EDA Autumn Seminars 2019

Programme

Linnaeus University, Växjö Sept. 27–29, 2019

Bridging the gap between research, policies and practice – Opportunities and challenges with accessibility

eda european dyslexia association

Linnæus University

Programme

Day 1: Friday Sept. 27

11:30 – 13:00 *House N*	Registration and refreshments
13:00 – 13:30 *Södrasalen, House N*	**Opening Ceremony** **Michael Kalmar,** *chairman EDA*, **Kristiina Heikkilä,** *Pro-Dean, Faculty of Health and Life Sciences, Linnaeus University*
13:30 – 14:00	**News from EDA Policy Working Group**
14:00 – 14:45	**Keynote 1** **Franck Ramus,** *Laboratoire de Sciences Cognitives et Psycholinguistique, Institute of Cognitive Studies, Ecole Normale Supérieure in Paris, France* "Prevalence of developmental dyslexia: a comparison between dsm5 and icd11 criteria"
14:45 – 15:15	**Coffee break**
15:15 – 16:00	**Presentation 1** **Eileen Healy,** *University Limerick, Ireland* Dyslexia, Web accessibility. Discussion about Dyslexia friendly fonts
16:00 –	**Discussion**
19:00 – *Restaurant 4 krogar, Vattentorget, Växjö*	**Social Dinner** *Only for those with prepaid tickets (€18 for the dinner not included in the conference fee. Drinks are not included.)*

Presentations will be delivered in English.

Programme

Day 2: Saturday Sept. 2

9:00 – 9:45 *Södrasalen, House N*	**Keynote 2** **Jakob Åsberg,** *University of Gothenburg and Queen Silvia Children' hospital* "Dyslexia and accessibility: the importance of considering comorbidity"	
9:45 – 10:15	**Presentation 2** **Fran Ranaldi;** *Education Scotland and Dyslexia Scotland* "Dyslexia and Inclusive Education – The Scottish Context – A collaborative project"	
10:15 – 10:45	**Coffee break**	
10:45 – 11:30	**Presentation 3** **Ylva Schön.** *The National Agency for Special Needs Education and Schools (SPSM)*	
11:30 – 12:00	**Presentation 4** **Monika Ljungstrand.** *Attarp school, Jönköping municipality* "Dyslexia and Inclusive Education- A Swedish example from secondary school"	
12:00 – 13:30	**Networking lunch Break and Interactive Poster session**	
13:30 – 14:30	**Project presentations and discussions** **Presented by different member organizations**	
14:30 – 15:00	**Panel Discussions** **Prof. Franck Ramus, Prof Idor Svensson, Jakob Åsberg, John Rack**	
15:00 – 16:00	**Coffee break and Interactive Poster Session 2**	
15:20 – 16:45	**General Assembly** **Member organisations only.**	

Presentations will be delivered in English.

Programme

Day 3: Sunday Sept. 29

9:00 – 9:30 *Södrasalen, House N*		**Presentation 5** **Melissa Scagnelli,** *Università IULM, Milano, Italy* "An inclusive reading course for dyslexic adults. Effectiveness measures through ad hoc tests and standardised tools"
9:30 – 10:00		**Presentation 6** **Verle Van Vooren, Sofie Carnewal,** *Artevelde University of Applied Sciences, Gent, Belgium* "Challenges for reading and spelling in elementary school: Summer learning loss in Flanders"
10:00 – 10:30		**Presentation 7** **Alexa von Hagen,** *Nanyang Technological University, Singapore* "Foreign language attainment of children/adolescents with poor literacy skills: A metaanalysis"
10:30 – 11:00		**Coffee Break**
11:00 – 11:45		**Keynote 4** **John Rack,** *Linnaeus University, Sweden* "Assistive technology for writing: Progress and possibilities" 
11:45 – 12:15		**Presentation 8** **Göran B. W. Söderlund,** *Western Norway University of Applied Sciences, Sogndal, Norway* "Benefit of auditory- and visual noise stimulation in children with attention- or reading disabilities"
12:15 – 13:00		**Panel discussions, conclusions and closing ceremony**

Presentations will be delivered in English.

Abstracts

Day 1: Friday September 27

The abstracts are presented in order of appearance.

 Keynote speaker

 Presentation number 1

 Prevalence of developmental dyslexia: a comparison between dsm5 and icd11 criteria

Franck Ramus, *Laboratoire de Sciences Cognitives et Psycholinguistique, Institute of Cognitive Studies, Ecole Normale Supérieure in Paris, France*

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 Dyslexia, web accessibility. Discussion about Dyslexia friendly fonts

Eileen Healy, *University Limerick, Ireland*

Purpose

The purpose of this paper is to inform the World Wide Web Consortium (W3C) Cognitive Accessibility Roadmap and Gap analysis for the Cognitive Accessibility User Research initiative. This is a meta-analysis paper to gain insight on specific Dyslexia and Web Accessibility issues. A thematic analysis of 11 studies from 2011 to 2018 was undertaken to provide user information, to support the W3C, Cognitive and Learning Disabilities Accessibility Task Force (COGA TF). The meta-analysis contributes additional information to the Cognitive Accessibility Issue Papers, W3C editors' working draft, 2019.

Methodology

Thematic analysis was undertaken using the Braun and Clarke (2006) method to identify semantic themes and patterns within the Empirical studies (Alholjailan, 2012; Clarke & Braun, 2013). Inclusion criteria was defined as follows: i) studies from 2011 to 2018, ii) Dyslexia and Web Accessibility, iii) diverse accessibility challenges. The analysis comprised of four stages of thematic coding to capture the reflections of the end users.

Results

In 2014, Dr Sally Shaywitz emphasised that the lack of high-quality scientific research on dyslexia was not 'the' problem, stating "... our current understanding of dyslexia is not being fully utilized in either policy or practice-" (Shaywitz, 2014) therefore explicitly, placing the inadequacies in the action gap not in the knowledge gap. However, Rello (2015) argues the real difficulty with Dyslexia and Web Accessibility is not the lack of academic research on this complex subject but more the repetitive study of the same issues (Rello, 2015). However, unlocking the potential of knowledge transfer from harvested data requires the development of 'meaningful use' initiatives supported by end user insight (Viola and Mookencherry, 2012)- in supporting this knowledge transfer. Table 1 identifies significant challenges faced by dyslexic users with search engine accessibility. Users with dyslexia find challenges at all stages of the information seeking process, including query formulation, search result triage, and information extraction (Morris et al., 2018). Table 2 outlines the difficulties in using CAPTCHA, for example,

the difficulty of identifying the numbers within the images (de Santana et al., 2013). Suggestions of a game-based CAPTCHA test may overcome the difficulties for dyslexic users (Gafni and Nagar, 2017). However, the W3C cautions the use of CAPTCHA and accessibility solutions, simply stating at present no ideal fit exists (W3C, 2019). Table 3 text design include; font without serifs; avoid small text; short simple text to assist with readability; text size 12 to 14px for reading and printing and using white spacing to help with readability, for example, Sokolik (2018), Berget et al., (2016), Rello (2015), Freire et al., (2011). In addition, the British Dyslexia Association (BDA), Dyslexia Style Guide 2018, recommended inter-word spacing be not less than 3.5 times the inter-letter spacing (British Dyslexia Association, 2018).

Table 4 describes the need for clear affordance for the improvement of functionality design. For example; alt tags that conveys information about the image; appropriate URLs to assist screen readers, algorithms ranking; unclear content links, and the discontinuation of hyperlinks that display "click here" Sokolik (2018), Morris et al., (2018), Habib et al., (2012), de Santana et al., (2012), Freire et al., (2011). Table 5 and Table 5.1 delineates the content design barriers present for people with dyslexia. Design opportunities for content design include autocomplete and spellchecker features specifically directed at Dyslexic users (Morris et al., 2018). However, acknowledging spelling mistakes are potentially outside the remit of (WCAG) (Berget et al., 2016). Furthermore, the BDA recommends using dark coloured text not on a white background but on a light background as white can appear too glaring (British Dyslexia Association, 2018).

Table 6 indicates that designers of web-learning material in Slovenia were largely aware of the standard guidelines for accessibility, readability, and usability (Radovan and Perdih, 2018)- however, emphasising accessibility as the area that required the most attention in web-based learning. Table 7 illustrates the impact inaccessibility design features have on the user. Challenges included anxiety of writing, social stigmatization and low tolerance of spelling errors, potentially, ending with enforced constraints and loss of social capital. In addition, the most perceived negative impact for users with dyslexia was writing on Facebook for fear of inadvertently disclosing their disability to the wider community by publicly displaying spelling and writing errors, (Reynolds and Wu, 2018). However, additional anxiety is caused in the visible nature of the editing history of posts, for the correction of spelling and writing errors, therefore, limiting user interaction due to stigmatization.

(For a full view of all the tables mentioned, please download the abstract from the programme page at our web site)

Abstracts

Day 2: Saturday September 28

Dyslexia and accessibility: the importance of considering comorbidity

Jakob Åsberg, *University of Gothenburg and Queen Silvia Children' hospital*

② Dyslexia and inclusive education – The Scottish Context – A collaborative project

Fran Ranaldi, *Education Scotland and Dyslexia Scotland*

Purpose

In response to the 2014 Education Scotland report Making Sense: Education for Children and Young People with Dyslexia in Scotland this collaborative 3 year project has been designed to support educational practitioners, schools and local authorities;

- improve the quality of educational experiences and outcomes for learners with dyslexia.
- meet their statutory and professional duties
- improve their understanding and practice of inclusion within the school community
- maximise their use of improvement methodology, collaborative enquiry and effective self-evaluation to improve practice and outcomes.
- evidence the impact of the methodology

Method

Working with a range of stakeholders e.g. practitioners, families and initial teacher training establishments a range of methodology was used to develop, support and evaluate this project incorporating qualitative and quantitative data.

- Literature review
- Improvement methodology
- Addressing Dyslexia Toolkit website analytics
- Collaborative enquiry
- Practitioner engagement – conversation and training events Sharing Practice
- Self-evaluation

These methods were selected in order to build capacity within schools and local authorities and to maximise the sustainability of progress made.

Results

This project is delivering outcomes which, in some areas exceed the original project aims. Evaluative feedback highlights that the project is empowering staff through increased confidence, knowledge and skills and increased learner participation and parental engagement. A series of free incremental online modules focusing on Dyslexia and Inclusive practice have been published and they provide positive registration and evaluation data. A blended professional learning model for educational practitioners has been developed which is now informing the development and support of professional learning in other areas of additional support needs and inclusive education in Scotland.

Abstracts

③ No title

Ylva Schön, *The National Agency for Special Needs Education and Schools (SPSM)*

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④ Dyslexia and inclusive education- A Swedish example from secondary school

Monika Ljungstrand, *Attarp School, Jönköping municipality.*

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Abstracts

Day 3: Sunday September 29

⑤ An inclusive reading course for dyslexic adults. Effectiveness measures through ad hoc tests and standardised tools

***Melissa Scagnelli*[1], *Massimo Ciuffo*[2], *Francesca Santulli*[3].**

1 Università IULM, Milano, Italy
2 Centro Studi IRIDAC, Messina
3 Università Ca' Foscari, Venezia

Success in the academic context highly depends on motivation, metacognitive abilities and learning methods. In tertiary education, it is also crucial to possess adequate strategies for reading, comprehending, and retrieving large quantities of information. Despite this, little research is available on specific difficulties met by university students and consequent intervention programmes. In this paper, we present a training designed to enhance reading and comprehension abilities in both normotypical and dyslexic adults. We will describe the inclusive and multifaceted approach of the training, and discuss its results on the basis of a large amount of data.

The research involved a population of 326 subjects (144 N and 182 D readers), who attended the training course. Reading tests were administered during sessions, to measure 8 different parameters concerning both reading time and comprehension. We adopted an AB design, measuring differences between first and last test performances. Results have been analysed for statistical significance (Wilcoxon signed ranks test), and for a comparison between the two sub-groups (Mann-Whitney U test). For independent measurement of the improvement of reading skills, we administered standardised reading tests before and after the course to some of our population (42 N and 58 D) and to a smaller control group (20 N and 11 D) who did not attend the course.

The results show statistically significant improvement (often with large size effect) for both the whole group and the two sub-groups, separately considered, in all 8 parameters. The comparison between the two sub-groups shows that in some measures (reading time at second reading, total reading time, and comprehension at second reading) dyslexic improve significantly more than normotypical readers. As for standardised tests, the results for both the whole considered population and the two sub-groups show a statistically significant improvement. The difference between variations in the population who did the course and control group is statistically significant.

⑥ Challenges for reading and spelling in elementary school: Summer learning loss in Flanders

***Veerle Van Vooren*[1], *Sofie Carnewal*[1], *De Spiegelaere, M.*[1], *Desoete, A.*[1,2]**

1 Artevelde University of Applied Sciences, Gent, Belgium
2 Ghent University

Purpose

Summer holidays can cause summer learning loss (Meyer et al., 2015). All children show losses in spelling skills. In addition, lower SES children scored lower in reading (Cooper et al., 1996; Shinwell & Defeyter, 2017), underlining the role of SES in development (Wang et al., 2013). Up until now no data is present for (semi)transparent languages, such as for Dutch- speaking children in Belgium. The purpose of this study was to examine which effect the summer holiday is having on summer learning loss in reading and spelling in primary school children in Flanders.

Method

A group of 364 children from 11 schools in Flanders participated in this study. Word reading was tested using the One-Minute Reading Test (Brus & Voeten, 1999). In addition pseudoword reading was tested using the Klepel Test (Van den Bos et al., 1994). Spelling was tested with the Spelling Test, ST 1-6 (Van Vreckem & Desoete, 2016). Participants (informed and consented) of elementary school in grade 1 to 4 were tested on reading and spelling at two measuring points: immediately before and immediately after a 9-week summer break.

Results/conclusions

Summer learning loss from grade 1 to 2 was present for existing words (d=0.41), pseudowords (d=0.59) and spelling (d=1.43). There was also a learning loss from grade 2 to 3 for existing words (d=0.61), pseudowords (d=1.38) and spelling (d=0.49) and from grade 3 to 4 for existing words (d=0.45), pseudowords (d=0.57) and spelling (d=0.49).

Results were significantly higher before the summer term than at the start of each new school year. Clinicians are encouraged to be aware of the challenge of this summer learning loss even in semitransparent languages.

References:

Alexander, K.L., Entwisle, D.R., Olson, L.S. (2007). Summer learning and its implications: insights from the beginning school study. *New Dir Youth Dev, 114*, 11-32.

Cooper, H., Nye, B., Charlton, K., Lindsay, J. Greathouse, S. (1966). The effects of summer vacation on achievement test scores: a narrative and meta-analytic review. *Ref. Educ. Res, 66*, 227-68.

Meyer, E., Meissel, K., McNaughton, S. (2015). Patterns of literacy learning in German primary schools over the summer and the influence of home literacy practices. J. *Res. Read, 40*, 1-21. Shinwell, J., & Defeyter, M.A. (2017). Investigation of summer learning loss in the UK – Implications for holiday club provision. *Frontiers in Public Health, vol 5 Article 270* (7pp) doi: 10.3389/fpubh.2017.00270

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⑦ Foreign language attainment of children/adolescents with poor literacy skills: A metaanalysis

Alexa von Hagen[1]*, Saskia Kohnen*[2] *and Nicole Stadie*[3]

1 Centre for Research in Child Development, National Institute of Education, Nanyang Technological University, Singapore.
2 Macquarie University, Australia
3 Potsdam University, Germany

Purpose

Parents and teachers often believe that children/adolescents with poor literacy will experience more difficulties than their typically developing peers in learning a foreign language. However, it remains unclear, if there is sufficient evidence to support this idea. To address this gap, we investigated how successful children/adolescents with poor literacy skills are compared to their peers with typical literacy skills in learning a foreign language. Moreover, we explored whether specific characteristics related to participants, foreign language instruction and assessment moderated scores on foreign language performance in this population.

Method

Overall, 16 studies with a total of 968 participants (poor reader/spellers: n = 404; control participants: n = 564) met eligibility criteria. Unfortunately, eligible studies only focussed on English as a foreign language. Available data allowed for meta-analyses on 10 different measures of foreign language attainment. In addition to standard mean differences (SMDs), we computed natural logarithms of the ratio of coefficients of variation (CVRs) to capture individual variability between participants groups.

Results and conclusion

Significant between-study heterogeneity, which could not be explained by moderator analyses, limited the interpretation of results. Although children/adolescents with poor literacy skills on average showed lower scores on foreign language spoken word production, phonological awareness, letter knowledge, and reading comprehension measures, their performance varied significantly more than that of control participants. Thus, it remains unclear to what extent group differences between the foreign language scores of children/adolescents with poor and typical literacy skills are representative of individual poor readers/spellers.

Assistive technology for writing: Progress and possibilities

John Rack, *Linnaeus University, Sweden*

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⑧ Benefit of auditory- and visual noise stimulation in children with attention- or reading disabilities

Göran B. W. Söderlund[1]*, Linda Fälth*[2]

1 Faculty of Teacher Education Arts and Sports, Western Norway University of Applied Sciences, Sogndal, Norway
2 Department of Pedagogy and Learning, Linnæus University, Växjö, Sweden

Purpose /objectives

Developmental dyslexia and/or reading disability is among the most common neurodevelopmental disorders with a prevalence of 5-12 % of the population and so is the neuro-developmental disorder ADHD were prevalence rates are similar at 5-7% in childhood. Both these groups struggle in school with poor achievement a high drop-out rates. Therefore, it is of crucial interest to develop tools and interventions for this large group of children that suffers from reading disability or attention deficits in their every day school work. In this talk we present how auditory and visual white pixel noise improves both cognitive and reading performance in these two groups.

Methods

Empirical data from children with reading disability are presented in following tasks: word decoding, sight word reading and phonological ability. All tasks are presented in silent and noisy conditions. Auditory noise (75-80 dB) was delivered binaurally through headphones or through loudspeakers. Visual white pixel noise was presented at four levels in video clips on a computer screen together with the target task. Auditory noise benefit in episodic and working memory in children with attention deficits will also be presented.

Results/Conclusions

We found that noise improved performance in all tasks for both groups. The phenomenon of stochastic resonance will be proposed as a possible explanation of noise benefit while stochastic resonance facilitates neural integration and communication. From this is concluded that the common properties of ADHD and dyslexia are larger than expected. We suggest that sensory noise stimulation should be further investigated as a possible future treatment and/or intervention of both reading disability and attention deficits.

Posters

Interactive posters

Creative ways of teaching english to greek dyslexic students

***Dr Sofia** Rapti[1], Antonia Rapti[2], Katerina Dasiou[3].*

1 Special Educator, sofrapti@gmail.com
2 English Language teacher, MA Special Education, ant_rapti@yahoo.gr
3 English Language teacher,

Purpose

Recent work has shown the considerable difficulties of dyslexics in learning English as a foreign language. Researchers regard the English language as the most phonologically inconsistent among all European ones, since it displays a plethora of irregularities, exceptions and phonological peculiarities.

Dyslexics find it hard already to learn their mother tongue, even if they do experience it daily (total immersion). Consequently, it stands reasonable to have greater difficulty learning a foreign language they don't experience on a daily basis (classroom condition).

When Greek students study English, they get confronted with two different phonological systems characterised by a totally different level of consistency. On the one hand, there is the Greek language, one of the most phonologically consistent European languages, displaying an exact grapheme-to-phoneme correspondence. On the other hand, there is the most inconsistent one with irregular grapheme-to-phoneme correspondence (one phoneme can be represented by various graphemes). As a result, English language acquisition is rendered particularly demanding.

Some effective teaching practices used with Greek dyslexics learning English as a foreign language will be presented. The learning environment has to be flexible and adaptable to their needs. Moreover, experiential and multisensory approaches have proved to be quite effective. Such activities and practices work better with dyslexics because the more active the students' participation is, the more interested they become, resulting in a better comprehension and absorption.

Using star strategy to enhance word problem solving ability of pupils with dyscalculia

***Abiodun T. Adewunmi**, Bamidele T. Akindele; Learning Disabilities Unit Department of Special Education University of Ibadan-Nigeria*

Purpose

This study tested the effect of STAR strategy in improving the word-problem solving ability of pupils with dyscalculia. The study was a quasi-experimental research with a 2x1 factorial matrix.

Method

20 pupils with dyscalculia in the primary education level were screened and selected through the integrated sampling technique, and were assessed with Wechsler Intelligence Scale for Children, Fourth Edition (WISC IV), and the Mathematical Ability Test. The intervention group received STAR instructional strategies of 20 sessions for six weeks while the control received placebo. Data was analyzed using ANCOVA at 0.05 level of significance.

Results and conclusion

There was a significant main effect of STAR strategy on word-problem solving ability of pupils with dyscalculia ($F(1,11) = 47.75$, $p<0.05$, partial $\eta 2 = .81$), but there was no significant main effect of Gender, nor interaction of treatment with gender. Thus, STAR instructional strategy was effective in improving the arithmetic problem-solving ability of pupils with dyscalculia.

The ecologically valid measurement of prospective memory impairments in adults with developmental dyslexia

Charles Mensah, *James H. Smith-Spark, and Alexander Marchant; London South Bank University, London, United Kingdom*

In addition to reading and writing difficulties, individuals with dyslexia experience broader cognitive problems. Prospective memory (PM) relates to remembering to carry out a planned action after a delay. The effects of dyslexia on PM are currently underexplored but evidence indicates that it is impaired, especially when self-initiated or time-based PM (TBPM) is required.

Purpose

The current research investigated performance on an ecologically valid task in order to obtain a more in-depth understanding of the underlying processes contributing to dyslexia-related deficits and their potential impact on everyday life.

Method

30 adults with dyslexia and 30 adults without dyslexia were assessed using The Dresden breakfast task (Altgassen, Koban, & Kliegel, 2012), a laboratory-based simulated meal preparation task with established ecological validity. This task emulates real-world exemplars of PM in which participants are required to set the table and prepare food items following specific rules (e.g., putting orange juice on the table before placing two glasses). The participants were asked to perform six subtasks, comprising four TBPM and two event-based subtasks (EBPM), within a seven minute timeframe.

Results/conclusions

The participants with dyslexia performed significantly worse in (i) number of tasks completed, (ii) number of TBPM tasks completed (iii) rule adherence and (iv) following implicit order constraints. However, comparable performances were demonstrated across both groups in: (i) number of EBPM tasks completed, and (ii) number of clock checks. ***Conclusion***: The results demonstrate the real-world impact of dyslexia on PM. They are considered in view of the current understanding of PM deficits in dyslexia.

The Himachy: A board game for students with SpLD

Sofia Rapti[1]***,*** *Apostolia Eur. Charmani*[2]

1 Special Educator, Scientific Director "Dyslexia Centers-Pavlidis Method", Larissa, Greece sofrapti@gmail.com
2 Integrative Psychotherapist & Special Educator apostoliacharmani@gmail.com

"The Himachy" is a board game designed for the intervention in Greek students with Specific Learning Disabi-

lities (SpLD) attending junior high schools. Its name derived from the combination of the words Hi(story) and (Sym)machy. The learning material used came from the subject of History.

Students with dyslexia and other specific learning disabilities usually have difficulties in information processing (perceiving, managing, organising, recalling and retaining information). Such difficulties hinder them from retrieving the significant information or using effective comprehension and memorisation strategies. Thus, learning disabled students do not develop strong motives to be involved with subjects like History that demand much information processing and do not find any reason to try.

The purpose of this board game is to make students with Specific Learning Disabilities be motivated in learning, make them socialise with each other, interact with their peers and cooperate. The Himachy game aims to support the development of cognitive abilities (e.g. working memory, short-term memory, spatial perception, naming, processing speed, attention, etc.) of students in junior high schools.

The poster presentation will focus on both the educational and psychological aspects of creating such an interventional tool. The first encouraging results of a pilot testing of the educational and psychological effects of the board game will be presented confirming that differentiated teaching methods (e.g. experiential and multisensory approached, games, etc.) have proved to be quite more effective with children with SpLD.

What kind of support does students with dyslexia receive in primary school in Denmark?

***Helle Bundgaard Svendsen**; VIA Learning & Teaching, Centre for research & development, Teacher education, VIA University College. hbs@via.dk*

Purpose

Literacy Technology (LIT = AT for reading and writing) is widely used in Danish schools, but there is limited research on how LIT can be integrated in the schools' practice, in such a way that students with dyslexia are supported in their academic development and are included in the school context.

The aim of the study is to identify the kinds of support students with dyslexia receive in primary school in Denmark, and to investigate how LIT is integrated in the various kind of support. Furthermore, the goal is to let practitioners point out significant developmental areas within the field.

Method

Twenty-four semi-structured qualitative interviews and document analysis was conducted in twelve municipalities. The selection criteria was: 1) geographical spread, 2) both rural and city municipalities. Interviews: In each of the twelve municipalities, one reading consultant and one reading counselor was interviewed.

Document analysis: Guidelines, concerning the support of students with dyslexia in the municipalities were collected and analyzed.

Results/Conclusions

We expect to be able to identify what type of support students with dyslexia are receiving in the Danish municipalities and schools, and furthermore to point out important factors for further development of the Danish support of students with dyslexia in a school context.

These findings are expected to create new grounds for further interventional research with emphasis on the support of students with dyslexia in the Danish school system.

Posters

Formative assessment and RTI to adapt reading instruction for pupils with problems learning to read

Ulrika B. Andersson *& Stefan Gustafson; Department of Behavioural Sciences and Learning, Linköping University*

Purpose

We will present an analysis of two forward-looking assessment approaches, Formative assessment and

Response to intervention (Andersson, Löfgren, & Gustafson, 2019) and relate it to early reading instruction for children with problems learning to read. The overall purpose is to contribute with knowledge of how different assessment approaches can be used to choose appropriate interventions and facilitate pupil's learning.

Method

We have analysed research literature regarding Formative assessment and Response to intervention and present the results of the analysis in a Venn-diagram. In the diagram, similarities and differences between the two approaches are presented. In this poster presentation, we also analyse implications for early reading instruction based on theories and previous research.

Results/Conclusions

The Venn-diagram highlights some critical aspects of forward-looking assessments. We propose a combination of the systematic assessment practise characteristic of RTI with a formative assessment approach where participation of the learner is central. Regarding dyslexia, assessment practice is central both in order to adapt effective interventions to different needs and to involve pupils in their own learning processes.

Researching the sensory-cognitive foundation for reading: improving accessibility in children with dyslexia

Angelica Benson; *Lindamood-Bell Learning Processes- San Luis Obispo, California USA*

Purpose

Accessibility to the print environment is critical for individuals with dyslexia. Can an evidence-based sensory-cognitive paradigm for reading improve reading skills for children with severe dyslexia, giving them a greater ability to decode in print environments and build autonomy in reading?

Method

This study is based on a homogenous group pre-post intervention design. Subjects (n= 914, mean age 9.4) with a prior diagnosis of dyslexia received diagnostic assessments measuring symbol imagery, phonemic awareness, word attack, word recognition, spelling, reading rate, accuracy, fluency and comprehension. This was followed by one-to- one intensive reading instruction to stimulate and integrate their multi-sensory cognitive processing for letters and sounds within words. After 100 hours of instruction, delivered 2-4 hours daily, 5 days a week, posttests were administered.

Results and Conclusion

On measures associated with diagnosing dyslexia, subjects' pretest scores fell within the first quartile. At posttest, subjects, in aggregate, showed statistically significant improvements in all 9 areas, with many scores moving 2 to 3 quartiles. Large effect sizes were observed in all areas, except reading rate (small effect size). This sensory- cognitive instructional paradigm adds to existing neuro-scientific evidence validating that significant improvement in reading for children with severe dyslexia is possible, increasing opportunities for accessibility and self-regulation in reading.

Phonological development from grades 2 to 8

Christer Jacobson *& Anna Fouganthine; Linnaeus University, Växjö*

Purpose

How does the phonological ability develop during compulsory school?

This question is discussed by using results from a Swedish study aiming to collect norms for a new phonological test called Fonologia. The purpose of Fonologia is to identify dyslexia in children and adults based on a phonological definition.

Method

In this study 680 students from grades 2, 4, 6 and 8 were individually tested with 11 different phonological tests. Almost all test items consisted of nonwords. For example, subtraction of sounds in nonwords, oral nonword repetition, sound blending of nonwords, short term and working memory of colours, reading a list of nonwords, two spoonerism tests and finally a RAN test based on colour naming. The test also includes reading a list of real words and of mobilisation of words which contain the sound of a, e and ng. The test person responded orally to all items and the test leader marked if the answers were correct or not and registered the test time on most of the items. (The test is now digitalized in an app by Inläsningstjänst, ILT).

Results

The development of the phonological ability showed an approximative linear growth from grade 2 to 8 for all

measures. All regression models based on age on each subtest were significant ($p<0{,}001$). The r2 coefficient varied, for example 0,10 for nonword repetition, 0,27 for RAN and 0,46 for word reading meaning that age influenced the results of the subtests differently.

The distribution of the results for each subtest were approximative normal for each grade, however the distributions were more or less negatively skewed.

Posters

Positive psychology in school: Investigating symptoms of anxiety and self-esteem in dyslexic and non-dyslexic adolescents, and enhancing learning potential with Mindfulness-based intervention

Panagiota Blouchou; *Department of Psychology, The University of Sheffield*
Supervisor: Professor Rod Nicolson Department of Psychology, Edge Hill University

Purpose:

Dyslexia can be a risk factor for the development of stress, anxiety and low self-esteem in childhood and adolescence, with the implications often to persist into adulthood. Previous research suggests that dyslexic adolescents are six times more likely to present with anxiety disorders and low self-esteem, compared to non- dyslexic peers. Mindfulness-based practice is a new concept in schools, however, initial studies have demonstrated the psychological benefits of mindfulness in adolescents, especially in stress and anxiety reduction. The aim of the current study is to investigate symptoms of anxiety disorders in dyslexic adolescents and gauge the effectiveness of a mindfulness-based intervention in terms of reducing anxiety and improving psychological well-being.

Method:

Participants included 60 secondary school students, 30 students with dyslexia and 30 students without dyslexia (14 to 16 years). Anxiety and self-esteem were evaluated using self-report measures, namely the State – Trait Anxiety Inventory (Spielberger, et al., 1970), the Academic Anxiety Scale (Caroll & Ille, 2006), the Westside Test Anxiety Scale (Westside, Driscoll et al., 2005), and the Culture-Free Self-Esteem Inventory 3 (Battle, 2002). Mindfulness awareness was also tested using the Mindfulness Attention Awareness Scale (Brown et al., 2011). Students were randomly allocated in the intervention or the control group. The study was designed as a pre-test, post-test, follow-up experiment, thus the participants were tested in three different time points.

Results and conclusion:

Results evidenced significant differences between dyslexic and non-dyslexic adolescents in anxiety and self-esteem, with dyslexic adolescents showing higher levels of trait anxiety ($p < .001$), academic anxiety ($p < .001$) and test anxiety ($p = .001$), and lower levels of self-esteem (p^{**}) than non-dyslexic adolescents. There was no difference between dyslexic and non-dyslexic adolescents in state anxiety. In addition, the experimental group showed significant improvement in state, trait and test anxiety, as well as in self-esteem after participating in mindfulness practice. These findings confirm that there are considerable differences between dyslexic and non-dyslexic adolescents in anxiety disorders as well in self-esteem, and that anxiety is not confined to academic work only but also affects general situations. There is also considerable growing evidence that mindfulness practice improves adolescents' psychological well-being.

Posters

Early language intervention in 8-18 month old Swedish babies using dialogic reading techniques

Emma Bergström, *Anna Bratt, Idor Svensson; Linnaeus University, Växjö, Sweden*

Purpose

A pilot study assessing early language development, parent-child problem areas, and effects on parent-child relationship through intervention with dialogic reading techniques on babies 8-18 months old.

Methods

Parents (n=110) are introduced to dialogic reading by a health care nurse when their baby is 8 and 18 months old. At both times they answer child language questionnaire CSBS DP, Parenting Stress Index-short form, and questions about reading habits. 12 families are randomly selected to the intervention group and babies are assessed with BAYLEY-III (cognition, language). Intervention group parents receive 4 individual training sessions with dialogic reading techniques, and are asked to read with their child daily. At 18 months, these babies are assessed with BAYLEY-III (cognition, language).

Results/conclusion

Study is still ongoing. Preliminary results indicate that participants (n=110) receive high scores on Parenting Stress Index-short form at first assessment. Parents in the intervention group report that individual training with dialogic reading techniques lead to more rich and varied reading sessions with their child which successfully activates and engages the child during reading sessions.

Reading interventions in a second language for adult students

Helén Egerhag, *John Rack and Idor Svensson; Linneaus University, Sweden*

The aim of the present study is to evaluate intensive and systematic interventions for adult students in SFI (Swedish for foreigners) who have a reading ability that is at, or below, the average level for students in grade 4 (age 11). A second purpose is to examine if the students' level of concern and stress can affect their reading ability. Studies have shown that second-language students benefit from explicit, well-organized, early reading interventions. There are few previous studies conducted in a second language and among adult students.

Participating students were divided into two groups of 10. The Intervention group received intensive decoding and reading fluency training using two applications, Bravkod and Flash card. The interventions were carried out in 24 sessions of 15 minutes, 3-4 times a week over 6-8 weeks. The comparison group received "treatment as usual" in their SFI classes. Thus, both groups received the same amount of teaching time, but the intervention group had more intensive one-on-one teaching. Measures of decoding, reading comprehension and vocabulary were given before, during and after the interventions.

Teachers have reported that reading ability is increasing amongst the students in the intervention group and students are positive to the intensive training. Test results will be available in time for the conference.

Posters

‘What you see is not what you get’ Dyslexia as a hidden disability and the challenges and possibilities this presents for students with dyslexia in third level education

John Hume; *Maynooth University, Kildare, Ireland*

Purpose

The formal processes involved in constructing, acquiring and transforming knowledge within the formal education systems in Ireland, is heavily reliant on text. Students with dyslexia can struggle with a wide range of everyday university tasks such as reading, writing, spelling, and note taking, word comprehension, memory retention, short-term memory use, organisational skills, concentrating and articulating ideas, theory and theorists. While third level institutions offer mostly the same supports to all students with dyslexia, the one size fits all is an unrealistic approach to try to incorporate so many differing struggles at so many levels. This study explores and examines how these formal structures are affecting the teaching and learning of those students with learning difficulties, namely Dyslexia, within the higher/third level tier of education. The study explores disclosure, supports and self-concepts as themes to accessibility and retention of this cohort of student.

Method

Ethnography is concerned with the meaning of actions and events of the people we seek to understand. Questions and answers will be discovered in the setting been studied. As a qualitative research method, ethnography seeks to describe and to understand another way of life from the ‘native’ point of view and the goal of ethnography is “to grasp the native’s point of view, his relation to life, to realize his vision of his world” (Malinowski, 1922:25). The ethnographic fieldwork for my research involved conducting observation, interviewing informants and note taking. I also used passive observation or ‘shadowing’, where a student or students were shadowed while they go about their everyday tasks in third level institutions.

Results/Conclusion

As the research is still on going, some of the results and conclusions have been around, disclosure and when/if they disclose plus the implications of this. How they situate themselves within the discourse of dyslexia and how their dyslexia impacts and/or affected their own personal journey in third level education through my participants own narratives.

Live-streaming interventions for reading and spelling difficulties

Kohnen, Saskia; *McArthur, Genevieve & Banales, Erin. Macquarie University. Department of Cognitive Science & Macquarie University Center for Reading*

Purpose

There is a growing evidence-base showing that certain interventions can significantly alleviate reading and spelling impairments. These literacy interventions are typically delivered face- to-face, which works well for children who live close to a clinician. However, access to these services is compromised for people in rural and remote locations. Access can also be challenging for families in large congested cities. Live-streamed sessions via the internet (eg Skype) is a possible solution. However, this approach does not currently have a solid scientific basis. This proof-of-concept study investigated if live-streaming of literacy interventions can improve reading/spelling skills.

Method

We conducted an intervention study with 14 students with reading and spelling difficulties. Students were in Grades 2-7 and they scored in the lowest 20% for their age/grade on standardized reading/spelling tests. Each student received 30 1-on-1 sessions which consisted of a combination of systematic synthetic phonics, sight word training, text reading practice and spelling training. Sessions were live-streamed into students' homes or schools, with clinicians located at the university. Reading/spelling progress measures were administered twice before and once after the intervention.

Results/Conclusion

WEST statistics ([Howard et al., 2015] suitable for case series and small N studies) showed that the group's reading and spelling scores improved significantly more during the intervention than the no-training (baseline) period. This indicates that live-streaming is a promising mode of delivery to increase access to high-quality intervention for students who cannot easily access face-to-face sessions. These results should be followed up in randomized controlled trials to provide a more rigorous test and also compare the efficacy of live-streaming to face-to-face delivery.

Reading/writing difficulties under inclusive perspective - A reconstruction of the framework of action of teachers in secondary integration classes

Florentine Paudel *– University of Vienna, Vienna, Austria*

Purpose

Dyslexia experiences a wide discourse (e.g. Jones & Kindersley 2013; Gavin 2007) in different countries. So far, scientific research (e.g. Gavin & Fawcett 2008; Groth et al. 2013) has not been able to provide consistent results on causes, support and opportunities. This heterogeneous finding leads to a lack of agreement on diagnosis and promotion in educational practice, which in turn leads to uncertainty among teachers in dealing with this phenomenon. However, enactments and curricula in Austria claim the right to individual support, requiring teachers to address this issue. For this reason, the author's dissertation deals with the framework of action of teachers in secondary integration classes in Vienna.

Method

With the help of a qualitative design, which provides guide-centered interviews (8-10) and group discussions (2-3), the research questions, which are related to the orientation framework and possibilities for action of teachers, are to be answered. The evaluation of the data (guide-centered interviews, group discussions) should be carried out with the help of the documentary method according to Bohnsack (2014) and Nohl (2017), since this method enables a reconstruction of the practical experiences and provides information about the action orientations.

Results/Conclusions

This research design would provide important results on how teachers in integration classes construct their framework of action in relation to individuals with difficulties in reading and/or writing. From this, conclusions can be drawn as to where school is on the way to inclusion. Furthermore, this study allows a differentiated view of teacher education in terms of reading/writing difficulties. Here reference is made to secondary school curricula, which demand individualization and differentiation. However, as part of teacher training, there is no explicit emphasis on reading and writing processes, so it could be assumed that prospective teachers in integration classes (German teacher, support teacher, special education teacher) will construct a framework for action through training, experience, exchange with colleagues, and so on.

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The potential of a forward-looking assessment and teaching system on students' reading gains

Nordström, T[1]; *Gustafson, S[2]; Fälth[3], L; Andersson, B. U[2]., Ingvar, M[4]*

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2 Linköping University, Department of Behavioural Sciences and Learning
3 Linnaeus University, Department of pedagogy
4 Karolinska Institutet, Department of Clinical Neuroscience

Purpose

How can teachers optimize reading instruction in Swedish schools? This poster presents findings from two studies investigating A) grade 1-3 teachers' use of a forward-looking assessment and teaching system (LegiLexi) and B), its effect on student reading gains in Grade 1. The purpose of study A was to support teachers with an assessment system which included teaching recommendations for individual students and to study how that support enabled teachers to individualize instruction. The purpose of study B was to gather evidence that such support is superior in relation to "teaching as usual".

Method

In study A, focus group meetings of eight active LegiLexi teachers were used as to answer the question of the extent teachers managed to individualize instruction in their everyday practice. In study B, we randomly assigned schools to three conditions; full access to LegiLexi (8 schools/217 students), access only to part of LegiLexi (4 schools/86 students) and control (9 schools/208 students), following estimated effects of LegiLexi across three test occasions containing reading measures.

Results/conclusions

In study A, results revealed that teachers were supported by LegiLexi, and were able to individualize instruction primarily by creating dynamic reading groups of students. However, individualizing further proved challenging. In study B, findings revealed that the group with full access to LegiLexi improved their word decoding (d=1.79 vs 1.33 and 1.20) and reading comprehension the most (d=1.75 vs 1.45 and 1.16). Thus, the findings show promising results for Swedish schools of how to improve reading instruction by focusing on students' individual needs.

Posters

Educational skills in dropout teenagers

Patrizia Piccinini, *Formetica-CTN teacher, patriziapiccinini23@gmail.com*

A study will be presented on 60 of 14-18 year old students who have dropped out of compulsory education.. The students are currently following a three-year school program based on school-work alternation. The courses are organized by the Formetica-Confindustria Toscana Nord Training Agency.

The proposals on which the paths are developed are varied, they aim to create skills to be able to work in the graphic, electrical, paper industry or shipyards.

At the end of this path the students must be able to enter in the world work.

Aim of the research:

- verify the knowledge of the Italian language, mathematics and history in individuals who will soon be of age;

-prevent / remove learning difficulties; -increase the pleasure of learning. First conclusions:

The results show:

-Low performances;

-lack of motivations;

-poor attention;

-low self-esteem;

-compulsive use of cell phones

Target audience: Middle and high school teachers, teachers for dropout students and teacher for special needs students

Assimilating and communicating text via assistive technology. An alternative to reading and writing for ID school pupils aged 16-21

Christina Sand, *Thomas Nordström, Linda Fälth, Idor Svensson; Linnaeus University, Växjö, Sweden*

Purpose

The main purpose of this study was to investigate whether a systematic and intensive use of assistive technology (AT) can support the language ability of intellectually impaired students. This study focuses on assistive technology, such as apps in portable tablets, that can be used as support when students communicate and assimilate the content of texts. The long-term goal of the study is to make these students feel more independent and involved in school activities as well as in private life.

Method:

Forty-five students from five special needs comprehensive schools participated in an extensive technology intervention. Student learning and independence in school were assessed by both quantitative measures and qualitative assessments, in addition to analyses of teacher focus group meetings.

Results/Conclusion:

Preliminary results showed positive effects for the participants. The following two examples shows what might be crucial for these two students to increase their participation in school on more equal terms.

A student with pronunciation difficulties could, after completing the intervention, dictate simple messages and thus enable a written communication, another has passed a theoretical test in a high school course with the help of listening to text and dictating answers.

Preliminary findings support positive effects of assistive technology usage regarding equivalence and independence for intellectually disabled students with reading impairments.

Has handwriting become an instructional dinosaur? Handwriting may be more important than you think!

Nancy Cushen White; *Division of Adolescent Medicine-Department of Pediatrics. University of California, San Francisco (UCSF)*

Purpose

Explicit, integrated handwriting instruction is important! Handwriting is complex and involves both cognitive and motor skills. A foundational skill for literacy, it influences reading, written expression, and critical thinking. Sequential hand movements during handwriting activate brain regions associated with thinking, working memory, and language. Cross-disciplinary research has shown that handwriting is a critical skill to teach from preschool to high school.

Results/Conclusions

Manuscript, cursive, and keyboarding all have advantages for different students at different ages and stages. A note-taking study comparing keyboarding and handwriting showed better comprehension and retention of content for handwriters. Elementary students composing by hand, not keyboarding, wrote faster, longer pieces with more ideas. Handwriting influences development of reading and writing for students of various ages and with diverse learning characteristics.

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Accuracy + Automaticity + Prosody -> FLUENCY
Effects of Fluency on Reading Comprehension

Nancy Cushen White; *Division of Adolescent Medicine-Department of Pediatrics. University of California, San Francisco (UCSF)*

Purpose

Prosody is appropriate expression (intonation) combined with meaningful phrasing There is growing consensus that accuracy, automaticity, and prosody all make contributions to fluency; together, they influence comprehension. Oral reading fluency is demonstrated through ease of word recognition, appropriate pacing, chunking of words into meaningful phrases, and intonation. Appropriate

intonation is associated with better reading comprehension.

Accurate and automatic word identification is essential for fluent reading, but speed is overemphasized—perhaps because it is so easy to measure. Excessive rate can impede comprehension by shifting focus away from under-

standing or by interfering with comprehension. While it is true that exceedingly slow word recognition hinders comprehension, skilled readers vary their pace depending upon text difficulty the complexity of ideas encountered in the text, and the reason for reading. To become a skilled reader, it is important to learn to be flexible, not simply fast.

Results/Conclusion

Prosody may support the process of parsing sentences into syntactically and semantically correct chunks. When reading aloud, readers need to combine morphemic, pragmatic, syntactic, and semantic cues. "The prosodic representation of a sentence may provide the backbone on which the unification of a sentence depends" (Frazier, Carlson & Clifton, 2006). Studies have shown that text reading prosody is a key factor in the construct of reading fluency—over and above decoding efficiency and language comprehension.

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Words with spelling connections have meaning connections Phonology + Phonics + Morphology + Etymology = Orthography

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Explicit instruction in orthography (spelling) that integrates phonology, phonics, morphology, and etymology is also effective for teaching word identification, vocabulary, content knowledge, and reading comprehension. Pronunciation of morphemes often varies when spelling does not:

- *decision->decisive; sign->signature.*

We never know the pronunciation of a morpheme until it surfaces in a word:

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- *define->definition -> infinite -> definite->finish->finite*
- *gradual -> degrade ->degradation -> graduate -> gradient.*

Good readers notice meaningful parts of words—and make connections between words related in meaning—and spelling. Related words that share structural elements at the morpheme level activate memory, especially when spelling reveals these connections:

- *science->conscious->conscientious->conscience-> omniscient.*

Three different language codes are involved in spelling—phonology, morphology, and orthography

(Berninger). These codes activate common and unique brain regions, but the specific brain regions associated with each code may change during the development of spelling skill. Berninger wrote, "Our research is telling us good spellers are taught, not born, as is often assumed. Unfortunately, what happens in most schools is dyslexic children learn how to read and then get dismissed from special education classes even though they still need specialized instruction until they learn to spell." Spelling is not systematically and explicitly taught in many classrooms in the United States [Berninger, Moats]. Too often, spelling is taught as a visual rote memory activity that resists "reasoned sequenced instruction" [Moats].

Good readers attend to parts of words, both spoken and written. 80% of derived words mean what their parts suggest, as long as multiple meanings of base elements are taken into account [Nagy].

English orthography often reveals the meaningful parts of words, preserving them in spelling even when pronunciation of the morphemes may vary:

- *wild -> wilderness*
- *brevity -> abbreviate.*

People with awareness of morphology organize their mental dictionaries so that related words are

associated and more readily retrieved—for speaking, reading, and writing.

- *scribe -> inscribe -> scribal -> indescribably • script -> subscription -> scripted -> manuscript*

Morphemes are units of sound and meaning, so deficits in phonological processing contribute to failure to discriminate similar-sounding words *(accept-except*), to recognize similarities of word structure (*ignite-ignition; erosion-corrosive-rodent)*, or to store or retrieve words with precision—and all these deficits affect word identification and spelling.

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The efficiency of Response to Intervention for two struggling learners: A Single Subject design

Camilla Nilvius, *Linda Fälth, Idor Svensson; Linnaeus University, Växjö, Sweden*

Background:

RTI is a model with three Tiers of interventions, which successively gets more intensive, specific and individualized, used mainly in the USA. In this study, the RTI model was adapted to Swedish conditions and an extra Tier was added to introduce assistive technology as a supplement for students who still had difficulties after individualized interventions.

Purpose

The purpose of the study was to implement, Response to Intervention (RTI) as a model, in a Swedish Grade 2 class to prevent reading, writing and arithmetic disability for children at risk.

Method

The project monitored all students' development in reading, writing and arithmetics with standardized test. Stu-

dents that did not develop their reading, writing and arithmetic ability as expected, got more systematic, intensified and individualized training in Tier 2-4. The 30th percentile was used as cut off.

Two students carried out interventions in all four Tiers since thy did not reach the cut-off level - one student with language impairment and one recently arrived to Sweden having Swedish as a Foreign Language. A single subject experimental design was used in a series of interventions in Tier 2-4 to monitor the students' progresses.

Results/Conclusion

Results indicated that the interventions within the RTI-model had a significant effect on the two student's reading- (both decoding and comprehension) and arithmetic abilities. The results also indicate that RTI as a model could be effective for children with special needs in Swedish schools. The findings also highlight the individual variability in children's needs, the importance of adjusting interventions and analyzing outcomes after interventions.

This work is the first empirical demonstration of the effectiveness of the RTI-model in a Swedish primary school for children with special needs. More results will be available in time for the conference.

Supporting learning in primary school with executive attention system activation techniques

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1 University of Trento, Italy.
2 ASL Napoli 2 Nord, Naples, Italy
3 National Learning Disabilities Association , Naples, Italy.
4 IPRASE of "inclusive education", Naples Italy.
5 Cognitive Neuroscience Association Clinic, research and intervention , Sanremo, Italy.

Purpose

This study deals with an experience aimed at fostering learning through the use of teaching strategies that are supported and integrated with techniques for activating the executive attention system. Starting from the teachers' expertise, some pedagogical models of cognitive psychology and other neuroscientific extraction paradigms on the management of attention states have been included in the ministerial didactic objectives. We hypothesized that there is the possibility of dealing with the complex phases of learning with a certain effectiveness, by means of an inclusive and participatory teaching, strengthening and activating, at the same time, the mnestic and attentive sub-processes.

Method

The research involved 105 first-grade students divided into four experimental classes (28 females and 26 males) and three control classes (31 females and 20 males). Statistical analyzes were performed on 105 subjects (aged 6 to 7 years) who were evaluated at the beginning of the school year (October 2017) through tests that tested attentional, mnestic, (meta) linguistic skills and visual-spatial and at the end of the school year (May 2018) through tests that evaluated both attention, mnestics and visual- spatial skills and the level of basic learning (reading, writing, comprehension and calculation).

Results/Conclusion

The statistical evidence confirms the research hypothesis: the strengthening of the Attentional Executive System,

would have allowed to reach, in the experimental classes, a greater degree of automation (expressed by the accuracy of the performances) in reading, writing and calculation. These evidences (significant reduction of the errors) would indicate that the greater resources available would have been addressed on the self-regulatory aspects. This is in line with international literature, according to which learning does not take place in isolation from the Attentive system, but rather reaches greater automation if there is more energy supplied by the central systems.

Possibility and Accessibility for dyslexia at school: the inclusive teaching

***Erica Di Francesco**; Universidad de Filología y Traducción de Valencia*

With the entry into school to children for the acquisition of read-writing and calculation will be necessary the progressively increasing cognitive load and use more resources to work, elaborate and mentally process a series of growing data in order to see and learn new connections between the elements also through self-control strategies.

It is not so easy and natural for dyslexic students: the executive functions are very important to them because they allow to plan and monitor the actions necessary to achieve a certain purpose.

When a teacher is developing an activity with a control group, it is easy to lose control on the aims and skills for dyslexic students: this creates a problem for what we call the " inclusive teaching". I have studied directly at school how to reach a positive atmosphere and stimulating one for dyslexic student in a control group.

The working memory that is one of the executive function we need to improve in these students needs some skills and strategy that the teacher has to find to involve the dyslexic students during a frontal lesson in a class group.

Purpose

My objective is to give an inspiration to teachers in order to make students feel comfortable to learn without any negative feelings in an inclusive teaching group. I have analyzed the Italian situation at high school : it does exist the law for the accessibility but not always it is so immediate its application during the teaching activity and some situations can go out of control. The existence of a law can defend or even give some resources to dyslexic pupils but it is necessary to develop some practical skills to give them the possibility and the accessibility to feel at ease studying in a group of control students.

So my aim is to change perceptions of dyslexia among teachers and school directors because it is necessary to reach an inclusive and positive teaching method.

To explain further: apart from the skills and the adaptation of books to make for better and easier learning experience, a huge amount of inoculation, patience and of corse enrichment is necessary: using methods for adding meaning and game element. Using social and computer supports enriching the natural learning abilities, being patient , doing tasks thoroughly, training simultaneously association and visual auditory are all tools and skills to take in consideration but it 's very important to remember that focusing on students strengths appose to attempting to fix or change weaknesses and that there are moments during the lesson that make this quite difficult: this is the aim of my researching directly in a classroom experience: to find a strategy to keep dyslexics students'-concentration high.

What happen during a lesson in a classroom? Which are the problems or the difficulties dyslexics pupils face? The answers to these questions are different per each case and the solutions are many of them. After observing students and teachers I drew the conclusions.

Methodology:

I studied the attitude in reading and working out grammar and reading comprehension in 11 classrooms with a total of: 253 students 40 of them with a confirmed diagnosis of dyslexia . They were asked to bring their diag-

noses to the experiment, to guarantee that dyslexia was diagnosed in an authorized centre or hospital. Their ages ranged from 10 to 16 and they are from Italy, I used the same books and the same webpages for all my students and I made them studying with different tools: some using colors , some using PC, others with normal papers and others with yellow papers.

My attention was on the capability of the eyes and the mind to catch the informations and work them out. The positive reinforcement is one of the"tools" I used with all of them to encourage to go on even if they looked upset or discouraged.

The idea was to check which one had more successful result trying to follow these activities:

- relating to personal experience
- learning naturally: I mean from what student already know and from their environment
- Using mnemonic to help learn grammar and how to use it in the language
- practicing to check the manual of grammar

I always tried to make students doing by themselves in order to highlight their own spontaneous activities , since I knew them I encourage the pupils to learn naturally just giving them an extraordinary positive feedback per each exercise that was well-done!

I tried to motivate and stimulate them as an "example" for the group control, giving them charge of responsibilities and stimulating their most developed skills.

We used a system of oral exams but also of writing test son a system of yellow papers and the results were satisfactory if we think about the improving working memory. The way of learning started to be : Immersive in the natural environment, Playful, to take away stress, Personal, because your own methodology is useful to learn, Experimental because we need to have a combination of experiences, Repetitive: very important to consolidate and refreshing.

Results/Conclusions

The result of my study was that the positive reinforcement helped the students to take motivation to go on and do not give it up.

The yellow papers helped them to fix some concepts and gave them more responsibility and motivation seeing positive results.During 9 months of studying together they found some different ways to learn naturally languages, history and geography in a limited context, of course, they found the courage to be self-confident in order to try to speak , read and write even if it means to make mistakes. By giving them a very positive feedback they started in some cases to correct their own mistakes and fix the rules they were studying. It was very important not only force them to improve their good skills but also to repeat constantly the rules, the words and the summary we did together.

Reducing, negative experiences , or weakness is completely different from having positive experiences or building strengths, we have to set up positive acceleration towards those ambitions so that students have pull goals and they can improve their english, Italian or Spanish learning by whatever method.

The result was posible collaborating with my colleagues at school and also making students feel the different way dyslexic pupils read and think, I tried to focus on "how" to do something in order to stimulate the development of competences.

In order to keep the concentration high, I tried to make dyslexic pupil by the teacher desk, or giving them some role of responsibility in the class context.

When the attention keeps going away I stopped the lesson and made them doing something more "physical" like

to stand up and look for something , in order to refresh their energy.

It was clear that it is not just a matter of assessment : it is important to be conscious of how and when you can do something not just in a classroom but in their daily life: school has also this role.

Decoding music education with dyslexic students: Exploring accessibility in the context of instrumental music lessons

Kristl Kirk; *Department of Music, University of York*

Purpose

The purpose is to improve and enhance the quality and accessibility of instrumental music teaching for dyslexic students. Nurturing and empowering the student's voice in the learning process is prioritised in order to counteract risk factors of 'learned helplessness', low motivation and challenges posed by possible comorbidities. With a focus on examining how to utilise dyslexic strengths, technological applications, alternative notation systems, evidence-based strategies and the learning environment, the aim is to generate a robust evidence base and resources for music educators, music exam boards, parents and students.

Method

Combining analysis of the latest findings from neurobiological, cognitive and pedagogical studies with evidence-based analysis of piano lessons and collaboration between student, teacher and parents allows for a convergence of theory and informed practice. Qualitative data is obtained through cyclical action research with multiple case studies investigating teaching diaries, video recorded lessons, interviews with students and parents, in addition to contributions from music education and dyslexia specialists. Surveys and interviews of student perceptions of music performance exam accommodations for dyslexics enables an evaluation of their views on the accessibility and equality of the exams.

Results/ Conclusions

My focus in this presentation will be to demonstrate how reverse teaching strategies, where the student and teacher exchange roles in a planned and collaborative way, can inform the teacher of the dyslexic student's specific learning style, zone of proximal development, and most importantly, their strengths: visuospatial abilities, creativity, problem solving, verbal communication and resilience. This strategy has proved an effective method of putting the student at the centre of the learning process, increasing self-determination, informing the lesson planning and structure with the ultimate goal of making music education more accessible to the dyslexic student.

Information

Services by the university

If you need something printed (including posters) you can find the copy center in the bottom floor of the main building H (not open on Saturday/Sunday). They have excellent printing capabilities and can cater to all your needs. They accept credit cards.
Information desk for the university is located in the main building H.
At the university you can find several places to eat (lunch is included on Saturday) or have a classic swedish "fika".
There is also a couple of small stores there and a hair salon. Close to the university (about 600m) there are also a couple of big supermarkets (ICA, Willy's), a petrol station, dentist, pharmacy and doctors reception.
Please see the university map (on the next page) for all the information you need.

Wifi

There is free wifi available. Look for the network "LNU-Test2019". Login by entering your email. You will be connected for 4 hours and after that you repeat the process.

Lunch

Lunch will be served in the M-building on Saturday. Follow the glass corridor over to the adjacent building.

Social Dinner

For those who pre-paid the Social Dinner. The restaurant is called ***4 Krogar***. The address is Vattentorget 5. The restaurant is situated at the north end of the city lake (see the map of Växjö) next to the sqauare.

Web info

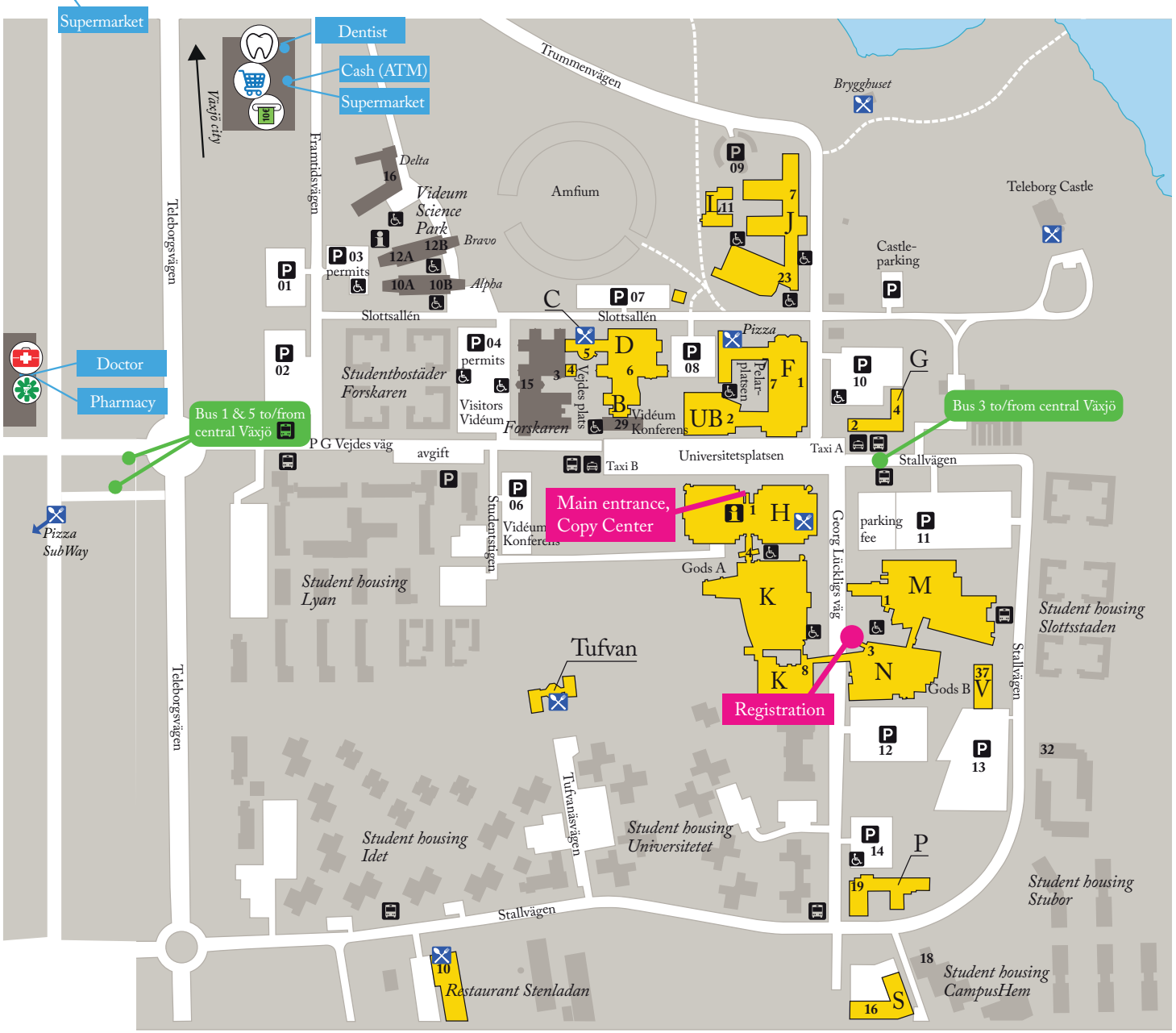
Updated programme and all the abstracts for download at eda-info.eu

Programme

Practical info page

Information

Find your way around **Linnæus University** *in Växjö*



Faculties

Faculty of Health and Life Sciences
Buildings ..... house J, K, L

Faculty of Arts and Humanities
Buildings ..... house F, G, J, K, M

Faculty of Social Sciences
Buildings ..... house F,G, J, K, M, N, O, S

Faculty of Technology
Buildings ..... house B, D, M,

School of Business and Economics
Buildings ..... house K

Lecture halls / conference rooms

The Bridge Studio 2038 ..... house N, entrance 3
The Bridge Studio 2040 ..... house N, entrance 3
Dacke, F3016 ..... house F, entrance 7
Homeros, F332 ..... house F, entrance 7
IKEA-hall ..... house N, entrance 3
Lammhult, F303 ..... house F, entrance 7
Leonardo, F119 ..... house F, entrance 7
Linné, H1509 ..... house H, entrance 1
Myrdal, K1010 ..... house K, entrance 4
Newton, C1202 ..... house C, entrance 3
Strindberg, F313 ..... house F, entrance 7
Södrasalen, M1083 ..... house M, entrance 1
Tegnér, H1510 ..... house H, entrance 1
Videumsalen, D1136 ..... house D, entrance 6
Weber, K1009 ..... house K, entrance 4
Wicksell, K1011 ..... house K, entrance 4
B1006-B3033 ..... house B, entrance 6
C2303A ..... hus D, ingång 6
D1136A-D2273B ..... house D, entrance 6
F103-F338B ..... house F, entrance 7
G106-G137 ..... house G, entrance 2-4
H1206-H1510 ..... house H, entrance 1
J0029-J1091 ..... house J, entrance 23
K1009-K3115 ..... house K, entrance 4
K1211-K3207 ..... house K, entrance 8
L225 ..... house L, entrance 7
H0010-H2102 ..... house M, entrance 1
N1017A-N2052 ..... house N, entrance 3
UB0028-UB3018 ..... UB, entrance 2

University administration

Board of Teacher Education
..... house H, entrance 1
Communications
Office ..... house H, entrance 1
Examination booking ..... house H, entrance 1
Executive Office ..... house H, entrance 1
Finance Office ..... house H, entrance 1
Infocenter/switchboard ..... house H, entrance 1
IT Office ..... house N, entrance 3
Office of External Relations
..... house M, entrance 1
Office of Facilities Management and Services ..... house H, entrance 1
Office of Human Resources
..... house H, entrance 1
Office of Student Affairs ..... house H, entrance 1
Regional D evelopment Center (RUC)
..... hus H
Student Welfare Office ..... house J entrance 7
Teacher Training Office ..... house M entrance 1
The University Library ..... UB, entrance 2

Miscellaneous

Academic studies workshop ..... UB, entrance 2
Café Astrakan ..... UB, entrance 2
Café Karl-Oskar ..... house F, entrance 7
Café Tufvan ..... Tufvan
Examination halls ..... house 10
Linnéstudenterna/Student Union ..... Tufvan
Restaurant Kristina ..... house H, entrance 1
Restaurant Rasken ..... house D, entrance 5
SP/Glafo ..... Vejdes plats 3
SP/Trätek ..... house M, entrance 1

2013-08-06

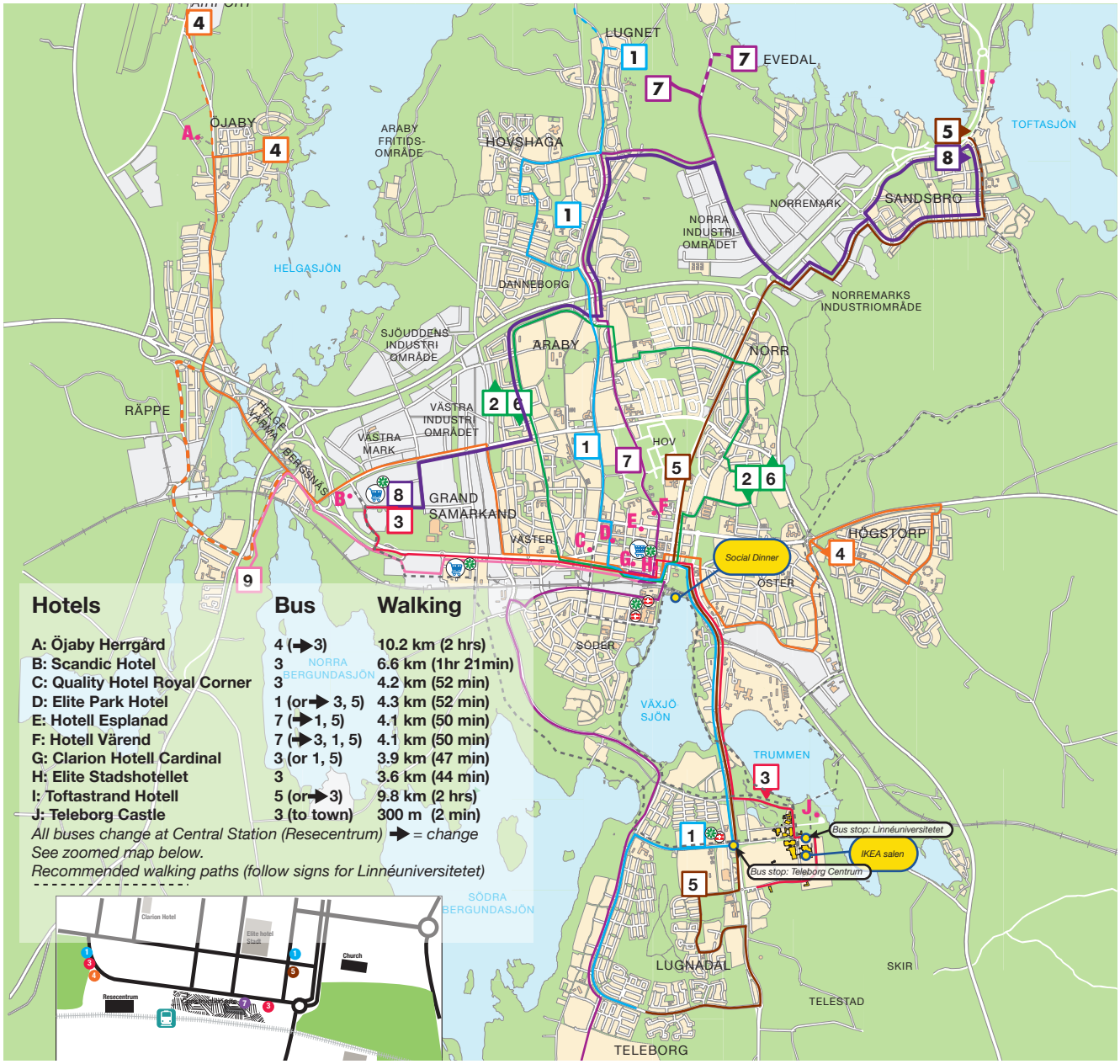
Information

Location

The EDA Autumn Seminars is held in House N, Linnaeus University, Växjö. (see the yellow oval below)

Social Dinner on Friday

The social dinner is for pre-paid guests only! It starts at 7:00PM (19:00). The restaurants is ***4 krogar*** at the north end of the Växjö city lake (Växjösjön), Vattentorget 5 (see the yellow oval below).



The EDA Autumn Seminars is hosted by the *School of Psychology*, Linnaeus University

About the Summer Seminars (Autumn Seminars)

The objectives of the EDA Community Summer Seminars are:

- to provide and exchange information between stakeholders responsible for people with dyslexia, about future strategies
- to raise questions, perspectives and answers for the creation of a dyslexia-friendly Europe
- to formulate common strategies in a kind of policy guidelines
- to raise public awareness about the situation of people with dyslexia

The summer seminars addresses people interested in dyslexia, preferably delegates of European dyslexia associations – (EDA Members).

The 4th EDA Community Summer School was staged successfully from the 6th till 8th of June 2013, in cooperation with the University of San Marino. The EDA-Board then decided to rename this event to "EDA Summer Seminars". Since 2017 it is instead an Autumn Seminar in the same spirit.