# EARLI SIG 15 – Special Educational Needs

## Newsletter Volume 9 – December 2023

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The EARLI SIG15 meeting will come to Valencia (Spain) in 2024 (from the 2nd to the 4th of September) with the appealing theme of ‘Neurodiversity in Education: Research and Practice’. We encourage researchers to submit their contributions to Special Educational Needs, taking into account the neurodiversity perspective and, at the same time, maintaining the excellence and rigour of the scientific research.

- The call for papers opens on the **15th of December 2023**.
- We are contacting potential reviewers to serve on the 2024 **scientific committee**. If you would like to volunteer as a reviewer, please contact us at: SIG15@earli.org.
- We also welcome interested JURE researchers at an advanced stage of their PhD who wish to join the SIG15 2024 conference **review panel**. If you are interested, please contact us at SIG15@earli.org.

Please visit our website for more information on abstract guidelines and submission: [https://www.earli.org/sig-15-conference-2024](https://www.earli.org/sig-15-conference-2024)

The organizers of the EARLI SIG15 meeting,

Inmaculada Fajardo (University of Valencia) & Nadina Gómez-Merino (University of Valencia) with the **local committee** and the organizing **committee** of the EARLI SIG15 members
2 – Symposium Invitation to SIG15 Meeting in Valencia

Join us for an attempt to make intervention studies in special educational needs better!

Call for participants for intervention study symposium on learning and/or learning difficulties in EARLI SIG 15 meeting in Valencia

The focus on the implementation of evidence-based interventions and practices in school settings has been on the rise. Such interventions indeed hold the promise of ameliorating the learning, cognitive and socio-emotional development of children with and without special educational needs. Nevertheless, researchers are faced with fundamental challenges when designing and setting up effectiveness studies. Because of their scope the current gold standard to test the effectiveness of clinical and classroom interventions, i.e. randomized controlled trials (RCTs), put a heavy burden on participating teachers and students, are time-consuming, are prone to recruitment bias by only including the most motivated participants, and are at risk for not being fully or reliably implemented afterwards when researchers’ support and monitoring are waning. These costs should be balanced with the strengths of RCTs such as the high level of evidence for causality. However, in many cases the choice for RCTs becomes an automatic one (perhaps under the pressure of publication standards) and not the result of a careful and balanced decision-making process.

In the Netherlands and Flanders (Belgium) the selection of (research designs for) interventions is based on the effectiveness ladder, a tiered system of research methods with increasing claims for causality (see Figure, adapted from van Yperen, Veerman & Pijl, 2017).
The general approach is that after you established a standardized intervention (Level of evidence 1) and a intervention theory (indicating moderators, mediators and clear outcomes; Level of evidence 2), the selection of your research method can be inspired by taking a higher ladder steps (Level of evidence 3-5) than the currently available empirical research. As such, more causal claims on the effect of the intervention are possible but at the same time less time-consuming, elaborate designs (compared to RCT) that match better with everyday practice can be considered and hold the potential of pushing the field forward (i.e., practitioner-based science rather than science-based practice).

During the 2024 EARLI SIG15 meeting in Valencia (September 2-4), we aim to organize a symposium that focuses on high-quality effectiveness studies on learning and/or learning difficulties that illustrate how novel and innovated research methods can contribute to the causality claim while also taking into account setting characteristics and implementation factors. Insights will help to reconcile current challenges of practitioner-based science and science-based practice approaches. We invite EARLI SIG 15 members to contact us by January 10th 2024, if they would like to contribute to this symposium.

Sincerely,

Dieter Baeyens (dieter.baeyens@kuleuven.be) and Pirjo Aunio (Pirjo.aunio@helsinki.fi)
3 – Current Research Projects

Auditory-visual integration during speech and its relation to reading acquisition in Neurodevelopmental Disorders (ATYPICAL)

Inmaculada Fajardo (PI); Ávila, V.; Ferrer, A., Pérez-Fuster, P., Gómez-Merino, N., Figueroa, M.; Domingo, C., Josehp, H. & Arfé, B.

University of Valencia

The project “Atypical” aims to examine, through a longitudinal approach, the influence that auditory-visual integration during speech comprehension (orally narrated stories) has on reading acquisition and, in particular, on word decoding and reading comprehension in the developmental period from 5 to 8 years of age for students with hearing loss (HL), autism spectrum disorder (ASD) and intellectual disability (ID). The transition from preschool education to the second year of the primary education is a period of enormous learning for children between 5 and 8 years of age as far as literacy is concerned. They go from speaking with some fluency and reading and writing a few very familiar words to becoming expert decoders who can read words they have never read (and perhaps never heard) and understand sentences and short narrative texts. They are now ready to use reading as a vehicle for other learning. All this happens thanks to the intentional instruction of teachers, but also thanks to the fact that when children reach primary school, they have already acquired a certain level of oral linguistic development such as auditory-visual integration, phonological awareness or lexical knowledge. While these learning processes occur without incident in most pupils, for other schoolchildren with sensory deficits such as HL or neurodevelopmental disorders such as ASD or ID, these prerequisites do not occur, emerge slowly or in a qualitatively different way, which, in turn, affects the development of reading as a subsidiary process of oral language.

The 3 specific objectives of Atypical are: 1) To analyse by means of eye movement measures how 5 to 6 year old children with atypical language development (Hearing loss-HL and Autism Spectrum Disorder-ASD and Intellectual Disability-ID), combine the information provided by
the voice and lips (lip reading) during speech comprehension (visuo-auditory and social tuning indices); 2) To study by means of a longitudinal approach (from 5 to 8 years old) the relationship between visual exploration of auditory and visual speech cues, the development of oral language (vocabulary and oral narratives) and written language (word reading and comprehension of written narratives) in each population; 3) To study the audio-visual gain during speech comprehension in conditions of auditory signal impairment (noise), also in each population at the age of 7-8 years.

The results of this longitudinal project would help to inform theoretical models of typical and atypical language development. In addition, the project also gains applied relevance in clinical and educational contexts by providing indices of visuo-auditory and social tuning based on measures of performance and eye movements during speech comprehension useful for diagnostic or intervention purposes.
4 – PhDs in the Spotlight

Gaia Spicciarelli – Università degli Studi di Padova

Gaia is a PhD student in the Ph.D. program at the Dipartimento di Psicologia dello Sviluppo e della Socializzazione at Università degli Studi di Padova, Italy. Under the supervision of Dr. Barbara Arfé, the subject of her research project is the effect of background noise on children’s cognitive performance. It aims to explore the effects of background noise on children’s cognitive abilities and tries to seek effective strategies to counteract its negative impacts. Focusing on children aged 7-11 (primary school), the project encompasses an initial phase of assessment, in which the influence of noise on cognitive task performance is evaluated by the integration of eye tracking data, behavioral measures, and self-report questionnaires. Secondly, an intervention phase is planned in order to introduce metacognitive strategies and digital tools to help children self-regulate their cognitive processes in noisy environments. Preliminary results reveal overall a small significant impact of noise on memory tasks, but a notable positive effect on attention tasks, particularly in children with attention deficits.

Gaia presented her research on “The effects of background noise on the cognitive performance of children with cochlear implants” at the Brown Bag Seminars in October 2022. You can access the recording of her presentation through this link: https://www.youtube.com/watch?v=7l5GbXdGMmc
Canmei Xu – KU Leuven

Canmei Xu, a fourth-year doctoral researcher in the SWITCH research group at KU Leuven's Faculty of Psychology and Educational Sciences, is exploring how teacher-student interactions, a key contextual factor, contribute to the development of children's executive functions across cultures. These functions, which are essential brain-based skills for planning and adapting in new or challenging situations, evolve with brain growth and receive contributions from environmental factors like parenting and teaching styles.

Supervised by Prof. Dieter Baeyens, KU Leuven and Prof. Mariëtte Huizinga, VU Amsterdam, Canmei focuses her research on the role of teacher-student interactions in shaping children's executive functions, with a particular emphasis on cultural contexts. Canmei's research, through cross-cultural meta-analyses and qualitative and quantitative studies, highlights these dynamics in various cultural contexts.

Her first study, a meta-analysis encompassing 84 studies across 18 cultural regions, found stronger associations between teacher-student interaction and executive functions in children from low-individualistic and high-power-distance cultures. Yet, the meta-analysis faced potential bias as most scales used were from specific, predominantly Western cultures, possibly leading to inappropriate conceptual frameworks for diverse populations. To uncover both universal and unique aspects of teacher-student interaction, in a second study, Canmei and her colleagues conducted semi-structured interviews with 60 teachers from Belgium, China, and Italy (i.e., countries with varying positions on the collectivistic-individualistic continuum of culture). Drawing on these teachers' insights, in a third study, she is currently adjusting the Student-Teacher Relationship Scale to be culturally sensitive. This revised instrument will facilitate her cross-cultural analysis of teacher-student interaction and executive functions, as the next step, comparing individualistic societies such as Belgium with collectivistic ones such as China.
In a globalized world marked by cultural diversity, Canmei’s objective is to make uni-cultural research findings more applicable in diverse cultural settings. By identifying similarities and differences in these dynamics, she aims to extend the use of theories such as attachment theory, social learning theory, and socio-cultural theory to various educational environments, both within and among diverse cultures.

**Simone Sankalaite – KU Leuven**

Simona Sankalaite is approaching the completion of her doctoral studies within the Parenting and Special Education Research group at the Faculty of Psychology and Educational Sciences, KU Leuven. In her doctoral project, supervised by prof. dr. Dieter Baeyens (KU Leuven) and co-supervised by prof. dr. Mariëtte Huizinga (Vrije Universiteit Amsterdam, the Netherlands), Simona is exploring the complex relationship between teacher-student interaction and working memory in primary school context. Working memory is crucial for children’s learning, academic performance and success, and social functioning, highlighting the need to improve it effectively. The interactions with their teacher seem to positively influence children’s cognitive development; however, this interplay is highly understudied.

At the start of her PhD, Simona conducted a systematic literature review exploring interventions that aim to improve children’s executive functions by manipulating the teacher-student interaction. This work not only laid the foundation for her ensuing work but also highlighted the scarcity of empirical studies on the topic, emphasising the need for further investigation. Furthermore, she conducted a study aiming to unravel the bidirectional and temporal relationships between children’s working memory and the teacher-student relationship. This study revealed temporal relationships between working memory and teacher-student relationship quality but did not uncover bidirectional effects. Such findings call for micro-analyses necessary to detect the subtle bidirectional influences that may occur between these constructs. Moreover, a qualitative exploration – semi-structured interviews with primary school teachers – provided further support for the use and efficacy of teacher-
student interaction strategies for supporting children’s working memory and related difficulties within the classroom environment. Finally, Simona explored the causal effects of teacher-student interaction, more specifically, instructional support provided by the teachers, and children’s working memory and related problematic behaviour. Preliminary analyses suggest that the intervention, developed based on the insights from her earlier work (the systematic literature review and the qualitative study), resulted in significant improvements in children’s behaviour, as well as perceived working memory in the classroom and performance working memory on verbal and visuospatial tasks. These findings highlight the potential of teacher-student interaction intervention in alleviating specific student challenges, offering a promising avenue for tailored support to address the needs of the most vulnerable learners.

As Simona finalises her doctoral thesis, she aspires for it to serve as a comprehensive overview for both researchers, as well as teachers and educators, bridging theoretical concepts and educational practice. With an eye to the future, Simona remains dedicated to exploring the complex construct of teacher-student interaction and its impact on various children outcomes. As for future postdoctoral projects, she aims to extend this focus and collaborations to more diverse child populations, such as those with low socioeconomic status or with a migration background.

**Felipe Torres – Pontifical Catholic University of Chile**

Felipe Torres is a third-year doctoral researcher at the Center of Educational Justice (CJE) at the Faculty of Education of the Pontificia Universidad Católica de Chile. In his doctoral dissertation (supervised by Professor Ricardo Rosas), Felipe aims to analyze the extent to which executive functions (working memory, inhibitory control, and cognitive flexibility) predict vocabulary and syntax (expression and comprehension) performance of schoolchildren with developmental language disorder (DLD). Worldwide, children with DLD are often treated for their linguistic symptoms, i.e., vocabulary and syntax problems, without considering executive functions. Therefore, based on the research, Felipe
hopes to find evidence supporting the inclusion of executive functions in school and clinical programs for children with DLD. Felipe has already completed data collection in 208 children, 102 with typical language development and 106 children with DLD. The results will be published soon.
5 – New SIG15 Publications


6 – Book in the Picture

Inclusion and Special Needs Education for Immigrant Students in the Nordic Countries

Editors Natallia Bahdanovich Hanssen¹, Heidi Harju-Luukkainen¹² & Christel Sundqvist³

¹Nord University in Bodø, Norway
²University of Jyväskylä, Finland
³Åbo Akademi University, Finland

Inclusion for immigrant students with special educational needs (SEN) is a neglected area of research. This edited volume addresses this problem, providing up-to-date insights into the provided support and special needs education (SNE) for immigrant students in different contexts of the Nordic countries. This important book explores the diversity of student experiences, addressing both compulsory schools and vocational education, and examines how different Nordic countries conceptualise and approach support and SNE for immigrant students. Readers will get an opportunity to read various studies that address gaps in the realisation of inclusion and special need education. This book initiates a dialogue on generating new knowledge, approaches, and methods to expand the flexibility necessary to implement a fully inclusive education. The book offers research that includes strong theoretical and practical frameworks, interviews, interventions, assessments, case studies as well as offers future directions for inclusive and special needs education.

By exploring the process of inclusion and special needs education in the Nordic countries, this book is an essential read for those who intend to deepen their understanding and to enact inclusion, and the development of special needs education for immigrant students.

SIG15 Online Brown Bag Seminars

Since 2020, SIG15 has started a series of meetings to exchange ideas and to hear more about the work and contributions of early and senior researchers. Here you can find the recordings of most of the meetings: https://www.earli.org/sig/sig-15-special-educational-needs.

During the 2023-2024 academic year, we have invited members from other SIGs to present and share their work with our members. The first joint seminar was held in November with SIG 28 (Play, Learning and Development) with the theme 'The social play as a means and goal for learning in inclusive education' related to both SIGs' special interests.

We had three excellent presentations. First, Associate Professor Hanna Ginner Hau from Stockholm University's Department of Special Education enlightened us with her insights in the talk titled, "Guided play and narrative skills – promoting participation and engagement for each child." Hanna is a member of both SIG15 and SIG28 and has collaborated on projects concerning social-emotional learning in early childhood education and primary education. She has also been leading research projects on young offenders and is currently Principal Investigator for “Promoting successful schooling for young offenders with ADH(D). A co-produced evaluation of the Homework, Organization, and Planning Skills (HOPS) intervention in Swedish social services.”

Professor Winnie-Karen Kiera held the second presentation from the University of Postdam. She discussed play with adolescents in her presentation titled "Everyone is playing! A participatory theatre project to promote reading competence." Winnie-Karen has received the award “Teacher of the Year” from the state of Brandenburg. Her current research investigates secondary school students’ writing skills, reading skills, debating skills and their skills concerning scenic acting as well as their feedback behavior and attitudes in these domains.

In the last presentation, Assistant Professor Florianne Rademaker from the Faculty of Behavioral and Social Sciences at the University of Groningen presented a talk titled "Room to play: Promoting the social play of kindergarten students with disabilities." Florianne’s expertise lies in inclusive education, social participation, cooperative learning, and intervention development. All presentations sparked a lively discussion in the audience.
Many thanks to all our presenters, who brought richly different perspectives to the topic related to special education and play. You can learn more about their research in the BBS recording on our webpage through this link: https://youtu.be/_3dDI2mQqNk?si=pzb_6v9kJldFyUMV

Next meeting

The second joint Brown Bag Seminar will prepare you for the SIG conferences hosted in Valencia, Spain. The SIG 2 (Comprehension of Text and Graphics) and SIG 15 conferences overlap in September 2024. It will be an excellent opportunity for both SIGs’ members to meet the organisers before the conference.

SIG 15 meets SIG 2 (Comprehension of Text and Graphics) will be held on Tuesday, 27 February 2024, at 14 UK time / 15 CE(S)T / 16 EE(S)T. In the seminar, titled “Digital and Paper struggling readers”, four top researchers will present and discuss their reading research with a focus on special educational needs: Øistein Anmarkrud from Oslo University; Eliane Segers from Radboud University; Jarkko Hautala from Niilo Mäki Institute & University of Jyväskylä, Lalo Salmeron from the University of Valencia.

Thank you for your input!

Nadina, Erica, Kati and Inma
8 – Conference Calendar

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<tr>
<td>JURE 2024 conference</td>
<td>24 – 28 June</td>
<td>Sevilla (Spain)</td>
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<tr>
<td>Neurodevelopmental Annual Seminar (NDAS) 2024</td>
<td>28 June</td>
<td>Norwich (United Kingdom)</td>
<td><a href="http://www.neurodevelopmentaldisorders-seminarseries.co.uk/index.php/about/">http://www.neurodevelopmentaldisorders-seminarseries.co.uk/index.php/about/</a></td>
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<td>IMBES 2024</td>
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The information of the other EARLI’s SIG conferences that are taking place in 2024 is available here: https://www.earli.org/assets/files/SIG-Conference-Calendar-version-8.pdf
EARLI 2023 Keynote Recordings

The EARLI 2023 keynote recordings are available now on the YouTube playlist.

EARLI Research Stories Podcast

[Introducing the EARLI Research Stories Podcast: Unraveling Academic Journeys and Career Paths! 🎙]

Dive into the world of academic excellence with the EARLI Research Stories Podcast! 🚀
Launched in 2022, this captivating podcast, led by Dr. Stefan T. Siegel, unravels the stories of influential figures within the European Association for Research on Learning and Instruction (EARLI) community. 🌐 Explore the Podcast: EARLI Research Stories

🌟 What to Expect:

- 🎙 Inspiring Conversations: Engage with insightful discussions featuring prominent researchers like Sari Lindblom and Jan Vermunt.
- 🌍 Global Presence: Now listed on Wisspod, the podcast is making waves beyond borders.

🔍 Behind the Scenes Special: Ever wondered what goes into creating a podcast? Get an exclusive look in the Behind the Scenes Special

🤝 Get Involved in Season 2! 🌈

The EARLI Research Stories Podcast is calling on the vibrant EARLI community! 🌟 We're exploring exciting ways to collaborate with researchers from various Special Interest Groups (SIGs). Be part of the movement by:

- 🎤 Guest Hosting: Take the spotlight and share your expertise.
Content Curation: Shape the narrative and contribute your unique perspective.

Production Assistance: Join the team behind the scenes and contribute to the podcast's success.

Call to Action:

- Let us know if you are interested in joining the podcast adventure (leen.catrysse@ou.nl).
- Share your suggestions for EARLI members you would love to see interviewed (leen.catrysse@ou.nl).
10 – New SIG15 Coordinator

We are happy to announce that Inmaculada Fajardo has joined the team as SIG coordinator.

Inmaculada Fajardo – University of Valencia (Spain)

Inmaculada is a member of the Reading Research Unit (www.uv.es/lectura) and associate professor at the Department of Developmental and Educational Psychology of the University of Valencia, Spain. As a researcher, she runs several projects about written and oral language comprehension in children and adults with neurodevelopmental disorders and disabilities as coordinator of the group Atypical (www.uv.es/atypical).

Inmaculada has always worked with and been enriched by researchers and educators of different backgrounds, so, as a member of the SIG15 coordination team. She likes to get to know and strengthen ties between different disciplines represented in the SIG-15 (Educators, Speech and Language Therapists, Psychologists), which will be a medium-term purpose.

During this first year in the coordination team, she is happy to take up the challenge of organizing, together with her colleagues at the University of Valencia, the next SIG15 meeting in 2024 (2nd to 4th of September), where we look forward to welcoming international junior and senior researchers to present their latest work under the umbrella of the theme “Neurodiversity in Education: Research and Practice”. They aspire to make the University of Valencia a place to give visibility to high quality research in special educational needs.

Contact:

@ infabra@uv.es  www.uv.es/infabra
Call for New SIG15 Members

We want to ensure that SIG15 includes a healthy number of academics within the field of special, educational needs, and inclusion and is represented by members from across all European countries, as such we would like to encourage you to invite your colleagues, collaborators, and students to join us. There are a number of planned activities and benefits to joining SIG15, including

- contribute to the SIG15 newsletters
- access to the Brown Bag seminars of talks held at various universities across the SIG15 network
- being part of SIG15 symposium
- contribute to special issues in scientific journals published by EARLI
- be part of the @EARLISIG15 community
- be part of the active JURE community and expand your networks
- share collaborations and funding opportunities

We challenge every member to recruit at least one new member!

SIG 15 Newsletter

Thank you to those who have contributed to this newsletter. We will release 2 newsletters per year. The next one would be in June 2024. If you have any content, you would like to contribute please email kati.sormunen@helsinki.fi.
SIG 15 X

Our X account is now active, and this would allow you to quickly spread news or make announcements to other academics or to SIG15 members. If you are on X, please follow us @EARLISIG15

SIG15 Co-Ordinators

- Dr Kati Sormunen, University of Helsinki, Finland. Email: kati.sormunen@helsinki.fi
- Dr Inmaculada Fajardo, University of Valencia. Email: infabra@uv.es
- Dr Nadina Gómez-Merino, University of Valencia, Spain. Email: nadina.gomez@uv.es
- Ms Erica Ranzato, UCL Institute of Education, UK. Email: e.ranzato@ucl.ac.uk

WARM WISHES FROM SIG15

Season’s Greetings

Kati, Inma, Nadina & Erica