there is still limited research on assessment and teaching strategies, as well as a lack of didactic materials developed for this purpose. This study presents data from five deaf children who attended weekly a bilingual school support program with Speech and Language Therapists and Deaf Language Specialists. The interventions were based on a children's story designed to raise awareness of the syntactic structures of both sign language and Portuguese. This paper examines the children's perception of the story in Libras, their meaning-making in written Portuguese, and their metalinguistic reflections on both languages during the bilingual intervention. To this end, we analysed the bilingual intervention process along with the children's signed and written productions through video and written recordings. Data show an increase in the understanding of the syntactic structures of Portuguese, facilitated by metalinguistic reflection in sign language. The structured presentation of the story in smaller parts, with temporal and logical organisation, supported the children's story retelling in Libras and positively influenced their written Portuguese production. The reflections demonstrated by the children in the literacy phase point to the need to rethink bilingual deaf education, with future projects sensitive to the cultural, social and linguistic plurality of today's world, considering the heteroglossic potential of language practices in society.

Keywords: Metalanguage. Sign Language Literacy. Bilingual Deaf Education. Libras.

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Tuesday 9th September Symposia 14.30 – 15.45

Session 1 Sympoisum: *Enhancing deaf children's language in bilingual settings: contributions from Education, Speech-Language Therapy and Linguistics*

Paper 3: "Hora da Libras": a digital game for developing Brazilian Sign Language as a first language in Bilingual Speech-Language Therapy

Priscila Starosky, Carolina Magalhaes de Pinho Ferreira

A digital game was developed within the context of Bilingual Speech-Language Therapy (SLT), based on visual pedagogy. Few technologies focus on teaching Libras as a first language (L1), while prioritising the visual experience of deaf users without relying on Portuguese. This study presents the development and validation of a digital game designed to teach Libras as L1. The game was created using the Design Thinking methodology, based on the linguistic needs of deaf children from hearing families. Currently, it is being implemented in three bilingual SLT services and at the National Institute for the Education of the Deaf. For validation, an adapted version of the Suitability Assessment of Materials questionnaire was used to assesses content, digital and Libras literacy, illustrations, linguistic structures, motivation and cultural appropriateness. The "Hora da Libras" game was initially designed to enhance vocabulary and phonological awareness, through engaging playful challenges that involve associations between images, between images and Libras signs, and between signs and two phonological parameters. A total of 19 children and adolescents used the game in bilingual SLT, family, and classroom settings. Following screen usage guidelines, the game was supervised by 15 adults who answered the questionnaire. Although four out of six assessed areas were deemed adequate, areas for improvement were identified, including illustrations, ranking, navigation, vocabulary and the game icon. The game shows strong potential as a tool for developing Libras as L1. The next version will expand the language levels and introduce an interface for users to create custom playful challenges for further learning experience.

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Tuesday 9th September Symposia 14.30 – 15.45

Session 1 Sympoisum: ***Enhancing deaf children's language in bilingual settings: contributions from Education, Speech-Language Therapy and Linguistics***

Paper 4: Italian Sign Language in teacher's education: state of the art and critical topics for development

Maria Tagarelli De Monte

Since its formal recognition in 2021, Italian Sign Language (LIS) and interpreters' education have become key topics in higher education. Starting in April 2022, Italian universities have been invited to present their proposals to create sign language courses for interpreters' training for both LIS and tactile LIS. Due to this change in perspective, studies on sign language are multiplying across the country, with increasing courses being offered each year. This growing interest in sign language education has also fired discussions on deaf education in schools, particularly regarding the preparedness of school teachers and educators towards this special group of learners. Along with experimental LIS classes at school aimed at creating inclusive environments for deaf children, new research initiatives and training courses are being proposed to equip communication assistants and special teachers. This contribution provides a critical insight in Italian deaf education, examining both mainstream and special settings. The study presents the results of a research conducted in the North-Eastern region of Friuli-Venezia Giulia, providing insights into the daily experiences of deaf children and their teachers at school. It highlights how imbalances in sign language training, in multilingual settings, result in increased difficulties in deaf education.

Keywords: Bilingual Deaf Education. LIS. Teachers Trainning.

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Tuesday 9th September Symposia 14.30 – 15.45

Session 2 Symposium: *The interaction of perception and production in early vocal development*

[77] Catherine Laing (Department of Language and Linguistic Science, University of York, UK), Irene Lorenzini (Université Paris Nanterre & Integrative Neuroscience and Cognition Center, Université Paris Cité & CNRS), Luis Muñoz (University of Oslo, Norway), Khalid Hudhayri (Department of Language and Linguistic Science, University of York, UK) and Tamar Keren-Portnoy (Department of Language and Linguistic Science, University of York, UK).

In adults, tiny alterations in auditory feedback in perception cause adjustments in production (Houde & Jordan, 2002), indicating a sensorimotor mechanism in language processing. Despite compelling evidence for this mechanism in adulthood, little is known about sensorimotor integration in infancy. Thus, current developmental models lack a mechanism that is part of the adult perceptual endowment. Existing work suggests that articulatory developments shape infant speech perception: in prebabbling infants, inhibiting the articulators impedes discrimination of consonant contrasts (Choi et al., 2019). In babbling infants, those with larger babble repertoires show perceptual preference for consonants they do not yet produce (DePaolis et al., 2011). This reveals a sensorimotor mechanism at work, but how this shapes development is not yet understood. We present four studies that advance our understanding of this mechanism in vocal development. With four methodological approaches (EEG, observational, eye-tracking, RCT), including longitudinal and cross-sectional perspectives across three languages, we present experimental work testing the early sensorimotor mechanism, and observational work applying this to ecologically-valid settings. Applied contexts demonstrate findings with realworld application, from non-nutritive sucking to improving language outcomes of children with Down Syndrome. Overall, this symposium offers a comprehensive overview of sensorimotor integration in infancy across contexts and populations.

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Tuesday 9th September Symposia 14.30 – 15.45

Session 2 Symposium: *The interaction of perception and production in early vocal development*

Presentation 1: The effect of babbling on speech perception (an Event-Related Potentials study)

Seminal studies have shown improvements in speech sound perception following the onset of their production1,2, thus suggesting that babbling might involve a perceptual reorganisation linked to the setting of perception/production loops, coherently with multisensoriality in adult perception3 . This developmental pattern has never been directly addressed in a neurofunctional design. To fill this gap, we compared electrophysiological signatures of speech sound discrimination before and after the onset of their production. Ten-month-old infants participated in a multi-feature oddball paradigm recording ERPs with 11 active electrodes (F7, F3, Fz, F4, F8; C3, Cz, C4; P3, Pz, P4). Standard syllables "pa" were presented 80% of the time; deviant stimuli ("ta"; "ka") were presented 10% of the time and fell either within or outside participants' production patterns. The target sounds were selected based on a preliminary parental survey. Then, for each participant, babbling was homerecorded and 90-minute samples were human-annotated to collect individual production patterns.

The study assessed differences in the ERPs elicited by produced vs not-yet-produced speech sounds. Preliminary results (20 participants) did not reveal differences for produced vs notyet-produced consonants, however, they showed a tendency towards better overall discrimination for both deviants in participants with more advanced production (participants who, in babbling, already produced two out of the three target sounds vs. participants producing 1 to 0 target sounds). Testing and analysis (babbling annotation) are ongoing for an additional 15 participants (current group size = 35), and we aim to complete the group by the time of the conference (N=50).

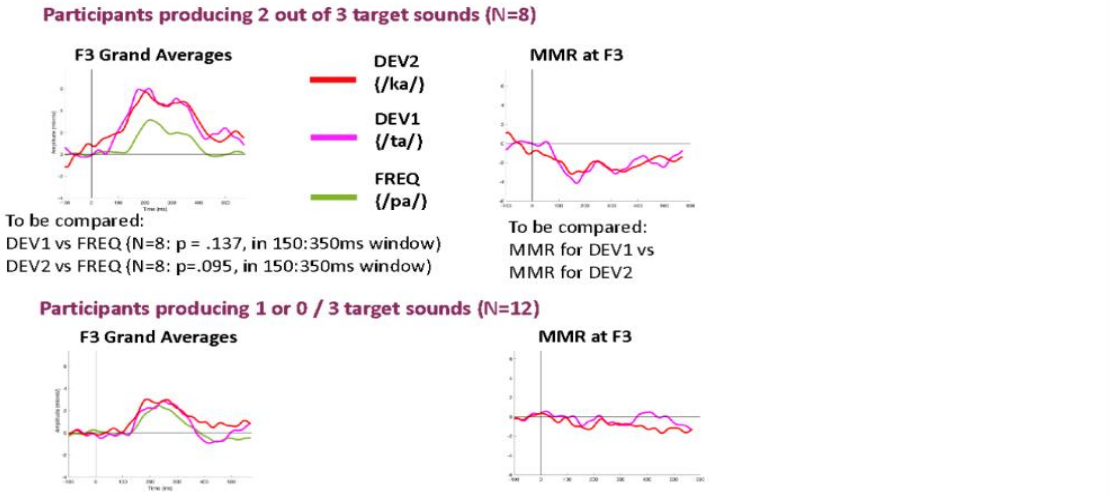

Fig. 1 Preliminary results (grand averages and Mismatch Response at F3, MMR)

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Tuesday 9th September Symposia 14.30 – 15.45

Session 2 Symposium: *The interaction of perception and production in early vocal development*

Presentation 2: Listening with the mouth: Infants' articulatory movement during speech perception

Bruderer et al. (2015) showed that infants distinguished /ɖ/ and /d̪/ when their articulators were not inhibited. They, however, failed to perceive the distinction when their tongue movement was restricted by a flat teether, implying that infants move their articulators while perceiving speech. Hickok and Poeppel (2016) challenged this implication claiming that the discrimination failure could have resulted from having a foreign object in the mouth, diverting the attention from detecting the difference. Building on this debate, we investigate whether infants move their articulators while hearing speech by analysing videos from 17 English-acquiring infants, collected by Bergelson & Aslin (2017). These videos feature twelve-month-old infants interacting with their mothers at home; the mothers wear a hat mounted with a camera that is directed at the infants' faces as they look at them. Using ELAN, we analyse infants' articulatory movement in two conditions: 1) while the mother is talking to the baby, and 2) while the mother is looking silently at the baby. If infants move their articulators during speech perception, they should attempt more articulatory movements in the first condition. Furthermore, we will investigate whether visual access to the speaker's articulators influences infants' articulatory movement. To that end, we will compare the babies' articulatory movement when they are looking at the mother and looking away while she is talking. if the mother's mouth movement isn't what is triggering any possible articulatory movement, the infant's movements should be the same whether or not they are looking at the mother.

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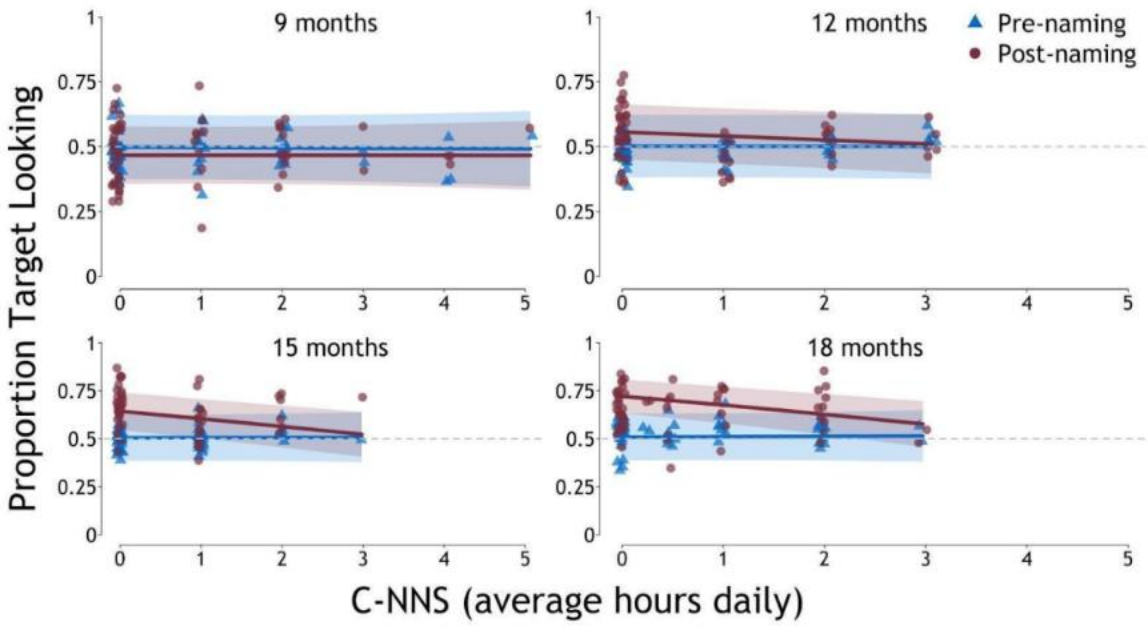
Tuesday 9th September Symposia 14.30 – 15.45

Session 2 Symposium: ***The interaction of perception and production in early vocal development***

Presentation 3: Pacifier Use is associated with reduced word comprehension in early childhood

Non-nutritive sucking (NNS) behaviors, such as pacifier use and thumb sucking, are commonly observed in infants and have been linked to both positive and negative developmental outcomes. While NNS is known to reduce distress in infants, sustained NNS has been reported to be negatively associated with parent-reported measures of vocabulary development (Muñoz et al., 2024). The present longitudinal study extends the afore-mentioned study and examined associations between NNS and direct measures of word comprehension in a sample of 69 Norwegian infants. Parents reported NNS use concurrently (C-NNS) when their infant was 9-, 12-, 15- and 18-months-old, which was used to derive two additional measures of NNS: average lifespan use (L-NNS), and relative changes in NNS over time. Word comprehension was assessed directly via an eye-tracking preferential-looking task and vocabulary size indirectly, through parental reports using the Communicative Developmental Inventories (CDIs). Neither L-NNS nor changes in NNS over time were significantly associated with either direct or indirect measures. However, greater C-NNS was associated with reduced word comprehension in older infants during the post-naming window, as measured in the eyetracking task ($z = 2.115$, $SE = 0.03$, $p = 0.03$; see Figure 1). These findings extend Muñoz et al. (2024) and suggest that greater NNS is negatively associated with direct measures of word comprehension in older infants. These findings extend Muñoz et al. (2024) and provide additional evidence on the role of NNS in language acquisition.



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Tuesday 9th September Symposia 14.30 – 15.45

Session 2 Symposium: *The interaction of perception and production in early vocal development*

Presentation 4: A caregiver-led intervention to encourage vocalisations and facilitate word learning

For typically-developing infants, gaining experience in speech sound production may facilitate early word production (McGillion et al., 2016). Infants with Down syndrome are not very vocal (Parikh & Mastergorge, 2018) and are at risk for language delay (Zampini & D'Odorico, 2013). Encouragingly, Yoder et al. (2014) found that promoting vocalising in infants with Down syndrome may lead to earlier word production. Building on this research, we are testing a novel caregiver-led intervention intended to encourage more vocalising in English-acquiring infants with Down syndrome, using the BabblePlay app (Daffern et al., 2020). The app responds to infants' vocalising with colourful moving shapes on an iPad screen. In a pilot study of the intervention with 27 infants, in which each infant played with a mirror one week and with BabblePlay the following week, only half of the caregivers thought their children understood that their vocalisations caused the shapes to appear on the screen. However, the majority of infants (69%) vocalised at a higher rate with BabblePlay than with the mirror. As well as reporting on results from the pilot, the talk will also report on findings from an ongoing Feasibility Randomised Controlled Trial (RCT) of the intervention (Boundy et al., 2024), data from which will be available by the time of the conference.

If successful, this intervention may fulfil a real need, as in the UK Speech and Language Therapy provision for infants with Down syndrome is rarely accessible, as reported by our pilot study participants (Keren-Portnoy et al., 2023 [in preparation]).

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Tuesday 9th September Symposia 14.30 – 15.45

Session 3 Symposium: *Words in the mind: a workshop on word processing*

[142] Alina Villalva (FLUL, CLUL, The Word Lab) and Carina Pinto (IPSetúbal, IPleiria, ciTechCare, CLUL, The Word Lab).

Introduction

Shaped by a complex interplay of factors, word processing may vary in typical and atypical development. This workshop explores phonotactics, phonological awareness, and morphological proficiency to better understand how children develop their word processing abilities.

The first talk, How sound patterns shape early word learning in (a)typical development: an eye-tracking study, examines how phonotactic frequency and phonological grammar influence early word learning in typically developing toddlers, toddlers at risk for language impairment, and toddlers with Down Syndrome. The study highlights differences in sensitivity to sound patterns and their impact on lexical acquisition.

The second talk, Word Phonological Awareness in Preschool and School-Age Children: Error Patterns in Typical Development, investigates phonological awareness through error patterns in a validated assessment tool for European Portuguese-speaking children. The findings provide insights into the role of metaphonological development in literacy acquisition.

The third talk, Morphoplay: A Serious Game for Assessing Morphological and Lexical Proficiency in School-Age Children, presents a digital tool designed to assess children's morphological and lexical knowledge. The study demonstrates the importance of morphological awareness and its diagnostic potential for language impairments.

Together, these presentations offer valuable insights into phonological and morphological development, fostering discussion on assessment, intervention, and educational practices.

Paper 1: How sound patterns shape early word learning in (a)typical development: an eye-tracking study

Jovana Pejovic, Cátia Severino, Sónia Frota & Marina Vigário (University of Lisbon, Center of Linguistics)

Word learning requires associating sound sequences to meaning. This study examined how phonotactic frequency and phonological grammar shapes word learning and lexical development in toddlers with low (typically developing, TD; N=32, mean age 20.4 ms) and high-risk (AR; N=29, mean age 20.7 ms) for language impairment, and toddlers with Down Syndrome (DS; N=12, mean age 22 ms). Toddlers' eye gaze was assessed while learning new labels of unknown objects in three conditions: labels with high phonotactic probability sound sequences, with low phonotactic probability sound sequences, or with illegal sound patterns. Control object-word pairs showing familiar objects were also presented. The task included a training phase, a test phase, and control trials.

Both TD and AR increased their looking time to the named image in control trials, unlike DS. Word learning in the test phase was found only in TD, and with high frequency patterns. Further, TD learning of high frequency patterns related to concurrent expressive vocabulary, whereas AR general performance related to expressive vocabulary at 24 and 30 months of age. DS toddlers demonstrated no learning. Findings suggest that phonotactic frequency guides TD toddlers' early knowledge of the phonological grammar of words, with AR toddlers' either showing phonological delay or a different developmental path, and DS toddlers' exhibiting a substantial delay in overall word learning skills. Unlike TD toddlers, both AR and DS toddlers displayed low sensitivity to sound patterns in early word learning. (239/250 words)

Tuesday 9th September Symposia 14.30 – 15.45

Session 3 Symposium: *Words in the mind: a workshop on word processing*

Paper 2: Word Phonological Awareness in Preschool and School-Age Children: Error Patterns in Typical Development

Dina Caetano Alves (Polytechnic Institute of Setúbal, School of Health (ESS/IPS) & Center of Linguistics of University of Lisbon), Joana Reis (Polytechnic Institute of Setúbal, School of Health (ESS/IPS)) and Ana Castro (Polytechnic Institute of Setúbal, School of Health (ESS/IPS) & NOVA University of Lisbon, Center of Linguistics (CLUNL))

This study aimed to describe and classify error patterns in a validated phonological awareness assessment tool, in order to characterise phonological awareness in preschool and school-age children (Alves et al., 2010; Castro et al., 2018; Castro et al., in prep.). The sample included 46 preschool children (4;4–6;1 years) and 48 school-age children (6;5–7;10 years). Using a cross-sectional observational design and a quantitative approach, the study examined error typologies across age groups.

The assessment tool evaluates different domains of phonological awareness, including word, syllabic, intrasyllabic, segmental, and stress awareness, through 18 digital tasks. Participants' responses were audio-recorded and manually transcribed. Errors were classified into 33 categories, which included word-level errors (such as omission or substitution of words), syllable-level errors (such as addition or restructuring of syllables), phoneme-level errors (such as substitution, omission, or insertion of phonemes), and stress-level errors (such as misidentification of stressed or unstressed syllables).

The study analyzed the distribution of error types across age groups and phonological awareness domains, predicting that error patterns would vary with age. Specifically, it was hypothesized that syllabic awareness tasks would show lower error rates, while word and phonemic awareness tasks would present higher rates. The findings contribute to understanding the developmental trajectory of phonological awareness in European Portuguese-speaking children, delineating what constitutes typical error patterns at different stages. Additionally, these data support the early identification of children at risk for phonological awareness deficits, reinforcing its predictive role in reading and writing acquisition. (244/250 words)

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Tuesday 9th September Symposia 14.30 – 15.45

Session 3 Symposium: *Words in the mind: a workshop on word processing*

Paper 3: Morphoplay: A Serious Game for Assessing Morphological and Lexical Proficiency in School-Age Children

Carina Pinto (Polytechnic Institute of Setúbal, School of Health (ESS/IPS) & Polythechnic Institute of Leiria, School of Health (ESSLEi) & ciTechCare & CLUL & The Word Lab) and Alina Villalva (Faculty of Arts and Humanities of University of Lisbon & Center of Linguistics of University of Lisbon)

The assessment of linguistic proficiency has traditionally prioritized lexical, phonological, and syntactic knowledge, leaving the morphological domain underexplored. Developing tools to evaluate morphological proficiency—which is crucial in the initial stages of semantic decoding, poses significant challenges, as it is often conflated with phonological and lexical-semantic proficiency. However, it plays a key role in identifying issues that require intervention.

The Morphoplay project (Pinto et al., in press) addresses this gap by creating a digital serious game to assist speech and language therapists and educators in evaluating children's lexical and morphological knowledge. The tool incorporates an experimental corpus comprising five morphological conditions: denominal agentive nouns in -eir(o/a); plant name denominal nouns in -eir(o); deverbal agentive nouns in -dor(/a) (both attested and unattested); and simple agentive nouns. This corpus has been carefully controlled for linguistic criteria, word knowledge, homography, and lexical frequency), allowing for evaluation through reaction time benchmarks in a lexical decision task.

Morphoplay (the game) includes four interactive tasks: lexical decision, word segmentation, word family identification, and intruder detection. All stimuli were validated experimentally, and reviewed by an expert panel. The game provides an engaging, naturalistic approach to assessing morphological knowledge and processing, reducing the limitations of traditional evaluation methods. It supports early diagnosis and effective intervention for children with language impairments and reading difficulties.

This paper presents the results of a pilot study with children with (N=55) and without language disorders(N=65), demonstrating MorphoPlay's potential as a diagnostic and educational tool. (247/250 words)

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Pinto, C., Minussi, R., Villalva, A., Lima, E., Silva, C., Abrantes, E., Reis, G., Gonçalves, F., & Barroso, I. (in press). MorphoPlay: Serious Game para a avaliação do conhecimento morfológico. Revista Portuguesa de Terapia da Fala.

Tuesday 9th September - Oral Presentations 16.00 – 17.00

Session 1: Cross-Linguistic Perspectives

[43] Elitzur Dattner (Tel Aviv University, Bar-Ilan University), Giuli Levin (Tel Aviv University), Orit Ashkenazi (Tel Aviv University) and Dorit Ravid (Tel Aviv University)

Longitudinal Dynamics of Adjective Acquisition in Hebrew: A Child-Directed and Child Speech perspective

We examined the longitudinal development of adjectives in a Hebrew-speaking toddler and her mother's adjective usage, focusing on the interplay between child-directed speech (CDS) and child speech (CS) in naturalistic caregiver-child interactions. Using a dense corpus from a single dyad (ages 1;8–2;3), we track the trajectory of adjective acquisition through time-series regression models and dynamic visualization techniques. Our findings reveal a nuanced developmental pattern shaped by lexical input, syntactic and lexical expansion, morphological specialization, and register sensitivity.

First, we identify a non-linear, S-shaped trajectory in the emergence of adjectives, reflecting both lexical diversification and the expansion of syntactic roles over time. Second, our analyses demonstrate significant time-locked coordination between maternal adjective diversity and child adjective production, suggesting an interactional mechanism beyond lexical exposure. Crucially, age modulates both the rate of change and the strength of the CDS-CS relationship, highlighting developmental shifts in sensitivity to input. Third, we uncover emergent morphological specialization, as the child's production increasingly differentiates inflectional and derivational categories, aligning with broader developmental milestones in Hebrew morphology.

These results support usage-based accounts of language development, where adjectives are acquired through distributional learning processes shaped by development, input frequency and structural variation. We propose a dynamic systems framework where caregiver speech functions as both scaffold and catalyst, with peaks in adjective acquisition corresponding to critical phases in nominal morphology development, representing the transition into clause and phrase syntax. Our methodological innovations—integrating mixed-effects modeling and temporal visualization—offer new insights into the complex interdependencies shaping early lexico-grammatical development.

Tuesday 9th September - Oral Presentations 16.00 – 17.00

Session 1: Cross-Linguistic Perspectives

[16] Wen Hui Sah (National Chengchi University) and Pao Chuan Torng (National Taipei University of Nursing and Health Sciences)

Mandarin-speaking preschool children's language development during COVID-19 school closures: Urban–rural differences.

The COVID-19 pandemic created global school closures which led to noticeable changes in children's learning environments and provided a valuable opportunity to examine the associations between parent-child activities and children's development. Previous research suggests that developmental losses during the pandemic are more pronounced among underprivileged children (González et al., 2022). Following this line of inquiry, this study aimed to investigate urban–rural differences in language development and its relationship with parent-child activities.

We compared language abilities of an urban cohort (n=18; Mage=5;6), and a rural cohort (n=15; Mage=5;4), both experiencing school closures for the entire academic year of 2021, and sporadic closures in the fall semester of 2022. Children's general language (expressive and receptive) abilities were assessed. Oral narrative abilities were analyzed in terms of story length, type-token ratio (TTR), syntactic complexity, evaluative expressions, and story macrostructure. A questionnaire was utilized to collect information regarding participants' demographic backgrounds and quantity and quality of parent-child activities (e.g., shared book reading, outdoor activities, etc.; Kartushina et al., 2022).

The results revealed that urban children had higher TTR, and receptive language scores than rural children did; however, the two cohorts did not differ significantly in other language indices. There were urban–rural differences in home learning environments. For both cohorts, frequency of shared book reading activities and the family's socioeconomic backgrounds were associated with children's language abilities. The findings display the unique circumstances and needs of rural children in Taiwan. Discussions on linguistic and cultural factors related to children's underprivileged backgrounds are included.

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Tuesday 9th September - Oral Presentations 16.00 – 17.00

Session 1: Cross-Linguistic Perspectives

[80] Katie Alcock (Lancaster University), Penny Holding (Jawaharlal Nehru Medical College), Khadja Nanga (Cerebral Palsy Foundation (CPF) Mombasa) and Chris King (Case Western Reserve University)

Longitudinal associations between production and comprehension of nouns and verbs in Kiswahili

Children's first words are frequently recorded to be nouns, rather than verbs, but data from some languages and some methodologies suggest that verbs can be represented as early as nouns. Variables that potentially impact early verb knowledge include the structure of the language children are learning and whether it is verb production or comprehension that is investigated.

We investigated longitudinal data from Kenya of children's (N=500) vocabulary productionand comprehension using Communicative Development Inventories (CDIs). Children's caregivers completed overlapping inventories designed to have equivalent difficulty when the children were 12, 18 and 24 months.

The structure of the inventories means that neither the absolute vocabulary levels nor the raw effect of word class can be recorded, while the relative difficulty of comprehension and production for different word classes can be measured. We conclude that we have replicated the findings of Goldfield (2000), that the noun advantage in early words is present in production, but not in comprehension.

Tuesday 9th September - Oral Presentations 16.00 – 17.00

Session 2: Interventions 2

[127] Carol-Anne Murphy (University of Limerick, Health Research Institute; Centre for Implementation Research), Tom Braddon (University of Limerick), Christopher Fitzgerald (University of Limerick), Clare Donnellan (University of Limerick), Norma O'Leary (University College Cork), Doris Murphy (University College Cork), Leonard Fletcher (University College Cork), Patricia Eadie (University of Melbourne), Susan Ebbels (Moor House Research and Training Institute), Melanie Ferk-Dornstauber (Carinthia University of Applied Sciences), Silke Fricke (University of Sheffield), Maja Kelic (University of Rijeka), Sari Kunnari (University of Oulu), Suze Leitao (Curtin University), Karla McGregor (Boys Town National Research Hospital), Cristina McKean (University of Oxford), Natalie Munro (Southern Cross University), Sini Smolander (University of Oulu), Amanda Owen Van Horne (University of Delaware) and Pauline Frizelle (University College Cork). ***What outcomes are measured in intervention for children with DLD? A systematic review of intervention studies***

We aimed to establish a comprehensive list of core outcome measures in oral language interventions for children with or at risk of DLD as reported in literature; to identify outcomes not included and to classify outcomes with reference to frameworks such as the ICF (WHO 2012). This registered review adhered to PRISMA guidelines and built on a separate related review seeking to identify the active ingredients of interventions.

A systematic search and screening process for peer -reviewed articles on intervention for children with DLD published between January 2019 and May 2024 in English, German, Portuguese, Croatian, Italian, or Finnish was undertaken. Studies reporting on participants who were ≤ 18 years, with/at risk for D(LD) and which incorporated empirical data on outcomes were included. Studies focusing exclusively on speech sound disorders were excluded. Following a two-stage process across reviews, we identified 200 articles meeting our criteria.

A detailed framework was developed to support data extraction on any reported proximal and distal intervention outcomes, in communication modalities, in domains of language and in related domains such as cognition, behaviour, wellbeing and participation. An inductive data extraction process enabled the development of a comprehensive picture of outcomes in intervention studies.

Outcomes most measured relate directly to impaired domains of language with few studies addressing outcomes for language beyond structured elicitation formats, and limited focus on participation measures. The review findings underscore the importance of moving intervention research forward to ensure a wide range of outcomes with direct relevance to children’s lives are addressed.

Tuesday 9th September - Oral Presentations 16.00 – 17.00

Session 2: Interventions 2

[70] Paola Calabrese (University of Reading), Vesna Stojanovik (University of Reading) and Emma Pagnamenta (University of Reading)

A combined working memory and lexical intervention for word learning in DLD

Children with Developmental Language Disorder (DLD) experience difficulties in the encoding of new words which relies on verbal working memory (VWM), verbal short-term memory (VSTM), and previously stored lexical knowledge. This study explores whether it is possible to enhance word learning in children with DLD by improving both their lexical knowledge and VWM/VSTM.

In this single-case experimental design, seven children with DLD aged 6;0–8;11 years received 16 sessions of an evidence-based lexical intervention (The Lexicon Pirate, Motsch & Marks, 2015) combined with 16 sessions of working memory training including Listening Recall (Henry et al., 2022) and phonemic awareness training (Park et al., 2014). Children completed an experimental word learning task pre- and post-intervention and weekly probes consisting of nonword repetition (NWRT), backward digit span (BDS), and a lexical strategy checklist (LSC). Intervention acceptability was evaluated through interviews based on the Theoretical Framework of Acceptability (TFA).

Tau-U calculation (Tau-U > 0.5) showed that 5/7 children improved in NWRT, 7/7 improved in BDS, and 7/7 improved in LSC. ANOVA showed that following the combined intervention, children's accuracy in producing ($F(2,18) = 4.25$, $p = .03$), recognizing ($F(2,18) = 9.71$, $p = 0.001$), and describing ($F(2,18) = 17.14$, $p < 0.01$) new words improved.

The results show that each component of the intervention was effective, and both together improved word learning in participants. This has important implications for clinical practice, highlighting the importance of targeting mechanisms that underlie a specific linguistic competence.

Tuesday 9th September - Oral Presentations 16.00 – 17.00

Session 2: Interventions 2

[29] Hind Dawi (PhD student/University of Essex), Victoria Joffe (Professor in Speech and Language Therapy and Dean of the School of Health and Social Care at the University of Essex), Claire Delle Luche (Senior Lecturer, Department of Language and Linguistics, University of Essex), Sevil Savi-Karayol (Lecturer, School of Health and Social Care, University of Essex) and Carmit Altman (Head of Child Development Program, Faculty of Education, Bar-Ilan University)

Understanding Language Development in Refugee Children: Insights from Parental Interviews.

This study explores the language development of school-aged refugee children in the UK through the lens of their parents' perspectives. Children from conflict zones often face unique challenges when acquiring English as a second language, with their linguistic development shaped by both pre- and post-migration experiences (Miller et al., 2020). Parental insights are crucial for understanding how these children navigate bilingual development, as parents provide continuous support across home and school environments (De Houwer, 2009).

The study employed semi-structured interviews with parents of refugee children aged 4;6 to 11;11 years, exploring their observations regarding expressive and receptive language development in both English and their home language, as well as their educational experiences in school. Thematic analysis revealed several factors that may influence second language acquisition, including parental language practices, the availability of English input at home and school, duration of stay in the UK, and broader school experiences. These findings align with previous research indicating that children's exposure to consistent, meaningful language interactions may contribute positively to their bilingual development (Cummins, 2000; Hoff, 2018).

Moreover, parents highlighted variations in school-based support and the need for culturally responsive educational practices to facilitate smoother language transitions. The study underscores the importance of collaborative efforts between families, educators, and policymakers to address the diverse needs of refugee children, ensuring their successful integration into educational settings while maintaining their home language skills (Thomas & Collier, 2002).

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Tuesday 9th September - Oral Presentations 16.00 – 17.00

Session 3: Shared Reading

[78] Affizal Ahmad (Universiti Sains Malaysia)

Parents' Goals for Shared Reading among Malaysian Malay and Chinese Parents: A Comparative Study

Even though shared reading is a highly effective early literacy practice, studies on shared reading practices in Malaysia are still limited. Studies have shown that shared reading promotes children's language development, cognitive growth, and socioemotional well-being. Parents engaged in shared reading can bolster their child's interest in reading, build critical early literacy skills, and strengthen parent-child bonding. Parents in multilingual and multiethnic provide unique insights into various factors which influence shared reading practices. This study looks at two major groups in Malaysia, namely the Malay and Chinese parents in shared reading practices. Data were collected using the adapted Malay-Parent Goals for Shared Reading Questionnaire which encompasses four subset goals: foster reading, stimulation, enjoyment, and closeness. The sample included 188 Malay parents and 110 Chinese parents for children between the ages of four and six. Overall, the results showed that parents scored highest on the foster reading goal, followed by stimulation, closeness, and enjoyment. Malay parents scored significantly higher than Chinese parents on foster reading, indicating that Malay parents place greater emphasis on developing literacy skills, assisting children in learning to read, and monitoring the child's progress during shared reading. Gender comparisons showed that there were no significant differences between mothers and fathers within ethnic groups for any goal subsets, indicating a gender-neutral approach to shared reading goals and consistency in parental roles. This study highlights the shared reading goals of parents across ethnicities and genders, emphasizing the universal value of shared reading in nurturing early literacy and parent-child relationships.

[134] Daisy Powell (University of Reading) and Holly Joseph (University of Reading)

Fostering a love of reading in young children through community-led initiatives: evidence from a participatory research project.

A rich home literacy environment, including shared storybook reading, in the pre-school years is associated with better language and literacy attainment (Senechal & Le Fevre, 2014), which may in turn improve young children's life chances. However, storybook reading interventions have not shown consistent benefits (Noble et al., 2019), partly due to low engagement and under-recruitment of those very vulnerable families who may benefit most. Our aim was to reach families who do not otherwise engage in language-enriching activities (e.g. storytimes in local libraries). Using participatory methods, we worked with local families, libraries and community centres to co-design and co-deliver shared storybook sessions for young children and their parents in a deprived urban area in SE England. Before the sessions we interviewed parents, teachers and community leaders to understand local context and overcome potential barriers to engagement. After eight sessions we interviewed parents to gain insights into the impact of sessions. Preliminary data analysis shows that our sessions have attracted parents living in the most deprived 10% of areas in England and who have not previously engaged in such activities. Themes emerging from the post-session interviews included children's increased interest in books, development of reading routines, and increased home literacy engagement. Parents also reported improvements in their children's vocabulary and attention, as well as socio-emotional benefits for parents such as better mental health and sleep. Findings show that community-led initiatives ca nmincrease a) uptahe and b) engagement, which has the potential to raise language and literacy in young children.

Tuesday 9th September - Oral Presentations 16.00 – 17.00

Session 3: Shared Reading

[116] Ayse Cakan (Aston University), Laura Shapiro (Aston University) and Gemma Heath (Aston University)

What Strategies are most effective in Increasing Engagement in Shared Book Reading for Bilingual Parents and their pre-school children? A Mixed Methods Systematic Review

Shared reading between parents and preschool children is known to support early language and literacy development. Understanding which strategies are most effective and how parents experience these activities can help improve outcomes for both parents and children. This systematic review aims to identify effective strategies used in shared book reading interventions for bilingual parents/caregivers and children aged 3-6 years and to explore the role of acceptability in raising engagement. Following PRISMA procedures (Moher et al., 2015), a systematic review was conducted, and 17 studies met the inclusion criteria. Eligible studies included both quantitative and qualitative research and data were synthesised using narrative analysis (Popay et al., 2006). We found that strategies that encouraged two-way interaction increased parent and child engagement during reading. Furthermore, acceptability was also associated with more effective shared book reading strategies. Specifically, interventions that were multilingual, culturally appropriate and practical, positively impacted parents' engagement in reading. When parents' acceptability was high, they were more likely to sustain strategies, leading to increased child engagement. Moreover, while facilitators such as accessible training, family members involvement and child enjoyment enhanced both acceptability and effectiveness, barriers such as time constraints, limited resources and parents' distress minimised parent engagement. The findings from this review will feed into subsequent intervention development, prioritising strategies that effectively increase engagement and factors that increase acceptability.

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Wednesday 10th September - Oral Presentations 9.00 - 10.40

Session 1: Language Development 2

[18] Sevil Savi-Karayol (University of Essex), Victoria Joffe (University of Essex) and Katherine Farrow (University of Essex)

The relationship between Speech, Language, and Communication Needs and School Exclusions in Children and Young People in Care

Background: Research reports that children and young people (CYP) in care are disproportionately affected by school exclusions, being nine times more likely to be excluded than their peers (1;2), whilst also experiencing significant difficulties in speech, language and communication (3). However, there is limited research on the nature and prevalence of Speech, Language and Communication Needs (SLCN) in this group and on its relationship to school exclusion within this population.

Aims: This study investigated the relationship between SLCN and school exclusion in CYP in care aged 9 to 16 years.

Method: Language data were collected from CYP in care using standardised language assessments of receptive and expressive language. Two focus groups were conducted with eight professionals working with these children, and semi-structured interviews were held with ten children to explore their perceptions and experiences of SLCN, and its impact and relationship with school exclusion.

Results: The findings revealed a link between SLCN and school exclusion in CYP in care. Whilst language and communication difficulties in this group were frequently undetected, SLCN were often expressed through emotional and behavioural difficulties, which increased the likelihood of school exclusion.

Conclusions and Implications: School exclusions are likely to result in significant educational disruption. Early identification of SLCN, alongside targeted interventions, is essential to reduce the risk of exclusion and support better educational outcomes for CYP in care.

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Wednesday 10th September - Oral Presentations 9.00 - 10.40

Session 1: Language Development 2

[72] Sara Verbrugge (Odisee University College and University of Leuven)

From silence to speech: the role of brief observations in encouraging young children's speaking opportunities, participation and language proficiency.

In this talk we present a method to first observe the chances to speak children have in kindergarten and primary school, and second how to improve those chances. Teachers and parents are familiar with the fact that some children are very talkative, while others tend to remain silent for most of the day in school contexts. Reasons may vary: character traits (being extrovert or introvert), being fluent (or not) in the school language, being a confident or less confident child etc. Research has shown that oral language skills at a young age can predict school outcomes in later life (Giguere & Hoff, 2024; Kieffer 2012). Moreover, taking chances to express your thoughts, to participate in what is happening around you, is also key for developing social skills. Our analysis of short but intensive classroom observations reveals significant discrepancies in chances to speak offered to children labeled as 'linguistically proficient' or 'linguistically weak' by their teachers and/or by the results of the 'KOALA' language screening (mandated by the government for all children around the age of 5 or 6 in Flemish schools).

In order to reduce the differences between those children, it is of the utmost importance to give all children in the classroom enough space and time to talk. We use video fragments in combination with an observation form to pay close attention to the chances that are offered to children. On the basis of those observations, we set up a plan of action to improve language interactions, both for teacher-child interaction and peer interaction.

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Session 1: Language Development 2

[15] Victoria Joffe (University of Essex), Katherine Farrow (University of Essex) and Sevil Savi-Karayol (University of Essex)

The nature and profile of speech, language and communication abilities in children and young people in Elective Home Education in the UK

Background: Elective home education (EHE) describes situations where parents provide education for their children at home instead of school [1]. The number of EHE children is rapidly increasing [2], with little known about the reasons for this choice and the strengths and areas of need of children and their families following this route.

Aim: The study aimed to investigate the speech, language and communication abilities of Children and Young People (CYP) in EHE and the prevalence and nature of Speech, Language and Communication Needs (SLCN) in this group.

Method: A group of CYP (6-14 years) in EHE were invited to participate in the study and undertake assessments of speech, language and communication. Semi-structured interviews were conducted with the CYP and their parent to explore their perceptions around SLCN and the support available.

Results: Difficulties were evident in all areas of language (speech, language and communication) and literacy. Reports of unmet needs were strong, and some reported the SLCN and limited support as the drivers for choosing EHE.

Parents expressed frustration about the limited support and inflexibility of the school system to adequately support their child's specific needs.

Conclusions and Implications: This study revealed a high prevalence of undetected SLCN in CYP in EHE and highlights the importance of speech and language therapy and specialist education support for this group. Considering the impact of SLCN on health and wellbeing [3], and the increasing prevalence of CYP in EHE, the identification of SLCN, and appropriate support for this group is essential.

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Session 1: Language Development 2

[14] Victoria Joffe (University of Essex), Katherine Farrow (University of Essex) and Sevil Savi-Karayol (University of Essex)

Exploring the Strengths, Needs and Support Networks of Adults with (Developmental) Language Disorder

Background: Research has consistently shown the pervasiveness and long-term nature of (Developmental) Language Disorder (D/LD), persisting into adulthood, and impacting more widely on health and wellbeing [1;2]. There is limited research, clinical services or ongoing specialist or community support for adults with (D/LD) or their families, despite the long-term nature of their difficulties [3].

Aim: To investigate the Speech, Language and Communication Needs (SLCN) and areas of strength in adults with a history of (D)LD.

Method: Adults with D/LD (aged 18-30), and their parents were invited to participate in a series of focus groups to explore their existing SLCN, areas of strength and available support structures. Information was collected via four focus groups with the service users and their families, and from language assessments, yielding quantitative and qualitative information and a triangulation of data.

Results: Findings from the adults with (D)LD, their families and the standardised assessments were consistent and revealed continued difficulties in areas of language, social communication and literacy, most marked during transitions between school and college and college and employment. Areas of strength were evident and differed across individuals. The availability of provision and clinical services were, overall, absent, with individuals relying on their family for support.

Conclusions and Implications: Adults with (D)LD continue to experience difficulties with their language, literacy and communication which impact their socialisation, employment and health and wellbeing. There are limited to no services available for them, putting additional pressure on their families. The urgency for targeted support for this group is emphasised.

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Session 1: Language Development 2

[46] Laura Patrizzi (University of Basel)

Development of abstraction and flexibility in the acquisition of the German ditransitive construction

Abstract. According to usage-based accounts of language acquisition, abstract linguistic representations gradually develop from lexically specific formulas (Behrens 2021). Higher levels of abstractness are linked to increased flexibility, that is, variability in the use of constructions (Theakston et al. 2015). However, flexibility can be measured in different ways, such as diversity of word use in specific slots of a construction, variability in the combination of lexical items, or the semantic range expressed within the construction. While the development of flexibility in the verb slot has been investigated in prior studies (Goldberg et al. 2004; Ellis et al. 2016), less is known about the development of flexibility in other aspects, and whether different measures of flexibility develop simultaneously or along individual pathways. The present study explores these issues in one German-speaking child's acquisition of the ditransitive construction.

The results indicate that lexical and semantic flexibility in the verb slot increase over development. At the same time, the argument slots show considerable flexibility from early on and, contrary to expectations, the construction does not appear to emerge from a small set of highly frequent lexicalized patterns. Instead, conventionalized expressions, which are common in the input, emerge only later in development and may in turn support the development of flexibility in other aspects of the construction. The study shows how the child acquires both more abstract representations of the construction as well as routinized and highly frequent formulas stored at lower levels of abstraction.

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Session 2: Language Disorders 2

[107] Pauline Frizelle (University College Cork), Doris Murphy (University College Cork), Norma O'Leary (University College Cork), Len Fletcher (University College Cork), Imogen Lyons (University College Cork), Cristina McKean (Oxford University), Carol-Anne Murphy (University of Limerick), Melanie Ferk-Dornstauder (Carinthia University of Applied Sciences), Maja Kelic (University of Rijeka), Sari Kunnari (University of Oulu), Silke Fricke (University of Sheffield), Susan Ebbels (Moor House), Nat Munro (Southern Cross University), Suze Leitao (Curtin University), Karla McGregor (Boys Town), Amanda Owen Van Horne (University of Delaware) and Tricia Eadie (University of Melbourne)

Defining and classifying the active ingredients in oral language interventions for children with or at risk of Developmental Language Disorder: A systematic review and qualitative synthesis.

Aim: To identify, summarise and synthesize how the active ingredients of oral language interventions for children with or at risk for (D)LD have been defined and classified in empirical and clinical literature.

Methods: This registered review (PROSPERO ID CRD42024541407) adhered to PRISMA guidelines. Search terms were included in seven electronic databases. We included peer-reviewed oral language intervention studies published between January 2019 and May 2024; in English, German, Portuguese, Croatian, Italian, or Finnish; and reporting on participants who were ≤ 18 years, with/at risk for D(LD). Relevant textbooks and taxonomies were also identified through a social media survey. Included textbooks were those most frequently used, to teach child language interventions in pre-registration Speech and Language Therapy (SLT) courses. Intervention manuals were also identified through the What Works database. Data extraction was guided by the TIDieR checklist.

Results: 9,576 articles were identified and screened; 619 were included for full text screening; and 245 articles included in the review. Modelling was the most common technique reported, across all language domains. However, overall, there was significant variability in whether, or how active ingredients were defined and classified, within and between interventions.

Conclusion: This review highlights the need to develop consensus on 1) how active ingredients of therapy are defined so that they are comprehensive, precise and non- overlapping and 2) a comprehensive taxonomy for ease of understanding and use, when reporting on oral language interventions for children with or at risk for D(LD).

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Session 2: Language Disorders 2

[67] Susan Ebbels (Moor House Research & Training Institute), Mollie Gadd (Moor House School & College), Hilary Nicoll (Moor House Research & Training Institute), Lucy Hughes (Moor House Research & Training Institute), Nicola Dawson (Moor House Research & Training Institute), Caroline Burke (Moor House Research & Training Institute), Samuel Calder (University of Tasmania) and Pauline Frizelle (University College Cork)

The effectiveness of individualized morphosyntactic target identification and explicit intervention using the SHAPE CODING system for children with Developmental Language Disorder (DLD) and the impact of within-session dosage

We first present the findings of a multiple baseline study (Ebbels et al., 2024) and then introduce a larger scale on-going RCT investigating the effectiveness of the SHAPE CODING system. The multiple baseline study included eight children with DLD aged 8;0-10;10 who received ten hours of highly individualized intervention for morphosyntax delivered in 30-minute individual sessions once per week for 20 weeks at three different dosages.

Scores on probe tests post-intervention were significantly higher than pre-intervention (d=1.6) and progress during the intervention phase was highly significant. However, there was no change during the baseline or maintenance phases. One participant showed significantly faster progress with intervention while one (with the lowest attention) made little progress. All three within-session dosages showed very similar rates of progress, with the odds of a correct response increasing by 3.9% for each teaching episode. The targets that were achieved required an average of 40-60 teaching episodes (approximately 2-3 sessions).

We concluded that, with the exception of one participant, the individualized intervention was highly effective and efficient. The cumulative number of teaching episodes per target provided across sessions appeared to be key. A larger scale RCT with a sequential design (Lakens, 2014) is currently in progress, which investigates the effectiveness of the intervention when delivered to children (aged 5-11 years) in mainstream schools by a range of speech and language therapists.

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Session 2: Language Disorders 2

[79] Lucy Hughes (Moor House Research and Training Institute; University of Reading), Amit Kulkarni (Royal College of Speech and Language Therapists), Susan Ebbels (Moor House Research and Training Institute), Sophie Franks (Afasic), Rachel Sievers (Independent Speech and Language Therapist), Claire Hoyle (Afasic) and Courtenay Norbury (UCL)

Co-producing research questions for Developmental Language Disorder: process and outcomes from Phase 2 of an adapted Priority Setting Partnership

Background: There is increasing demand to involve patients and carers when designing research - to ensure that outcomes are maximally relevant to the people they affect. However, participating in research consultations can place high demands on people with communication disorders, due to the complex information and procedures involved.

Aims:Phase I of this project identified a list of important areas for DLD research. The goal of this second phase was to translate these priority areas into specific, fundable research questions.

Methods:A project steering group was formed, including two adults with DLD, a parent, specialist SLTs and researchers. Together, we developed an adapted methodology, based on James Lind Alliance principles for seeking the views of the DLD community. The project follows four stages:

Results:One hundred and twenty people responded to our survey, including 11 adults with DLD, 18 parents and 63 speech and language therapists. Additionally, 36 children and 4 adults with DLD completed Talking Mats TM to indicate visually their priorities for research. Responses were combined with data from Phase I and questions were split into four key areas aligning with the DLD Vision: Diagnosis; Intervention and Support; Schools and Workplaces; Independence. This information shaped the development of a set of research questions, which were refined and prioritised by project groups.

Conclusion:A final prioritisation workshop will be held in June 2025 to agree a Top 10 list, to be presented at CLS. This will be used to influence funders and researchers to explore the prioritised questions.

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Session 2: Language Disorders 2

[146] Eleftheria Geronikou (University of Patras)

Phonological Processing, Language, and Cognitive Abilities in School-Aged Greek-Speaking Children with Learning Difficulties: A Comparison with Typically Developing Peers

Abstract. Developmental disorders can affect various domains, including language, cognition, and academic performance. Children with learning difficulties (LD) often face challenges in areas such as language comprehension and production, reading, writing, arithmetic, and motor skills. This study aimed to compare the linguistic, phonological, and cognitive abilities of Greek-speaking children with LD to those of typically developing (TD) peers across different grade levels in mainstream schools.

Greek-speaking children with LD (second grade, n=4; third grade, n=4; sixth grade, n=6) were compared to age-matched TD controls (second grade, n=4; third grade, n=9; sixth grade, n=20). The assessment battery included tasks that targeted language production (Renfrew Action Picture Test, Word Finding), phonological processing (nonword reading, nonword repetition, phoneme deletion), sentence-level processing (sentence reading with picture choice, sentence comprehension), and broader cognitive skills (Raven's Progressive Matrices).

TD children outperformed children with LD on most tasks. Significant differences were found in nonword reading, nonword repetition, sentence repetition with picture choice, and phoneme deletion in second grade; nonword repetition, phoneme deletion, and sentence comprehension in third grade; and word finding, nonword reading, nonword repetition, phoneme deletion, and sentence comprehension (particularly passive voice construction) in sixth grade.

Children with LD exhibited persistent difficulties in phonological processing and sentence-level tasks, with increasing divergence from TD peers in later grades. These findings highlight the need for targeted interventions focusing on phonological awareness, syntactic processing, and working memory. Early identification and tailored support in the classroom are essential for mitigating the academic challenges associated with LD.

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Session 2: Language Disorders 2

[56] Draško Kašćelan (University of Essex) and María del Carmen Parafita Couto (Leiden University)

Code-switching by individuals with neurodevelopmental conditions: Findings from a scoping review

Code-switching or the use of more than one language in an utterance or in conversation is a natural and often quite frequent phenomenon in bilingualism. While there have often been concerns about raising neurodivergent individuals bilingually (e.g., Kay-Raining Bird et al., 2012; Howard et al., 2021a; 2021b), to date, no comprehensive overview has been done on code-switching practices among neurodivergent individuals (children or adults). In this scoping review, we aim to: (i) identify neurodevelopmental conditions in which code-switching has been investigated; (ii) identify approaches used to explore code-switching in this population; (iii) describe the demographic and bilingualism-related characteristics of investigated populations; (iv) outline any comparisons in code-switching practices between neurodivergent and neurotypical bilinguals; (v) outline attitudes towards code-switching in the investigated population. Among the scarcely conducted research on the topic (n = 31 sources), we uncover that code-switching has primarily been explored in children under the age of 8, and in individuals with autism and with language disorder. The review identifies under-representation in research from most areas outside of North America and Europe, as well as under-representation in research with older children and adults. We discuss the plethora of methodological approaches used to explore code-switching in neurodivergent populations and their ecological validity. The characteristics of code-switching in neurodivergent individuals are also addressed, as well as the implications of these findings for educators, speech and language therapists, researchers, and bilingual families with neurodivergent family members.

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Session 3: Grammar Learning & Processing

[47] Elitzur Dattner (Tel Aviv University, Bar-Ilan University), Florit Korobochko (Tel Aviv University), Orit Ashkenazi (Tel Aviv University) and Dorit Ravid (Tel Aviv University)

Pronoun Development as a Process of Input, Syntactic and Discourse Integration: Evidence from Hebrew

The development of pronoun usage in Hebrew is examined through a longitudinal analysis of naturalistic CS–CDS interactions. Using conditional inference trees and mixed-effects logistic regression, we investigate how lexical, morphological, syntactic, and developmental factors interact in shaping pronoun acquisition and use in toddlers. A key finding is that non-subject pronouns follow a significant developmental trajectory, with child usage closely tracking CDS input. A positive correlation between non-subject pronouns in CS and age, and a parallel correlation between CDS and CS, suggests that caregiver input enables the child's syntactic expansion through development. This, in turn, supports the growing ability to use pronouns for accessible referents in non-subject positions, linking syntactic development to the expansion of discursive reference.

Pronoun type differentiation plays a crucial role in this process, as personal and demonstrative pronouns show distinct developmental pathways. Demonstratives exhibit stricter syntactic constraints than personal pronouns, particularly in subject position, suggesting early reliance on deictic, discourse-bound reference before integration into abstract syntactic structures. This distribution of pronoun types shifts with age and input, reflecting growing sensitivity to argument structure, information structure, and discourse accessibility.

Finally, decision tree analysis reveals that children prioritize person and number morphology in zero vs explicit subject pronoun usage, whereas CDS relies more on verb tense. This suggests that early pronoun use is context-dependent, driven by discourse cues, while adult speech reflects a more grammatically constrained system. These findings support a usage-based model in which syntactic-grammatical feature integration emerges through input, refining referential structure in Hebrew child speech.

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Session 3: Grammar Learning & Processing

[149] Pablo Requena (University of Texas at Austin) and Carla Contemori (The University of Texas at El Paso)

The use of differential object marking in the interpretation of which-questions in Spanish-speaking children

Cross-linguistic research has shown that object which-questions are the hardest types of wh-questions to comprehend for children and are acquired late (e.g., De Vincenzi et al., 1999). In addition, object wh-questions (O-WQ) are particularly difficult for children, who tend to interpret them as subject wh-questions (S-WQ bias). The present study asks when Spanish Differential Object Marking (DOM), an early cue to object marking consisting of 'a' before animate and specific direct objects, is actively used to successfully comprehend object which-questions in Spanish-speaking children. We also investigate whether DOM is first used in object which-question with human objects vs. animal objects.

Fifty-five child learners of Argentinian Spanish (N=28 ages 5-6; N=27 ages 7-8) and nine monolingual adults participated in a picture matching task. Sample experimental stimuli appear in Figure 1. A 2x2 design manipulated DOM and animacy within participants. Each participant received six items per each condition (and twelve filler sentences).

DOM helped adults arrive at an object interpretation for O-WQ. When DOM was absent, adult responses did not differ from chance. Children did not use DOM to interpret O-WQ, and absence of DOM determined a strong subject interpretation. A subgroup of the children ages 7-8 performed target-like. This indicates that by age 7-8, children start using DOM as a reliable cue to override or prevent commitment to an agent-first interpretation. Mastery of DOM for comprehension of complex syntactic structures may reach target use during the school years. This raises questions about the production~comprehension assymetry and cue salience in language acquisition.

Figure 1. Example of stimuli used in the picture-matching task

Condition with DOM (unambiguous O-WQ):
a) ¿A qué bombero$_{object}$ *está salpicando la doctora*$_{subject}$*?*
Which firefighter is the doctor splashing?

Condition without DOM (ambiguous, S-WQ bias):
b) ¿Qué bombero$_{subject}$ *está salpicando la doctora*$_{object}$*?*
Which firefighter is splashing the doctor?

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[60] Andrea Nardon (Università degli Studi di Verona), Denis Delfitto (Università degli Studi di Verona), Chiara Melloni (Università degli Studi di Verona), Ilaria Venagli (Università degli Studi di Verona) and Maria Vender (Università degli Studi di Verona)

Only adults interpret focus particles, or do children also? An eye-tracking study

Focus particles like only and also are optional elements that scope over a specific constituent depending on structural and prosodic constraints. Only indicates that the property assigned to the focus set is not shared by the elements of the alternative set, whereas also indicates that sharing is compulsory for some element of the alternative set [1]. While production studies have observed that children begin uttering such particles from the earliest stages of multiword utterances [2], the majority of comprehension studies report that children's interpretation of sentences with focus particles often remains non-adult-like even at primary school levels [3, 4].

	Focus Operator	
Syntactic Position	**Anche (Also)**	**Solo (Only)**
Pre-Subject	Il bambino ha una trottola. Guarda l'immagine in cui **anche** la bambina ha una bambola. *The boy has a spinning top. Look at the picture in which **also** the girl has a doll.*	Il bambino ha una trottola. Guarda l'immagine in cui **solo** la bambina ha una bambola. *The boy has a spinning top. Look at the picture in which **only** the girl has a doll.*
Pre-Object	Il bambino ha una trottola. Guarda l'immagine in cui la bambina ha **anche** una bambola. *The boy has a spinning top. Look at the picture in which the girl has **also** a doll.*	Il bambino ha una trottola. Guarda l'immagine in cui la bambina ha **solo** una bambola. *The boy has a spinning top. Look at the picture in which the girl has **only** a doll.*

Table 1. Experimental items.

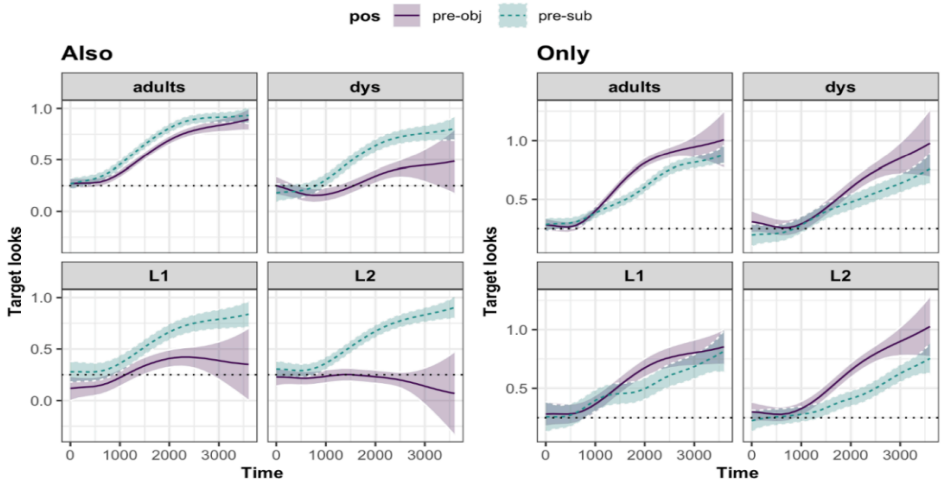

Figure 1. Three-way interaction between Group, Focus Operator (Also vs. Only), and Syntactic Position in looks to the target. The sample size currently includes 11 monolingual children (L1), 20 monolingual children with dyslexia (dys), 24 children with Italian as an L2 (L2), and 41 monolingual adults (adults). Data collection is still ongoing; data will be final by the time of the conference.

In this study, third- and fourth-grade Italian monsnipolinguals with and without dyslexia, age-matched L2 Italian children, and adults completed a Visual World Paradigm task, in which they heard sentences containing only or also in pre-subject or pre-object position (Table 1). Proportion of looks on the target image was analysed with gamm models. The analysis showed a significant interaction between Focus Operator and Syntactic Position, with sentences containing the exclusive particle only in pre-subject position and the additive particle also in pre-object position being the most challenging scenarios (Figure 1). This asymmetry was consistent in both children and adults and will be discussed in terms of the different cognitive complexity associated with the computation of contextual alternatives in the given experimental setting. Crucially, the comprehension of also in pre-object position was particularly challenging for L2 children, whose difficulties likely stemmed from a failure to compute the presuppositional content triggered by also.

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Session 3: Grammar Learning & Processing

[103] Alejandra Mitzi Castellón-Flores (Universidad Nacional Autónoma de México, UNAM), Armando Quetzalcóatl Angulo-Chavira (Universidad Nacional Autónoma de México, UNAM), Natalia Arias-Trejo (Universidad Nacional Autónoma de México, UNAM) and Elsa Viviana Oropeza Gracia (Universidad Nacional Autónoma de México)

Emerging Grammatical Prediction: Gender Cues in Early Language Processing

Linguistic prediction, a fundamental process in language acquisition, facilitates the anticipation of upcoming linguistic elements by leveraging contextual and structural cues (Dell & Chang, 2014). Within this framework, morphosyntactic prediction enables speakers to use grammatical structures to pre-activate potential continuations of an utterance (Mani & Huettig, 2012). The present eye-tracking study examined the development of gender-based morphosyntactic prediction in Spanish-speaking toddlers at 30 and 36 months of age. Participants were presented with highly constraining sentences (e.g., La gallina puso su… [The hen laid its…]) while viewing images that included a gender-congruent competitor (cuchillo [knife]), which shared only grammatical gender with the target noun (huevo [egg]), and a semantically unrelated distractor (gorra [cap]). The results indicated that by 36 months, but not at 30 months, children shifted their gaze toward the gender-congruent competitor before the onset of the target noun, suggesting developmental differences in the use of morphosyntactic information for predictive processing. These findings provide evidence that the ability to exploit grammatical gender as a predictive cue emerges around 36 months, contributing to our understanding of the developmental trajectory of morphosyntactic prediction in early language processing.

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Session 3: Grammar Learning & Processing

[83] Christina Reuterskiöld (Linköping University), Kristina Hansson (Lund University) and Marcus Nyström (Lund University)

Swedish-speaking children with DLD in comparison with typical language learners: A new look at grammatical challenges

Background and aim

Comprehension depends on rapid analysis and integration of different aspects of linguistic information. Studies from languages with different noun genders (e.g., Spanish) show that children use the gender cues provided in the article of the noun phrase (NP) to retrieve nouns (Lew-Williams & Fernald, 2007). We investigate processing of the Swedish NP which has two genders (uter and neuter), in sentences with different grammatical complexity in Swedish children, including children with Developmental Language Disorder (DLD) who are known to have difficulties with processing of grammatical information.

Our hypotheses were:

•Swedish-speaking children use the gender of the article to identify a noun

•Children with DLD show different patterns in processing the gender information in the noun phrase

•The low-frequency neuter gender is more challenging to process than the uter gender

•Increased sentence complexity affects processing of the noun phrase

Method

Participants were Swedish-speaking children with and without DLD aged 6-9. Noun phrase processing was measured using an eye-tracking task (Visual World Paradigm, Tanenhouse et al., 1995; Haman et al., 2015). Children heared a sentence with a NP during picture identification and we tracked their eye gaze. There were two gender conditions: four pictures with the same gender nouns or one picture differing in gender from the other three. Two sentence complexity conditions included simple or complex sentence frames.

Results

Preliminary results from 15 children with DLD and 26 controls indicate that the first two hypotheses were confirmed, whereas the third and fourth were not.

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Wednesday 10th September - Oral Presentations 10.55 – 11.55

Session 1: Phonology

[10] Sergio Rojo (Lund University), Kathleen McCarthy (Queen Mary University of London), Anna Caunt (University of Plymouth), Caroline Floccia (University of Plymouth), Joost van de Weijer (Lund University) and Carita Paradis (Lund University)

The development of accent biases

Background: Children develop their sociolinguistic competence earlier than previously thought (Dossey et al., 2020). This includes biases such as that someone speaking standard British English is more competent than someone speaking London English (Levon et al., 2021). This study investigates how children develop these biases and whether this development depends on (i) the kind of accent used as stimuli (i.e. regional or foreign accents), (ii) exposure to linguistic diversity and (iii) accent intelligibility and categorization.

Methods: Data from 249 children (aged 7–11 years) was collected (136 from Southwest England and 113 from London). The accents used included regional British accents and foreign accents. The battery of tests consisted of five tasks: a questionnaire for parents to gauge children's exposure to linguistic diversity and four tasks completed by the children:

- intelligibility task (speech-in-noise)
- verbal-guise task (e.g. how smart they think a speaker of a given accent is)
- accent classification task (grouping multiple speakers of each accent)
- BPVS

Results: Children from London are exposed to more linguistic diversity than children from Southwest England. Their BPVS and intelligibility scores are comparable. In the verbal-guise task, the youngest London children have accent biases, whereas children from Southwest England only do so after the age of 9.5 years. In the categorization task, younger participants from London outperform their peers from Southwest England, while the scores of older participants across locations are comparable. The results are argued to show a relationship between linguistic exposure, the ability to categorize accents and accent biases.

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Wednesday 10th September - Oral Presentations 10.55 – 11.55

Session 1: Phonology

[31] Florence Oxley (University of York), Tamar Keren-Portnoy (University of York) and Eytan Zweig (University of York)

Babble and the Brain: Babble becomes more left lateralised as babies gain articulatory experience

How infants' meaningless syllabic vocalisations like [bababa] influence language development is debated. Investigating which hemisphere drives babble – its laterality – can offer valuable insights. In adults, the left and right hemispheres drive language and emotion respectively. One cross-sectional study found infants' babbles and smiles were similarly differentially lateralised, and concluded babble is innately linguistic (Holowka & Petitto, 2002). But language is more sophisticated than babble, and infant brain activity is less localised and consistent than in adults. Only through accumulating perceptual and productive experience are functions gradually recruited to specific networks and regions. So does babble show increasing lateralisation with time and articulatory experience?

I analysed the laterality of babbles, smiles, and other vocalisations by measuring asymmetries in 8 infants' lip movements. I recorded naturalistic videos of infants twice monthly from before babble emergence (~5 months) until 12 months, and extracted ~1500 still-frames of their faces, calculating Oral Asymmetry Indices indicating direction and magnitude of asymmetry in lip openings (a proxy for laterality) for each. I bisected the midline of the mouth using 3 facial landmarks and measured the area of the resulting 'hemimouths'. I explored effects of category (babble, smile, other vocalisation), age, and phonological milestone attainment using linear mixed effects models. Babbles were right-lateralised at emergence, shifting left gradually, with distinct trajectories for mono-, bi-, and polysyllabic babbles. This left lateralisation was associated with productive experience, questioning innate/maturational theories. I propose an alternative, Emergentist conceptualisation of babble as an endogenously-emerging dynamic system, becoming relevant to language only with experience.

[35] Catia Severino (Universidade de Lisboa), Marina Vigario (Universidade de Lisboa) and Sónia Frota (Universidade de Lisboa)

Is early perception of intonation a strength in infants with Down Syndrome?

Although language difficulties have been highlighted as a cornerstone of the developmental profile in Down Syndrome (DS) [1,2,3], few studies have examined early language abilities in children with DS to determine initial strengths and weaknesses that might inform early language interventions to support language development in this population. The present study focused on early perception of intonation and examined whether it differed in infants with DS and typically developing (TD) peers. We used the visual habituation paradigm from [4], who studied TD infants' ability to distinguish the intonation patterns of statements and yes-no questions in European Portuguese. Infants with DS (N=21, Mage=7;18, age range 5;03 to 13;08) were found to look longer to switch trials when compared to same trials. A RM ANOVA revealed an effect of trial type (p=.03), indicating successful discrimination, similarly to TD infants. To explore potential age effects, looking times for same and switch trials for TD and DS younger (below 7mos) and older (above 7mos) age groups were compared through a GLMM analysis (Figure 1). An interaction trial type*group type*age group was found (Table 1). Unlike TD infants and younger infants with DS, older infants with DS were unable to discriminate the intonation contrast.

Our findings highlight the importance of prosody in early development also in infants with DS. Moreover, the decrease in early sensitivity to intonation in older infants with DS pinpoints a crucial developmental window – the first semester of life – for early interventions using intonation to support language learning in these infants.

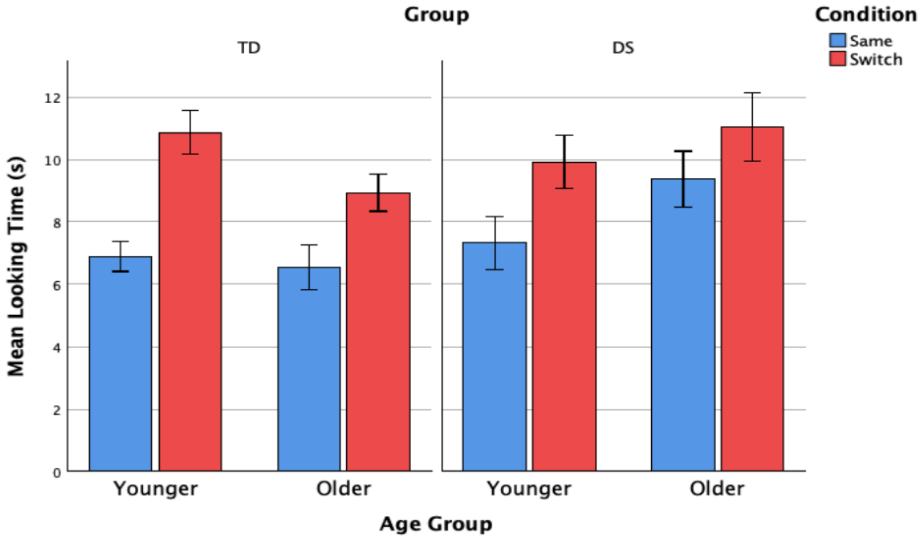

Figure 1. Average looking times (in seconds) for same and switch test trials, by age group for TD infants (data from [4]) and infants with DS. Error bars indicate the standard error of the mean.

Table 1. Results of the GLMM analysis.

Fixed effects	F	df	Denominator df	p-value
Trial type (same/switch)	25.485	1	29	<.001
Group (TD/DS)	2.948	1	32	.096
Age Group (young/older)	.177	1	31	.677
Trial type*Group	1.090	1	33	.304
Trial type*Age Group	1.546	1	33	.223
Trial type*Group*Age Group	3.385	1	72	.039
Analysis of the significant interaction				
Younger TD infants	$ß$ = -3.979, SE =.635, t = -6.260, p < .001, *95% CI* -5.242, -2.716			
Older TD infants	$ß$ = -2.405, SE =.530, t = -4.536, p < .001, *95% CI* -3.455, -1.355			
Younger infants with DS	$ß$ = -2.612, SE =.953, t = -2.742, p = .008, *95% CI* -4.524, -.701			
Older infants with DS	$ß$ = -1.667, SE = 1.634, t = -1.020, p = .319, *95% CI* -5.059, 1.726			

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Wednesday 10th September - Oral Presentations 10.55 – 11.55

Session 2: Social Communication and Pragmatic Language Skills

[8] Liam Blything (University of Manchester), Anna Theakston (University of Manchester), Silke Brandt (Lancaster University) and Ben Ambridge (University of Manchester)

The role of functional-pragmatic constraints on 6- to 7-year-olds' and adults' use of reflexive and non-reflexive object pronouns

Consider the sentence 'Olivia said that Samantha washed [her vs herself]'. How do children know that 'her' means 'Olivia'; whereas 'herself' means 'Samantha'? Traditionally the answer has been determined by (possibly innate) grammatical 'binding principle' constraints (Chomsky, 1981). The present work does not aim to argue for the non-existence of binding principles, but instead tests how much data can be explained by a functionalist-pragmatic framework under which the pronoun refers to what the speaker most plausibly intends to convey (Ambridge et al, 2014). This framework draws upon 'herself' having a specialized meaning: a female who instigates the event of which she is also the direct target (and/or who is seen from her own point of view).

In a forced-choice pronoun completion paradigm (with accompanying animations), we examined adults' (N=60) and 6- to 7-year-olds' (N = 60; M =6;10 ranging 6;4-7;8, 29 female) preferences for a reflexive ('herself') versus a non-reflexive ('her').

Results support a functionalist-pragmatic framework. Both adults and children produced herself over her significantly more often when the PATIENT character who had an action done to them was clearly also the AGENT in executing that action ('Samantha' is represented from her internal viewpoint, e.g., 'Samantha brushed paint all over [herself vs her]': adult M = 99%, child M = 82.1%) rather than being stative ('Samantha' can be represented from an objective viewpoint e.g., 'Samantha has paint all over [her vs herself]': adult M = 59.98%; child M = 73.3%).

Wednesday 10th September - Oral Presentations 10.55 – 11.55

Session 2: Social Communication and Pragmatic Language Skills

[44] Suzanne Murphy (University of Bedfordshire), Kerry Bell (University of York), Erica Cook (University of Bedfordshire), Sarah Crafter (Open University), Rosemary Davidson (University of Bedfordshire), Caroline Fairhurst (University of York), Kate Hicks (University of York), Victoria Joffe (University of Essex), David Messer (Open University), Lyn Robinson-Smith (University of York), Luke Strachan (University of York), David Torgerson (University of York), Han-I Wang (University of York), Charlie Welch (University of York) and Justin Fenty (University of York)

Enhancing Pragmatic Language skills for Young children with Social communication difficulties (E-PLAYS-2) trial: a computer intervention to promote communication and collaborative skills in young children

Children who have difficulties with social communication experience problems with using language for social purposes, however, few evidence-based interventions for this group of children exist.

We will present the results of a large randomised controlled trial assessing the effectiveness and cost-effectiveness of the E-PLAYS intervention. The E-PLAYS programme is a novel, technological intervention for children (5-7 years-old) taking the form of a fun computer game. The programme supports children with social communication difficulties, guiding them through collaborative problem-solving experiences with a peer to develop their communication and perspective-taking skills. E-PLAYS is played by children in pairs, in 10 weekly sessions of 30 minutes each, supervised by a teaching assistant. The E-PLAYS-2 trial was funded by the National Institute for Health and Care Research (NIHR); 90 mainstream schools and 800+ children participated.

Children were tested with a battery of language and psychological tests including measures of pragmatic language skill, peer relations and perspective-taking. These assessments were largely conducted face to face with the children by blinded researchers, with some measures completed by teachers. Cost-effectiveness measures were completed by parents via survey.

Children were tested at baseline and 15-20 weeks and 35-40 after randomisation, thus providing us with a long-term follow-up. School staff, parents and children were also interviewed regarding their experiences of E-PLAYS.

Statistical and cost-effectiveness analyses compare performance of the experimental and control groups across all measures. Implications of results for practice will be discussed, with a long-term plan to offer the E-PLAYS-2 programme to all UK primary schools.

Wednesday 10th September - Oral Presentations 10.55 – 11.55

Session 2: Social Communication and Pragmatic Language Skills

[151] Lena Sakure (University of Reading)

Micro-creativity in interaction: evidence from play encounters

Background: Creativity is an important area in childhood development due to its association with a range of cognitive and linguistic skills. More research is needed to understand how creativity is co-constructed in child-adult interaction. In this paper, I study encounters between children and older adults in a care home co-located with a nursery, a new type of early childhood education and long-term care setting gaining popularity in recent years.

Method and participants: I use conversation analysis to investigate 6.5 hours of inter-generational activities, video-recorded in a care home co-located with a nursery. I conduct turn-by-turn analyses of naturally occurring social interaction between 3-4-year-old children and care home residents attending the activities.

Results: I find that in inter-generational activities, led by early years educators, children and residents take opportunities to interact dyadically in three contexts: 1) 'structured free spaces' which emerge during hands-on tasks for small groups, 2) 'transitory free spaces' where the educators' group-directed talk is paused, 3) 'non-spaces' where residents and children interact despite being allocated listener roles. I demonstrate how, in all three contexts, participants co-construct play sequences through conversation and by creatively re-purposing objects handed out to them for a group task.

Discussion: I put forward the new concept of 'micro-creativity' as a form of creativity which is socially co-constructed turn by turn in child-adult playful interaction. I document children and adults' capabilities for engaging in spontaneous micro-creative practices and identify a set of conditions in which this can occur.

POSTER PRESENTATIONS -ABSTRACTS-MONDAY 8th September

[24] Victoria Hulks (University of Oxford), Amy Hoose (University of Oxford), Caitlin Croke (University of Oxford) and Alexandra Hendry (University of Oxford)

Promoting early interaction and communication through interactive play in the museum context

Responsive adult-child interactions have been widely associated with learning outcomes in the early years. In particular, research has linked adults' use of contingent talk and expansions to children's speech and language development. Many early education and speech and language therapy programmes have been developed that promote positive adult-child interaction strategies, and there are further opportunities for promoting positive adult child interactions within cultural settings such as museums and galleries, where there are often vast collections and stimulating experiences on offer. Here, we describe the development of Toddler Time; a museum-based early years programme developed by the Ashmolean Museum, Oxford, UK, in partnership with researchers (including a speech and language therapist and a developmental psychologist). The program has sought to promote responsive interaction strategies within its gallery-themed sessions. Such strategies included "waiting to see what the child is interested in first" and responding to child initiations through "repeating back and expanding." Findings from the programme evaluation are described, including the challenge of shifting museum facilitator delivery from more traditional didactic practice to building responsive interactions that accommodate different ages and stages of development and balancing child-centred learning principles with the adults' desire for enriched learning content.

[30] Florence Oxley (University of York), Charlotte Blake (University of York), Rajalakshmi Madhavan (University of York) and Catherine Laing (University of York)

Baby vs. Machine: Do infants prefer listening to natural or synthesised infant vocalisations?

Sensorimotor feedback guides and enriches learning and development. Mapping sensory information from the body and environment onto articulatory movements is vital for voluntary speech. Sensorimotor mapping may influence oral-motor development as early as ~3 months, via turn-taking and imitative smiling and tongue-poking. But what of vocal development? By ~3 months, infants prefer familiar over unfamiliar environmental sounds, attending longer to caregivers vs. strangers, human voices vs. music, natural vs. synthesised vocalisations, and humans vs. primates (Mehler et al., 1978; Standley & Madsen, 1990; Vouloumanos et al., 2010). By ~4-5 months, infants are creating and familiarising with many of their own sounds, and by ~6 months, they prefer synthesised infant vs. adult vocalisations (Polka et al. 2022). Here, we investigate whether infants prefer vocalisations produced by infant vocal tracts vs. acoustically equivalent synthesised sounds. We will present 4-5-month-olds with natural and acoustically-matched synthesised infant vocalisations, in a remote listening preference paradigm, using Habit2 over Zoom. We are recruiting 30-40 infants (allowing for attrition) with no known hearing impairment or risk of developmental conditions, from monolingual homes (75% ambient English). Data collection will start in March 2025. We predict infants will prefer natural infant vocalisations. If not, previous findings may reflect simply a preference for higher-pitched sounds (rather than more familiar, infant-like sounds). Nonetheless, if infants show any discrimination across conditions, this would indicate recognition of real human vocal tract properties, controlling for all acoustic features, suggesting that infants are learning from sensorimotor feedback from their own vocalisations by ~4-5 months.

[66] Sara Carter (University of Edinburgh) and Amalia Skilton (University of Edinburgh)
Comparing the morphological complexity of ADS and CDS in a polysynthetic language.

Most studies on morphological differences between adult-directed speech (ADS) and child-directed speech (CDS) analyze fusional languages such as English [References 1, 2]. In contrast, this paper evaluates the morphological complexity of ADS vs. CDS in a polysynthetic language. Ticuna (isolate; Peru). While some studies of polysynthetic languages suggest that ADS and CDS are similar in morphological complexity [3], others suggest that CDS is simpler [4]. However, these studies include very little ADS. Thus, we ask: In polysynthetic languages, is ADS still more complex than CDS when equivalent amounts of data are analyzed? To respond, we analyze 7.5 hours of conversation in Ticuna between adults only, and 7.5 hours of free play with 45 children aged 1;0-4;11 and their caregivers [5]. All adult speech was transcribed, translated, morphologically glossed, and manually tagged as ADS/CDS.

Like other work on CDS in polysynthetic languages [6], we focus on verbs, making the following predictions. (1) Verbs in Ticuna ADS will be longer, in morphemes, than verbs in CDS. (2) Verbs addressed to older children will be longer, in morphemes, than verbs addressed to younger children. (3) ADS will display greater paradigmatic complexity (more unique forms of each verb) than CDS. We will test these predictions by fitting a series of mixed-effects linear regressions. Each model will include the complexity measure (in 1 and 2, verb length; in 3, count of word types per root) as the outcome; ADS/CDS (1, 3) or child age (2) as a fixed effect; and speaker as a random effect.

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Monday 8th September – poster presentations

[95] Madlen Jones (Queen Mary University of London), Gwen Brekelmans (Queen Mary University of London) and Kathleen McCarthy (Queen Mary University of London)

Acquisition of English phonetic contrasts among children from Somali-dominant homes in East London

Children who start school new to English produce and perceive English (L2) speech sounds with influences from their heritage (L1) language. With increased English experience in school, these children acquire more robust English phonemic categories but continue to display an L1 influence in their early literacy skills (Lee & Iverson, 2011; McCarthy et al., 2014; 2023). This project explores factors that drive such developmental patterns in New-to-English Somali heritage children. We will investigate how structural L1-L2 phonetic differences, language exposure and social environment influence children's production and perception of English speech sound contrasts. 30 children aged 4-8 years from Somali-speaking families in East London will take part in two tasks in Spring 2025: 1) a picture naming task (production) and 2) a XAB sound discrimination task (perception). Tasks measure the extent to which children have acquired English phonetic contrasts that are absent in Somali (/p-b/, /s-z/, /f-v/) in comparison to contrasts that are present in Somali (/t-d/, /k-g/). Each child's language environment and communicative network will be documented using a caregiver interview-based questionnaire. English contrasts not found in Somali are expected to be acquired later than those found in both languages. Younger AoA and more diverse linguistic input are expected to correspond with more advanced production and perception of English sounds. Results will allow us to identify patterns in the English acquired by children who speak Somali, an understudied yet prevalent language in East London, and to consider how individual differences in linguistic experience can influence their developmental trajectories.

Monday 8th September – poster presentations

[100] Laura Vaccari (City St George's University), Helen Spicer-Cain (City St George's University) and Ros Herman (City St George's University)

Exploring limitations and challenges of the deaf autism assessment process: Insights from parents and professionals

Background: Deaf children encounter reduced exposure to language learning opportunities in their critical years, often adversely impacting development (Allgar et al., 2021; Hall et al., 2017). Similar impacts are seen in autism as both are closely linked with language and social development. As such, deaf autism assessment (DAA) is a multi-faceted process with additional layers of complexity due to this overlap, often leading to misinterpretation of behaviours and difficulties in differential diagnosis (Hodkinson et al., 2023; Phillips et al., 2022). DAA also presents unique challenges due to linguistic and cultural complexities. This paper is important because failure to receive a timely, accurate diagnosis results in missed opportunities to address a child's needs (Wright et al., 2022). **Methods:** Using a qualitative, interpretative approach, this study gathered insights through focus groups and interviews with four National Deaf CAMHS professionals and four parents. Participants were recruited through professional and personal networks, deaf schools/provisions and social media, and asked about their experience of the DAA process. Thematic analysis was employed to examine patterns within the data, ensuring rigour through supervisory review and anonymised transcript analysis.

Results: Preliminary findings provide perspectives into systemic limitations of the current process, including misinterpretation of autistic traits in deaf children, lack of standardised deaf-accessible tools, and challenges in communication between professionals and families. Results highlight the need for updated nationwide assessment frameworks and enhanced training for clinicians. These insights will inform clinical practice and future research aimed at enhancing DAA accessibility and diagnostic accuracy for this population.

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Monday 8th September – poster presentations

[114] Kateřina Šormová (Charles University) - *Ethnolect expressions in written text*

This poster examines the functional literacy of Romani pupils, particularly their written production skills, which are closely linked to reading comprehension. Research indicates that individuals with strong literacy skills have better self-esteem, health, and job prospects than those with low literacy. Romani pupils belong to a high-risk group for low literacy, making targeted interventions necessary.

Government strategies, such as The Strategy for Equality, Inclusion, and Participation of Roma 2021–2030, emphasize the importance of supporting Romani pupils in speech development and communicative competence. In some Romani communities, Czech is spoken as an ethnolect influenced by Romani, leading to linguistic challenges in education. Since this ethnolect differs from standard Czech, pupils struggle with unrecognized linguistic patterns that impact their writing.

This poster analyzes written responses from Romani primary school pupils, the data reveal high error rates, difficulties in word comprehension, and ungrammatical sentence structures. Many pupils misinterpret questions or copy text fragments, showing limited ability to formulate original responses. Their writing often resembles spoken language or free association rather than structured answers. Findings suggest that ethnolectal influences hinder written proficiency, likely due to insufficient linguistic support and limited exposure to standard Czech. These challenges highlight the need for targeted educational measures to enhance language development and academic inclusion for Romani pupils. The study underscores the importance of addressing ethnolectal phenomena in Czech language instruction to bridge linguistic gaps.

Monday 8th September – poster presentations

[115] Sophie Bennett (Lancaster University), Cristina Flores (Universidade do Minho), Padraic Monaghan (Lancaster University) and Patrick Rebuschat (Lancaster University)

Individual differences in heritage language learning: A meta-analysis of influences on sentence repetition

A heritage language (HL) is the language of origin of migrant communities, separate to a majority language (ML) that is spoken in their place of residence (Paradis et al., 2021). Given the heterogeneity of HL learners, a wealth of research analyses the effect of individual difference factors on HL and ML proficiency. These include their age, age of onset of bilingualism and exposure to the heritage language, where language proficiency is widely measured through sentence repetition task performance (e.g., Armon-Lotem et al., 2021; Kaltsa et al., 2020; Torregrossa et al., 2024).

However, it is difficult to draw conclusions across all this research given the variation in methods and measures used. We therefore conducted a preregistered systematic meta-analysis to estimate the effect sizes of these individual contributors to sentence repetition to find out (1) how each of these individual differences affect HL and ML proficiency; (2) whether they affect HL and ML proficiency differently; (3) whether these effects are moderated by the task design and atypical development.

We synthesised and evaluated the effects of these individual differences across all eligible studies extracted from key databases (e.g., Web of Science, Linguistics and Language Behavior Abstracts, etc.). We included studies if they empirically tested the effect(s) of age, age of onset of bilingualism, and the amount of HL exposure on sentence repetition performance in the HL and ML. The results show how each of these key individual differences predict children's acquisition of the HL and ML and the remaining research gaps to date.

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[122] Serge Minor (UiT - The Arctic University of Norway) Natalia Mitrofanova (UiT - The Arctic University of Norway) and Gillian Ramchand (University of Oxford and UiT -The Arctic University of Norway)

Between-subject heterogeneity suggests stepwise acquisition of grammatical aspect in L1 Russian

Competing theories of L1 acquisition emphasize either item-by-item learning (Tomasello 1992, 2003) or early abstraction of grammatical rules (Pinker 1984, Valian 1986). We addressed this question by examining how Russian-speaking children acquire grammatical aspect. Using a cross-sectional design, we tested 174 children (ages 3–8) in a sentence-picture matching task while recording their eye movements and offline responses. Participants viewed pictures of ongoing vs completed events while listening to sentences with either a Perfective or Imperfective verb (ex.1; Fig.1). Previous studies found that Russian-speaking adults strongly preferred ongoing events for Imperfective verbs and completed events for Perfective verbs (Minor et al. 2022, 2023).

Ex. 1. Babuška **saža-la / po-sadi-la** bʲelyj cvʲetok
grandma **plant.IMP-PAST / PVF-plant-PAST** white flower
'Grandma was planting a white flower.'

Age group	Mean Accuracy
3 y.o	64.3%
4 y.o.	68.1%
5 y.o.	77.5%
6 y.o.	85.9%
7-8.y.o.	86.9%

Table 1. Accuracy on the picture selection task

	Cluster 1		Cluster 2	
	N of participants	*Estimated mean accuracy*	*N of participants*	*Estimated mean accuracy*
3 y.o.	38 (100%)	64.1	0 (0%)	—
4 y.o.	22 (65%)	56.6	12 (35%)	90.9
5 y.o.	18 (50%)	61.2	18 (50%)	94.2
6 y.o.	12 (36%)	70.6	21 (64%)	94.2
7-8 y.o.	14 (37%)	70.1	24 (63%)	96.8

Table 2. Sub-populations within the age groups, as revealed by finite mixture model analysis of the accuracy score.

Figures

Fig 1A. The ongoing event of 'grandma planting a flower'.

Fig 1B. The completed event of 'grandma planting a flower'.

Fig. 1

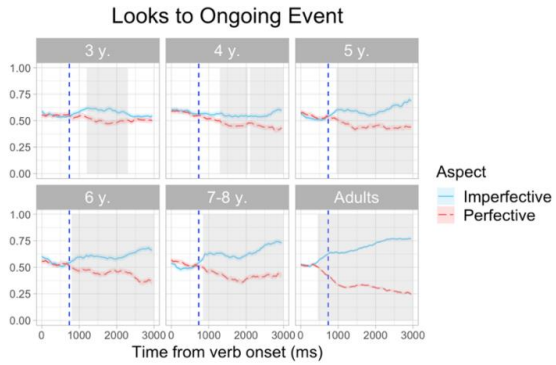

Fig. 2. Looks to the OE picture by Aspect for the five child age groups. Adult data (n=124, mean age = 22) from a previous study using the same design included for comparison. Plots start at verb onset. Dashed vertical lines represent average verb offset. Shading marks the localization of significant effects.

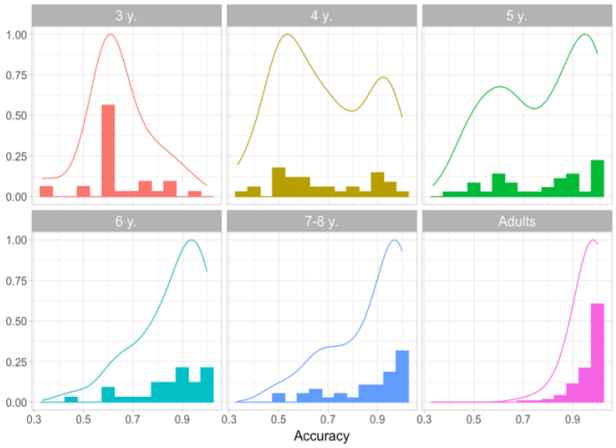

Fig. 3. Distributions of accuracy scores (histograms and densities) for the different age groups. Adult results included for comparison.

Selected references: Minor et al. (2022). Fine-grained time course of verb aspect processing. *PLoS ONE* 17. **Minor et al. (2023).** Aspect processing across languages: A visual world eye-tracking study. *Front. Lang. Sci.* 1. **Pinker (1984).** *Language learnability and language development*. Cambridge MA: Harvard University Press. **Tomasello (1992).** First verbs: A case study of early grammatical *development*. Cambridge; Cambridge University Press. **Tomasello (2003).** *Constructing a Language: A Usage-Based Theory of Language Acquisition.* Cambridge, MA: Harvard University Press. **Valian (1986).** Syntactic categories in the speech of young children. *Developmental Psychology, 22*(4), 562–579.

The results showed that children in all age groups displayed sensitivity to aspect, with gaze patterns and offline responses differentiating between Imperfective and Perfective conditions (Table 1; Fig.2). Offline accuracy improved with age, with significant gains between 4–5 years and 5–6 years. Crucially, a finite mixture model analysis of accuracy scores revealed distinct sub-populations within all age groups except for the 3-year-olds. From age 4 onward, children clustered into two groups: one performing moderately (60–70% accuracy) and another at ceiling (>90%), with the proportion of high-performing children increasing with age (Table 2, Fig.3).

This pattern suggests a two-phase acquisition process: an early stage of item-based learning, allowing children to achieve ~70% accuracy, followed by a "quantum leap" to above 90% accuracy. We hypothesize that this leap is triggered by the emergence of aspect as a discrete and obligatory category in the children's grammar.

Monday 8th September – poster presentations

[123] Grzegorz Krajewski (University of Warsaw), Magdalena Krysztofiak (University of Warsaw), Karolina Muszyńska (University of Warsaw), Michelle White (University of Plymouth), Katarzyna Bajkowska (University of Warsaw), Pernille Hansen (University of Inland Norway), Ewa Komorowska (University of Warsaw), Eirik Tengesdal (OsloMet - Oslo Metropolitan University), Ewa Haman (University of Warsaw) and Nina Gram Garmann (OsloMet - Oslo Metropolitan University)

Different Approaches to Assess Bilingual Language Development Using MacArthur-Bates Communicative Development Inventories: Findings from Polish-Norwegian Children

Parental vocabulary checklists, such as the MacArthur-Bates Communicative Development Inventories (CDIs), are widely used for screening language delays in young children (Marchman et al., 2023). Although CDIs exist for many languages, they are normed for monolinguals, posing challenges for bilingual assessment. For bilinguals, vocabulary scores from both languages can be combined (total vocabulary, TV, or total conceptual vocabulary, TCV) and compared to monolingual norms. Alternatively, expected single-language scores may be predicted using regression models with language exposure as a predictor (Floccia et al., 2018; Singh et al., 2022).

This study compares these approaches in Polish-Norwegian bilinguals in Norway. Polish and Norwegian CDI data were collected online from 234 parents of children aged 18–36 months. For 95 children with both CDIs, TV and TCV scores were calculated. Regression analyses modeled language exposure as a predictor of single-language CDI scores.

We compared the percentages of children identified as below the 10th percentile (common threshold for language delay) by each method. Using combined scores with Polish norms identified 9% as at risk, while Norwegian norms identified 16%, suggesting over-diagnosis. Regression analyses showed exposure measures did not predict Polish single-language scores but, with age, explained over 50% of variance in Norwegian scores. Norwegian regression-based norms identified 8.5% as at risk.

Findings suggest monolingual tools can assess bilinguals but require population-specific validation. For Polish immigrant children in Norway, Polish norms may be used with combined scores, while Norwegian single-language scores may be used with exposure measures in regression-based assessment.

Monday 8th September – poster presentations

[128] Karolina Muszyńska (University of Warsaw), Grzegorz Krajewski (University of Warsaw) and Magdalena Krysztofiak (University of Warsaw)

Validation of Computerised Adaptive Versions of the Polish CDIs

Communicative Development Inventories (CDIs) are widely used in research on language development in young children. However, CDI lists include hundreds of words and many attempts are made to create shortened versions. Computer Adaptive Testing (CAT) enables shortening a CDI while retaining its accuracy. In CDI-CAT, the participant is presented with one item at a time, and their response allows the CAT algorithm to estimate the language ability and choose the next item to re-evaluate this estimate.

We will present results from an ongoing validation study of two Polish CDI-CATs: Words and Sentences (WS) for parents of children aged 18-36 months and Words and Gestures (WG) for parents of children aged 8-18 months. The estimate from the CDI-CAT can be correlated with the score from the full-item CDI. So far, parents of 88 children filled in both a full-item CDI and a CDI-CAT. Testing is conducted online via a web app, with intervals of 1 to 10 days. Correlations between the score from the full-item version and the CDI-CAT were above r = .80 for WS and for WG word understanding, r = .57 for WG word production, and r = .92 for WG gestures (however, the WG sample is currently relatively small, n = 16). The WS correlations are similar to those reported in the only other big-scale validation study so far (r = .86 for American English WS, Kachergis et al., 2022). We will also explore parental consistency in selecting particular words across the two versions and report discrepancies.

[129] Nelly Joye (University of Essex), Krystina Raymond (University of Toronto), Steve Songtao Wong (University of Toronto), Jennifer Donovan (Cotswolds Learning), Lucie Broc (Université de Poitiers), Julie Dockrell (UCL) and Chloë Marshall (UCL)

A cross-orthographies comparison of spelling strategies in the primary years in French and English.

Learning to spell relies heavily on linguistic skills in the primary years, across a range of alphabetic orthographies. French and English are both morpho-phonemic orthographies that allow for children to build on their linguistic knowledge in their spelling attempts. Whilst spelling analysis has given good insight into the weight these skills may play in learning to spell French and English, spelling processes and strategies have not been explored across these two orthographies. The present study offers a first comparison of the spelling strategies used by children learning to spell French or English throughout the primary years.

Nighty-one children were recruited in years 1-6 in mainstream primary schools in France and in the UK and were given to choose between alternative spellings for a word, and to explain their choice. Twelve words were chosen and matched across orthographies for length and complexity.

Results suggest phonological strategies are used more frequently by young and English spellers, whilst morphological strategies are used more frequently by older and French spellers. This was despite similar spelling challenges across the orthographies' word lists. In both languages, the use of morphological and orthographic strategies predicted spelling ability, as measured by spelling performance on the same word lists.

Monday 8th September – poster presentations

[130] Nora Chrifi (University of Liège - Clinical speech therapy Department), Marie Geurten (University of Liège - Psychology Department) and Christelle Maillart (University of Liège - Clinical speech therapy Department)

The role of teachers' metacognitive talk in young children's language development: a pilot study

Introduction. Child-directed speech plays a fundamental role in language development and learning (Weiss et al., 2022). Research in metacognition has demonstrated that input structured around metacognitive strategies facilitates learning, particularly in fields such as mathematics and reading comprehension (Grammer et al., 2016 ; Urban et al., 2023). However, the relationship between the metacognitive characteristics of teachers' talk and language development remains unexplored.

Method. This pilot study will analyse the metacognitive talk of preschool teachers and examine its influence on children's language development over one year. The study will involve five teachers and 26 French-speaking preschool children. Teacher-child interactions will be recorded two times: once in the middle and at the end of the year, encompassing three activities (language, mathematics, and informal interactions). The metacognitive talk will be categorised into two types: (1) monitoring occurrences (feedback, metacognitive judgments, e.g.: “exact, you said it very well”) and (2) control occurrences (statements, questions about strategies used, e.g.: “we repeat the words we've learned to remember them for next time”). Non-metacognitive talk will also be coded for comparison. The assessment of language skills will encompass vocabulary, phonological awareness and inferences.

Expected results. Descriptive analyses and multiple regressions using a hierarchical linear model will identify the input characteristics most predictive of language development.Discussion. This study aims to enhance language support practices by providing an innovative theoretical framework for understanding the role of metacognitive talk in improving the quality of language input and its impact on the development of young children's language skills.

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Monday 8th September – poster presentations

[131] Kathleen McCarthy (Queen Mary University of London) and Elisa Passoni (Queen Mary University of London)

The acquisition of urban language varieties: a longitudinal study of London English speech development in an East London primary school

Previous work has shown that children initially acquire speech patterns that reflect their caregivers (Smith, 2021). With experience in school, children begin to sound more like their peers and by early adolescence show distinct speech patterns that are determined by multiple social factors such as peer group, class and ethnicity (Cheshire et al., 2011). To date, we know very little about how and when children acquire differing speech varieties, especially in urban contexts, where children are exposed to range of accents and languages. In the current project, we are tracking the English speech production patterns of 43 children in East London, starting at age four to seven years old. We are recording children with their peers every 6 months using 3 tasks (picture naming, spot-the-difference, free play) designed to elicit vowels and consonants that cover a range of London English accents (e.g., Multicultural London English (MLE), London Asian).

We have recorded the children twice so far and are currently conducting an auditory and acoustic analysis of their speech. Preliminary findings show that at the start of school (4-5 years) children's speech contains phonetic features that reflect their home variety and more variability than that of the older children (6-7 years), who display phonetic features that reflect an MLE-like and/or standard London variety, while still retaining some ethnic-specific features. At CLS, we will present a detailed pattern of phonetic development of London English from age 4-8 years, in the context of the children's home environment, social background and ethnicity.

[132] Karolina Muszyńska (University of Warsaw), Grzegorz Krajewski (University of Warsaw), Magdalena Krysztofiak (University of Warsaw), Agnieszka Dynak (University of Warsaw), Magdalena Łuniewska (University of Warsaw) and Ewa Haman (University of Warsaw)

(In)consistencies in parental reports in language diary vs. CDI

Parental reports are crucial in language development research, with the MacArthur-Bates Communicative Development Inventories (CDIs) widely used. CDIs list common words known by young children but are not exhaustive, potentially introducing reporting bias. This study compares CDI and parental diary data to: (1) assess whether CDI words align with those freely reported in a diary, (2) capturing additional words reported in the diary but not present in CDI list, (3) identify potential reporting bias by analyzing discrepancies between diary entries and CDI responses. Parents of 230 Polish children kept a language diary of their children's new words. After Mdn = 4 months, they completed a CDI (Words and Gestures or Words and Sentences). Only words recorded in the diary before CDI administration were analyzed.

Re(1): Of 3,826 word tokens in diaries, 79% appeared in the CDI, indicating that the CDI captures a large portion of commonly reported words. These tokens represented 819 word types, with 50% on the CDI, indicating the CDI's broad but incomplete coverage.

Re(2): These were largely new instances of existing CDI semantic categories and open classes, such as food and drink, animals, and verbs.

Re(3): Parents failed to mark M = 16%, Mdn = 9% of previously reported diary words. Regression analysis showed that words likely omitted in CDI were content (open class) words, baby forms and CDI items further on the list. Analyses with mixed effects models are planned next.

This comparison helps refine our understanding of how parental reporting shapes early vocabulary assessment.

Monday 8th September – poster presentations

[133] Mirjana Jeremic (University of Reading), Emma Pagnamenta (University of Reading) and Vesna Stojanovik (University of Reading)

Shared book reading with young pre-school children with Down syndrome: exploring parent-child interactions and language boosting behaviours and comparing with typically developing peers

Background: The development of language and communication skills is a significant challenge for children with Down syndrome (DS). Shared book reading (SBR) has been proposed as a valuable context for language intervention (Jeremic et al., 2024), but few studies have examined parental and child behaviours and language use during SBR with young children with DS.

Method: We recruited 32 families: 12 with 2- to 4-year-old children with DS, 10 age-matched typically developing children, and 10 typically developing children matched on receptive vocabulary. Parent-reported and standardised measures of language, cognition and home reading environment were collected. Parent-child SBR interactions were video-recorded and analysed using the Child and Maternal Behaviour Rating Scales (Mahoney, 2008; Mahoney, 1998). We also examined parents' use of evidence-based language boosting strategies (labelling, repeating, questioning, and interpreting child communication).

Results: Parents reported frequent SBR and enjoyment of the activity but varied in their use of language boosting strategies. We found positive correlations between parental responsivity and child attention, initiation, and language use across groups during SBR. In the DS group, asking open-ended questions, copying, and expanding the child's utterances were positively correlated with child verbalisations. In the language-matched group, asking questions and labelling were positively correlated with child communication. Parents' interpretation of child communication was positively correlated with child vocalisations in the DS and age-matched groups.

Conclusions: Our study confirm the potential of SBR as a valuable tool for supporting language development in children with DS. The differences in interactions between children with DS and their parents, compared to those of typically developing children, highlight the need for the development of a tailored SBR intervention for this population.

Monday 8th September – poster presentations

[136] Yuko Matsuoka (King's College London)

The impact of heritage language exposure on development of the societal language for children with Down Syndrome

Existing studies on language development in children with Down Syndrome (DS) have paid little attention to bilingual children (Bird et al., 2005; Ward & Sanoudaki 2021; 2023). In particular, no research has looked at bilingual children with DS in heritage language (HL) contexts where bilingualism is not supported in society such as in England. The current study investigates if there are differences in the societal language (i.e. English) development outcomes for monolingual and bilingual children with DS in England.

I will present the preliminary results from 10 children with DS living in England aged between 5 and 16 (5 each for bilingual and monolingual groups). The data were collected using the Clinical Evaluation of Language Fundamentals- Preschool Edition (CELF-P; Semel et al., 1998) and the Multilingual Assessment Instrument for Narratives (LITMUS-MAIN; Gagarina et al., 2019). The goal is to examine if bilingual children with DS, who are exposed to HL at home and English at school, show difference in English development compared to monolingual children who are only exposed to English. Importantly, I will also highlight the differential effects of bilingualism on development in different language subdomains, vocabulary and morphosyntax precisely, to go beyond the existing literature that mainly studied receptive and expressive language skills (e.g. Drysdale et al, 2015). This study is the first empirical study that explores the language development of bilingual children with DS who grew up in an HL context.

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Monday 8th September – poster presentations

[138] Sarah Rossi (IUSS Pavia)

Negative and Infinitival Imperatives in Italian: A Rare Phenomenon in Early Child Speech

Previous research (Salustri & Hyams, 2003, 2006) has shown that Italian children go through a developmental stage analogous to the Root Infinitive Stage (Rizzi, 1993, a.o.), during which they overproduce positive imperatives in the 2nd person singular (2SG)—uninflected forms consisting only of the verb root and a thematic vowel (ex. Parl-a! speak-IMP.2SG).

Little is known about the acquisition of other imperative forms in Italian. This corpus study aims at filling this gap by focusing on Italian imperatives with infinitival morphology (Table 1). Spontaneous production data from four Italian children (Table 2) were extracted from CHILDES (MacWhinney, 2000) and analyzed using CLAN. Results (Table 3) show only five instances of Negative Imperatives (2SG), and no occurrences of Imperatives with Generic Subjects or A-imperatives. In contrast, prior research (Table 4), documented 519 positive imperatives (SG) in the same children's production.

The scarcity of infinitival imperatives suggests that they are more computationally demanding than canonical 2SG imperatives. Following Rossi (2023), Shlonsky (2004), a.o., imperatives are reduced structures, raising the question of why even minimal differences in structural size between canonical and infinitival imperatives result in such a sharp contrast in rate of early production. Negation is harder to process (Dale & Duran, 2011, a.o.), and the limited discursive uses of infinitival imperatives (c.f. Table 5) may explain their infrequent occurrence in early speech. Instead, developing children prefer the non-inflected 2SG positive imperative as a versatile, low-cost form, enabling them to express a wider array of directive uses and possibly other speech acts.

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❖ ***Table 1:*** *The types of imperatives discussed in this work, along with their gloss, translation, paraphrase, and relevant references.*

Imperative Type	Example	Gloss	Translation	Paraphrase	Reference
Negative Imperative (2SG)	*Non mangiare!*	NEG eat-INF	'Don't eat!'	I order you not to eat / I forbid you from eating.	(Kayne, 2000; Zanuttini, 1997)
Imperative with Generic Subject	*Allacciare le cinture!*	fasten-INF the seatbelts	'Fasten your seatbelts!'	Passengers are instructed to fasten their seatbelts.	Example by Salvi & Borgato (1991, p. 153)
	Montare le tende!	set.up-INF the tents	'Set up the tents!'	The older scout leader exhorts all the younger scouts to set up the tents.	
	Svitare il coperchio!	unscrew-INF the lid	'Unscrew the lid!'	The user (i.e., whoever reads the guide) is instructed to unscrew the lid.	Example by Salvi & Borgato (1991: 153)
	Rispettare l'ambiente!	respect-INF the environment	'Respect the environment.'	Whoever reads the sign is instructed to respect the environment.	
	Indossare la mascherina protettiva!	wear-INF the protective mask	'Wear a protective mask.'	Whoever reads the sign is instructed to wear a protective mask.	Example by Pak et al. (2024: 2)
A-imperative	*A mangiare!*	to eat-INF	'Time to eat / Let's eat!'	I peremptorily announce that it's time to start eating and command that the interlocutors go and start eating.	
	A montare le tende!	to set.up-INF the tents	'Get to setting up the tents! / Start setting up the tents!'	I peremptorily announce that it's time to set up the tents and command that the interlocutors go and start setting up the tents.	

❖ ***Table 2****:* Spontaneous production data from the Calambrone Corpus (Cipriani et al., 1989) in the CHILDES database (MacWhinney, 2000).

Corpus	Child	Age - 1st transcript	Age - Last transcript	# of analyzed transcripts	# of child's utterances
Calambrone	Raffaello	1;7,07	2;11;20	17	3812
Calambrone	Martina	1;7,18	2;07,15	12	6,666
Calambrone	Viola	1;11,16	2;10,03	10	6,280
Calambrone	Diana	1;08,05	24;00.02	9	3,812

❖ ***Table 3:*** *Production rate of Negative Imperatives in the second person singular, Imperatives with generic subjects (both positive and negative) and A-imperatives.*

	Age																																
Child's name	1;03	1;04	1;05	1;06	1;07	1;08	1;09	1;10	1;11	2;0	2;1	2;2	2;3	2;4	2;5	2;6	2;7	2;8	2;9	2;10	2;11	3;0	3;1	3;2	3;3	3;4	3;5						
Diana						0		0	0	0	0				1	4																	
Martina					0	0	0	0	0		0		0	0	0		0																
Raffaello					0		0	0	0	0	0		0	0	0	0	0	0	0		0												
Viola									0	0	0			0	0		0	0		0													

❖ ***Table 4:*** *Production rate of positive 2nd person singular imperatives (canonical imperatives) in Italian (c.f. Rossi, 2023).*

	Age																																
Child's name	1;03	1;04	1;05	1;06	1;07	1;08	1;09	1;10	1;11	2;0	2;1	2;2	2;3	2;4	2;5	2;6	2;7	2;8	2;9	2;10	2;11	3;0	3;1	3;2	3;3	3;4	3;5						
Diana						2		23	8	22	29				39	X																	
Martina					4	12	14	11	26		29		61	X	X		X															
Raffaello					0		0	1	3	3	6		8	4	11	13	15	9	X		X												
Viola									6	3	54			12	23		20	21		X													

❖ ***Table 5:*** *Summary of the uses different imperative forms have, based on the taxonomy by Condoravdi & Lauer (2012).*

Imperative Use	Positive Imperative (2SG)	Negative Imperative (2SG)	Generic Imperative	A-Imperative
1. Directives				
→ Command	✓	✓	✓	✓
→ Warning	✓	✓	✓	?
→ Request	✓	✓	?	X
→ Advice	✓	✓	X	X
→ Plea	✓	✓	X	X
2. Wish-type Uses				
→ Well-wish	✓	X	X	X
→ Curse	✓	X	X	X
→ Addressee-less Wish	✓	✓	X	X
→ Absent Wish	?	✓	X	X
3. Permissions & Invitations				
→ Permission/Concession	✓	✓	X	X
→ Offer	✓	X	X	X
→ Invitation	✓	X	X	X
4. Disinterested Advice	✓	X	X	X

Monday 8th September – poster presentations

[141] Magdalena Łuniewska (Faculty of Psychology, University of Warsaw, Warsaw, Poland), Weronika Araszkiewicz (Faculty of Psychology, University of Warsaw, Warsaw, Poland), Nina Gram Garmann (Department of Early Childhood Education, OsloMet – Oslo Metropolitan University, Oslo, Norway), Pernille Bonnevie Hansen (Faculty of Education, University of Inland Norway, Oslo, Norway), Alicja Jeleń (Faculty of Psychology, University of Warsaw, Warsaw, Poland), Magdalena Krysztofiak (Faculty of Psychology, University of Warsaw, Warsaw, Poland), Zofia Kordas (Faculty of Psychology, University of Warsaw, Warsaw, Poland), Anna Sara Hexeberg Romøren (Department of Early Childhood Education, OsloMet – Oslo Metropolitan University, Oslo, Norway) and Ewa Haman (Faculty of Psychology, University of Warsaw, Warsaw, Poland)

Bilinguals are more sensitive to word characteristics only in their L1

Word properties such as age of acquisition (AoA), imageability, and frequency significantly impact vocabulary knowledge in both monolingual and bilingual children (Goodman et al., 2008; Haman et al., 2017; Masterson et al., 2008). This study examines how these properties influence accuracy in picture naming and picture recognition tasks among monolingual and bilingual preschoolers.

In a pre-registered study, we assessed 58 Polish-Norwegian bilingual children (ages 3–6) and 116 monolingual peers (58 Polish, 58 Norwegian) using Polish and Norwegian versions of the Cross-Linguistic Lexical Tasks (Haman et al., 2015). The groups were matched for age, gender, and parental education.

Linear mixed-effects models revealed that AoA, imageability, and frequency independently predicted accuracy across languages and tasks. Bilingual children generally scored lower than monolinguals, particularly in Polish picture naming (L1) and both picture naming and recognition in Norwegian (L2).

Significant interactions between group and word properties emerged in Polish, indicating that bilingual children's word knowledge in their L1 was more sensitive to lexical characteristics. In contrast, in Norwegian, the effects of word properties were similar across groups.

Our results highlight that monolingual-based findings cannot be directly generalized to bilinguals. Patterns observed in L1 may not replicate in L2, underscoring the need for comprehensive bilingual assessments. This research contributes to a more nuanced understanding of bilingual lexical development and emphasizes the importance of considering language experience when evaluating word learning in diverse linguistic contexts.

Monday 8th September – poster presentations

[147] Tamara Schmidt (University of Reading), Stephan Sallat (Martin Luther University Halle-Wittenberg) and Ludovica Serratrice (University of Reading)

Learning to negotiate: the emergence of speech acts in two- and three-year-olds

Language development is rooted in the human desire to understand and express intentions – a social-cognitive, pragmatic skill [17, 3, 4] that is a "cat's cradle of abilities" [11 ;1] which interact to adapt language use based on social context. An integral part of the process of language development is the understanding that language conveys speech acts, i.e. language is used to make requests, to offer apologies, to provide criticism, and to persuade.

Previous research on children's understanding and use of speech acts has focussed on case studies [4, 8, 2, 6], parents' engagement [13], comprehension [14], nonverbal expressions [10, 18], or age of emergence and interchange growth [16, 12, 15]. To date, we do not know much about how speech acts are realised in the transition between preverbal and early verbal development, and yet this is a crucial aspect of the socio-pragmatic skills that underpin language use.

Based on findings on pragmatic flexibility [16, 12] and argument production [9, 5], we developed a task to elicit negotiations as a target speech act sequence (PragmaSet). Twenty-two mother-child dyads with children between 24 and 37 months participated remotely, providing self-recorded videos. We specifically investigated the frequency of negotiations elicited by a violation of expectation in a house furnishing task (e.g. toilet in living room) and associated speech acts, how different pragmatic behaviours correlate with each other, and which factors can predict pragmatic skills.

Our main findings are that children's negotiations increase with age, three-year-olds resolve negotiations more than two-year-olds and correct errors twice as much, and children who produce more multi-word utterances resolve negotiations more often. Parental catalysts, a supportive strategy to foster communication, lead to longer negotiations, more error corrections and more child resolutions of negotiations, and parents who support their child more during negotiations also produce more utterances in general. Age predicted children's error detection and correction of parental violations of expectations, and overall criticisms, alongside children's prosocial score (SDQ) [7], which also predicted children's error detection and overall criticisms. The PragmaSet provides an innovative, observation based tool for the assessment and analysis of pragmatic skills in toddlers.

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Monday 8th September – poster presentations

[152] Selim Tiryakiol (The Arctic University of Norway), Fatih Bayram (The Arctic University of Norway) and Leyla Zidani-Eroglu (Central Connecticut State University)

Comprehension and Production of Prosodic and Case-Marking Cues in Turkish Heritage and Monolingual Speakers

This study investigates how Turkish heritage bilingual children in Norway and monolingual children in Turkey comprehend and produce prosodic and overt accusative case-marking cues in verb-medial sentences (NP-VP-NP), with adult speakers from both groups serving as controls. Using the visual world eye-tracking paradigm (VWP) and a picture description task, we explore how these groups process case marking and prosody. While previous studies primarily focused on word order and case marking, our study extends this by examining scrambled structures with and without case marking and prosodic cues. Research suggests that case marking is a strong predictor in processing, whereas prosody is used only in the absence of other disambiguating cues.

We tested 46 monolingual children (Mage = 10.19) and 52 monolingual adults (Mage = 28.76), along with 52 heritage children (Mage = 11.82) and 45 heritage adults (Mage = 29.36), using the Gorilla online platform. In production, children described reversible actions in images, and their recordings will be analyzed for case marking, word order, and prosody. In comprehension, they listened to sentences while viewing corresponding images in a VWP task and provided offline responses.

Comprehension results show that both bilingual and monolingual children rely on case marking but not prosody, while monolingual adults utilize both cues. These findings align with prior research showing variability in prosodic processing among bilinguals. Production analysis, to be presented at the conference, will further clarify these patterns.

Monday 8th September – poster presentations

[157] Anamaria Bentea (University of Konstanz) and Theodoros Marinis (University of Konstanz)

Does cross-linguistic influence affect comprehension of wh-questions in heritage Romanian?

There is ongoing debate regarding the factors influencing morphosyntactic development in children acquiring a heritage language/HL. While some studies have shown that cross-linguistic influence/CLI from the societal language/SL affects HL development (Van Dijk et al. 2021, Meir & Janssen 2021), others suggest that HL development remains unaffected by CLI (Torregrossa et al. 2023). This study examined the effect of CLI on the comprehension of which-questions in Romanian and compared two groups of bilinguals, acquiring Romanian as HL in contact with SL English and SL German, and a group of monolingually-raised Romanian-speaking peers. We aimed to uncover whether a.the bilingual groups show similar sensitivity to the Differential Object Marker pe and number agreement in Romanian for comprehension or whether b.wh-comprehension is subject to CLI: English relies on word order, whereas German uses case-marking to denote thematic roles, and both use number agreement to disambiguate subject and object questions. 17 RO-EN children, 32 RO-GE children and 30 monolingually-raised children (6yo-10yo) participated in a picture-selection task (32 items). Children saw pairs of pictures while listening to subject/object which-questions and had to choose the picture matching the question. The results revealed differences between groups, with RO-EN bilinguals showing substantially lower performance. Object questions and questions with a number match were associated with significantly lower comprehension. Age positively influenced performance, with a significant RO-EN group x age interaction, indicating that the developmental trajectory differed for this group. We will discuss the implications of these findings for HL morphosyntactic development under the influence of SL properties.

Examples

1. Care tigru$_{SG}$ împinge ursul panda$_{SG}$? (subject *number match*)
   'Which tiger is pushing the panda?'
2. Pe care tigru$_{i\ SG}$ îl$_i$ împinge ursul panda$_{SG}$? (object *number match*)
   'PE which tiger him is the panda pushing?'
3. Care tigrii$_{PL}$ împing ursul panda$_{SG}$? (subject *number mismatch*)
   'Which tigers are pushing the panda?'
4. Pe care tigrii$_{i\ PL}$ îi$_i$ împinge ursul panda$_{SG}$? (object *number mismatch*)
   'PE which tigers them is the panda pushing?'

Fig 1. Example of image pair used to assess comprehension of *which*-questions

Number match conditions Number mismatch conditions

Fig 2. Accuracy results by group and by condition

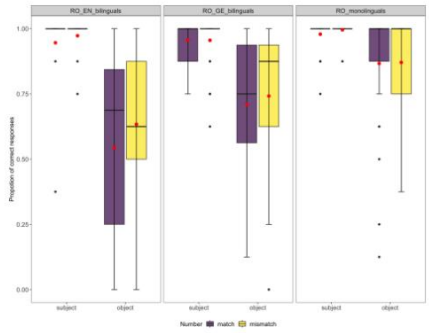
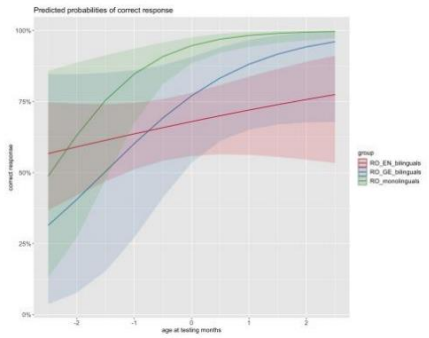


Fig 3. Predicted probabilities of correct response by group and age (data analysed with GLMMs)



Monday 8th September – poster presentations

[158] Lyla Parvez (University of Cambridge), Mahmoud Keshavarzi (University of Cambridge), Susan Richards (University of Cambridge), Giovanni Di Liberto (Trinity College Dublin) and Usha Goswami (Trinity College Dublin)

Speech Production and Developmental Language Disorder

Developmental language disorder impairs the learning, understanding and use of spoken language due to a rhythmic processing deficit. Research has found children have higher thresholds for the parameters that yield stress patterns in language, that contribute to rhythmicity. In-line with this, we hypothesized children with DLD would struggle to produce the rhythm structure of words and phrases. The theoretical framework adopted for this investigation was the Temporal Sampling Framework. This study focused on word production from a speech amplitude envelope (AE) perspective since perceptual studies have highlighted a role for difficulties in AE processing in DLD. Fifty-seven children with and without DLD completed a speech production imitation task, copying 30 familiar targets such as 'unicorn.' The aim was to assess the similarity between the word production of the participants and the token in terms of AE and pitch contour. Two similarity metrics were used to compute our findings, correlation and mutual information. We concluded children with DLD showed reduced imitation of AE and pitch contour in relation to the age-matched children. Given the atypical word production of multisyllabic words in DLD, it hints at an impaired sensory/neural processing mechanism of the low-frequency amplitude and frequency modulations, consistent with the temporal sampling theory.

Monday 8th September – poster presentations

[137] Pradina Ziani Ardia Hanum (University of Galway)

Comparing Macrostructure in the Narratives Across Heritage and Dominant Societal Language of Indonesian Bilingual Children

Bahasa Indonesia (Indonesian Language), with over 275 million speakers, is vital for national unity and growing international presence, including Indonesia's aspirations to propose Indonesian as an official language in the UNESCO General Assembly. However, preserving the heritage language among Indonesian children abroad remains a challenge, as highlighted by the 12th Indonesian Language National Congress. This study explores the narrative skills of Indonesian bilingual children in the Republic of Ireland, with comparative analysis to Indonesian bilingual children in the Netherlands (Tribushinina et al., 2022). Employing a mixed-methods approach, the research administers The Multilingual Assessment Instrument for Narratives (MAIN) (Gagarina et al., 2015) to elicit and analyse narrative data, focusing on macrostructure, comprehension, and code-switching. Demographic variables, including age, language exposure, and parental language use, are considered.

Results reveal that the children in Ireland demonstrated stronger narrative skills when code-switching between Indonesian and English, with age and language exposure playing a less significant role in narrative production than initially hypothesized. In contrast, Indonesian bilingual children in the Netherlands performed better in Indonesian, their heritage language, with more structured and complex narratives. The study highlights the importance of code-switching in bilingual narratives and suggests that individual language histories and experiences significantly shape bilingual children's language development. These results contribute to the understanding of bilingual narrative development and draw attention to the importance of considering both heritage and societal language use in educational and social policies aimed at supporting bilingual children.

POSTER PRESENTATIONS -ABSTRACTS-TUESDAY 9th September

[4] Alaa Elsehrawy (Alexandria University)

Normal Speech and Articulation Rates in Egyptian Arabic Speaking Children

Background: This study investigated the speech and articulation rates of normal Egyptian Arabic-speaking children.

Method: Thirty normal children (15 males and 15 females) participated in the study, aged from 6;7 to 9;6; their speech and articulation rates were measured using spontaneous speech and oral reading styles.

Results: A significant increase in speech rates was observed when there was an age gap between the stages, but articulation rates were not influenced by age increases. The findings of this study provide preliminary norms for speech and articulation rates in these age groups, which can help identify children with atypical rates and guide tailored treatments to enhance speech intelligibility.

[7] Léa Leuthold (Université de Neuchâtel) and Katrin Skoruppa (Université de Neuchâtel)

Factors Affecting Text Comprehension in Monolingual and Bilingual Primary School Children With and Without Reading Difficulties: A Systematic Review.

The acquisition of written language, a crucial milestone in children's development (Bentolila & Germain, 2019), can be impacted by difficulties related to reading comprehension (Cain & Oakhill, 2008), which is in turn linked to oral language skills (Gough & Tunmer, 1986). Hence, understanding the factors influencing reading comprehension in different reader profiles (monolingual vs. bilingual; children with vs. without reading difficulties) is crucial for better early detection of and intervention for difficulties in literacy acquisition. Thus, a systematic review of recent research in the field of reading comprehension was conducted following internationally recognized criteria. In 2022, multiple raters searched three databases using keyword combinations and identified additional literature for an initial screening of 1492 articles. Using strict inclusion criteria concerning the topic (passage or text comprehension in 6- to 12-year-old children) and the quality of the article (in particular, we rejected articles lacking a clear definition of the linguistic and clinical status of the participants, as well as those lacking statistical analyses), only 25 articles were retained. Whether in monolingual or bilingual contexts, oral language skills emerge as a crucial factor for predicting reading comprehension abilities. For bilingual participants, awareness of linguistic structures (phonology, morphology, and syntax) in both languages seems to have a large impact. Additionally, depending on reader profiles, other factors related to reading, such as executive functions, memory, and context also appear to play a role. We are currently updating the literature search and will include more recent articles (until 2024) in our synthesis.

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Tuesday 9th September – poster presentations

[11] Marisa Filipe (Center of Linguistics, University of Lisbon), Tânia Carneiro (Center of Linguistics, University of Lisbon) and Sónia Frota (Center of Linguistics, University of Lisbon)

The Effect of Prosodic Training on Emergent Literacy Skills in Preschoolers

The role of prosody in reading development highlights the importance of exploring its impact on emergent literacy. This study examined the effects of prosodic training on preschool children's emergent literacy skills. Forty-four children aged 5 to 6 years were randomly assigned to one of two intervention groups: One group (n = 22) received oral language training combined with phonological awareness activities; The other group (n = 22) participated in the same oral language training but combined with prosody-focused activities. The prosodic activities addressed formal properties of prosody (e.g., auditory discrimination, vocal modulation) and functional aspects (e.g., turn-taking in communication, emotional intonation, and emphasis on key expressions). Both groups completed eight oral language training sessions before beginning their specific training in phonological awareness or prosodic skills. The training consisted of 16 weekly sessions lasting 45 minutes, conducted in small groups of 5 to 6 children. Pre- and post-intervention assessments were conducted to measure the effects of each training on several literacy-related domains, including receptive and expressive language, rapid naming, vocabulary, and phonological awareness. The trainings are still ongoing at the time of this submission, and are scheduled to be concluded in May 2025. The results will be analyzed before the conference and will provide valuable insights into the role of prosodic training in fostering emergent literacy skills.

[23] Shijie Zhang (University of Manchester), Emily Warren (University of Manchester), Silke Brandt (University of Lancaster) and Anna Theakston (University of Manchester)

The comprehension of temporal adverbial clauses in children with and without developmental language disorder

The semantic account proposes that iconic sentences (“After she paints the fence, she hoovers the house”) are easier to process than non-iconic sentences (“She hoovers the house, after she paints the fence”) due to the “order-of-mention” principle, with iconic sentences reflecting real-life order (Clark, 1971). Research has shown that young typically developing (TD) children comprehend iconic sentences better than non-iconic (De Ruiter et. al, 2018). Grammatical difficulties are a key feature in Developmental Language Disorder (DLD), especially with complex sentences containing a main and subordinate clause (Montgomery, Evans & Gillam, 2009). This study will explore comprehension of adverbial clauses, comparing TD and DLD children. This will contribute to understanding as to whether grammar difficulties in DLD are atypical or reflect exaggerated patterns of difficulties seen in younger TD children.

This study will explore iconicity with ‘before’ and ‘after’ adverbial clauses in children aged 7-12 with DLD and younger TD children, with 30-55 children in each group. Comprehension performance is assessed through a picture-sequence selection task, manipulating connective type and clause order. We will also explore whether there is a correlation between general language ability, memory and comprehension accuracy.

We have collected data from 14 DLD children. Preliminary results suggest that there is an effect of iconicity, like patterns seen in younger TD children. This may provide tentative support for the theory that difficulties with complex sentences in DLD represent a generalised age delay (Leonard, 2014). We will present the full results on the poster and discuss possible implications.

Tuesday 9th September – poster presentations

[26] Hafsa Shams (University of Essex), Anna Caute (University of Essex) and Victoria Joffe (University of Essex)

The Awareness, knowledge and experiences of speech and langauge tehrapists of LEGO therapy with children and young people with speech, language, and communication needs

Background: Lego Therapy is a child-led and peer-based intervention promoting cooperation and engagement [1]. It has been found to improve social communication, shared attention, verbal and nonverbal communication, and collaboration [2]. LeGoff et al (2010) initially designed the approach for children with Autism, but it has now expanded to reportedly benefit those with broader social and communication challenges [1].

Objective: To explore the awareness, knowledge, and experiences of Speech and Language Therapists/Pathologists (SLT/Ps) of Lego therapy /Adapted Lego therapy working with Children and Young People (CYP) with Speech, Language and Communication Needs (SLCN).

Method: An online survey was distributed internationally, through social media and professional networks, using Qualtrics, to gather insights from SLT/Ps working with CYP with SLCN. It included both qualitative and quantitative questions on the use of Lego Therapy with this population.

Results: There were 229 total responses, with 174 remaining once data quality checks were completed. Results showed that SLT/Ps are aware of Lego Therapy and report using a combination of Lego therapy and Adapted Lego therapy with range of groups, including Developmental Language Disorder and Speech Sound Disorder.

Conclusions and Implications: The findings of this study indicate that Lego Therapy is well known in the SLT/P community, with adapted versions frequently used. Lego Therapy was shown to be a flexible and engaging intervention that can be adapted to different clinical needs. This study highlights the growing role of Lego Therapy emphasizing the need for continued research and structured implementation to maximize its benefits.

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Tuesday 9th September – poster presentations

[36] Alessandra Valentini (University of Greenwich) and Elena Ivanova Minerva (University of Greenwich)

Word learning from reading and bimodal conditions in Bulgarian-speaking adolescents

Previous research has shown that presenting words in two modalities simultaneously can positively affect word learning from stories compared to unimodal (i.e. reading-only or listening-only) conditions (Valentini et al, 2018; Valentini et al., 2024). This effect has been replicated in bilingual children and adults (see Colenbrander, 2019 for a review). However, this effect is not always consistently found in all aspects of word learning, and it has been explored most often in English, where the orthography-phonology inconsistencies found in the writing system might have a positive influence on this effect. In the present study we explored whether presenting texts in unimodal (reading) or in a bimodal (reading and listening) condition affected learning of new words' meaning in Bulgarian-speaking 10 to 17 year-old. 34 participants completed the study online (Mage = 14 years; SD = 1.8 years; 64% females, 41% bilinguals). All participants were exposed to two stories (one in each condition), each containing 6 non-words. Preliminary results suggest that, while children learnt new words in both conditions (recognising the correct category of around 4 words and producing the correct definition of 1 to 2 words), there was no effect of condition (reading vs. bimodal) previous vocabulary knowledge, or bilingual status. Further analyses will be performed to confirm these results. The results suggest that the advantage of a bimodal presentation for word learning might be moderated by features of the writing system as well as age, with bimodal presentation not improving word learning in more transparent languages or in older children.

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[42] Shuya Chen (University of Edinburgh) and Vasiliki Chondrogianni (University of Edinburgh)

Anaphora resolution in Mandarin-speaking child heritage speakers

The Interface Hypothesis (Sorace, 2011, 2016; Sorace & Filiaci, 2006) argues that structures involving an interface between syntax and discourse domains are less likely to be fully acquired. This study investigated the acquisition of a well-known interface structure, i.e., anaphora resolution in Mandarin-speaking heritage children (aged 8-10) residing in the US/UK, with age-matched Mandarin-speaking monolingual children and Mandarin-speaking monolingual adults as control groups. In a picture verification task, participants identified antecedents of null/overt pronouns in ambiguous forward/backward anaphora contexts. We predicted that heritage children would differ from their monolingual peers and adults specifically in interpreting overt backward pronouns (i.e., biasing to the subjects) based on two accounts. First, the Crosslinguistic Influence account (Hulk & Müller, 2000; Müller & Hulk, 2001; Sorace, 2016) predicts that the language with the less restrictive anaphoric system (i.e., English) affects the other (i.e., Mandarin). Second, the processing account of the IH argues that bilingual children, who have limited cognitive resources to integrate language-specific referential mappings and contextual information, tend to abide by the language-universal strategy where a subject antecedent is consistently preferred (Serratrice, 2007; Sorace, 2016). Our results partly confirmed the prediction. Heritage children selected significantly more subject antecedents for overt backward pronouns than monolingual children and adults, while group differences were also found in null backward pronouns. The results not only suggest a delayed developmental pattern of interface structures, supporting the prediction of the IH, but also indicate different developmental trajectories between null and overt pronouns in Mandarin.

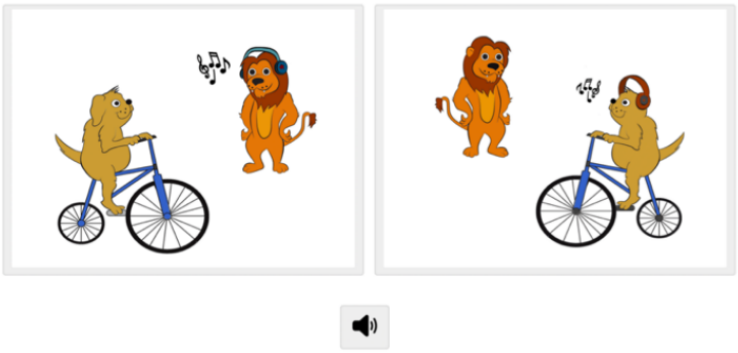

Figure 1. Example display for experimental trials in the forward overt condition. The auditory stimulus comprised: 'Last weekend, Dog and Lion went to the playground and had a good time. They did some sports and listened to music. When Dog was cycling, **he** was listening to his favorite song'. After listening to the audio prompt, participants were instructed to click on the picture that best descried the story.

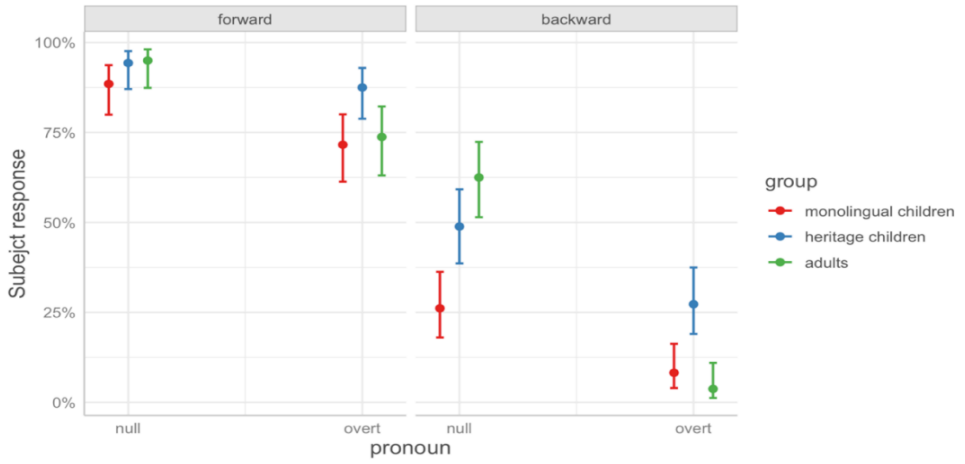

Figure 2. Model predicted probability of subject responses by each condition in monolingual children, heritage children and monolingual adults. *Notes*. Upper and lower ends of the lines = standard deviations, dots in the middle of the lines = means. The linear model was fitted with lme4 in R 4.1.2, using the Bernoulli distribution family. As predictors, we included Anaphora (forward, backward), Pronoun (null, overt), Group (monolingual children, adults, heritage children) and the interaction among the three. All predictors were coded using treatment contrasts, with the first level as the reference level.

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[53] Nikolina Runje (Faculty of Education and Rehabilitation Sciences, University of Zagreb) and Mirjana Lenček (Faculty of Education and Rehabilitation Sciences, University of Zagreb)

Rapid automatized naming and oral reading fluency in typical readers and readers with dyslexia in the period of reading automatization

There is a multitude of research results that establish the importance of rapid automatized naming (RAN) in explaining and predicting reading. Studies have shown that alphanumeric RAN (letters, digits) tasks are a better predictor of reading than non-alphanumeric RAN (pictures, colours) (Wolf & Bowers, 1999) but children with reading and/ or spelling difficulties show difficulties on both (e.g. Donker et al., 2016). In transparent orthographies children reach high degrees of reading accuracy very early on (Landerl & Wimmer, 2008) and as children move toward period of reading fluency reading becomes automatized and reading speed becomes increasingly important. The purpose of this study was to investigate oral reading fluency and RAN skills in typical readers (TRs) and readers with dyslexia (RDs). Two questions were posed: 1) Is there a difference between TRs and RDs in oral reading fluency and RAN skills, and 2) Is there a correlation between oral reading fluency and different RAN tasks in these 2 groups? Sample consisted of 46 TRs (Mage=9;10; 57% F, 43% M) and 21 RDs (Mage=10;05; 38%F, 62% M) attending 3rd and 4th grade. Students were assessed on oral reading fluency and 3 RAN tasks. Results of Mann-Whitney U test show statistically significant difference for oral reading fluency ($U=77.00$, $p<0.001$) and all the RAN skills measured: pictures ($U=98.50$, $p<0.001$), digits ($U=220.50$, $p<0.001$), letters ($U=215.00$, $p<0.01$). For TRs there was a significant correlation between reading fluency and all three RAN skills while only alphanumeric RAN was correlated with reading fluency for RDs.

References

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Landerl, K., & Wimmer, H. (2008). Development of word reading fluency and spelling in a consistent orthography: An 8-year follow-up. *Journal of Educational Psychology*, 100(1), 150–161. https://doi.org/10.1037/0022-0663.100.1.150

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Tuesday 9th September – poster presentations

[55] Tonia Williams (University of Oxford)

Beyond Code-Switching: Lexical Processing in Patois-English Bilingual Children

Despite increased research on bilingualism, little psycholinguistic work has explored the lexical mechanisms of dialect-lexifier bilingualism, particularly in creole-speaking populations, and their impact on literacy and cognition. This study investigates Jamaican Patois (Patwa) and its lexifier, English, focusing on how lexical overlap and distinctions influence word perception and memory.

Jamaican Patois and English share numerous cognates (e.g., dream, prove) and near non-identical cognates (e.g., car /kiyar/, and little /likl/). While some view Patois as an accented English variety, its unique lexicon, incorporating non-identical cognates (little /likl/), interlingual homophones (e.g., /sait/ meaning sight in English and dodge in Patois), and loan words from Akan/Twi and Gaelic, underscores its status as a separate language.

Sixty-six bilingual children completed a recognition memory task in a 2x2x2 within-participants design, manipulating translation (untranslated vs. translated), language (Patois vs. English), and stimuli type (non-identical cognate vs. noncognate). Participants first completed an English lexical decision task with English/Patois cognates, non-identical cognates and noncognates in both languages, and pseudowords, followed by a test phase assessing word recognition. Language experience and word reading proficiency were also measured.

Analysis for this study is ongoing, however preliminary results analyzed using mixed-effects modeling, suggest significant main effects supporting bilingualism theories, particularly cognate facilitation. The findings contribute to psycholinguistics by providing insight into how dialect-lexifier bilinguals process words across languages, with implications for education and literacy development in bilingual settings.

Tuesday 9th September – poster presentations

[68] Gabrielle Morin (Dalhousie University) and Ana Maria Gonzalez-Barrero (Dalhousie University)

Social Communication Skills of Preschool and School-Age Children: A Look at Linguistic-Pragmatics and Social Pragmatics

Introduction: It has been proposed that pragmatic (i.e., social communication) tasks can be distinguished into two categories: linguistic-pragmatics (i.e., contexts where structural language skills are required to understand a social situation) and social-pragmatics (contexts where, in addition to language skills, Theory of Mind is needed; Andrés-Roqueta & Katsos, 2017). To test this hypothesis, we developed a task to assess the pragmatic skills of Canadian children, and we examined the contribution of structural language skills and Theory of Mind (ToM) to their pragmatic skills.

Methods: Participants included 26 neurotypical children and 5 autistic children (4–8 years of age). The new task consisted of 9 questions that relied primarily on structural language skills and 9 questions that required ToM, and included scenarios that were culturally relevant for Canadian children. The task underwent a comprehensive development process based on child responses and experts' feedback. Children also completed standardized assessments of structural language, ToM, nonverbal IQ, and pragmatics.

Results: Preliminary results suggest that this new tool could be used to assess the pragmatic skills of neurotypical and autistic children in a virtual format. Results also showed significant correlations between a standardized pragmatics measure (i.e., Inferencing subtest from the CASL-2), structural language, and ToM, suggesting that these skills are closely involved in pragmatics.

Conclusion: Findings from this study demonstrate the feasibility of administering a new pragmatic assessment to Canadian children. They also provide novel information on the contribution of cognitive and linguistic skills to the pragmatic abilities of preschool and school-age children.

[74] Susana Silva (Center for Psychology at University of Porto, Porto, Portugal), Marina Vigario (Center of Linguistics, University of Lisbon), Catia Severino (Center of Linguistics, University of Lisbon) and Sónia Frota (Center of Linguistics, University of Lisbon)

Sound shapes first, meaning next: The time course of word processing in typically developing 19-month-olds

The time course of the processing of sound sequences and their integration with lexical meaning was investigated in a previous EEG study with adults. While looking at pictures of familiar objects, participants listened to illegal sound sequences, legal sound combinations (pseudowords) with either high or low frequency, and actual words either congruent or incongruent to the picture. Critical comparisons indicated that phonological grammar (low-frequency-pseudowords vs. illegal words) and phonotactic frequency (high-frequency vs. low-frequency-pseudowords) were processed at an earlier stage (increased positivity for low-frequency-pseudowords between 140-250 ms and 350-450 ms respectively), while lexicality was processed later (increased positivity for high-frequency-pseudowords vs. incongruent words between 550 and 650 ms). The extraction of lexical meaning was shown by increased N400-like negativity for incongruent compared to congruent words between 400 and 650 ms.

Little is known about the interplay between phonological grammar, phonotactic frequency and lexicality in the development of word processing abilities. Using the same picture-word priming paradigm and stimuli, we examined the brain responses of typically developing 19-month-olds (N=30). Similar to adult findings, we found earlier effects of phonological grammar (increased positivity for low-frequency-pseudowords vs. illegal sequences between 0-300 ms) and phonotactic frequency (increased positivity for low vs. high-frequency-pseudowords between 0-400 ms). Lexicality effects emerged later, between 300 and 550 ms. However, unlike adults, toddlers did not show ERP markers of semantic congruence. These findings suggest that the processing of word form shapes may be prioritized over meaning at this developmental stage, supporting the view that phonological knowledge guides word learning.

Tuesday 9th September – poster presentations

[88] Raffaele Dicataldo (Department of Developmental Psychology and Socialization), Laura Franzoi (Department of Developmental Psychology and Socialization), Emanuele Di Maria (Department of Developmental Psychology and Socialization), Irene Leo (Department of Developmental Psychology and Socialization) and Maja Roch (Department of Developmental Psychology and Socialization)

Exploring the Interplay Between Executive Functioning, Language Skills, and Theory of Mind in Preschoolers: Implications for Emergent Literacy and School readiness

Executive functions (EFs) and language skills play a crucial role for children's school readiness. However, the relationship between these skills remains debated, with some researchers proposing that language predicts EFs, while others suggest that emerging EFs drive language development. This cross-sectional study investigates the relationship between language skills and EFs in preschool-aged children, with a focus on the potential mediating role of Theory of Mind (ToM). The study involved 141 children (77M), aged 3 to 6 years (M = 53.4 months, SD = 10.1). A battery of tasks was administered to assess language abilities, executive functioning, and ToM. Two structural equation models (SEM) were tested: Model 1 assessed the effect of EFs on language, with ToM as a potential mediator, while Model 2 reversed the causal order. Results indicated a significant direct effect of EFs on language in Model 1, with an indirect effect mediated by ToM. In contrast, Model 2, where language was considered the predictor of EFs, showed no significant direct or indirect effect of ToM. Moreover, Model 1 exhibited a better fit than Model 2, suggesting that the relationship between EFs and language is better explained when EFs predict language, with ToM acting as an indirect mediator. These findings suggest that, in preschoolers, EFs have both direct and indirect effects on language development, with ToM playing a key role in indirect pathway. The results have important implications for understanding complex relationships between cognitive skills and informing interventions to enhance children's cognitive development.

Tuesday 9th September – poster presentations

[92] Sophie Lund (Lancaster University), Padraic Monaghan (Lancaster University) and Calum Hartley (Lancaster University)

How does extraneous perceptual information influence neurotypical and autistic children's word learning?

To learn new words children must engage in referent selection (identification of meaning), retention (storage in memory for later retrieval), and generalisation (extension of labels to novel referents on the basis of shape). One way in which children referent select accurately is to rule out familiar objects as possible targets based on the mutual exclusivity principle. Previous research finds that when these familiar objects are of the same colour as the novel object, as opposed to different colours, neurotypical children are more accurate at generalisation. It is suggested that holding colour constant during learning supports generalisation because it encourages children to attend to shape more carefully, resulting in more robust shape-based encoding. It is unknown whether this manipulation affects autistic children, a population that often experiences difficulties in acquiring vocabulary. Here, autistic and neurotypical children matched on receptive vocabulary used mutual exclusivity to learn new words via a touchscreen computer. Familiar and novel objects were either all the same colour or different colours. Following a 5-minute delay, children's retention and generalisation was tested. As expected, neurotypical children's generalisation was significantly more accurate when learning from same-coloured objects compared to different-coloured objects. However, autistic children's generalisation was similarly accurate in both colour conditions. Neurotypical children's shape-based generalisation may have been enhanced by learning from identically coloured referents due to heightened attention to, and encoding of, object shape. By contrast, autistic children may instead benefit from increased opportunities to compare and contrast novel and familiar objects that differ on multiple perceptual dimensions.

Tuesday 9th September – poster presentations

[97] Rama Kanj (University of Reading), Ludovica Serratrice (University of Reading), Sherine Bou Dargham (American University of Beirut) and Vesna Stojanovik (University of Reading)

How Do Word Characteristics Affect Retrieval in Arabic Speaking Bilingual Children With and without DLD?

The interaction between bilingual children and their cultural environment affects their familiarity with concepts and the frequency with which they hear or use words throughout the day. Research on monolingual children suggests that words with higher imageability, familiarity, and concreteness are acquired at younger ages [1]. However, children with Developmental Language Disorder (DLD) may struggle to develop deep semantic representations, even as they continue to learn new words. While concreteness and imageability are important for building lexical-semantic knowledge, understanding the extent to which these word characteristics impact word learning in children with DLD is crucial for informing educational and clinical practices and identifying words that should be targeted during early language teaching. Studies on the effect of word characteristics on retrieval in bilingual populations are also limited. In a study conducted on Spanish-English bilinguals, fourth and fifth graders were more likely to transfer word knowledge across languages for words that were rated as frequent [2].

In this study, we investigate naming accuracy on the Lebanese Picture Naming Test (LPNT) [3] as a function of the complex interaction between word characteristics, bilingualism, and language ability in Lebanese children with and without DLD who are trilingual in Lebanese Arabic, French, and English. We investigate the effect of word frequency and predict similar performance between the children with and without DLD on high-frequency words, and lower accuracy anticipated on low-frequency words for children with DLD. We further examine the role of home language exposure on language choice during responses in the LPNT's conceptual scoring, Lastly, we investigate the relationship between word category and children's language choice, exploring whether certain word categories are more likely to prompt responses in one language over another. Data analysis is ongoing, and we expect it will be completed by the summer.

References:

[1] (Carroll & White 1973; Gilhooly & Logie 1980)
[2] (Ordóñez et al. 2002)
[3] (Kanj & El-Hassan, 2021)

[104] Elsa Viviana Oropeza-Gracia (Universidad Nacional Autónoma de México), Mary Rosa Espinosa-Ochoa (UNAM), Alma Luz Rodríguez Lázaro (UNIVERSIDAD NACIONAL AUTÓNOMA DE MEXICO) and Natalia Arias-Trejo (Universidad Nacional Autónoma de México, UNAM)

Multimodal input in Mexican Spanish speaking interactions between infants and primary caregivers.

This study explores the multimodal input caregivers provide to children. When mothers communicate with their infants, they offer more than just linguistic models, incorporating emotional, social, and multimodal cues. In naming events, they also use tactile, gestural, and visual signals that help children identify named objects (Custode & Tamis-LeMonda, 2020; Morgenstern, 2023). While multimodal input has been widely studied in English and bilingual English-Spanish children, research on Spanish remains limited (Song et al., 2012).

To address this gap, we analyzed 60-minute video recordings of four urban, middle-class Mexican mothers interacting with their infants (14–24 months) during daily home routines. Using ELAN, we transcribed and coded the multimodal cues used by both mothers and children. We found that:

a) Mothers provide diverse and frequent multimodal input.

b) Mothers rarely look at referred objects (7–10%) but touch, hold, or gesture toward them 41–43% of the time.

c) Infants look at named objects 16–18% of the time but physically interact with them 46–48% of the time.

d) Mothers and children engage in mutual gaze 35–38% of the time but rarely coordinate their gazes toward the referred object.

Although mutual attention is common, coordinated joint attention—where both align their gaze toward the object—remains limited. Our findings suggest that early mother-child alignment primarily relies on tactile cues (Custode & Tamis-LeMonda, 2020; Abu-Zhaya et al., 2017). This study contributes to characterizing multimodal communication in Spanish, tracking gestural cues in child-directed speech, and expanding research on coordinated joint attention.

Tuesday 9th September – poster presentations

[105] Elsa Viviana Oropeza-Gracia (Universidad Nacional Autónoma de México), Alma Luz Rodríguez Lázaro (UNIVERSIDAD NACIONAL AUTÓNOMA DE MEXICO) and Natalia Arias-Trejo (Universidad Nacional Autónoma de México, UNAM)

Exploring Sources of Language Input in Erly Childhood: The Role of Everyday Activities Among Mexican Spanish-Speaking Children

Social interactions provide essential opportunities for native language acquisition (Hurtado et al., 2008; Suárez Rivera et al., 2022). Documenting the contexts and interlocutors through which children receive linguistic input offers valuable insights into language development. This study presents preliminary findings from a parental report designed to examine the everyday situations in which children are exposed to native language input, specifically Mexican Spanish. Additionally, we explore whether the duration and frequency of these activities influence language acquisition.

For this preliminary analysis, we collected 28 questionnaires completed by mothers of children with a mean age of 4.9 years (SD = 3.6), the majority from middle socioeconomic backgrounds. Our findings indicate that the primary caregivers and interlocutors in children's activities are parents, particularly mothers and fathers. However, grandparents also play a significant role, reflecting a characteristic of Mexican culture that contrasts with Anglophone contexts, where fewer studies report the presence of extended family caregivers (Ferjan Ramírez et al., 2022; Hurtado et al., 2008).

The most frequently reported activities were artistic and sports-related, which also had the longest duration in children's daily routines. Additionally, our data confirm that time spent in transportation serves as a relevant context for caregiver-child interactions, primarily through conversation and singing.

These findings highlight the importance of identifying the specific activities that foster native language exposure. A detailed understanding of these contexts enables a more precise analysis of the mechanisms underlying language acquisition.

[112] Mya Taylor (Sheffield Hallam), Javier Aguado-Orea (Sheffield Hallam) and Hannah Witherstone (Sheffield Hallam)

The effect of grammatical complexity and verb frequency in the acquisition of English using an online version of the Sentence Repetition Test - with DLD Children

'The Acquisition of Grammatical Markers by Children with Developmental Language Disorder' aims to explore the previously outlined effects of the frequency of verbs (Freudenthal et al., 2021), sentence length (Abdalla & Mahfoudhi, 2023) and verb agreement (Freudenthal et al., 2021) in children with developmental language disorder (DLD) across two grammatically different languages (English & Spanish). The present study is phase 2 of 3 and uses a newly developed and validated language matched sentence repetition task (SRT) to assess DLD effects, in a sample of around 50 English monolingual (UK) 4–6-year-olds. The SRT was validated (phase 1) in a sample of Adult English monolinguals (N = 12, M age = 31.4, Gender Female = 7), where participants made an average rate of 95.6% correct repetitions (Thus creating a baseline value for the present phase of study).

For the present study children's parent/guardians completed the Oxford CDI online to give an indication on their child's language ability, following this the child and their parent/guardian took part in 2 video calls completing: 4 sections of the pre-school CELF; the new SRT. The SRT was scored using a coded system considering the subject, verb and object separately - indicating where individual errors occur within the sentence.

Data collection is still ongoing, expecting to yield results demonstrating Children with DLD make a significantly increasing number of errors when producing low frequency constructions; Children with DLD struggle with sentence length effects; The grammatical complexity of a sentence increases error making probability in DLD children.

References

Abdalla, F., & Mahfoudhi, A. (2023). Verb agreement production in Arabic-speaking children with developmental language disorder. *Language Acquisition*, 31(3–4), 224–245. https://doi.org/10.1080/10489223.2023.2231924

Freudenthal, D., Ramscar, M., Leonard, L. B., & Pine, J. M. (2021). Simulating the acquisition of verb inflection in typically developing children and children with developmental language disorder in English and Spanish. *Cognitive Science*, 45(3). https://doi.org/10.1111/cogs.12945

[118] Natalia Mitrofanova (UiT - The Arctic University of Norway), Serge Minor (UiT - The Arctic University of Norway), Christina Athanasiadi (UiT - The Arctic University of Norway), Nadine Kolb (University of Stavanger) and Marit Westergaard (UiT - The Arctic University of Norway)

The role of heritage and societal languages in L3 aspect processing: Evidence from eye-tracking

Using Visual World eye-tracking, we examine how bilingual German-Russian and Greek-German children process English aspectual forms, comparing them to age- and proficiency-matched German monolinguals. The languages involved exhibit distinct aspectual systems: Russian and Greek differentiate between perfective and imperfective aspects, associating them with completed and ongoing events, respectively. German lacks grammatical aspect, while English uses past progressive form for ongoing events in the past, with simple past forms allowing for both ongoing and completed event interpretations.

We adapted the paradigm from Minor et al. (2022) to test whether the aspectual systems of the participants' heritage languages (HLs) influence their processing of L3 English. Our study involved 117 children (age 8-13 y., mean age 10 y.): 52 German-Russian bilinguals and 24 German monolinguals tested in Germany, and 41 Greek-German bilinguals tested in Athens, all matched for English exposure and lexical proficiency. Results showed that German-Russian and Greek-German adolescents were sensitive to aspect in both offline judgments and online gaze preferences, unlike the monolingual German controls, who showed no sensitivity to aspect manipulation.

Interestingly, the Greek-German bilinguals in Athens exhibited a stronger and earlier aspectual effect than the German-Russian bilinguals in Germany. These findings are discussed in relation to contemporary L3 acquisition models (Westergaard et al. 2023; Rothman et al. 2019), emphasizing structural similarity (see Kolb et al. 2022; Jensen et al. 2023) and language dominance. The study highlights the role of grammatical representations from previously acquired languages in shaping L3 processing, particularly in the context of aspectual distinctions.

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Examples of experimental stimuli:

(a) Grandma **was knitting** a new jumper.

Ongoing event (OE)

(b) Grandma **knitted** a new jumper.

Completed event (CE)

An experimental trial included an audio preamble which located the narrative in the past (e.g. *It was a rainy day*), followed by a sentence-picture matching task where the participants were presented with a pair of pictures on a screen: one representing an Ongoing Event (OE), i.e. an action in progress, and one representing a Completed Event (CE), see examples (a-b) above from the English task. Each experiment included 24 fillers and 24 test trials (12 Past Progressive and 12 Simple Past) involving 48 verbs/event types and visual stimuli. Eye-movements were recorded.

Figures:

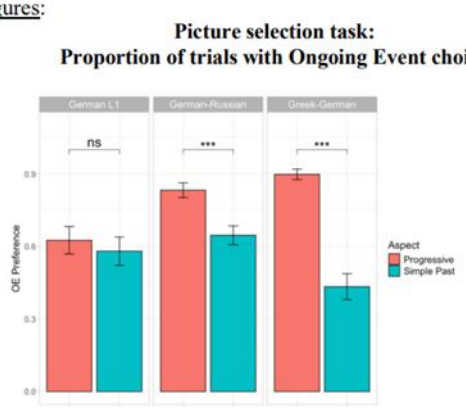


Fig. 1. Offline results

Significant effect of aspect in both Bilingual groups
No effect of aspect in the L1 German group
Significant interaction between Group and Aspect (Greek-Ger > Ger-Rus > Ger L1)

*Mixed effects logistic regression. Group, Aspect, English Proficiency and their interactions as predictors, random intercepts and random slopes for Aspect by Participant and by Item.

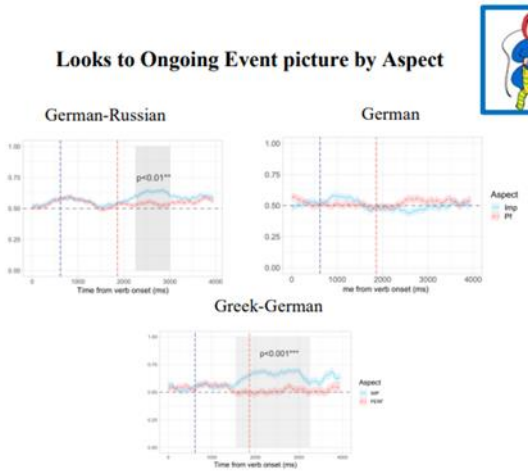


Fig. 2. Online results

Significant effect of aspect in both Bilingual groups
No effect of aspect in the L1 German group
Significant difference between the groups

*Cluster based permutation analysis + Bayesian mixed effects zero one inflated beta regression (Group, Aspect and their interaction as predictors, English proficiency included as covariate, random slopes for Group*Aspect by Participants and Items)

References:

[1] Westergaard et al. (2023). Full Transfer Potential in L3/Ln acquisition: Crosslinguistic influence as a property-by-property process. CUP. **[2] Jensen et al. (2023).** Crosslinguistic influence in L3 acquisition across linguistic modules, *IJM*. **[3] Kolb et al. (2022).** Crosslinguistic influence in child L3 English: An empirical study on Russian-German heritage bilinguals. *IJB*. **[4] Minor et al. (2023).** Aspect processing across languages: A visual world eye-tracking study. *Front.in Lang.Sci.* **[5] Athanasiadi (2024)** An investigation into L3 acquisition and processing of Grammatical Aspect in English by bilingual Greek-German children. MA thesis, EMCL++. **[6] Rothman et al. (2019)** *Third Language Acquisition and Linguistic Transfer.* CUP.

Tuesday 9th September – poster presentations

[120] Liza van den Bosch (Universiteit Leiden)

The development of receptive and expressive language skills in second language learners of Dutch

Background: Successful acquisition of a society's majority language is important for children's performance at school and their participation in society. For educational professionals working with multilingual children from diverse linguistic backgrounds it is essential to gain insight into individual differences among children in the early stages of second language acquisition.

Method: This study examined the development of receptive and expressive language skills in multilingual children, aged 5-6 years. All participating children (n = 94) can be considered as second language (L2) learners of Dutch. The study was conducted in three urban elementary schools in the Netherlands. To assess children's receptive and expressive language skills in Dutch, we administered the subtest Sentence Comprehension of the CELF (Wiig et al., 2019) and a narrative task of the MAIN (Blom et al., 2020) at two timepoints (start & end) during the second year of kindergarten.

Results and discussion: Coding of the collected data will be completed in a few weeks. Results will shed light on children's language development in Dutch in terms of receptive and expressive language skills as well as the receptive-expressive gap. We investigated whether developmental differences existed between L2 readers with low or high levels of Dutch exposure, based on demographic variables. More exploratively, we considered children's attempt to convey a story by analyzing their verbal and non-verbal forms of communication while completing the narrative task. This resulted in an extra variable with high inter-rater reliability revealing individual differences among L2 readers with lower expressive language skills in Dutch.

References

Wiig, E.H., Semel, E., & Secord, W.E. (2019). *Clinical Evaluation of Language Fundamentals – CELF 5 NL*. Dutch version. Amsterdam: Pearson Benelux BV.

Blom, E., Boerma, T., & de Jong, J. (2020). Multilingual Assessment Instrument for Narratives (MAIN) adapted for use in Dutch. *ZAS Papers in Linguistics, 64,* 51-56.

[121] Serge Minor (UiT - The Arctic University of Norway), Sílvia Perpiñán (Pompeu Fabra University) and Natalia Mitrofanova (UiT - The Arctic University of Norway)

Grammatical Aspect Processing in Spanish and Russian: Bidirectional Crosslinguistic Influence in Bilingual Child Language Acquisition

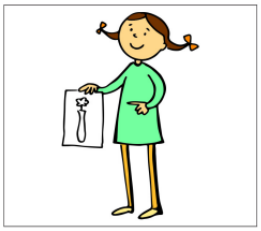
This study uses VW eye-tracking to examine bidirectional crosslinguistic influence (CLI) in verbal aspect processing in bilingual children. We focused on two groups of bilingual children aged 6-12 with Russian as heritage language residing in Spain (n=85, Mage=8.15) and Germany (n=45, Mage=8.25), compared to control groups of monolingual Russian (n=71, Mage=7.6) and Spanish (n=41, Mage=8.6) children. The bilingual groups were matched on societal language onset, kindergarten start, family type, and lexical proficiency in Russian. The design was informed by structural similarity: Russian and Spanish use aspect to distinguish completed and ongoing past events, while German lacks grammatical aspect marking.

The design was adapted from [1], and involved looking at pictures representing ongoing versus completed events while listening to verbs in perfective or imperfective aspect. The experiment included 24 test items, all accomplishments, with aspect forms counterbalanced across lists.

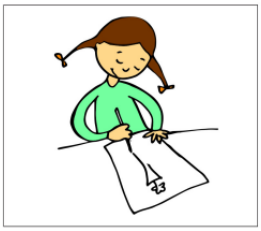
Bayesian mixed effects modelling revealed a strong effect of aspect in Russian for both bilingual groups, with no significant differences between them, but a stronger effect in the monolingual Russian children. Interestingly, Spanish-Russian bilinguals demonstrated a stronger aspectual effect in Spanish compared to Spanish controls, suggesting facilitation from the heritage to the societal language. This suggests that the acquisition of aspect is influenced by grammatical salience, with Russian's consistent aspect marking across all verb forms enhancing acquisition. In contrast, the aspectual distinction in Spanish is confined to past tense, and the preterite doesn't unambiguously entail event completion. These findings contribute to understanding CLI's differential effects on bilingual children's societal and heritage languages.

Examples of experimental stimuli:

Completed Event (CE)



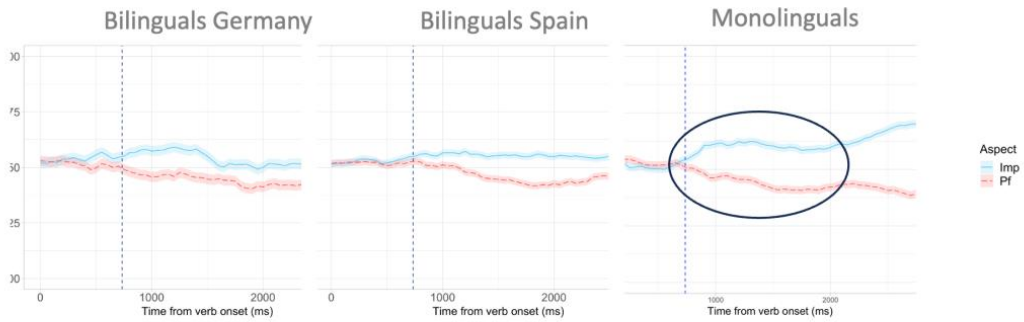
Ongoing Event (OE)



El primer día de clase una nena dibuj-aba / dibuj-ó un florero delgado. (SP).
Šël pervyi urok devočka risovala / na-risovala tonkuju vazu (RU)
It was the first lesson at school. The girl was drawing / drew a thin vase.

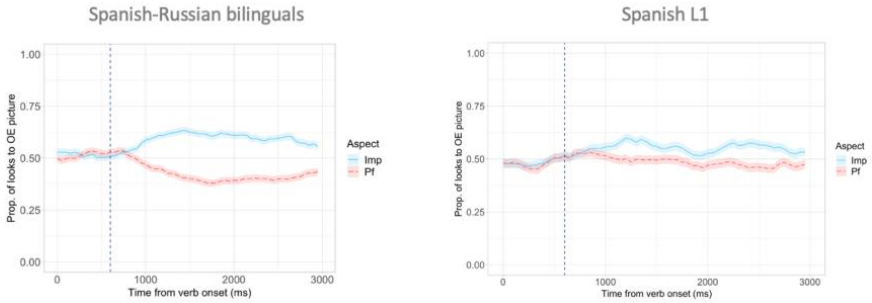
Results:

Effect of aspect in Russian (Looks to OE picture by aspect)



Bayesian generalized mixed effects regression revealed a strong effect of aspect for both bilingual groups, but no evidence that the effect was larger in one of the groups. Strong evidence of interaction between aspect and group when comparing the monolinguals to each of the bilingual groups.

Effect of aspect in Spanish (Looks to OE picture by aspect)



Bayesian generalized mixed effects regression revealed strong evidence for the effect of aspect in both groups. Strong evidence of interaction between aspect and group (larger effect in Spa-Rus bilinguals).

Reference:

Minor S, Mitrofanova N, Ramchand G (2022) Fine-grained time course of verb aspect processing. *PLoS ONE* 17(2): e0264132.