



The Promise of an Education

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Abstract

It has been said that the key objective of an education is to provide choices and enable learners to make these choices. The challenge therefore, for parents, educators, schools and policymakers alike, is in accurately predicting and shaping a future that is evolving faster than ever before due to changing intellectual and cultural mindsets and rapid technological advancements. Consequently, with the aim to invoke conversations on the future direction of dyslexia support in Singapore and better speculate on this future, assumptions about dyslexia, the provision of support and the potential and possibilities of people with dyslexia must be considered. A review of current literature provides some recommendations and highlights some emerging themes within intervention for learners with dyslexia such as an acknowledgement of the variation present among learners with dyslexia, the aptness of any literacy intervention, the cascading impact of dyslexia on other academic subjects, a continuation of service and support for learners and finally, the undeniable impact of identification and grooming of talents. By better defining the learners' diverse needs, and expanding our views on the support that is required, it is hoped that schools, teachers and parents can help learners discover opportunities to enhance prospects and fulfil their future potential.

Keywords: Dyslexia, Literacy Intervention, Singapore

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More than meets the eye: Understanding the holistic needs of children with dyslexia and bridging research with practice.

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Abstract

The knowledge base for our understanding of dyslexia has evolved substantially over the years. While there is clear consensus among researchers and practitioners on many aspects of dyslexia, several issues remain unclear. Drawing from research conducted locally and overseas, this presentation will first discuss the convergent evidences for the current conceptualization of dyslexia and illustrate how this has influenced the implementation of dyslexia identification and literacy support in local mainstream schools. However, given the complexity of their needs, a focus on literacy support is necessary, but insufficient for many children with dyslexia. One area of additional needs often associated with dyslexia will be discussed, namely social-emotional needs. While schools often focus on literacy outcomes of individuals with dyslexia, there is increasing evidence of social-emotional issues associated with dyslexia. Drawing upon research on resilience, risk and protective factors associated with social-emotional outcomes of children with dyslexia will be highlighted. The presentation concludes with a discussion of some principles that can guide practitioners in translating research into practical actions and intervention efforts in schools.

Keywords: dyslexia, identification, literacy support, social-emotional needs, resilience, intervention

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An investigation on the Teaching Practice of Reading Comprehension Skills for Individuals with Dyslexia in Singapore

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Abstract

Reading comprehension (RC) is the process of simultaneously extracting and constructing meaning through interaction and involvement with written language (Snow, 2002). Individuals with dyslexia have difficulties with word recognition, which may become a bottleneck that impedes reading comprehension. Thus, educators should implement relevant intervention programs to train individuals with dyslexia the necessary metacognitive skills for reading comprehension. To achieve this, the Dyslexia Association of Singapore (DAS) developed an enhanced RC curriculum that included essential skills closely aligned with mainstream curriculum. Resource materials that emphasized the use of relevant and localized content were also designed to facilitate the teaching of RC skills. To evaluate the enhanced RC curriculum, students' performance will be measured prior to and one year after the curriculum implementation. Concurrently, education therapists will be surveyed prior to, at the mid-point of, and one year after the implementation of the curriculum. As the curriculum was implemented in September 2016, data collection for the study is still ongoing. In the current study, the findings from the first survey of the education therapists is discussed. Education therapists were surveyed on two main areas: (a) types of RC skills that were taught, and (b) learning resources required for teaching RC skills. In terms of RC skills, advanced RC skills were taught less compared to basic or intermediate RC skills. The frequency of basic RC skills tends to correlate positively with perceived importance of the skill, while that of advanced RC skills tends to correlate negatively with perceived difficulty in teaching the skill. For teaching resources, although education therapists generally agreed that teaching resources were sufficient and useful, they felt that more resources with localized content, and more exposure to online resources are required. The findings were discussed in the context of future refinement of the enhanced RC curriculum.

Keywords: Reading Comprehension, Dyslexia

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Procedural learning difficulties and co-morbidity in dyslexia

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Abstract

As research uncovers more evidence on the characteristics of dyslexia, it has become harder to identify children who do not suffer any overlap with other disabilities, and this has led to controversy in the field of learning differences. However, there is now an emerging consensus in the literature on the role of co-morbidity in dyslexia, with high overlaps identified between dyslexia, SLI, ADHD, and dyspraxia. How can this phenomena be explained in theoretical terms and what drives the differences between individuals with dyslexia. In this talk, the procedural learning deficit, (Nicolson and Fawcett, 2007; 2011; Nicolson et al, 2010) an explanatory theoretical framework that can address these issues, will be presented. The talk will be illustrated with findings from an extensive research programme over the last 25 years, that has identified deficits in dyslexia that go far beyond literacy, highlighting the importance of learning. The findings suggest that an effective intervention strategy for dyslexia must begin to address these co-morbidities, that are based on differences in brain development in this population.

Nicolson, R. I. and Fawcett, A. J. (2007). Procedural learning difficulties: reuniting the developmental disorders? *Trends in Neurosciences*, 30 (4), 135-141.

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Nicolson, R.I and Fawcett, A.J. (2011) Invited article, special Issue on Dyslexia, Dyslexia, dysgraphia and procedural learning. *Cortex*, 47, 117-127/

Keywords: Procedural learning, cerebellum, co-morbidity

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The Problem Sums for Upper Primary Curriculum

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Abstract

During intervention time with students in the DAS Essential Maths Programme, teachers found that Maths Word Problems which make up more than 60% of an exam paper in Singapore, were most challenging for our dyslexic learners especially when trying to decode the language of Maths.

This led to the development of the 'Problem Sums for Upper Primary Curriculum' with its focus of providing P5 and P6 students taking Standard Maths in school with the skills to solve routine and non-routine word problems. Students walk through the process of problem solving in a collaborative and interactive way applying the DAS unique TRY-SHARE-LEARN-APPLY approach thus strengthening not only their thinking and Maths skills but also confidence in sharing their strategies. Students work with manipulatives to visualise and understand complex concepts at appropriate stages.

Pilot Run and improved results: A pilot study to test the effectiveness of the approach and curriculum was carried out in 2015 with identified P5 and P6 students taking Standard Maths on a 6-month intervention period respectively. Students not only made significant improvements in their Post test scores but maintained the improvements by achieving better grades in their final exams and by obtaining credible grades at PSLE Maths.

Success stories: Participants will hear 3 success stories of students who benefitted from our unique approach and went on to become confident problem solvers in secondary school with a love for Maths.

In the breakout session, participants will get first-hand classroom experience of the TRY-SHARE-LEARN-APPLY problem solving approach.

Keywords: TRY-SHARE-LEARN-APPLY approach, first-hand experience

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Do Structured Writing Instruction and Writing Checklist aid Learners with Dyslexia in their Narrative Writing?: An exploratory case study

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Abstract

Writing has been identified as a field that has not been extensively researched as part of dyslexia. The learners at the Dyslexia Association of Singapore (DAS) are taught writing based on a structured writing instruction that follows the process genre approach (Badger & White, 2000) adapted alongside Derewianka's (1991) Curriculum Cycle (i.e. building knowledge of the field, modelling, joint constructing, and independent writing). Additionally, an adaptation of the 6+1 Trait® Writing (Northwest Regional Educational Laboratory, 2004) was added to the writing instruction to create the platform for structured feedback as well as to make the process of writing more focused and meaningful for our dyslexics learners. Hence, a year-long case study was conducted at DAS to explore whether the use of a structured writing instruction and a student-friendly checklist based on the 6+1 Trait® Writing (Northwest Regional Educational Laboratory, 2004) would lead to an improvement in dyslexic learners' narrative writing skills. Four classes of students attending mainstream schools, ages 10 to 12 years, with similar abilities have been identified to take part in the study for four terms. They were grouped to either be in experimental 1 or experimental 2 group, with both groups exposed to the same structured writing instruction, but experimental 1 also receiving a structured checklist to support their writing. Results obtained from this writing research showed a significant impact for the lowest achieving children, and will be further discussed and analysed in this article.

Keywords: learning difficulties, dyslexia, teaching writing, writing difficulties, process genre approach, 6+1 Trait® Writing

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Alternative strategies for students who are unresponsive to phonics instruction

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Abstract:

Discussions on reading instruction often choose between phonics and whole language. Literature reviews starting from Chall (1967) to Ehri (1991), consistently concluded that early and systematic instruction in phonics skills results in superior reading achievement. However, researchers also report that that 30-50% of children with learning disabilities do not seem to progress with even the most intensive and careful instruction (Torgesen, J.K. (2000); Al Otaiba, S., and Fuchs, D. (2006). Based on a four-year longitudinal study of early reading intervention, Moats (2002) recommended applying best practices of reading research by matching the needs of the students, and using systematic, structured, and cumulative methods. These approaches teach language at all levels- sound, word, sentence, and passage, ensuring that students build fluency through ample practice. The presentation provides an overview of effective intervention, including identification of difficulties in the absence of a diagnosis, and techniques of remediation other than phonics . This is with reference to a holistic remedial intervention with secondary level vocational school students having severe reading difficulties, spanning a period of 6 years. Strategies to buy-in the students' participation and commitment, which are crucial to the success of the intervention, are also discussed. The intention of the presentation is to encourage parents and educators to come together to share knowledge and techniques and bring to light to a hitherto under-acknowledged aspect of reading difficulties.

Keywords: Reading difficulties, Phonological processing difficulties, Whole word reading, Customised instruction

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The seeds of literacy: The earliest indicators of reading ability

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Abstract

Reading and writing are essential for successful communication. Both skills require explicit formal instruction. Such instruction is successful for most children, but not so for those 10% affected by dyslexia. Dyslexia is best defined by its effects – specific deficits in reading and spelling independent of educational level or intelligence. But as reading instruction begins only in primary school, dyslexia can only be detected and diagnosed around 5 or 6 years, or later, or sometimes, not at all. In contrast, infants' fine tuning of speech perception to their native language(s) and occurs very early in life; before their first birthday infants become expert listeners and begin to produce speech. And again in contrast to reading, this occurs without any explicit instruction and involves basic auditory abilities, abilities that may also be important in later reading acquisition. In the Seeds of Literacy project the efficacy of such early auditory abilities as potential predictors of later literacy is being investigated. The study involves following 5-month-old infants who are, or are not at familial risk for developing dyslexia (by virtue of having one parent with dyslexia) through until they are 5 years, reading age. Here preliminary findings are presented focusing on measures of early auditory and speech perception ability and early linguistic input collected from when the infants were between 5 and 24 months. This research should result in better understanding of typical and atypical reading acquisition, earlier detection of dyslexia, and possible indications for intervention for children with reading difficulties.

Keywords: Speech perception, Speech input, Dyslexia, Early prediction

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Perceptual and Phonological Difficulties in Multilingual Children with Dyslexia: Evidence from Telugu Native Speakers

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Abstract

Although developmental dyslexia (DD) is considered as genetic in origin, which leads to unexpected difficulties in reading and writing, but its nature and prevalence differ across languages. This difference gave rise to lots of debates about its universality and specificity. In addition, the prevalence estimate of dyslexia in different countries appears to be related to the shallowness of the orthography (Paulesu et al., 1996; Ziegler and Goswami., 2005). Moreover, research demonstrated that orthographic consistency plays a significant role in the manifestation of dyslexia, and in the case of consistent orthography the severity of reading difficulties are less prevalent (Cossu, 1999; Goswami et al., 1998; Serrano & Defior, 2008; Vidyasagar and Pammer, 2010). In addition phoneme deficit considered being the causal factors for reading difficulties in dyslexia, and this hypothesis got the universal acceptance. However, Telugu is an alpha-syllabic / akshara based language with one-to-one mapping between the grapheme and its constituent phoneme (orthographically consistent). Moreover, phoneme is not the smallest grain size (basic unit) of Telugu orthography nor the reading instructions are phoneme based (separating consonants from vowels), in that case how a phoneme deficit can underlies reading difficulties in Telugu? Thus we believe that the reading difficulties of Telugu native speakers who are dyslexic would be kind of perceptual in nature rather than phonological. Twenty-two dyslexic and twenty-two non-dyslexics recruited from an integrated school with informed consent. Both the groups were matched on the medium of instructions, chronological age (range of 9 -13 years), IQ, ADHD scores and language proficiency. We conducted a set of perceptual tests (visual, auditory, attentional), rapid automatized naming test and as well as phonological ability tests (phoneme: deletion, substitution, segmentation, spoonerism, and non-word reading tests) respectively. The results are found to be high significance between the groups on visual, auditory, attentional and RAN deficits. The speed as well as accuracy impairment observed only for spoonerism tasks, rest of the phonological tests scored above 80 percent. These results are assumed to be of perceptual deficit rather than phoneme deficit among Telugu native speakers with dyslexia. In addition, we found that, dyslexic children performed equally to the typical children on elimination, substitution and non-word tasks with attenuated speed. The better performance on these tasks could be explained in two ways: first multilingual background and second transparent orthographies (Makita, 1968). In line with this evidence, we predict that, the task requiring attention was difficult for dyslexics, as they cannot sustain the focus for a long time, due to dorsal stream dysfunction (Vidyasagar and Pammer, 2010). Other contributing factors could be: instructions in three languages education system and Indian curriculum, for instance much emphasis given to spellings, it's a kind of rote learning. This study concludes that phoneme awareness is intact in the dyslexic group showing the advantage being reading transparent language and as well as being multilingual.

Keywords: Attention, perception, phonological ability, transparent orthography and multilingualism

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Indonesian dyslexia early identification system

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Abstract

Dyslexia mainly causes difficulties in reading, writing, spelling and executive function. It remains life time and unintervened cases might potentially influence not only in academic field but also in self-esteem and social-emotional development. Fortunately, good long-term outcome might be reached if it can be identified and intervened at early age (pre school-aged children). Indonesia is an archipelago-based big country, but still the ratio number between dyslexia experts to its population is not sufficient. Therefore, a valid yet simple, and friendly user of dyslexia identification system is mandatory. Proposed early identification system provides cost efficient and proceeding flexibility as it may be accessed via website. Respondents were pre school aged children, 56 boys, 44 girls. The parent had to fill in the questionnaire consists of 21 questions. The parameters of screening were the child's and parents' background, academic ability (oral language, written language, social language, math ability) and non academic ability (organization, sequence, direction, working memory). Written language parameters were only asked for children 6 years old and above. Analysis of main screening sensitivity, specificity, and accuracy

School	Resp	TP	FP	TN	FN	Sensitivity	Specificity	Accuracy
Fitrah Insan Elementary School	46	27	2	11	6	0.818	0.846	83%
Indigrow Child Development Center	6	6	0	0	0	1	-	100%
Nilem Elementary School	53	29	0	15	9	0.763	1	83%
Total	105	62	2	26	15	0.805	0.929	84%

The area under ROC curve (AUC) was 0.867 which indicated that the screening test had good accuracy to identify whether a child has risk of dyslexia or not.

Keywords: dyslexia early identification; Indonesia

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Investigation of cognitive and environmental factors affecting spelling of third-grade Filipino children

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Abstract

The number of studies regarding reading and spelling of not only English, but also of other languages continue to increase. However, there are still some languages that are not well researched yet and this includes the Philippine language. Filipino and English are the official languages of the Philippines and both are usually studied as early as the first grade. The current study investigated the underlying cognitive processes that would predict Filipino (specifically, Tagalog) and English spelling of third-grade Filipino children. Phonological awareness, naming speed, vocabulary size, verbal short-term memory, visual processing, word reading and spelling abilities of 98 Filipino children studying in Manila were tested. Results of multiple regression analyses revealed similarities between Filipino and English spelling in which phoneme awareness predicted spelling in both languages. However, differences were found in which vocabulary size predicted irregular word spelling, while naming speed also predicted regular word spelling in English in addition to phoneme awareness. Additional findings were found when word reading was included in the analyses. Environmental factors were also examined in which parents/guardians of children answered questionnaires regarding home literacy background of the children. Multiple regression analyses showed that environmental factors did not have significant contributions to the spelling of Filipino children. Findings in the study have implications in assessing Filipino children with spelling difficulties.

Keywords: cognitive skills, Filipino reading, English reading

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Early assessment and intervention of specific literacy learning difficulties within multilingual learning contexts.

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Abstract

Specific learning difficulties need to be assessed at any age. However, supporting a child at risk of literacy difficulties before prolonged periods of failure in reading and writing should avoid many of the negative consequences of poor acquisition on learning, motivation and self-esteem. Therefore, as part of projects in Arabia, South-East Asia and New Zealand, we are developing tools for early identification and intervention. These contexts are the focus of the work in order to include children from non-English, bilingual and English-as-an-additional-language backgrounds. Assessment measures and intervention procedures are based on research from primarily English speaking contexts, but aim to take into account features of the children's language backgrounds. The Arabic work is targeting early literacy development (and predictors of literacy) of pre-school and primary school children who speak Arabic as their first, dominant language, but who are also exposed to English as a foreign or second language. The work in South-East Asia involves literacy and language skills of pre-school and primary school children who are learning English and one other language in a bilingual education context. The work in New Zealand focuses on pre-school and primary school children who are learning within an English language education context but who also speak at least one other language in their home environment. The research is ongoing and this presentation will cover some of the background to the work as well as some of its initial findings and future plans.

Keywords: Early assessment, bilingual, English as an additional language, intervention procedures

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Early screening and intervention: preventing failure

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Abstract

If failure can be prevented for young children at school entry, then a sound platform for future learning can be provided, that can reduce the impact on children's self-esteem and lead to better literacy outcomes. Early readiness for learning can be built effectively and cost effectively, as illustrated here with a series of studies on screening and intervention for children aged 4-7 (Nicolson et al, 1999; Fawcett et al, 2001; Fawcett et al, 2014). These examine the critical aspects that need to be in place to ensure effective learning for this age group, including recent thinking on executive function. This approach has been used with over 1000 children in a series of studies in Wales, with small group intervention for pre-reading skills for 1 hour weekly for a 12-week period. Data are reported here on a series of successful screening and pre/post intervention studies, and recommendations made for further progress. Finally, a new iPad app will be introduced designed in Sheffield for greater efficiency and fun in the early assessment process, that has potential for use in Singapore and beyond.

Fawcett, A.J., Nicolson, R.I., Moss, H, Nicolson, M. K., and Reason, R. (2001). Effectiveness of Reading Intervention in Junior School. *Educational Psychology*, 21

Fawcett, A.J, Lee, R and Nicolson, R. I (2014) Sustained Benefits of a Multi-skill Intervention for Pre-school Children at Risk of Literacy Difficulties. *Asia Pacific Journal of Developmental differences*. 1, 61-77.

Nicolson, R.I., Fawcett, A.J., Moss, H, Nicolson, M. K., and Reason, R. (1999). An Early Reading Intervention Study: Evaluation and Implications. *British Journal of Educational Psychology*, 69, 47-62

Keywords. Executive function, screening, intervention

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The Effectiveness Of Using Drama As A Tool To Build Social-Emotional Development Of Children With Dyslexia In Singapore.

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Abstract

Literacy is not the only struggle that children with dyslexia face every day. For many years, researchers had gathered how children with dyslexia have poor level of social-emotional development due to personal experiences with failures, other's perceptions of their literacy abilities and not receiving proper emotional support from adults around them. This study explores the efficacy of a speech and drama programme in developing social-emotional literacy of children with dyslexia. The participants were students aged 7-11 years old, enrolled in the Speech and Drama Arts programme in Dyslexia Association of Singapore for the whole year of 2016. The Southampton Emotional Literacy Scales (SELS) of the relevant age group was used for this study. Pre and Post programme questionnaires were collected from students, parents and drama teachers. Through this study and the data presented, hopefully teachers, educators, education policy makers and parents are able to see there is more than just acquiring literacy (reading, spelling and writing) skills and achieving good grades but also, there is a need to develop our children's social-emotional literacy so that they can adapt and be ready to meet the current demands of the society.

Keywords: Dyslexia, Drama, Social-Emotional Literacy

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Evidence-based Vocabulary Instruction for Early School-Aged Children

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Abstract

Vocabulary was found to play an important role in language learning and teaching as early as in the 1970s. "Without grammar very little can be conveyed; without vocabulary nothing can be conveyed" (Wilkins 1972:111). In 2010, the National Reading Panel stated that vocabulary is essential in learning to read and in comprehending text: readers cannot understand the text when they do not know what most of the words mean. "Vocabulary is one of the best predictors of academic success" (Kurdek & Sinclair, 2001). Evidence-based Vocabulary Instruction for Early School-Aged Children includes (I) Choose vocabulary words that children will find useful in many contexts (Allen, 1999; Beck, McKeown & Kucan, 2002) such as words that are often used at home and in different social settings (Victoria Joffe, 2011, pp.36). (II) Active engagement that goes beyond definitional knowledge (Stahl & Kapinus, 2001) to promote word learning (Graves, 2006). Active engagement happens in conversation as well as shared reading. (III) Frequent exposure to targeted vocabulary words (Biermiller & Boote, 2006). Struggling learners may need 25 trials to acquire novel words compared to 9-11 trials for typical learners (Gray, 2003; Pence & Justice, 2008). (IV) Provide a student-friendly definition using everyday language that differs from a dictionary definition (McKeown, 1993; Beck et al., 2002; Steele & Mills, 2011). (V) Children to define vocabulary words using their own words which truly make sense to them (Cain, 2007). Provide verbal and visual support when children with language impairment learn vocabulary (Nelson & Van Meter, 2006).

Keywords: Vocabulary Instruction, Grammar, Language Impairment

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The effectiveness of a Chinese intervention programme for dyslexics in helping struggling learners

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Abstract

Learners with dyslexia has shown significant improvement in their reading, spelling and morphological awareness following intervention at the DAS. This study explores if the intervention programme at DAS is also effective in supporting struggling learners in Chinese and if the intervention is more effective as compared to other programmes.

This session covers the similarities and differences between dyslexics and struggling learners in the Chinese language, reading and writing errors common to dyslexics and the effectiveness of the intervention for dyslexics and struggling learners. It also includes findings from surveys done with students and their parents to investigate their language attitudes and perceptions when learning.

Key words: Dyslexia, Chinese Language, Chinese Intervention

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A Comparative Analysis of 2 Mentoring Approaches at the Dyslexia Association of Singapore

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Abstract

Mentoring is significant in the life of any new teacher. A mentoring programme aims to provide new teachers with support in the practical aspect of teaching. At the Dyslexia Association of Singapore (DAS), formal mentoring takes place over a period of six months. New teachers are paired with experienced teachers who guide them on lesson planning and delivery, as well as classroom and student behaviour management. This study examines the strengths of two types of mentoring approach currently adopted at the DAS - (a) mentoring concurrently when formal teaching begins and (b) mentoring after formal teaching begins. The aim of this study was to examine the perceptions of two groups of teachers who received mentoring from the two approaches. A mixed-method comparative study which involved surveying teachers who had completed their mentoring programme using a questionnaire on a five-part Likert scale and face-to-face interviews were adopted. 28 teachers in their first two years of teaching were randomly selected for the survey. 6 teachers were then purposively selected for an interview to investigate their perceptions on the mentoring approach they had received. These findings will inform of the preferred mentoring approach and help to identify specific challenges, benefits and the impact either of these approaches had on teachers' performances. Results revealed that new teachers prefer to receive mentoring when their formal teaching begins as they felt more confident and assured when they had a mentor to guide them.

Keyword: mentoring, mentor, mentee, formal teaching, challenges

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Exploring the classroom practices of the English Exam Skills Programme for Singaporean primary school children

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Abstract

Grammar, vocabulary and comprehension are key skills that are impaired in dyslexic children. In previous studies in Singapore, we have shown that dyslexic children can improve these skills significantly with structured intervention. In this controlled study, we demonstrate a highly significant improvement in these skills in a group of dyslexic children in comparison with a group of dyslexic children who did not receive the intervention. The strong effect sizes indicate that these improvements are not the effect of maturation and school based teaching, but reflect the impact of this targeted teaching on overall progress. Implications for dyslexia are discussed more generally.

Keywords: English Exam Skills, Classroom Practices, Teaching Styles, Teaching Processes

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Trends in assessment at the Dyslexia Association of Singapore

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Abstract

The Dyslexia Association of Singapore (DAS) has been offering intervention services to individuals with dyslexia for over twenty years. The mission statement of “Helping Dyslexic People Achieve” goes beyond just providing intervention for school-aged children. In the last fifteen years, the DAS has also raised a team of Specialist Psychologists who are involved in the assessment of individuals. These assessments are carried out under the MOE-aided DAS Literacy Programme (MAP) division of the DAS (DAS-MAP). Each year, the DAS psychologists process over a thousand referrals and assess hundreds of school-aged children. The purpose of the assessments conducted at the DAS-MAP is for the identification of dyslexia and to provide educational placement or strategies to help these children further their strengths and improve on their weaknesses. Given the vast number of students who are seen by the DAS Psychologists, the objectives of this session are twofold: (1) To provide an overview of the assessment services provided at the DAS-MAP, and (2) to discuss some trends that had been identified through the assessments conducted at the DAS. The understanding of the implications trends provide a context to the development of the DAS Psychological Services in order to provide needed and valued psycho-educational assessment services.

Keywords: dyslexia, assessment

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Neuroeducation and its impact on learning for Children with special needs using clay as a medium.

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Abstract

Neuroeducation (Mariel Hardiman et al, 2009) has its tenets in neurobiology and psychology. It explains how engaging more than one of our senses while processing information strengthens existing and creates new neural networks. Creating pottery is a hands-on experience that engages emotions and stimulates creative expression. When this experience is paired with learning, associations are made with seemingly unrelated pockets of information, which stimulates abstract thinking, problem solving and creativity. Why we choose clay: (a) Highest tactile cognition factor; (b) Object permanence; (c) Longevity. The three factors mentioned are the fundamental criteria we have instilled for a medium to be in line with the principles of Neuroeducation. Research has shown that clay (Winship, G and Haig R, 1998) is one of the few platforms available today, that is of greatest sensorial value. By way of understanding, mild learning disabilities or a spectrum of cognitive impairment would be used to describe children with special needs. Children with learning disabilities, such as delays in physical or cognitive development that catch up quickly or remain entrenched; occasional panic attacks or serious psychiatric problems face challenges regardless of their intellectual abilities. They require specialized learning strategies to meet their potential. Sensorial engagement has been an essential part of learning for children with special needs. Understanding how the brain learns and utilizing these principles to deliver content created a positive impact on the way children with special needs learn. We have created a platform using clay as a medium (Jamie Sanders, 2013) to engage special needs children. Infusing the arts and sciences together enhances neural networks and connections in the brain. This, in turn, serves as a catalyst for creativity and innovation, while developing a person's self-confidence, perception and awareness. From our observations, we have had great success with children with special needs. Our work with renowned special needs institutions in Singapore has validated the applicability of Neuroeducation for these children and we have seen them flourish week-on-week. We have had remarkable results, with children who are primarily non-verbal say "fun" to teachers, now saying "fully engaged" with our platform.

Keywords: Neuroeducation, clay, special needs, dyslexia, behavioral disabilities

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Exploring the Contribution of a Daily Structured Movement Programme to A Screening and Intervention Programme for Pupils aged 5-11 At Risk of Dyslexia

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Abstract

There is a growing awareness of the role for regular physical activity to combat concerns with issues such as childhood obesity, myopia and a decline in regular activity; however, is there also a rationale for its use as part of a school's programme to identify those at risk of dyslexia and its associated difficulties?

In this talk I will explain how the physical/ non-language indicators of dyslexia (British Dyslexia Association) might be associated with physical immaturities and outline a small-scale research project, working with 15 children aged 5-11, over a period of one school year.

A screening programme for all the students aged 5-11 was implemented at the start of the year, followed by a daily, structured, floor-based programme that was developed by Australian educator, Barbara Pheloung to address retained primitive reflexes and learning difficulties. Staff at the school attended a one-day training programme in this method prior to the project commencing and they were supervised and supported throughout its implementation.

Initial findings indicate that the screening programme has the potential to identify some of the more subtle indicators of learning differences and that the intervention can make a valuable contribution to the physical, social, emotional and curricular aspects of learning.

Keywords: Screening, early identification, non-verbal indicators, floor-based physical programme, primitive reflexes

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Learning ALL (Articulation, Language and Literacy) through Echo Poems for young children

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Abstract

The purpose of this paper is to introduce the concept of echo poems, and how they can be used to help young children learn ALL - articulation, language and literacy. The concept of each term, articulation, language and literacy is elaborated, and with that, suggestions on how echo poems can be used for the teaching of the respective conceptual area. In order to help educators to better support children in their learning, some of the challenges that young children may have in these conceptual areas are discussed. In this way, it is hoped that children can become more motivated to learn and have better outcomes in the learning of articulation, language and literacy.

Keywords: Echo poems, articulation, language, literacy, young children.

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A case study approach to understanding the benefits of a Personalised Online Learning Experience (POLE)

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Abstract

In this paper we sought to share the benefits of a Personalised Online Experience –POLE whereby we explored the possibility of extending our current DAS International Specialist tutoring one to one service through adopting the online platform. Most theories of learning presume that learning occurs in a classroom environment mediated by a teacher. Accordingly, most of these theories do not take the distinctiveness of mobile and/or digital learning into account (Taylor, J. et al., 2006). The online experience to children with diverse learning needs is guided by a few frameworks namely: the TPACK framework (Mishra & Koehler, 2006; Koehler & Mishra, 2008), HAAT Model (Cook and Hussey, 2008), and Universal design for learning guidelines (UDL – CAST, 2011). The goal of selecting qualitative phenomenological research method is to describe a 'lived experience' of a phenomenon. It is concerned with the study of experience of a subject from the perspective of the individual. Moreover, this study is based in a paradigm of personal knowledge and subjectivity, and emphasises the importance of personal perspective and interpretation. Hence, the method to analyse data in this research involves qualitative analysis of narrative data – interviews. It was our hypothesis that the level of engagement, accessibility, interaction with the content, sharing the content with the Specialist Teacher, through an online platform are a new and a rewarding experience to the client. Moreover, the levels of frustration over the writing tasks can significantly be reduced with the introduction of online writing tools. Our collective goals are that at the end of the intervention the confidence level, taking ownership for the tasks is significantly positive. Finally the online personalised learning experience saves travel time and the student has the option to work in the comfort and security of their home or anywhere with a secure internet wifi. To provide a global Personalised Online Learning Experience teaching to students requiring literacy support is at the heart of this study.

Keywords: online learning, dyslexia, specialist teacher, experience

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Perspectives of Adolescents with Dyslexia: An Insight through Images

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Abstract

The research reported here aimed to understand the perspectives of 15 adolescents with dyslexia receiving support in Singapore. It outlines how they perceive their personal learning differences and how they think others view their learning difficulties. The methods used in this study included photography and semi-structured individual interviews. Photography was chosen as it has been shown to be a viable visual method that elicits genuine responses from participants. This study aims to provide an insight not only to individuals with learning differences, but also to the significant others in their lives (e.g., educators, parents and siblings). Another important aspect of this study was the focus on self-awareness, self-disclosure and self-advocacy that after diagnosis. The findings indicated that the use of photography in interviews was well accepted and preferred. Moreover, individuals who demonstrated self-awareness seemed to be more successful in their studies. Future studies are encouraged to explore these areas further.

Keywords: Dyslexia, Adolescents, self-awareness, self-disclosure, self-advocacy, photography

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Executive Dysfunction, Dyslexia and Treatment of Cross Patterns. Outcomes of a Research Study

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Abstract

In this talk, we present the first controlled study of our approach, showing a significant impact on efficiency and fluency of reading in a group of 20 dyslexic children in comparison with controls. Reading and the activation of increased efficiency in cross system patterning from left to right, are an expression of the most extensive correlation between reading and motor skills, that constitute a functional conjunction of great importance. Our research, conducted over 10 years of observations, rehabilitative treatments and targeted experimental interventions, testifies to the effectiveness of Champion L.I.R.M. (Reading Intensive Speed Motor), a professional practice, forming part of the Cognitive Motor Training based on the Crispiani Method. We move from concrete repetition of sequences of movements to abstract and symbolic (reading from words in time to the rhythm). Through intensive practice based on the activation of cross patterns to enhance general executive functions, including procedural /sequential motor skills, we can improve the fluency and accuracy of reading and writing. The research has focused on an intensive and sequential activation of cross patterns of the lower and upper limbs, and in general praxic performance builds their "incipit" or readiness for rapid activation. We pay particular attention to four major vectors of Physio-Praxis-Vectors (namely Incipit, Fluidity, cross patterns, and rotary patterns), in intensive closed cycles of 2 or 3 days, for a total of 15 hours, working on constant and ecological rhythm. Through applying motor and coordinated sequences, we promote and activate processes, improving automatization of neural circuits and exchanges between the hemispheres. Improvement and functional gains are also extended to attention, general responsiveness, balance, and language. The clinical trial, conducted before and after intensive Champion LIRM, on a sample of 20 dyslexic children between 7 and 13, and on an equivalent control group, reveals an average of improvement of 50/60 percentage increase in activation timing in a short time, accompanied with an improvement in reading for the experimental group.

Keywords. cross patterns, activation, sequences, fluidity, executive functions, automatization, motor coordination, reading, dyslexia

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Using picture books and philosophy for children (P4C) approach to engage learners with dyslexia

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Abstract

Learners with dyslexia struggle with reading and comprehension. Research has shown that many literacy programmes developed to help students overcome dyslexia and its related learning difficulties focus largely on phonics instruction. This study is an attempt to elicit the impact of picture books on the comprehension, verbal expression and engagement in reading of students with dyslexia. Research on this study centered on observing a group of Primary 4 and 5 students as they demonstrated their comprehension through retelling skills, their verbal expression of thoughts and ideas and their engagement in reading using picture books. This study adapted the Philosophy for Children (P4C) approach developed by Matthew Lipman and his colleagues at the Institute for the Advancement of Philosophy for Children (IAPC). The P4C approach which places emphasis on questioning skills, engaging in meaningful dialogue and reasoning were incorporated into post-reading discussions facilitated by the literacy therapist. Observations of the students' behaviour and engagement during the shared reading process and their responses during the post-reading discussions were analysed closely. The main findings indicated that the use of picture books helped the students recall details and sequence of events in the books as seen in the way they referred to the visual aspects in the post-reading discussions. The students' responses recorded during these discussions also showed that they were able to infer and make connections to the stories and characters portrayed by relating to their learned prior knowledge and personal experiences. This study showed that picture books combined with features of the P4C offer an instructional opportunity and an alternative teaching tool for teachers to enhance a dyslexic learner's learning experience in a literacy classroom.

Keywords: dyslexia, picture books, philosophy for children, dialogue, engagement

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Metacognitive Strategies for transitioning post-secondary students

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Abstract

Individuals with dyslexia who have acquired adequate literacy skills may continue to face issues with organisation, planning, time management and social communication. These executive function skills are especially important when people with dyslexia move through transition in life. The presentation will look at the profiles of our post secondary school students with dyslexia in Singapore and focus on the learning friendly metacognitive practices used during the 6 month trial on 20 students that have been incorporated in the classroom.

Keywords: metacognition, post secondary, strategies, prevention, intervention, executive function
ity

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Developing a Dyslexia Screening Assessment for English-Chinese bilingual learners in Singapore

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Abstract

In Singapore's bilingual education, dyslexia is diagnosed through use of formal psychological assessment conducted in our first language, English. As formal diagnosis of dyslexia usually requires much time and monetary resources, risks of dyslexia screening tools can be screened prior to a formal dyslexia assessment. Existing screening tools are developed and normed in monolingual populations and related to only one language. Dyslexia is a language-based difficulty but not language-specific. Individuals with dyslexia generally have difficulties learning languages and the extent of dyslexic-type difficulties manifested differently in different languages. English-Chinese bilingual learners in Singapore may not have a more holistic screening of their learning difficulties, especially if an average or above average performance is attained which potentially indicate low risks of dyslexia. The proposed solution is to develop a simple and efficient dyslexia screening tool that detects dyslexic-type difficulties in English-Chinese bilingual learners at risk of dyslexia in Singapore and to provide a basis for an eventual formal dyslexia diagnosis and a timely appropriate intervention. The screening tool can also serve as a supplement to the existing formal diagnostic assessment for dyslexia. The research design is proposed in two phases. Phase 1 employs the qualitative approach that involves case studies of 10 primary school aged Singaporean students of Chinese ethnicity (8 to 11 years of age) who are studying Chinese language, through use of 'semi-structured' interviews and analysis of students' work. Phase 2 employs the quantitative approach that determines the validity of the dyslexia screening tool for English-Chinese bilingual learners. The screening tool will be developed based on the theoretical framework derived from Phase 1 with test items that measure the identified prevalent and dominant dyslexic-type difficulties. The screening tool will then be piloted and evaluated with 400-500 English-Chinese bilingual learners with dyslexia, aged 8-11, in Singapore.

Keywords: screening, dyslexia, bilingual

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Assessing executive function in children with dyslexia: Capturing both hot and cool executive function

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Abstract

While there is a general agreement that children with reading difficulties demonstrate impairments in a variety of executive functions, a majority of the studies have relied exclusively on performance-based measures (cool executive function) to investigate executive functions. In so doing, the affective human brain is reduced to an inert computer system. Drive, motivation and will, all of which add to the ecological validity of executive function, have been omitted from the conventional approach of measuring executive function. Using ecologically valid measures of executive function (hot executive function) is equally important. This session will provide a review of current executive function research with children with dyslexia, discuss implications of hot and cool executive function deficits, and positions the hot and cool executive function in the context of Frith's (1999) causal modeling framework.

Keywords: dyslexia, executive function, hot and cool measures

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Reliability and Validity of Chinese Literacy Assessment for school learners in Singapore

信度与效度：新加坡小学生华文读写能力测试工具

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2. Dyslexia Association of Singapore

Abstract:

Many schoolchildren are facing difficulties in learning Chinese and over the years, we see an increase in the number of students getting Mother Tongue exemption. Currently there is no standardised tool to understand the difficulties/difference students face when learning the language. This study aims to gain a better understanding of the difficulties/differences students face by studying the following cognitive and literacy related skills in Chinese, namely, word recognition, morphological awareness, copying, spelling and comprehension. Research has shown that these areas are significant predictors of reading and writing ability in the Chinese language. A pre-pilot study involving 11 students will be carried out prior to the pilot test of 138 students. The findings from this study will serve to inform guidelines to the Ministry when planning and developing curriculum and serve as a platform for standardisation testing in time to come. The findings will also shed light to educators on the development of appropriate intervention and support to be given to struggling learners.

Keywords: Chinese Learning Difficulties/Differences, Chinese, Literacy, Assessment, Standardisation

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Assessments and profiles of children with dyslexia

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Abstract

Dyslexia is a specific learning difficulty that is neurological in origin, and is characterised by difficulties with acquiring accurate and fluent word reading and spelling skills. Characteristics markers of dyslexia include deficits in phonological awareness, verbal memory and processing speed. Other co-occurring difficulties may include difficulties with language acquisition, motor co-ordination, sequencing, concentration, and personal organisation. Without a comprehensive psycho-educational assessment, dyslexic individuals are often unidentified, and likely to encounter significant barriers in accessing classroom instructions and struggle in their academic learning. At the Dyslexia Association of Singapore (DAS), psychologists use standardised assessment tools to evaluate an individual's cognitive, literacy (i.e., reading accuracy and fluency, comprehension, spelling), and phonological skills (i.e., phonological decoding and awareness) when assessing for dyslexia. Other factors considered during the evaluation process also include the individual's background, instruction and intervention received. In view of the scope of work done by the DAS psychologists, this session will focus on (1) the identification process of dyslexia at the DAS, which includes the common types of assessment tools used and the factors considered, (2) the factors considered in instances of differential diagnoses, and (3) a sharing of some profiles of students who present with dyslexia and/or other learning difficulties.

Keywords: dyslexia, assessments

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The Positive Impact of ELI (Early Literacy Intervention)

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Abstract

"I can't understand why I can't go for Family Day..." came a refrain of a perplexed 6-year-old to a visiting health care officer to his kindergarten. This was a breakthrough for him. Prior to this, positive learning in his mainstream classroom had proved to be challenging.'

Are we able to see the children behind the numbers? How they fare and the impact it has on early intervention?

DAS Preschool Programme has found significant improvement in the areas of alphabet knowledge, phonogram knowledge, learnt word knowledge, reading and spelling through pre-post testing.

Apart from literacy, it has also been reported that children seem to develop resilience in their daily activities. It is suggested that these skills preschoolers learn in the early intervention classroom to cope with their literacy difficulties could have been generalised into their daily living, as observed by other educators and parents working with the child.

Case study will be shared in this presentation.

Key words: Early intervention, literacy, positive impact, measurable

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Good Children's Literature Matter: Digital Reading as an Early Intervention Support for Children with Learning Disabilities

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Abstract

Children's literature has been affected by digitization as there is a dramatic rise in household ownership of the smart phones, tables, and e-book readers. Given the crucial role that children's literature has played in early intervention, this paper offers a thorough review of the use of digital children's literature in early intervention, detailed information about the effectiveness, convenience, and practicality of providing award-winning children's literature in a media-rich and interactive digital format (i.e. electronic books and book apps) for children with learning disabilities. Referencing the latest research in the field, this paper provides book titles along with evidence-based effective activities for nurturing and enhancing the development of children with learning disabilities. Early intervention strategies for supporting those children through shared reading, reading aloud, selecting appropriate children's literature, and generating a literature-rich environment have also been expanded. Furthermore, suggestions for parents are included as well as in-depth intervention plans for several specific books. In response to concerns regarding a lack of empirical research of digital reading, this paper also goes some way towards addressing the need for more research in this area. This paper not only benefits professional in fields of special education, also is a great resource for parents and families of children with learning disabilities.

Keywords: children's literature, digital reading, early intervention, learning disabilities

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