

# EARLI SIG 15 – Special Educational Needs

# Newsletter Volume 4 – April 2021

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# 1 – EARLI Meeting 2021

The following symposium has been accepted as the EARLI SIG15 invited symposia:

# Validity and reliability evidence of measures used to detect mathematical learning difficulties

Chair: Pirjo Aunio (University of Helsinki, Finland)

Discussant: Annemie Desoete (University of Ghent, Belgium)

In EARLI "Learning and Special Education" -domain understanding and identifying learning difficulties is fundamental task. It is essential that the measures we use are valid and reliable. It is important to evaluate the measurements and make their psychometric evidence visible. In the field of special education it has not been a strong tradition to demand evidence of validity and reliability of measures used. In fact, in our field the knowledge is less developed compared to educational psychology for instance, although it would be higly needed. Measurement validity is related to how we define learning difficulties and how we are able to measure it. In educational practice, this forms a base for the decision making process. The aim of this symposium is to develop evidence to develop valid and reliable measurements for identifying children with mathematical learning difficulties. Around 15-25 % of children have difficulties with mathematical development. It is crucial to be able detect children who are at risk for developing mathematical difficulties at an early age and provide support needed. The papers report validity and reliability of measurements by using systematic review methods and empirical data from three countries. To secure interaction during symposium we use chat, online discussion and other means so audience can answer some questions live online and provide feedback. Validity and reliability are important concepts in terms of research but are applied differently. An open debate about these issues and the importance of them will raise scientific rigour of the research in the field.

Paper 1: Validity and reliability evidence of numeracy measures used in elementary school (Relander, Aunio, Laine & *Hakkarainen* (University of Helsinki, Finland)

Paper 2: Validity of an online dyscalculia screener for grades 3 to 9 (Räsänen, Aunio, Laine, Hakkarainen, Väisänen, Finell, Rajala, Laakso & *Korhonen* (Univ. Turku, Univ Helsinki, ÅA, Finland)



Paper 3: The SYmbolic Magnitude Processing Test (SYMP-Test). A validation in Belgium and Finland (*De Smedt*, Korhonen & Aunio (Univ. Leuven (Belgium) ÅA, Univ. Helsinki (Finland)

Paper 4: Number Estimation Line tasks: The impact of instructional variations (*Van Herwegen*, Outhwaite & Simms (UCL, Univ. Ulster (UK)

### 2 – NEW SIG15 co-ordinators

We are inviting candidates to apply to be our SIG 15 co-ordinator and jure-co-ordinator. Pirjo and Jannis will step down in August 2021. Please send as a short CV and Letter of Intent, where we can see how you would like to develop our SIG 15 in future. Please email them to j.vanherwegen@ucl.ac.uk.

Deadline for application is 30/05/2021.

## 3 – EARLI AWARDS

On the occasion of the EARLI Biennial Conference, EARLI hands out three awards. You can find more information about each award and its procedure below. The general nomination deadline for all the awards is the **30th of May 2021 (midnight CEST)**. The recipients of each award will be announced during the EARLI 2021 online conference.

### **Outstanding Publication award**

The Outstanding Publication Award recognises outstanding research and publication work in the field of research on learning and instruction.

You are kindly invited to nominate articles for the 2021 Outstanding Publication



Award. Nominated articles must be situated in the field of Learning and Instruction, and have a truly international scope and audience.

In order to be considered eligible for this award, articles have to be published in a peer reviewed journal, with publication date in one of the two years preceding the Biennial Conference (i.e. for the 2021 Award, publication year 2019 or 2020). Furthermore, articles have to be published in journals that meet the eligibility criteria, as described in the <u>guidelines</u>.

Authors of nominated articles should have been EARLI members during those two eligible years. Please note that self-nominations will not be accepted.

A Publication Award Committee, chaired by the Awards Portfolio Holder, will rate the quality of all nominated articles, using criteria based on those that are normally used for peer review in scientific journals. The award recipient is announced during the EARLI 2021 Online Conference and is invited to hold a keynote lecture in the following EARLI Conference. You can find the nomination form <u>here</u>.

### Erik De Corte award

The Erik De Corte award recognizes the outstanding work of young and promising scholars in the field of research on learning and instruction. This award is named after the founder of EARLI, Prof. Erik De Corte, who chaired the first evaluation committee for this award.

As EARLI member, you are kindly invited to nominate eligible young researchers using this nomination <u>form</u>. The award will be granted for outstanding research work conducted by a promising young scholar within EARLI. Guidelines for nomination can be found here, <u>guidelines</u>.

The award recipient is announced during the EARLI 2021 online conference and receives an award and €1200 to be used for research purposes.



### 4 - New SIG15 publications

Bagga-Gupta, S. & Carneiro, A. (2021). Commentary: Nodal frontlines and multisidedness.
Contemporary multilingual scholarship and beyond. Special issue: Advances in the studies of semiotic repertoires. *International Journal of Multilingualism*.
18(2). <u>https://doi.org/10.1080/14790718.2021.1876700</u>

Bagga-Gupta, S. & Messina Dahlberg, G. (2021, out end April). Disentangling participation across scales. Perspectives on practices of access, communication and inclusion in contemporary lives. *Outlines. Critical Practice Studies*. Special Issue: Transmethodology: Research Beyond Proceduralism. Editors: Iram Khawaja & Dorte Kousholt.

Dimitriadis, C., Georgeson, J., Paliokosta, P. & Van Herwegen, J. (2021). Twice-Exceptional Students of Mathematics: What Do the Teachers Know? *Roeper Review*, 43:2, 99-111, DOI: 10.1080/02783193.2021.1881851

Kamei, M. & Bagga-Gupta, S. (2021). Goodbye linear learning: posthumanism in dialogue with Indian communication theory on online education. In Stavros Demetriadis, Vasileios Dagdilelis, Thrasyvoulos Tsiatsos & Anastasios Mikropoulos (Eds.) *Research on E-Learning and ICT in Education - Technological, Pedagogical and Instructional Perspectives* (169-195). Springer Nature Switzerland AG. <a href="https://doi.org/10.1007/978-3-030-64363-8\_10">https://doi.org/10.1007/978-3-030-64363-8\_10</a>

Liebner, S., & Schmaltz, C. (2021). Teacher training for inclusive education in Germany: Status quo and curricular implementation. In J. Goldan, J. Lambrecht, & T. Loreman (Eds.), *Resourcing Inclusive Education* (pp. 133–145). Emerald Publishing.

Lindberg, Y. & Bagga-Gupta, S. (2021). On Naming Groups in the Margins. Constructs of (Dis)ability in the Morning Press across Time in the Nation-State of Sweden. *Scandinavian Journal of Disability Research*. 23(1), 50–62. DOI: <u>https://doi.org/10.16993/sjdr.737</u>

Ranzato, E., Tolmie, A., & Van Herwegen, J. (2020). Perceptual and Conceptual Subitizing in Williams syndrome and Down syndrome: insights from eye movements. *Research in Developmental Disabilities*. 106:103746. doi: 10.1016/j.ridd.2020.103746.



# 5 – SIG15 Guidance for the inclusion of students with Special Educational Needs for online learning

Some of the members of SIG15 have collaboratively put together a guidance paper that integrates key recommendations for providing best-practice to online learning for students with Special Educational Needs (SEN).

This guidance has been written for teachers and educational professionals of mainly primary and secondary schools who work with students with some kind of special educational needs and includes best-evidence practice from research-based evidence.

The full document is available at the SIG15 web page (<u>https://www.earli.org/node/38</u>).

Feel free to share this document widely to your contacts.

For any questions email Jo Van Herwegen: j.vanherwegen@ucl.ac.uk

### 6 – Paper in the Picture

Prof. Pirjo Aunio (University of Helsinki) and her team have conducted research with colleagues Prof. Elisabeth Henning and Associate Prof. Lara Ragpot from University of Johannesburg to find out effective means to identify and support young learners with low performing in mathematical skills, hence at risk for learning difficulties. The intervention study published in Early Childhood Research Quarterly (open access) showed that ThinkMath intervention was effective in supporting early numeracy performance in children starting their first grade. The intervention group improved in numerical relational skills during 8 weeks intervention and the intervention effect was visible also in delayed measurement.



Executive functions, language skills and kindergarten attendance all predicted the level of early numeracy skills at the beginning of the intervention, but only executive functions explained individual differences in counting skills development from pre- to delayed posttest. Load paper here: https://doi.org/10.1016/j.ecresq.2020.12.002

In a related study (published open access in International Journal of Educational Research) conducted in South Africa Aunio and her group showed that kindergarten attendance predicted children's early numeracy performance even when controlling for executive function and language skills. In addition, listening comprehension skills predicted the early numeracy skills stronger than did executive function skills. Among South African first graders, English as a second language was associated with weaker early numeracy performance. Load paper here: <a href="https://doi.org/10.1016/j.ijer.2019.06.011">https://doi.org/10.1016/j.ijer.2019.06.011</a>

Implication for early education practice is clear: kindergarten year and ThinkMath intervention program are potential supporters for children's early numeracy learning.

### 7 – SIG15 Monthly presentations

We started a monthly seminar series for SIG15 in January 2021. We would like to thank all presenters and attendees who have attended so far.

You can check out the dates and the schedule here: https://www.earli.org/node/38

We have 1 more talk scheduled in May 2021:

"Home Learning Environment in children with Down Syndrome and William Syndrome" by Erica Ranzato; **Tuesday, May 25th at 15h UK time / 16h CE(S)T / 17h EE(S)T Moving forward:** 

From June onwards SIG15 Brown Bag seminars will take place on **Tuesdays 13h UK time /** 14h CE(S)T / 15h EE(S)T. Talks will last around 60 minutes (30 for presentation / 30 for discussion)



Do you have any exciting research you would like to share?

We welcome presentations from researchers at any stage of their career. As this can be a great opportunity to receive feedback from other senior and junior members, we encourage especially junior researchers to take part in these interactive talks. You can participate either by giving a presentation or moderate a discussion based on a recent paper.

- By giving a presentation: Contributions about experiments, research methods, as well as tutorials about any topic related to special education, are very welcome.
   Presentations about projects seeking to establish inter-lab collaborations will be adequate as well.
- 2. By moderating a discussion about a paper: Presenters will choose the paper they want to discuss. The reference of the paper will be sent to the rest of the members so they can read it before the seminar. The presenter will prepare questions that will serve as a point of departure for discussion between participants.

If anyone outside the SIG15 is interested in joining these talks, they will be welcome. Non-SIG15 members will have a free trial for three seminars. Once the trial finishes they would need to subscribe as a SIG15 member if they want to join in the presentations. If you're not a SIG15 member but want to keep updated about the talks all you need to do is sign up here.

If anyone is interested in participating in these meetings, please contact: <a href="mailto:nadina.gomez@uv.es">nadina.gomez@uv.es</a>

## 8 – EARLI and JURE 2021

### Jacobs Foundation Presenter / Attendee Award

The EARLI Executive Committee, in collaboration with the Jacobs Foundation, is committed to recognise high-quality research conducted in countries that are facing financial struggles and where researchers have little access to funds. As such, we are pleased to offer the



Jacobs Foundation Presenter Award for participants in EARLI and/or JURE 2021 with an accepted presentation. Additionally, and new for this conference, we also grant the Jacobs Foundation Attendee Award to participants without an active role in the conference.

Both awards are granted in the form of a **fully waived conference fee** for EARLI and/or JURE 2021.

The main criterion to qualify for the award is that the applicant must reside and work in a low-GDP country. As such, only applications from the following countries will be considered:

- African countries
- Asian countries (with following exceptions: Brunei Darussalam, Hong Kong SAR, Israel, Japan, Republic of Korea, Kuwait, Macao SAR, Qatar, Singapore, United Arab Emirates)
- Latin American countries (with the exception of Puerto Rico)
- and the following countries in wider Europe: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Greece, Hungary, Kazakhstan, Kosovo, Latvia, Lithuania, North Macedonia, Moldova, Montenegro, Poland, Portugal, Romania, Russian Federation, Serbia, Slovak Republic, Turkey and Ukraine.

Below, you can find the application criteria for each award. Please be advised that applications that don't meet the requirements outlined below will not be considered for the award.

Applications for the Jacobs Foundation Awards are welcomed until the **30th of April 2021** (midnight CEST) and should consist of a filled-out application form supported by an uploaded list of publications and scientific achievements from 2011 – 2021 (pdf file, max. 10 MB).

Best wishes,

The EARLI 2021 Organising Committee and the JURE 2021 International Organising Committee



### 9 – Conference Calendar

Conference	Date	Location	Homepage
ISEC 2021	August 3-5, 2021	Online	https://www.ucl.ac.uk/incl usive-supportive- education-conference/
EARLI conference	August 23-27, 2021	Online	https://www.earli.org/EA RLI2021
IASSIDD	July 6th-8th, 2021	Online	https://www.iassidd.org/
NDAS 2021	Autumn TBC	Online	http://www.neurodevelop mentaldisorders- seminarseries.co.uk/

### 10 – Other SIG 15 NEWS

#### SIG15 Membership

We would like to ensure that SIG15 includes a healthy number of academics within the field of special educational needs 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 the newsletters, access to podcasts of talks held at various universities across the SIG15 network, online discussions, share interesting papers, share collaborations and funding opportunities and much

#### **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.



If you have any other ideas for SIG15 activities or support you would like from the SIG15 community then please let us know!

### SIG15 Co-Ordinators

- Prof Pirjo Aunio, University of Helsinki, Finland. Email: pirjo.aunio@helsinki.fi
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- Dr Nadina Gómez-Merino, University of Valencia, Spain. Email: <u>nadina.gomez@uv.es</u>