

# Free Pre-Conference Seminars

**Tuesday 24 October 2023**

Hilton UF Conference Centre, Gainesville

## **Morning Seminar, 8.50am-12.30pm**

Exploring the role of orthographic impacts in expediting, impeding, and optimising literacy development in at-risk learners.

## **Afternoon Seminar, 2.00-4.30pm**

Exploring current and potential GraphoLearn technology applications supporting literacy acquisition in at-risk learners across nations

**Emeritus Prof Heikki Lyytinen, Prof Chunghui Hsuan, and Dr Susan Galletly are meeting together on Tues 24 Oct, the day prior to the IARLD conference, to explore the role of orthographic impacts in impeding versus optimising literacy development in at-risk learners; and the potential of GraphoLearn technology for current and future research focussed on optimising literacy development of at-risk readers.**

They would like to extend an informal invitation to other conference attendees to join them on the discussion day at the Hilton Conference Centre.

A summary of the day's program is included below.

The seminars are free, as room hire has been generously covered by an IARLD seed grant. Donations on the day towards morning and afternoon tea costs, are optional, with receipts available.

Registering as soon as possible is appreciated, to give an idea of numbers, for room size and catering needs.

**To register, please contact:**

- **Susan:** [susan.galletly@hotmail.com](mailto:susan.galletly@hotmail.com); iPhone +61 409 576 725, or
- **Heikki:** [heikki.j.lyytinen@jyu.fi](mailto:heikki.j.lyytinen@jyu.fi).

Please state whether you'll be attending the morning, afternoon, or both sessions.

## **Morning Seminar: 9.00am-12.30pm**

### **Exploring the role of orthographic impacts in expediting, impeding, and optimising literacy development in at-risk learners**

**Presentation 1: Dr Susan Galletly** 9.00-9.50am (45mins + 5mins discussion)

Needs for strategic research and exploration by Anglophone nations to reduce current negative impacts of severe orthographic disadvantage.

**Presentation 2: Prof Chunghui Hsuan** 9.50-10.40am (45mins + 5mins discussion)

The role Tzuyin plays in Chinese reading acquisition Kindergarten to Grade 2: A 3-year longitudinal study.

**Morning Tea:** 10.40 to 11.00am

**Presentation 3: Prof Heikki Lyytinen** 11.00-11.50am (45mins + 5mins discussion)

The potential of new technologies in future knowledge building and optimising of literacy development across nations, using findings of the Jyväskylä Longitudinal Study of Dyslexia (JLD) and research on these new digital learning environments used in optimising literacy development in typical and atypical learners.

**Whole-Group Discussion: Discussant: Dr Susan Galletly** 11.50am-12.30pm (40mins)

Discussion, including optional 5min impromptu speeches attendees might like to add to the discussion.

**Lunch:** 12.30-2.00pm

## **Afternoon Seminar: 2.00-4.30pm**

### **Exploring current and potential GraphoLearn technology applications supporting literacy acquisition in at-risk learners across nations**

**Presenter: Prof Heikki Lyytinen**

This seminar will explore

- The practicalities of GraphoGame and ComprehensionGame.
- How the games are developed for new use by a nation, aligned to and using its orthography.
- How dynamic assessment tracks progress and tailors intervention.
- The potential for GraphoLearn research, and dynamic assessment in future knowledge building.
- How GraphoLearn research might be used towards optimising English literacy development.

*Afternoon tea will be available across the session.*

## **Seminar Presenters:**

### **Heikki Lyytinen**

Lead researcher of the *Jyväskylä Longitudinal Study of Dyslexia (JLD)*, Heikki has built from JLD findings to conduct ongoing research on *GraphoLearn*: intensive computer-game intervention, which uses ongoing dynamic assessment to tailor instruction.

Now used in many nations, by over 2 million children, *GraphoGame* builds *Basic Literacy* skills (accuracy then fluency with letter sounds, word-reading and spelling), while *ComprehensionGame* supports development of *Full Literacy* (reading comprehension and analytical reasoning). Other integrated applications are also being developed and explored.

Heikki is Emeritus UNESCO Chair/Professor, Inclusive Literacy Learning for All; Professor of Developmental Neuropsychology, University of Jyväskylä; CEO of ComprehensionGame World Learning; Senior Adviser, Niilo Mäki Institute, Jyväskylä, Finland, and Senior Adviser, Haskins Laboratories, Yale, USA.

### **Chunghui Hsuan**

A professor in the Department of Early Childhood Education at National Chiayi

University, with a background of working as a licensed special education teacher in Taiwan. Chunghui's research focuses on Mandarin-speaking children's reading development and difficulties. She has been principal investigator in Chinese reading research studies funded by the National Science & Technology Council in Taiwan, including 1) longitudinal studies on Chinese reading development and reading difficulties of children aged from 3 to 8; and 2) researching key predictive markers to detect young children at risk of literacy learning difficulties.

## **Susan Galletly**

An Australian researcher, speech language pathologist and teacher with a keen interest in the impacts of cognitive processing skills and high cognitive load on communication, literacy and learning skills; and crosslinguistic differences in literacy development, difficulties and learning needs. Susan works in both research on orthographic and crosslinguistic impacts, and improving the effectiveness of literacy instruction; and in clinical practice, conducting private-practice intervention with children with literacy learning difficulties, and their families.

Susan's latest book, *The Research Tours: The Impacts of Orthographic Disadvantage* (Galletly, 2023), explores key research findings providing a strong basis for the *10 Changes*, strategic research-based directions for education in Anglophone nations to pursue, to achieve the strong effective education so many other nations enjoy. Her work with IARLD fellow, Emeritus Bruce Knight, of Central Queensland University, has developed models for exploring orthographic impacts and crosslinguistic differences, including *Orthographic Advantage Theory* (Knight, Galletly & Gargett, 2019), the *Literacy Component Model* (Knight, Galletly & Aprile, 2021), the *Transition from Early to Sophisticated Literacy (TESL) model* (Galletly & Knight, 2011b), and the *Differential Disadvantage model* (Galletly & Knight, 2011a), and the *10 Changes* (Galletly, 2022, 2023).

## **IARLD Conference Symposium:**

Heikki, Chunghui and Susan will also present a Symposium with discussant Annmarie Urso on Day 1 of the IARLD Conference:

### **The Roles of Orthographic Impacts in Optimising Literacy Acquisition from First Steps to Full Literacy in Typical and Atypical Learners**

As its content and questions are highly relevant to the 24 Oct discussion day, its abstracts are included below:

At-risk children in regular-orthography nations experience far less major word-reading and spelling difficulties than similar English-reading children in Anglophone nations.

What roles do orthographic impacts play in wide crosslinguistic early-literacy differences?

Australia's Susan Galletly's 2023 book, *The Research Tours: The Impacts of Orthographic Disadvantage*, explores crosslinguistic differences, Anglophone nations' difficulties optimising early-literacy development, and useful research directions into the future.

Finland's Heikki Lyytinen knows well Finland's 1-Stage Early Literacy with a highest-regularity orthography, and, through GraphoLearn research, the challenges of preventing and overcoming word-reading and spelling difficulties in children of many nations.

Taiwan's Chunghui Hsuan knows well Taiwan's 2-Stage Early Literacy, with a highest-regularity orthography used first, and the difficulties Asian nations resolved by moving to 2-Stage Early Literacy.

Discussant Annmarie Urso knows well word-reading and spelling interventions for English readers, and the extent these are effective.

What roles might orthographic differences play in research focused on overcoming early-literacy difficulties in diverse nations?

### **Summary of each presentation:**

The presenters will explore the orthographic-impact stimulus questions below, and associated relevant areas.

**Presenter 1, Australia's Susan Galletly**, will summarise research on crosslinguistic differences, and pose key questions:

**Q1.** What directions show strongest effectiveness for optimising word-reading and spelling in weakest English readers, e.g., the weakest 10% of achievers?

**Q2.** To what extent are current intervention methods for optimising word-reading and spelling in the weakest 10% of English readers able to achieve the intervention effectiveness that regular-orthography nations routinely achieve with weakest readers?

**Q3.** What factors impede achieving this level of effectiveness in at-risk English-readers?

**Q4.** Given the strong success of Taiwan, Japan and China's 2-Stage early literacy, should Anglophone nations explore 2-Stage Early Literacy (initially reading and writing an English regular orthography then transitioning to usual English)?

**Q5.** Given that 7 to 8 year olds have stronger executive-function and cognitive-processing skills than 4 to 5 year olds, should Anglophone nations explore starting

formal reading and writing instruction at age 7.5 (mid-Grade-2), the age many European children are when learning to read far more regular orthographies, with the first 2.5 school-years focused on language and learning enrichment?

**Q6.** Are there ethical issues which should be considered, in at-risk children in Anglophone nations being far more likely to develop ongoing, severe word-reading and spelling difficulties?

**Q7.** To what extent should Anglophone children be entitled to word-reading and spelling development as easily developed as is routinely achieved across Taiwan, Japan and China, nations using 2-Stage Early Literacy?

**Presenter 2, Finland's Heikki Lyytinen**, building from the *Jyväskylä Longitudinal Study of Dyslexia (JLD)*, is researching *GraphoLearn* intensive computer-game intervention that uses ongoing dynamic assessment to tailor instruction, in many nations, with over 2-million children now using *GraphoGame*.

*GraphoGame* builds *Basic Literacy* skills, of accuracy then fluency with letter sounds, word-reading and spelling. *ComprehensionGame* supports development of *Full Literacy*, building reading comprehension and analytical reasoning.

While regular-orthographies use a single orthographic-grainsize (phonemes), English uses multiple grainsizes, thus English *GraphoGame* has two forms: *GraphoGame Phoneme* and *GraphoGame Rime*.

Further, for regular-orthography children, learning to read and write (*Basic Literacy*) and reading and writing to learn (*Full Literacy*) can often be largely sequential, given most children have proficiently-accurate word-reading and spelling early in Grade-1.

That's far less the case for English readers, given that word-reading and spelling take many years to develop.

**Q8.** To what extent will progress made by English readers using *GraphoLearn* technology differ from that of regular-orthography readers?

**Q9.** What factors underlie these differences in progress?

**Q10.** Will *GraphoLearn* intervention be as successful with English readers as with regular-orthography readers?

**Q11.** Will it be more effective than other Anglophone interventions?

**Q12.** What differences in findings would Anglophone nations find in replicating the JLD's longitudinal study of children's development and its strategic assessments?

**Q13.** Whereas the JLD showed intervention at the time of letter knowledge and phonemic recoding to be the intervention point for children in nations with highly regular orthographies, might different points of intervention be relevant for Anglophone nations using English with its particularly high orthographic orthography?

**Presenter 3, Taiwan's Chunghui Hsuan**, will discuss Taiwanese education's 2-Stage Early Literacy, with children first reading and writing fully-regular ZhuYin FuHao (Tzuyin), which expedites word-reading, spelling, literacy, self-teaching and cognitive-processing; reduces likelihood of difficulties; plus supports transitioning to highly-complex morphologographic Hanzi.

Chunghui's work researching early literacy development in Taiwan provides useful insights on regular-orthography and complex-orthography education relevant to Anglophone nations and future research focused on optimising early-literacy development of at-risk children in all nations.

**Q14.** In nations with highly complex orthographies, to what extent does use of 2-Stage early literacy, and children learning to read and write a highly regular beginners' orthography, expedite transitioning and mastery of the nation's complex orthography, reduce activation of risk factors, and expedite successful word-reading and reading comprehension in at-risk children?

**Q15.** To what extent might Taiwan be a valuable role model for Anglophone nations exploring 2-Stage early-literacy development and use of a fully-regular beginners' orthography, prior to learning to read and write a complex orthography?

**Discussant, USA's Annmarie Urso**, is principal investigator for New York State Education Department's *Scaffolding for Students with Disabilities* project, with research interests including the development of effective reading interventions for students with dyslexia who have failed to respond to intervention, the role of processing speed and other cognitive correlates in poor readers, and the role of cognitive profiles in Response to Intervention models, with strong involvement in school-level instruction.

**Q16.** How best might Anglophone nations achieve instruction and interventions as effective as those of regular-orthography nations?

With the presenters' and discussant's interesting contrast in backgrounds and perspectives, this symposium will promote useful discussion and reflection.