

EARLI SIG 15 – Special Educational Needs

Newsletter Volume 6 – June 2022

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1 – SIG15 Meeting 2022 in Ghent



On September 22–23, 2022, the [EARLI SIG15 conference](#) will be held in Ghent, Belgium. In this newsletter item, we bring you the latest updates.

Conference theme and program

The backbone of the conference theme “*A village to teach a child. The influence of contextual factors on learning and development*” consists of three renowned keynote speakers: Janet Goodall (Swansea University, UK), Megan McClelland (Oregon State University, USA), and Martin Valcke (Ghent University, Belgium). Their presentations will be followed-up by three invited symposia on the topic of parents and home environment (Sara Nijs, KU Leuven, Belgium), teacher and classroom factors (Wendelien Vantieghem, Ghent University, Belgium), and broader school and policy factors (Lucia Dehaene, KU Leuven, Belgium). An additional 5 symposia, 40 papers and 17 posters, each carefully evaluated by the scientific committee, will guarantee for an exciting and critical exploration of new (contextual) insights on the topic of special educational needs. The conference will end with a summarizing debate (moderated by Annemie Desoete, Ghent University, Belgium) and -in the best SIG15 tradition- the award ceremony for best presentation and poster by young scientists. Please visit the website for further updates on the conference program.

Conference venue

The conference will be located in the [Monasterium Poortackere](#), a former 19th century monastery with the latest modern meeting technology, in the center of Ghent – an ideal base to discover the historical city after conference hours. Although Ghent has many hotels in all price ranges, please note that the Monasterium also accommodates a hotel. EARLI SIG15

conference participants get a 10 percent discount at the Monasterium hotel if they use the code “EARLI SIG CONGRES” while booking a room.

Registration: early bird rates until June 30

[Registration](#) through the conference website is now possible. There are different rates for JURE members/PhD students, EARLI members and non-members. Early bird rates are available until June 30. Registration fees include scientific program events, coffee breaks, lunches, and a reception. Presenters are invited to register before June 15 to validate their slot in the conference program.

Upon registration you can also make reservations for a conference dinner in a historical setting: Café Theatre Ghent. The best place in town for an informal get together with all participants.

As organizer we look very much forward to meeting you again in a couple of months. Please check our conference website regularly for latest updates and do not hesitate to contact us in case of questions.

The organizers of the EARLI SIG15 meeting,

Petra Warreyn (Ghent University), Dieter Baeyens (KU Leuven) and Sig vzw

2 – JURE Conference 2022

On July 18-22, the [JURE 2022 conference](#) will be held in Porto, Portugal.

We are excited to present the SIG 15 symposium titled “Implementing digital tools to support learning across different populations” on **Wednesday 20 July at 11:00 – 12:30 pm**.

The symposium will investigate the efficacy of digital tools in the classroom and whether they can support learning of different populations.

The first presentation by Emeritus Professor Chris Donlan (UCL, UK) will investigate the effect of the use the SWAN app game to support basic mathematical skills of individuals with developmental language disorders.

In the second presentation Bethany Huntington (University of Nottingham, UK) will present a review of studies that have used tablet technology equipped with the “oncourse” software to support foundational numeracy and literacy skills in populations with different learning difficulties and levels of Socioeconomic Status, such as learners at risk of underachieving, students with Down syndrome, and children living in remote villages.

In the final presentation, Costanza Ruffini (University of Florence, Italy) will focus on university students and will share their findings on the comparison between face-to-face and online learning methodologies and their influence on cognitive load and attention.

Together, these studies provide evidence that some digital learning tools are effective with specific populations and they contribute to a wider discussion about the recommendations on the use of digital tools in education.

Also, we will be at the SIG exhibition session on **Tuesday 19 July at 5:00 – 6:00 pm**. If you are attending JURE 2022, come and visit our booth, we look forward to meeting you all there!

3 – PhD in the Spotlight

Bethany Huntington – University of Nottingham (United Kingdom)

Bethany is a second-year PhD student in the School of Psychology and N/LAB, based in the University of Nottingham. Bethany's PhD project focuses on the impact of educational interventions in developing contexts, using XPRIZE data collected from remote villages in Northern Tanzania using out-of-school marginalised children. Bethany aims to determine how effective digital technologies are at supporting foundational skills, which app features and pedagogy best support the acquisition of these skills, which



environmental factors impact the most on implementation and whether machine learning approaches can assist in the design, implementation, and evaluation of educational interventions. Bethany uses a mixed methodological approach, using data collection methods such as a systematic literature review, interviews with key experts, a comparative judgement task and deep machine learning methods to analyse existing competition data. The end goal is to contribute to the knowledge base about what is needed for best practice when implementing EdTech interventions with diverse groups.

4 – New SIG15 Publications

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5 – Paper in the Picture

Combining Numerical Relational and Fundamental Motor Skills to Improve Preschoolers’ Early Numeracy: A Pilot Intervention Study

By Pinja Jylänki^a, Elina Sipinen^a, Theo Mbay^a, Arja Sääkslahti^b & Pirjo Aunio^a.

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At *International Journal of Early Childhood* (2022).

<https://doi.org/10.1007/s13158-022-00329-8>

MoVEN
INTERVENTION

Movement with Early Numeracy

8 weeks intervention aiming to improve preschoolers early numeracy skills

01 *Beginning*

Each 45 min session starts with an overview of the lesson plan with pictures following a familiarisation game using a ball.



 **02** *Storybooks*

During the intervention, five general children's storybooks with rich mathematical language are read using a dialogic reading technique. Each storybook is read in three consecutive sessions.

03 *Dialogic reading*

Book session 1: The story is read with supporting questions.
Book session 2: The story is read highlighting the numerical relational words, and the words are explained to the children.
Book session 3: The children tell the story and explain the words. This is followed by a mathematical activity where the children use the learned words.



 **04** *Motor skill activity*

After the reading session, there is a warm-up, followed by a motor skill activity combined with the numerical relational skills used in the storybook. Motor skill practices included locomotor skills e.g. running & jumping, manipulative skills e.g. throwing & catching, and combined locomotor, manipulative, and balance skills eg. an obstacle course

05 *Conclusion*

At the end of the sessions, learned words are revised with the children and children get to choose a sticker for their sticker book. Finally, sessions end with relaxation.



Previous research has shown that individual differences in children’s early numeracy (EN) can be observed already before formal schooling begins (Aunio et al. 2015), and the achievement gap between low- and high-performers widens during the preschool years (Anders et al., 2012). The importance of early support for low-performers is well demonstrated (Aunio et al., 2015; Duncan et al., 2007). However, while previous EN interventions have been found effective, long-term effects have seldom been found nor reported (Aunio, 2019). In light of previous research from story reading (e.g., Hassinger-Das et a., 2015) and fundamental motor skill interventions (FMS; Jylänki et al., 2022), it is plausible that combining the learning of EN via story reading with FMS practice may result in long-term improvements in EN. Hence, we examined the immediate and long-term effects of a Movement with Early Numeracy (MovEN) intervention program that aims to improve EN by combining the learning of numerical relational skills via story reading with FMS practice.

A total of 36 children ($M = 4.49$ years, $SD = 0.35$); 21 girls and 15 boys, from four preschools in the Helsinki area, participated in this pilot study. Children in the intervention groups were, at first, identified as at risk in numerical relational skills learning based on their teachers' experience, and secondly measured with the Early Numeracy test (Van Luit et al., 2006). Participating children had heterogeneous language and socioeconomic backgrounds. The MovEN -interventions were led by trained teachers and were first conducted with a within-subject repeated-measures design (study I), and after some modifications with a quasi-experimental design (study II). By conducting the intervention with two intervention designs, it was possible to increase the reliability of the results despite the small sample sizes.

Both studies demonstrated that children’s EN skills and especially numerical relational skills improved during the MovEN -intervention. When comparing gains per month in study I, children’s EN improved significantly more during the eight-week intervention than during the 5-to-10-month baseline period. In study II, there were significant differences in numerical relational skills between the intervention and average performance control group before the intervention. However, the difference between the groups in numerical relational skills was not significant after the intervention, suggesting that the gap between these groups narrowed, and the children in the intervention group were able to catch up the average performing peers during the intervention. Importantly, the improvements were sustained in the delayed measurement in both studies.

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6 – Current Research Projects

Peer relations and peer influence in students with intellectual disabilities

Christoph Michael Müller, Meta Amstad, Thomas Begert, Sara Egger, Verena Hofmann,
Gina Nenniger, & Noemi Schoop-Kasteler

University of Fribourg, Switzerland

Research shows that typically developing children and adolescents are influenced by their peers in the development of their adaptive competence and social behaviors. It is largely unclear, however, what significance peers have for the development of children and adolescents with an intellectual disability (ID). In the research project KomPeers ("Competent with Peers") we investigate to what extent children and adolescents with an ID are influenced by their peers in their everyday life skills, behavioral problems and social judgments. Secondly, peer relationships in the context of special needs schools are investigated.

The research project includes a longitudinal questionnaire study (T1 at the beginning and T2 at the end of a school year) and an experimental study. In the questionnaire study 16 special needs schools for students with an ID in Switzerland participated. Data on 1107 children and adolescents with ID and on 397 school staff members were collected. Based on this data the characteristics of the student body at special needs schools are described, relationships between students are recorded, and peer influence processes in the school setting are analyzed. Parts of the analyses focus specifically on the question in how far students with high levels of autistic traits are influenced by their peers in their autistic-like behaviors. In the experimental study we relied on a sub-sample and used computer-based tasks to investigate the extent to which adolescents with mild ID are influenced by peers compared to control groups. Additional analyses consider the role of students' problem behavior in burnout risk of teachers in special needs schools.

Towards the end of the research project, several publications on the study results are now available (see <https://www.researchgate.net/project/Peer-Influence-in-Children-and-Adolescents-with-Intellectual-Disabilities-KomPeers>). They offer insights into the socialization conditions of children and adolescents with ID and provide indications for the support of individuals with ID and teachers in special needs schools.

The KomPeers project is financed by the Swiss National Science Foundation and is conducted at the University of Fribourg in Switzerland. Project partners are Prof Christian Huber (Bergische Universität Wuppertal), Prof Antonius Cillessen (Radboud University Nijmegen), and Prof Carmen Zurbriggen (University of Luxembourg).

7 – Call for Speakers to SIG15 Brown Bag Seminars

In 2020, we started a series of meetings to exchange ideas and to hear more about the work and contributions of all SIG15 members. We meet online every **last Tuesday of the month at 13h UK time / 14h CE(S)T / 15h EE(S)T.**

Brown bag seminars are open to all. You can subscribe to the seminars and check out the dates and the schedule here: <https://forms.gle/u7XBBhZioREWZUUXA>

Next meeting:

Tuesday, **June 28, 2022 (13h UK time / 14h CE(S)T / 15h EE(S)T.)** - Ricardo Rosas (CEDEti-UC, Chile)

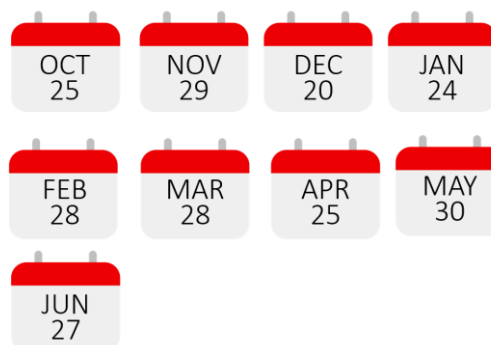
Past seminars:

We've had the opportunity to listen to very interesting talks during this past academic year. If you missed any of the seminars don't worry, you will be able to watch the recordings. Stay tuned, we will let you know where you can find them soon!

Call for speakers:

The call for speakers for the next academic year is now open! Next seminars will begin at the end of October. *Would you like to share your findings, discuss any idea, or start new collaborations?* You can check the available slots here: <https://doodle.com/meeting/participate/id/b48mrNnb> and email Nadina at nadina.gomez@uv.es or Erica at e.ranzato@ucl.ac.uk to schedule your slot.

Seminars for the next academic year will take place in the following dates for 2022-2023:



8 – Conference Calendar

Conference	Date	Location	Homepage
5th Workshop on Communication Disorders: Forensic examination of DLD	June 8, 2022 11:00 am (peninsular time)	Online Webinar	https://symposium.uoc.edu/84024/programme/5o-jornada-trastornos-de-la-comunicacion-y-la-deglucion-peritaje-judicial-del-tdltel.html
Neuro-developmental Disorders Annual Seminar	June 23, 2022	University of Edinburgh	http://www.neurodevelopmentaldisorders-seminarseries.co.uk/index.php/about/
JURE 2022 Conference	July 18-22, 2022	Porto	https://earli.org/JURE2022
EARLI SIG15 Conference 2022	September 22-23, 2022 Registration is open!	Ghent	https://www.earli2022.ugent.be/
JURE 2023 Pre-Conference	August 20-21, 2023 First call is open now!	Thessaloniki	http://earli.org/JURE2023
EARLI 2023 Conference	August 22-26, 2023 First call is open now!	Thessaloniki	https://www.earli.org/EARLI2023

9 – Other SIG 15 NEWS

Call for New SIG15 Members

We would like 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 at least 2 newsletters a year. The next one would be in December 2022. If you have any content, you would like to contribute please email kati.sormunen@helsinki.fi.

SIG 15 Twitter

Our twitter account is now active, and this would allow you to quickly spread news or make announcements to other SIG15 members. **If you are on Twitter, please follow us [@EARLISIG15](#).**

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