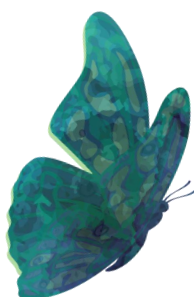




CASE STUDIES



PRESCHOOL PROGRAMME



Specialised Educational Services

UNLOCKING POTENTIAL

The aim of the SES Preschool Programme is to help preschoolers who are potentially at risk of dyslexia, or have developmental delay in early literacy, develop skills and strategies to become confident achievers when they enter primary school.

RECOMMENDED FOR

Preschoolers in Kindergarten One and Two who are at risk of dyslexia or having difficulties with reading, spelling and/or writing.

OUR APPROACH

Our programme helps preschoolers acquire a good foundation in alphabet knowledge and phonograms, leading up to learning sight words essential for reading. These abilities gear them towards reading and spelling readiness.

In class, your child will be taught rules, facts and generalisations about the English language, enabling them to read and spell more effectively. They will also be taught strategies to cope with letter reversals. The programme follows a prescribed scope and sequence for systematic, sequential and cumulative teaching.

Components covered in a typical lesson:

- Alphabet Knowledge
- Phonograms
- Learned Word Knowledge (e.g. said)
- Reading
- Spelling

Preschoolers will be advised to go for a Full Aged Psychological Assessment when they turn six. Children diagnosed with dyslexia have the option to continue with the MOE-aided DAS Literacy Programme.



Find out more at www.ses.org.sg or 6444 5700

Specialised Educational Services (SES) is a division of the Dyslexia Association of Singapore.

Early Intervention in Singapore: A Case Study

Wong Kah Lai

Preschool Programme Manager

Specialised Educational Services

Dyslexia Association of Singapore

INTRODUCTION

Early intervention is important. The impact and ripple effect of early literacy intervention cannot be underestimated nor fully measured. Let me share with you a story of a little boy, where the impact of early literacy intervention went beyond preschool. It propelled him as he progressed into Primary One, and moving onto Primary Two thereafter. He left our programme almost two years ago, after receiving about one and a half years of 2-hour weekly early literacy intervention at the Dyslexia Association of Singapore Preschool Programme.

CASE STUDY

Aniq is a happy, bubbly five-year-old, filled with natural curiosity of the world around him. A couple of comments from his preschool teachers to his mum, from time to time, that they think he could be ADHD.

He loves stories and being read to. He can remember the names of cars and dinosaurs, facts and figures, and rattle them off from the top of his head.

He loves drawing. His teachers said his drawings depicted out-of-the-box thinking.

“Early intervention is important. The impact and ripple effect of early literacy intervention cannot be underestimated nor fully measured, [and] where the impact of early literacy intervention went beyond preschool.”

He loves blocks and Legos. He can build the most intricate and amazing structures that surprises his teachers, peers and even his mother.

There is just one little problem. **Writing.** This little boy hated it.










He would make scribbles that went for his name and then he would cover it up with a darkened pencil. So all you get to see in the end as a blackened blotch. There were other creative solutions to having to write his name. A scribble, to pass as his "signature", or simply leaving his name conspicuously blank on the page. Once, Aniq's teacher couldn't find his completed worksheet from a class activity. Thinking that he had not completed his work, called him aside and asked. Aniq calmly flipped through the pile of submitted work and lifted it out. His teacher acquired a strategy from Aniq. To identify his work was to count the number of worksheets submitted by all students present on that day, ...then look for the one piece without a name written on it ... that's Aniq's.

Name: 

Beginning Sounds Animals

Directions: Look at each animal below. Say the animal's name. What sound do you hear at the beginning of each animal's name? Circle the letter for the sound you hear.

Name Missing

 g t <u>p</u>	 <u>h</u> r m	 h <u>l</u> w
 <u>m</u> n t	 m <u>b</u> p	 r <u>b</u> d
 r <u>l</u> d	 p <u>m</u> r	 d m <u>r</u>



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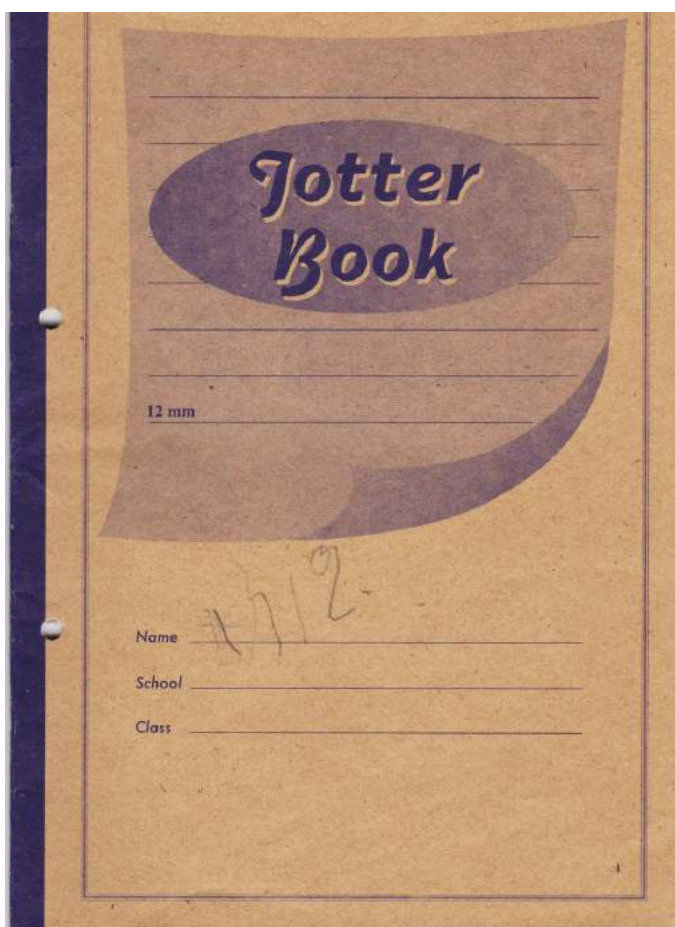
Date. When you attend preschool at five in Singapore, you're expected to be able to write your name and date on every piece of given work, be it writing or drawing. He couldn't do it.

3-AK10015+21013

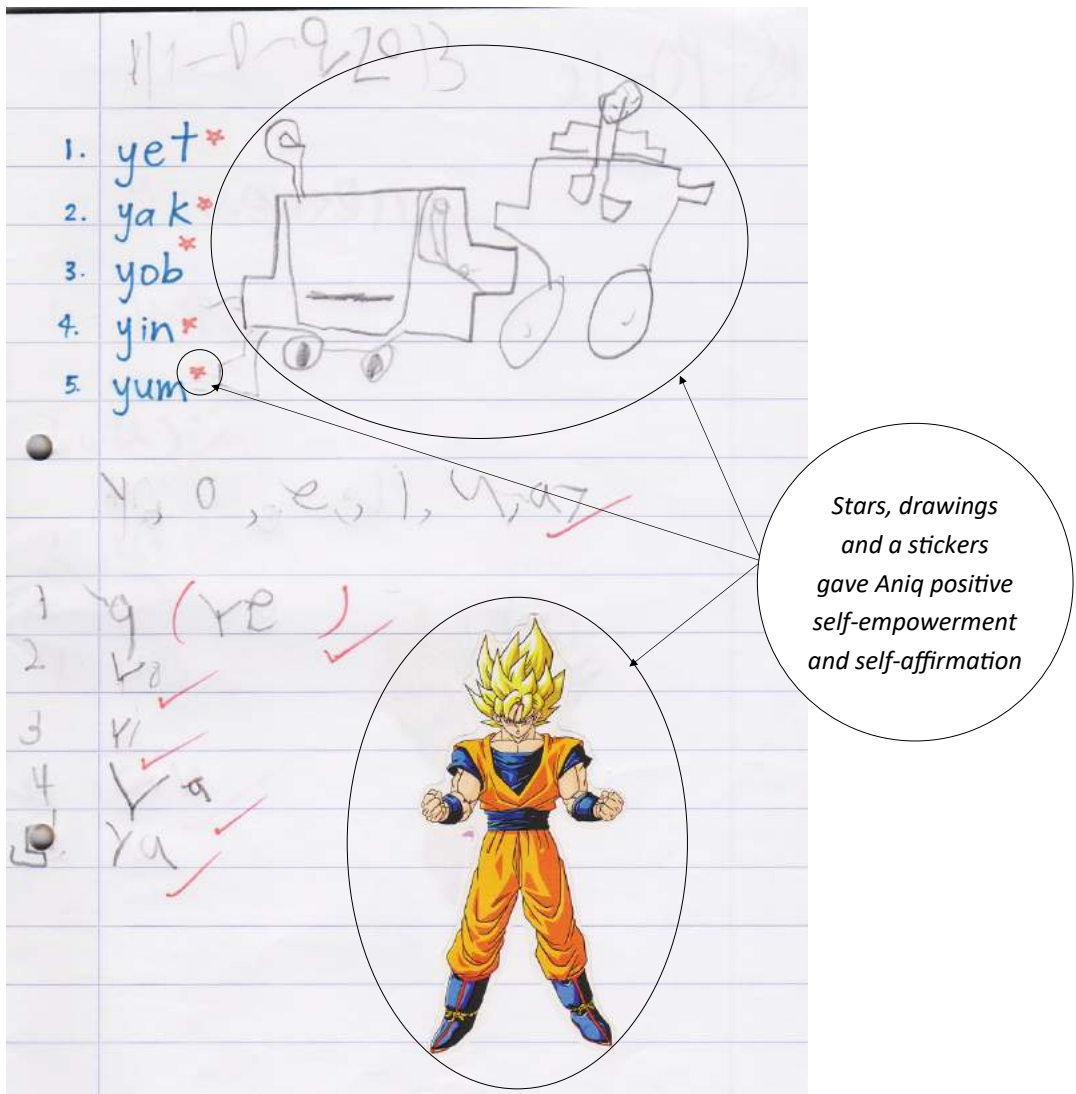
Here's what Aniq's educational therapist did.

1. She gave him a jotter book and convinced him to have his name on it - so that he need only **write his name once** whenever he used it. Thereby reducing some of Aniq's ongoing stress in having to write his name constantly on every piece of given work, and navigating away from avoidable conflicts between adult and child.

2. Aniq used the jotter book consistently for all his words-to-read and words-to-spell activities. He was given direct, explicit, positive feedback immediately as the activity unfolds, with stars drawn next to the ones he got correct, and a bracket next to the ones that needed correction to be made.



3. She was **flexible and accommodating** of his personal needs e.g. Giving Aniq permission (and time) to draw a picture next to his sound drill, write-what-you-hear activity. Thereby, providing Aniq with the chance to catch a breather before the next activity...writing words-to-spell.



4. **Self-empowerment.** Giving Aniq and other students the opportunity to give themselves a pat-on-the-back for accomplishing tasks that they find challenging and not to their liking.

5. **Offering a choice, working with individual strength**, making learning a multi-sensory process. Aniq loves art and craft but hates writing activities. In offering him a choice of pastel coloured paper, Aniq's a decision maker. By having him cut out pictures e.g. letter e from the story "Eddy elephant" and framing it by gluing it onto the pastel paper appeals to his love for hands-on craft activity while learning the letter 'e'. Having to repeatedly say, "Eddy elephant /e/ /e/ /e/" throughout the entire activity, was an opportunity to talk-as-you-work. Aniq peppered comments and discussion about the story in between his recitation whilst his hands were busy working.



6. Encourage and stretch, raise the bar, and extend learning to greater heights.

Aniq improved with early literacy intervention. From avoiding the need to write his name on worksheets, he wrote his name and the date in legible handwriting. The explicit teaching of writing conventions e.g. a finger space between words, yield results. Aniq was able to write "The duck goes quack" neatly on a line.



Aniqa **A Day At Sentosa** 18-10-2014

During the school holidays, my mother brought my brother and (and, with) me to Sentosa. We took (take, took) a ferry to the island. We were (was, were) very excited _____ (because, when) it was our first visit to Sentosa. My (My, Mine) favourite place was the Wax Museum. It told (tells, told) about Singapore's history in the Second World War. It is (is, are) not good to have wars. In (In, When) the afternoon, we went (go, went) to the beach. It was a hot and (with, and) humid day. My mother bought (bought, brought) us cold (hot, cold) drinks and ice-cream.

We had (have, had) a happy day with our (us, our) mother. We would (would, would not) certainly like to visit Sentosa again soon.



From being unable to complete his sight work activity sheet in one session amongst other activities, he was finally able to cope and complete all his work on time at a good pace.

When he was given a challenging short passage, A day at Sentosa, he was able to complete it to the best of his ability. He endorsed his own efforts with a stamp marked "outstanding" on his worksheet.

Unexpectedly, the intervention gained traction beyond the programmes reach 4 months into Primary 1 (P1), in a mainstream school.

Aniq scored full marks for his spelling, in his mother tongue, Malay. He transferred, somehow, what was taught in early intervention, into his mother tongue learning.

He never failed his English spelling in school either. [scoring 5 or 6 out of 8]
When his mother offered to coached him in his spelling, his happy and confident reply was, "Mum, stop stressing me"]



He participated in an art competition in Primary 1. That's his drawing below. Wow!

Into Primary two now, he is into sports while keeping pace with his school learning.

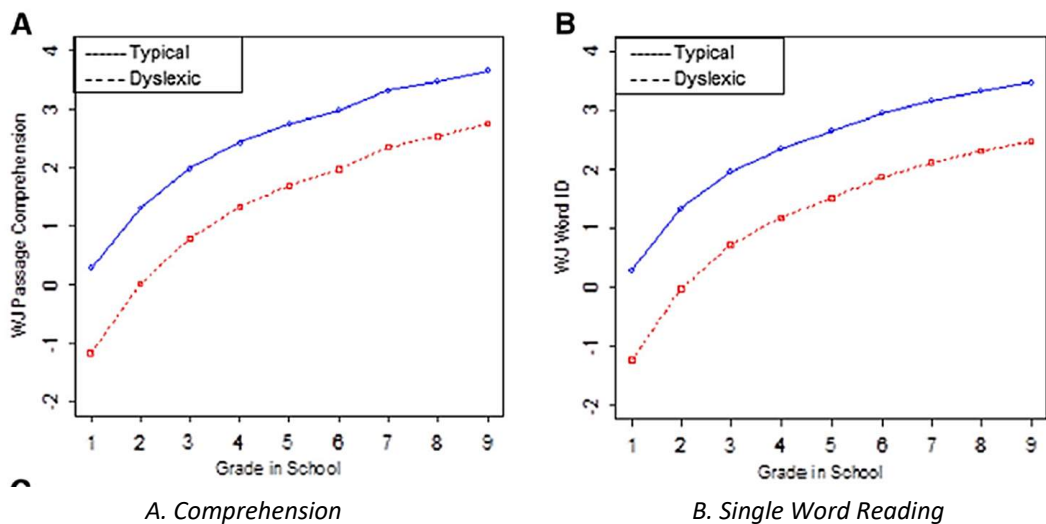


DISCUSSION

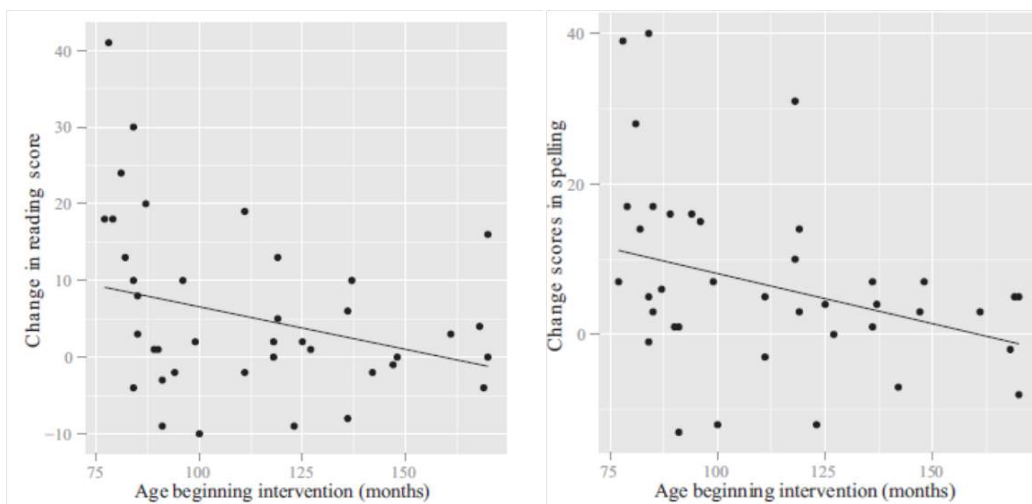
While the dyslexia debate rages on, the impact and influence of early literacy intervention has never been in doubt. Aniq's case study is a good illustration in support of this.

According to a new study by researchers at the University of California, Davis and Yale University, published November last year, the importance to address this learning disability as soon as possible ... and not wait, was once again highlighted. So how likely are problems in early learning to be intractable?

Unfortunately, research shows (Ferrer et al, 2015) that children who start with a deficit in the first grade will continue to show problems right through to adolescence in comprehension and single word reading.



In their longitudinal study of reading from 1st to 12th grade and beyond, revealed findings that “an **achievement gap** appears as early as 1st grade in dyslexic readers and persist into adolescence”. These findings, according to researchers, provide strong evidence and impetus for early identification and intervention for young children at risk of dyslexia. Implementing effective reading programmes as early as kindergarten or even preschool, in their opinion, offers the potential to close the achievement gap.



Scatterplot with regression line for age beginning intervention (months) as a function of reading and spelling gains after one year of intervention (Lim and Oei, 2015)

Local research by Lim and Oei (2015) published last year, also affirms the importance and need for an early start. They found in their research with Singaporean students ages 6 to 14 over one year “indicates that the younger one receives intervention, the larger the gains from intervention in reading and spelling”.

CONCLUSION

Early intervention allows us to make a difference for pre-schoolers, like Aniq, who may otherwise be deprived of the opportunity to achieve his potential. This bubbly outgoing boy can now move on to express his strengths without being pulled down by ongoing weaknesses. Given the measurable outcomes derived from the recent progress evaluation 2015 for 213 students (Wong, 2016) perhaps we can find a better way to reach out and help more children like Aniq.

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ABOUT THE AUTHOR



WONG KAH LAI

Preschool Programme Manager

Wong Kah Lai is the Preschool Programme Manager at DAS. An enthusiastic and passionate educator with more than twenty years' experience in the field of early childhood education, Kah Lai taught young children, mentored teachers, supported parents and caregivers in a wide range of setting, from within the classroom to community outreach, while juggling her Diploma in Early Childhood Education from Wheelock College, and subsequent Bachelor of Education in ECCE from the University of South Australia. She completed her Masters in Teaching English to Young Learners from the University of York through distance learning whilst working full time as head teacher of a bilingual kindergarten in China.

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- 10% discount on full age assessments for dyslexia
- Access to DAS Academy library & e-journals
- Invitation to workshops/talks/sharing sessions by guest speakers
- Invitation to speak at conferences, workshops and courses
- Research consultancy
- Opportunity to be listed on RETA website for private consultation (not applicable to DAS Staff & AEDs)

Please note:

- Membership fee will be charged for 2017 (free for 2018). Your membership will be valid till 31 December 2018
- If you renew your membership between 30 November 2016 and 30 June 2017, the fee should be paid in full as per your membership level and no admin fee will be charged (full 2 years membership)
- If you renew your membership between 31 July 2017 and 31 December 2017, the fee will be prorated by 50%, but membership will only be valid till 31 December 2018 (less than 2 years membership)
- In the case where you decide to upgrade your membership level, an additional admin fee of \$20 will apply and your new membership level will still be valid till 31 December 2018.

6643 9600 | www.reta.sg | info@reta.sg



Register of Educational Therapists (Asia)

73 Bukit Timah Road
#05-01 Rex House
Singapore 229832



Register of Educational Therapists Asia (RETA)

Geetha Shantha Ram

*Director of MOE-aided DAS Literacy Programme and Staff Professional Development
Dyslexia Association of Singapore*

INTRODUCTION TO RETA

RETA or as known in full, the Register of Educational Therapists Asia is an association in Singapore that was formed to connect practitioners working in the field of Specific Learning Differences and Education. This is in addition to endorsing their qualification and at the same time recognising their professional status. This Register started as an initiative by the Dyslexia Association of Singapore and today, it is advised by a three member panel. Among the distinguished names involved in RETA are Professor Angela Fawcett, who is also the Registrar, and Dr Kate Saunders.

RETA works under the tag line, “For educators who make a difference” and the various colours and symbols on their official logo carry a meaning. The blue represents trust, confidence and stability. The yellow is associated with energy, intellect and also children. Finally, the stairs represent success, growth and progress in life.

ESTABLISHMENT OF RETA

Students with specific learning differences (SpLD) require special care from educators and as a result, it is important that awareness is heightened across Asia in general on their needs. Singapore has over the years particularly developed a sustainable educational hub to support these individuals with SpLD. The ever increasing number of students with

“RETA was formed to connect practitioners working in the field of Specific Learning Differences and Education.”

these special needs in Singapore are currently being taught and supported by a good number of institutions including the Dyslexia Association of Singapore, other voluntary organisations, the Ministry of Education and some private institutions.

Such initiatives have put Singapore and the region surrounding it on the map as the place where more students with specific learning differences receive support as compared to many places in the world. These encouraging developments are what necessitated the timely establishment of RETA. The launch was done on 29 October 2012 at Traders Hotel where the chief guest and guest speaker was the Chief Executive Officer of the British Dyslexia Association, Dr. Kate Saunders.

Today, RETA is able to provide support to educational therapists, teachers and other allied professionals. Through the platform availed by RETA, these professionals can come together, form a Register through which high professional practice and the application of related research into practice can be encouraged and pursued. After its formation in 2012, the members had their first meeting on 2 February, 2013 at the Rex House where RETA's Professional Code of Conduct was developed and sealed.

THE OBJECTIVES AND AIMS OF RETA

RETA works with five main objectives and aims which express their mission and vision. These are:

1. Establish and maintain a directory of Educational Therapists that is available to the public.
2. Develop a code of standards and ethics for professional practice.
3. Provide professional guidelines to members of the public who seek the professional services of educational therapists in Singapore.
4. Provide opportunities for the professional exchange of knowledge, research and experience.
5. Encourage and support Continuing Professional Development (CPD) within the field of dyslexia and related learning difficulties.

RETA'S CODE OF PROFESSIONAL CONDUCT

RETA has had a code of conduct and values guiding their members and professionals since 2013. According to RETA, the role of an Educational Therapist is to give individualised intervention based on a student's assessed Specific Learning Difference profile.

In regards to that, RETA has adopted guideline values under the title RICE meaning, Respect, Integrity, Competence and Empathy. This guidelines help in the understanding and management of the standards and behaviour expected of the

Educational Therapists working in the field of Specific Learning Differences. These guidelines therefore ensure that Educational Therapists are aware of their responsibility to always maintain good conduct, while at the same time consciously creating an environment everyone is happy and proud to function in.

THE BENEFITS OF RETA TO PROFESSIONAL GROWTH

Being a member of RETA comes with a number of benefits in the form of access and various discounts to those who choose to sign up to be members. And in 2016 in particular, DAS celebrates its 25th Anniversary and has extended its celebrations to RETA members through the benefits of membership.

Some of these benefits include:

- ◆ Access to the Bi-annual RETA Chronicles, which is an exclusive members' only magazine with professionally relevant material and opportunities.
- ◆ Access to the Bi-annual Asia Pacific Journal of Developmental Delays (APJDD)
- ◆ Up to 25% discount on the resources sold by Dyslexia Association of Singapore (DAS) including a 25% discount on courses and workshops conducted by DAS Academy.
- ◆ Access to the Dyslexia Association of Singapore, DAS, Academic library & e-journals
- ◆ A 25% discount on full age Assessments for dyslexia.
- ◆ Invitation to speak at conferences, workshops and courses.
- ◆ Invitation to workshops, talks and sharing sessions by guest speakers.
- ◆ Opportunity to be listed on RETA website for private consultation.
- ◆ Research consultancy for all members exploring new fields.

RETA has gained attention and the membership numbers (please see table below) have seen an encouraging growth, given the increased activities and a newly introduced sharing of current educational research via email. In 2016 alone, 3 RETA in-person meetings have been scheduled and 17 research articles have been recommended.

Year	Total	Affiliate Member	Associate Member	Associate Member Plus	Member	Associate Fellow	Fellow
2015	10	0	0	0	8	2	0
2016	88	1	4	11	34	16	22

With an increased diversity in membership, RETA is well situated to become a localised and Asian body of knowledge and a way to develop and establish industry standards for both the professionals in the field and the clients seeking the service. Many international researchers and practitioners have sought membership, following the 2016 UnITE SpLD conference: Research Worth Sharing, organised by DAS, noting that there was no similar professional body available in their own country. This is encouraging and indicates that RETA must continue to grow and reach out to professionals in the region and beyond.

ABOUT THE AUTHOR



GEETHA SHANTHA RAM

Director of MOE-aided DAS Literacy Programme & Staff Professional Development

Geetha Shantha Ram is the Director of the MOE-aided DAS Literacy Programme (MAP) and has led curriculum enhancements for the DAS through the Essential Literacy Approach and the current integrated MAP curriculum. Besides MAP, Geetha oversees the Staff Professional Development division and the DAS Research Committee and is also an advisor in the Register of Educational therapists (Asia) (RETA). Formerly, the Assistant Director of the DAS Academy, Geetha trained Allied educators, parents and other professionals and continues to present at conferences, most recently at the 2014 International Dyslexia Association Conference.

Geetha has a Masters in English (NUS) and a Post Graduate Certificate in Learning and Teaching in Higher Education (Distinction) (LMU) while currently pursuing her doctorate. With over 12 years of experience supporting children and adults in the area of dyslexia, Geetha constantly aspires to provide a quality service to dyslexics that searches for and realises their true potential and provides them with a view to appreciate their own unique gifts.

RETA Case Management Discussions

Sumanthi D/O Krishna Kumar¹, Hani Zohra Muhamad², Geetha Shantha Ram³

1. Senior Educational Therapist and Educational Advisor

2. Lead Educational Therapist and Educational Advisor

3. Director of MOE-aided DAS Literacy Programme and Staff Professional Development
Dyslexia Association of Singapore

and Angela Fawcett (moderated)

Research Consultant

Dyslexia Association of Singapore

Introduced just earlier on this year, case management discussions are currently one of the best and newest innovations in the field. The case management studies are dedicated to bringing psychologists, therapists and dyslexic adults from various backgrounds under one roof to help address a problematic case. This ground-breaking approach shows the levels of care and involvement of professionals in Singapore.

Moderated by Angela Fawcett who is a Research Consultant to DAS, and Registrar and Panel Advisor to the Register of Educational Therapists Asia (RETA), the first such meeting was held in to Singapore in April 2016. Angela needs no introduction and her contributions to the field of dyslexia and specific learning differences (SpLD) in the past 30 years have advanced both the theory and practice in the field. She is also the Vice President of the British Dyslexia Association since 2004. What made her interested in this case management initiative was the fact that

"The case management studies are dedicated to bringing psychologists, therapists and dyslexic adults from various backgrounds under one roof to help address a problematic case."

in all her years she had never come across such an approach. Such dedication just went on to showcase the outstanding good practices that characterise DAS and all its members.

All these events have been reported in the RETA Chronicles and in this article, we present her findings as moderator.

THE FIRST RETA CASE MANAGEMENT DISCUSSION

Most educators have asked themselves this question at least once in their career, “what can I do as an educator if I have students who are challenging in their behaviour or literacy attainment or even, both?” Research has clearly found that teachers will face obstacles in effectively enabling students to learn if they have to handle behavioural issues. Additionally, students struggling with literacy tend to take up much more of the teacher’s attention as they require focused guidance. With these in mind, a few case studies were shared of some challenging cases of students at DAS during the first RETA Case management discussion of 2016.

Case Study 1

This study involved a Primary 2 boy staying at a Children's Home. In addition to dyslexia, he was also diagnosed with ADHD. He is however, a bright student showing great potential despite his multiple behavioural issues in school, at the Home, as well as at the DAS learning centre.

The debate among RETA members came up with a good number of suggestions that would be relevant to any other educational therapist facing similar challenges.

Angela reports that the audience were shown a video of this child displaying anger and distress and banging his head on a desk in frustration. The audience were clear that in this case a concerted approach based on rebuilding the trust and self concepts of this child would be needed before we could begin to make much progress on his learning needs. The level of commitment of DAS therapists in their engagement with this child and their patience in trying to engage his interest, was phenomenal.

Case Study 2

The second case study was based on a Secondary 4 student with low cognitive IQ in addition to being diagnosed with dyslexia. This causes him to have major learning difficulties which cause him to perform very poorly in school. As a result, he ended up being placed on a one to one classroom setting. This way he could get the much needed attention and guidance from his educational therapist. Subsequently, a classmate was assigned the task of guiding him with social interactions with his peers. Now, this year, the student is taking his N(T) Level examination which his family hopes he will pass since this has the ability to shape or break his future.

The focus group that followed this discussion resulted in the exchange of ideas in a bid to find other options for students aged 16 and above, who may not be able to enter into the Institute of Technical Education (ITE). Through the discussion, two schools emerged which is a bright glimmer of hope for parents who might have students who fall into this category.

One of the schools is METTA School and their mission is for the METTA student to lead an independent and meaningful life. The school has a vocational programme dedicated to meeting the future needs of the current student discussed. For students who are 17 years and over, this programme is perfect for equipping them with nationally recognised vocational certification in different sectors ranging from housekeeping operation to baking and food preparation.

The other school discussed is DELTA Senior School. This school acts as a post-secondary school within APSN (Association for Persons with Special Needs). In this school, students who face challenges with academic pursuits can prepare themselves for future employment.

Angela noted the concern for the overall wellbeing of this child and the readiness to engage with alternatives to ensure that he received the best possible outcome and an opportunity to express his full potential. Again it was particularly heartening to note the commitment of the staff and their concern to try and identify the best possible future for this child. In closing, Angela and her husband David found this to be an extremely rewarding event, that gave them great hope for the future outcomes for children who engaged with DAS, even those with the most intractable problems.

THE SECOND RETA CASE MANAGEMENT DISCUSSION

Case Study 1

The first case involved a 7 year old who repeated his second year of kindergarten as he could not read or write. This child was about eight months behind chronological age. Although he performed at an average range in visual perception and motor coordination, he demonstrates difficulties when he has to combine both in an activity. He in turn received intervention in speech inclusion, hand-in-hand OT and of course literacy support at DAS.

However, it was found that despite all the intervention the boy still struggled with literacy, reflecting a profile consistent with dyslexia. A school age assessment was therefore recommended to confirm the diagnosis of dyslexia, which was not possible before this as the child was too young during the first assessment.

Case Study 2

The second case study involved a 7 year old girl in P1 who presented issues in attention and had strong headed tantrums in addition to not being able to read or write. She in turn received an intervention in the form of Chinese tuition and literacy intervention through the MOE-aided DAS Literacy Programme (MAP).

Comparing the two case studies, there were results for both cases. There were observations and conclusions based on:

- ◆ Progress with Specific Intervention for Literacy (PSIL).
- ◆ Behavioral Responses due to Family Background.
- ◆ Top-Down vs Bottom-Up Approaches.
- ◆ Dangerous High Processing Speed.

In conclusion, RETA has come to transform the field of Specific Learning Differences and Education by creating clear guidelines for conduct of professionals in the field from teachers to educational therapists.

Intensive Remediation (IR)

Such challenges necessitated the creation of the Intensive Remediation Programme (IR) by the Dyslexia Association of Singapore. This programme was initiated to give extra support and assistance to educational therapists with students who require special attention as described above.

The Intensive Remediation team, which consists of a multidisciplinary panel of professionals, helps both the educators and their students by observing cases and offering suggestions to manage behaviour and learning. Under the IR programme, there are 3 groups to categorize the challenging students. These include IR (1), IR (2) and IR (3) - where IR (3) is the most severe.

IR (1) - This is for a less demanding case requiring some levels of challenge or maintenance of action plans. The student in this case has mild co-morbidity diagnosis in addition to dyslexia.

IR (2) - this is a similar but more progressive case as compared to IR (1). The student should have moderate to severe co-morbidity and a dyslexia diagnosis.

IR (3) - this is a more unique case requiring more challenge and maintenance of action plans. These students suffer from severe co-morbidity besides having a dyslexia diagnosis.

The endgame of IR is to reintegrate these selected students into the main literacy programme, MAP. In 2014, 22 students were given the IR status, with 3 students released from IR. As of September 2016, there are 32 students in IR, which reveals the increasing complexity in the profiles of MAP learners.

While this highlights that increasingly many students who enter the programme may require additional behavioural support, it also reveals the impact IR has made on some learners and the significance of availing such support for our learners. Through this intensive remediation, many students have been supported to achieve the required prerequisite skills and behaviour management strategies in order to be integrated into MAP group classes.

ABOUT THE AUTHORS



GEETHA SHANTHA RAM

Director of MOE-aided DAS Literacy Programme & Staff Professional Development

Geetha Shantha Ram is the Director of the MOE-aided DAS Literacy Programme (MAP) and has led curriculum enhancements for the DAS through the Essential Literacy Approach and the current integrated MAP curriculum. Besides MAP, Geetha oversees the Staff Professional Development division and the DAS Research Committee and is also an advisor in the Register of Educational therapists (Asia) (RETA). Formerly, the Assistant Director of the DAS Academy, Geetha trained Allied educators, parents and other professionals and continues to present at conferences, most recently at the 2014 International Dyslexia Association Conference.

Geetha has a Masters in English (NUS) and a Post Graduate Certificate in Learning and Teaching in Higher Education (Distinction) (LMU) while currently pursuing her doctorate. With over 12 years of experience supporting children and adults in the area of dyslexia, Geetha constantly aspires to provide a quality service to dyslexics that searches for and realises their true potential and provides them with a view to appreciate their own unique gifts.



HANI ZOHRA MUHAMAD

Lead Educational Therapist and Educational Advisor

Hani Zohra Muhamad is a Lead Educational Therapist and an Educational Advisor (EA). Hani joined the Dyslexia Association of Singapore in 2006 and has over the years been teaching and working with students with dyslexia and other co-morbidities such as ADHD and SLI. As an EA, Hani contributes to the mentoring and training of new educational therapists, as well as support colleagues with challenging students. Hani holds a Masters Degree in Education (Special Education) from Nanyang Technological University (NIE-NTU), a Bachelor of Science (Hons) in Management from University of London (UOL) and a Cambridge International Diploma for Teachers and Trainers (Dyslexia). Hani is also a member of the Register of Educational Therapist Asia (RETA).



SUMANTHI D/O KRISHNA KUMAR

Senior Educational Therapist and Educational Advisor

Sumanthi is a Senior Educational Therapist and an Educational Advisor at the DAS. As an Educational Advisor, she contributes to the area of Staff Professional Development. Sumathi has a Postgraduate Certificate in Specific Learning Differences from the London Metropolitan University and has been active in the area of specialized educational services for over 5 years. Her recent research involved a collaboration with 2 colleagues in a study of a comparative analysis of 2 mentoring approaches at the DAS that was showcased at the BDA International Conference 2016. She looks forward to and is excited about participating in future educational prospects.



Speech & Language Therapy

Specialised Educational Services

UNLOCKING POTENTIAL

Specialised Educational Services (SES) is a division of the Dyslexia Association of Singapore.

Therapy is an integral step following assessment for your child that has shown areas of difficulties. The Speech and Language Therapy service is available to all preschool to secondary school students, with no diagnosis of dyslexia required.

Most of our students at DAS attend therapy sessions due to speech (unclear pronunciation) and/or language difficulties (difficulty understanding others and/or expressing themselves). Depending on your child's needs, therapy is conducted individually or in small groups. Through games and functional activities that relate to their everyday life or school, the therapists will help your child become more confident and effective communicators. Speech and language therapy will also help your child to reach his or her full potential in better accessing the literacy programme at DAS and the mainstream curriculum at school.



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6444 5700



ses@das.org.sg



www.ses.org.sg



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Dyslexia and Specific Language Impairment

Hani Zohra Muhamad

Lead Educational Therapist and Educational Advisor

Dyslexia Association of Singapore

Abstract

Children with Specific Language Impairment (SLI) often struggle with receptive and expressive language skills. They often display difficulties in comprehending and producing complex sentences or using the right grammar and vocabulary in their speech or written work. Generally, these children seem to have considerable difficulties acquiring language although grammar concepts such as present, past and future tense, prepositions, conjunctions and singular and plural nouns as well as their usage in speech and writing might have been taught repeatedly to them.

These challenges can in turn impede their educational development and learning as they tend to do rather poorly in school and underachieve in their academic pursuits. Hence, they are at risk of low self-esteem and confidence, bullying and poor academic achievements. As a result, these children are often found to be reserved and shy, or face difficulties communicating with peers and adults. On the other hand, children with SLI can be healthy and possess normal intelligence range, are sociable and may display normal neurological, sensory-motor and social-emotional development. Normalcy in these areas may contribute to protective factors that override the risks mentioned above. This in turn will result in them showing better self-esteem and confidence as they excel in non-academic pursuits.

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INTRODUCTION

Bishop (2008), stated that Specific Language Impairment (SLI) is diagnosed when children fail to develop language skills along normal lines for no obvious reasons. In all cases, before a firm diagnosis is made, hearing loss, physical disability, emotional disturbance, parental neglect and brain injury have all been ruled out. The children develop normally in areas other than language, and will show adequate intelligence if tested using nonverbal measures such as construction puzzles or reasoning tasks with shapes. Generally, SLI is observed in children who fail to acquire age-appropriate language skills but otherwise appear to be developing normally (Joanisse & Seidenberg, 1998). SLI is not a speech disorder that is a result of difficulties in coordination of oral-motor musculature (Cohen, 2002), but a specific developmental language disorder affecting both receptive and expressive language skills with varying degrees of severity.

The causes for SLI are unclear but Bishop (2006) has found a strong genetic disorder for its occurrence. The best evidence for this was found in twin studies where twins who grow up together in the same home environment may differ radically in their language skills. This different outcome can be seen in both fraternal and identical twins but is most common in fraternal twins as they are genetically different. Identical twins, on the other hand, share the same genes and therefore, tend to be more similar in their language ability. Nevertheless, there can be variation and persistence of SLI in identical twins indicating that environmental factors affect the course of the disorder, but it will be unusual to find a child with SLI who has an identical twin with normal language. According to Bishop (2006), although twin studies indicate that genes are important, the occurrence of SLI is not usually caused by a mutation in a single gene. Current evidence suggests that there are many different genes that can influence language learning, and SLI results when a child inherits a particularly adverse combination of risk factors. Parents of children with SLI have similar genetic makeup to their offspring and may well have limited language skills themselves. However, we must not assume that parents with poor language have caused their children's problems by providing insufficient exposure.

Children vary in their language abilities. Hence, it will not be a surprise if children of similar ages show different rates of language acquisition. Moreover, in the Singapore context, children are exposed to more than one language from a very young age. Parents and caregivers may speak English and other languages at home, particularly their Mother Tongue language, making it rather difficult and at times, confusing for children to be fluent and proficient in either language. In the case of children with SLI, the situation is a double whammy as it can be even more difficult for them to acquire two languages and be proficient in either one or both. The onset of SLI is noted to be observed in children as young as three or four years

old (Ervin, 2001) and its prevalence could be between 6 to 8 per cent of preschool children (Simpson & Rice, 2002). They also noted that this problem can persist into adolescence and young adulthood (Johnson et al., 1999).

CHARACTERISTICS OF SLI

Our language consists of five major components namely: phonology, morphology, syntax, semantics and pragmatics. In a nutshell, phonology refers to the organization of speech sounds into segments, morphology refers to the structure of words and mechanisms for creating related words such as affixing and compounding, syntax refers to the structure of sentences and of the grammatical rules that govern their formation, semantics refers to the meaning in language and pragmatics refers to the choices of language people make in social interaction. Typically, when we speak and write, these five major components are considered carefully before we express ourselves. They are involved in our receptive process too as they inform us on the time and context that an event occurs. However, children with SLI will find great difficulty in exercising and applying this knowledge and therefore, manifest it in their poor receptive and expressive ability. The primary symptoms of SLI are delayed speech and slow development of language. Children with SLI will demonstrate varying degrees of strengths and weaknesses in their receptive and expressive abilities but this can change over time.

Children with SLI tend to exhibit short-term verbal memory difficulties, problems with speaking and speech development as well as with listening and following oral instructions. Indeed, many of the difficulties faced by a child with SLI can be found in a child with dyslexia. The common features listed below are highlighted in the Children's Communication checklist, 1998.

(i) Problems with speaking and speech development

- ◆ Delay in starting to talk; first words may not appear until 2 years of age or later
- ◆ Unclear speech and others find it difficult to understand what is spoken
- ◆ Have trouble communicating with other children during play or group discussion
- ◆ Use of simplified grammatical structures, such as omission of past tense endings or the auxiliary "is", well beyond the age when this is usually mastered
- ◆ Commit many grammatical errors when talking
- ◆ Jumble up words while trying to explain something to a listener and thus, make it difficult for the listener to follow
- ◆ Restricted vocabulary, in both production and comprehension
- ◆ Weak verbal short-term memory, as evidenced in tasks requiring

- ♦ repetition of words or sentences
- ♦ Difficulties in understanding complex language, especially when the speaker talks rapidly

(ii) Problems with listening and following oral instructions

- ♦ Struggle with following multi-step verbal instructions or orders
- ♦ Tend to neglect certain parts of verbal instructions, especially if there are several parts to the instructions
- ♦ Find it difficult to follow a conversation and to respond appropriately
- ♦ Have difficulty understanding jokes
- ♦ Have difficulty following an event that is described
- ♦ Encounter difficulty following the plot of a story in a movie or television programme

(iii) Other problems with language and language development

- ♦ Exhibit problems in phonological processing and thus, have reading and spelling difficulties
- ♦ Display word-finding difficulties when conversing
- ♦ Possess limited vocabulary or poor word knowledge
- ♦ Display problems in stringing words together to form proper sentences
- ♦ Confused with tense and aspect of verbs
- ♦ Confused with subject-verb agreement, where the subject can be either noun or pronoun
- ♦ Encounter difficulties using conjunctions to join sentences to form either compound or complex sentences
- ♦ Have problems with the morphological structure of the past tense and past participle forms of regular and irregular verbs

In diagnosing children with SLI, Bishop (2006) stated the characteristics below:

- ♦ Language is significantly below level expected from age and IQ, usually interpreted as scoring in the lowest 10% on a standardized test of expressive and/or receptive language
- ♦ Nonverbal IQ and non-linguistics aspects of development (self-help skills, social skills) fall within broadly normal limits
- ♦ Language difficulties are not caused by hearing loss, physical abnormality of the speech apparatus, or environmental deprivation
- ♦ Language difficulties are not the result of brain damage

Children with SLI often exhibit most of the characteristics mentioned above in speech and/or in writing. Hence, they are prone to being bullied or teased in school when their speech is not well understood by peers. Knox and Conti-Ramsden (2003) noted that children with mixed expressive and receptive language difficulties showed the

greatest increase in behavioural and social problems and therefore, are at an increased risk of experiencing bullying behaviour in school (Botting & Conti-Ramsden, 2000). Additionally, they stated that children with communication difficulties were more likely to be ignored by peers and not invited to join in with social interactions (Hadley & Rice, 1991). Teachers who are unaware or ill-informed about SLI may further misunderstand the behaviour of these children due to their poor abilities in receiving information or expressing themselves.

RATIONALE

As dyslexia often occurs with other learning disorders, it is imperative for educational therapists to be aware of the occurrence of SLI as well as understand how it impacts and affects children. According to Bishop (2008), many studies have shown that children with SLI are at risk of educational failure. It is especially relevant to children with language impairments that persist beyond the age of five years, affecting comprehension as well as expressive language. In fact, it was found that 67% of children with expressive SLI and 88% of those with receptive SLI had serious reading difficulties at 11 years of age (Simkin & Conti-Ramsden, 2006).

Dyslexia and SLI may appear to share similar underlying difficulties in that they both exhibit problems of phonological processing and also short-term verbal memory (Muter & Likierman, 2008). However, there exist differences when examined at the cognitive level and behavioural level. Moreover, Ramus et al 2013, has noted that a multiple-component model of language abilities may best explain the relationship between SLI and dyslexia and the different profiles of impairment that are observed in children. This model considers SLI and dyslexia to be distinct in that, some children with SLI also have dyslexia but some with dyslexia do not have SLI. However, SLI can manifest itself as dyslexia if a proper diagnosis is not established. Classically, children with dyslexia display reading, spelling and writing difficulties. Vocabulary and grammar acquisition for these children may fall within the acceptable range if sufficient exposure to the English language has been provided for them.

Children with SLI, on the other hand, display language deficits in the areas of vocabulary and grammar. Hence, children identified as having dyslexia alone tend to possess age-appropriate vocabulary and grammar knowledge and will show improvements in their reading, spelling and writing ability once the phonological deficit is

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remediated with interventions. On the other hand, children with SLI may show persistent difficulty in the areas of vocabulary and grammar, and remediation with phonological processing will only help those with reading and spelling difficulties to improve in these areas but still struggle with acquiring age-appropriate vocabulary and grammar application. As a result, children with SLI may or may not show difficulties in reading and spelling, but their ability to comprehend passages as well as write proper and complex sentences may be compromised. This difficulty may render them unable to perform well in Comprehension and Writing activities, and often these children do not perform well in English tests.

In view of this, educational therapists need to be aware of the characteristics of SLI and be able to identify the subtle differences between SLI and dyslexia in order to provide the right kind of intervention to children who come through DAS. The most beneficial intervention and remediation for children with SLI would involve the educational therapist remediating the phonological deficit of the child so as to improve his or her reading and spelling ability, and at the same time collaborating with the speech and language therapist who will aid the child in acquiring the right vocabulary and grammar. It is hoped that with these two forms of remediation, children with SLI can show improvement in their receptive and expressive skills.

CASE PROFILE OF A CHILD WITH SLI

Jessie (not real name) was a Primary 2 girl from an elite school when she came under my charge. She came from a predominantly Mandarin speaking family but only started talking at the age of 2 to 3 years. Besides attending the literacy class and speech and language therapy at DAS, Jessie also received English support at a tuition centre, as well as English and Mathematics tuition from a private special needs tutor. Historically, Jessie was attending fortnightly sessions of Speech and Language Therapy (SLT) and Occupational Therapy (OT) at the Society for the Physically Disabled (SPD) at Kindergarten 1 and 2. These sessions were aimed at improving her receptive and expressive language, as well as fine motor skills. According to Hill (2001), significant co-morbidity exists between SLI and poor motor skills, suggesting that SLI is not a specific disorder of language, but rather that children with SLI experience a broader range of difficulties including motor in-coordination. It should also be noted that articulation is one of the most complex motor skills involving thousands of muscle movements.

Before becoming my student, Jessie was under the charge of another educational therapist who observed that Jessie had unclear speech, difficulty understanding oral instructions as well as comprehending text passages and difficulty cutting using a pair of scissors. Jessie's educational therapist noted that perhaps Jessie displayed traits of hyperlexia though this had not been diagnosed as Jessie was able to read

age-appropriate text independently but had trouble understanding what was read. Despite the intensive remediation that she had been receiving, Jessie continued to struggle with the educational demands of school. The DAS psychologist who had assessed Jessie indicated that Jessie had below average non-verbal cognitive functioning and very low verbal ability. Furthermore, Jessie demonstrated poor phonological awareness, weak visual memory and processing skills, as well as difficulties with spelling when writing sentences. Although Jessie's poor phonological processing is a feature of dyslexia, she exhibited a poor command of the English language as was evident in her limited expressive and receptive language skills. On the other hand, Jessie showed age-appropriate processing speed and auditory working memory and was able to read, spell and comprehend what she had read at an appropriate level. Jessie had a performance IQ of 86 which placed her in the below average range and her verbal IQ of 69 was considered as very low. Consequently, Jessie was conferred the STAR PLUS status by an educational advisor who observed that Jessie would benefit from more guidance provided by her educational therapist, and by being in a small class (less than 4). Jessie was put under my charge the following year with two other students who were found to be well-suited for Jessie.

When Jessie came under my charge, she was still undergoing SLT with the DAS speech and language therapist. However, Jessie continued to present difficulty in her receptive and expressive language skills. She faced a major challenge when asked to construct sentences from words or phrases that were just taught to her. It was even more challenging for Jessie to form ideas when writing a short passage. Although Jessie could identify many high frequency words, her reading was jerky and lacking in expression and appropriate pauses. While Jessie presented as very sociable and cheerful girl who enjoyed the company of her peers and often wanted to be involved in their interaction, she had difficulty expressing herself. Similar observations were made during class discussions where Jessie tended to be quiet at times but when she showed enthusiasm in sharing her thoughts, she had difficulty expressing her opinions clearly enough to be understood. Class observations of Jessie depicted a girl who was earnest at learning and compliant when presented with tasks but had great difficulty grasping concepts such as spelling and suffixing rules, retaining information as well as applying appropriate social skills during interactions. Jessie would often interrupt others without understanding social cues, turn taking or the language of others. Such behaviour tended to upset her classmates and at times, a little disagreement would ensue. Jessie needed explicit explanation as to why her behaviour was unacceptable and what actions could have upset her peers. In addition, Jessie was observed to be easily distracted with short attention span as well as rather low in motivation and confidence as she needed encouragement to persevere on her tasks.

Jessie completed her SLT with the DAS speech and language therapist while still under my charge. It was noted by the speech and language therapist that Jessie displayed very poor memory of spoken words and poor discrimination of subtle sounds, was very sensitive to background noise and showed immense difficulties with language processing. Moreover, through an oro-motor examination, it was observed that Jessie tended to maintain an open mouth posture with slight tongue protrusion which led to occasional saliva pooling and drooling. This suggested reduced lips sensitivity which caused Jessie to have difficulty planning and coordinating oral motor movement and hence, affects her ability to sequence the sounds in words. Both the DAS psychologist and speech and language therapist had recommended special classroom accommodations to compensate for the weaknesses that Jessie presented.

INTERVENTIONS AND REMEDIATION

The words 'intervention' and 'remediation' are often used interchangeably but they carry slightly different connotations. Roulstone, Wren, Bakopoulou and Lindsay (2012), viewed interventions as an action, technique, activity or procedure, or a combination of these that reflects a shared aim to bring about an improvement, or prevent a negative outcome, related to a child's speech, language and communication skills. In this respect, interventions for children with SLI include teaching grammar and vocabulary explicitly to them besides providing them with reading and spelling support. Therefore, at DAS children with SLI may receive two forms of interventions: literacy intervention conducted by the educational therapist as well as speech and language therapy conducted by the speech and language therapist. In the case of Jessie, she had received two forms of interventions during her kindergarten years - SLT and OT. Subsequently, she continued to receive speech and language therapy as part of her remediation with DAS.

From the aspect of literacy remediation, Jessie was taught using the multisensory way. As Jessie was faced with the challenge of poor memory of spoken words, instructions given were short and succinct. Occasionally, I would demonstrate to Jessie what I wanted her to do or get her to repeat my instructions back to me. Class rules are minimal and each rule was accompanied by a visual that was easily captured and understood by Jessie. When introducing a new phonogram or sight word, Jessie was made to trace and sound the letters which involved the kinesthetic, visual and auditory route to learning. Where the sight words taught were prepositions such as 'above', 'under', 'behind' or 'between', props were used to demonstrate the idea. Jessie was made to position an item for each preposition to show her understanding. As Jessie loved to draw, she was encouraged to draw when new vocabulary was taught and given pictures to construct sentences and paragraphs in writing. Jessie was encouraged to share her thoughts with me prior to

her writing so that I could guide her in her sentence construction.

Although Jessie faced great difficulty in constructing grammatically correct sentences, her effort was praised for just attempting to form such sentences. This also gave her more confidence to attempt writing independently. Initially, Jessie was prone to form simple and short sentences but as her confidence improved, she became more determined to form longer ones. Occasionally, with the help of the other students, I would act out any phrase or sentence that was taught to aid Jessie in her understanding. In order to ensure that Jessie pronounced words or sounds correctly, she was instructed to look at my mouth and encouraged to model after me in pronunciation or to repeat the sounds given.

Instructions given to Jessie had to be short for she had difficulty retaining information. At times, I had to demonstrate to her how things had to be done so that she could produce what was required. Activities given catered to Jessie's interests such as writing quizzes on the board or doing worksheet exercise as a game. This motivated Jessie to work on her ability at retaining information on concepts taught such as spelling and suffixing rules. Jessie could perform well when instructions were given to her orally and supplemented by visual aid. To guide Jessie towards improving her social skills, she was given clear explanations on how she should interact with others and occasionally, we would do a role play in the class. Jessie's classmates were instrumental in Jessie improving in this area. In order to aid Jessie in expressing herself, she was assisted with verbal expressions to repeat after me.

EDUCATIONAL IMPLICATIONS

Due to the challenging issues that children with SLI face with language, these children often do rather poorly in language based tests. In the Singapore education context, besides the English subject, subjects such as Mathematics and Science are taught and administered in English. Children with SLI will face some challenges in performing well if their language acquisition continues to be impeded by their impairment. Hence, they may display poor scores and underachieve in their educational performance.

In examining the components of these subjects when tested, components of the English paper consist of: Composition writing; Grammar and Vocabulary multiple choice questions; Synthesis and Transformation which involves combining two sentences using connectives; Comprehension components which consist of passages and multiple choice as well as open-ended questions;

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and Cloze Passage which involves filling in the blanks with relevant vocabulary derived from contextual clues. The mathematics paper consists of equations and story sums that students need to understand and be able to perform in order to solve questions and derive answers. The Science paper consists of two sections namely, multiple choice questions as well as structured questions where students have to answer in their own words. As all the components of the test papers are language based, children with SLI may struggle to fully understand questions and passages which may cause them to give inaccurate answers. Moreover, multiple choice questions can be very confusing for children with language difficulties or dyslexia because the answers are often designed to be difficult to disentangle. Access arrangement such as extra time should be granted to them so that they have more time to think and process the questions before attempting to answer them.

Although children with SLI may not perform well in language based tests, it does not reflect their true ability as they may possess normal intelligence and are able to think out of the box during project work as in the case of Jessie. Teachers working with children with SLI have to be aware of their difficulties and needs and therefore, provide the right kind of support to them. In this respect, Jessie had been rather fortunate as her school teachers and allied educator were fully aware of the challenges that she faced and provided her with the kind of support she needed.

REFLECTIONS

At the cognitive level, SLI and dyslexia share some similar underlying difficulties namely, problems of phonological processing and short-term verbal memory ability (Bishop, 2006). Hence, it is common to find the difficulties children with SLI possess manifesting as dyslexia. If a misdiagnosis occur, the kind of interventions given may not be suitable for children with SLI as they may not necessarily address the root problem faced by these children.

In the case of Jessie, her difficulties were identified by her parents at a very early age when she was in kindergarten. Thus, appropriate interventions were given when a diagnosis was made and Jessie showed gradual improvement in her receptive and expressive abilities after undergoing SLT and OT. Although she had completed her OT intervention, Jessie still required some help with her fine motor skills especially at using the scissors when we did cut and paste activities. While Jessie was also showing gradual improvement in her reading and spelling abilities, she was still struggling with verbal and written expressions. She exhibited difficulty in retelling a story, answering comprehension questions or finding the right words to express herself verbally. She often said 'I don't know' or 'that thing' when referring to something. Her speech was found to be unclear at times though some improvement was noticed. Likewise, she continued to show difficulty in forming ideas for sentence

and paragraph construction. Jessie needed much hand-holding and scaffolding when these activities were done.

On the other hand, it was observed that Jessie was showing some improvement in her self-esteem and confidence level. Her interactions with and mannerisms towards her classmates was progressively more tactful as she became more aware of her social behaviour in relation to others. As Jessie realised that her sociable and cheerful disposition endears everyone to her, she made a conscious attempt to exercise a little patience while waiting for her turn or when sharing her thoughts. Furthermore, Jessie could draw well and she was often praised for it by her classmates and everyone who saw her drawings. Throughout my time with Jessie, I noted that she never allowed her weaknesses to get in the way of her learning especially when she was motivated and encouraged. Jessie's parents played an important role in providing her with appropriate academic support and by allowing her to thrive in her areas of interest such as drawing and swimming. These presented as protective factors that spurred Jessie on to keep on trying her best at literacy and oracy tasks.

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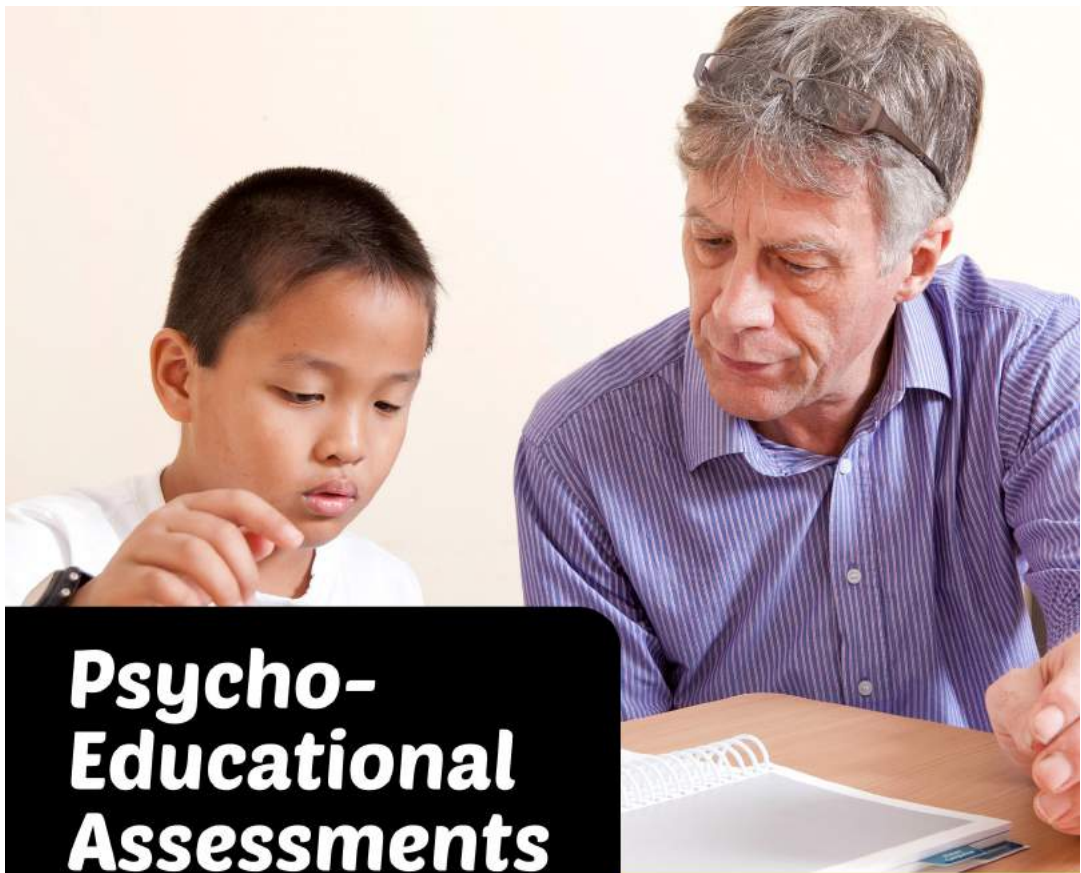
ABOUT THE AUTHOR



HANI ZOHRA MUHAMAD

Lead Educational Therapist and Educational Advisor

Hani Zohra Muhamad is a Lead Educational Therapist and an Educational Advisor (EA). Hani joined the Dyslexia Association of Singapore in 2006 and has over the years been teaching and working with students with dyslexia and other co-morbidities such as ADHD and SLI. As an EA, Hani contributes to the mentoring and training of new educational therapists, as well as support colleagues with challenging students. Hani holds a Masters Degree in Education (Special Education) from Nanyang Technological University (NIE-NTU), a Bachelor of Science (Hons) in Management from University of London (UOL) and a Cambridge International Diploma for Teachers and Trainers (Dyslexia). Hani is also a member of the Register of Educational Therapist Asia (RETA).



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Dyslexia and the Alexander Technique

Dr Margaret Meehan

Swansea University, Centre for Academic Success

The day to day difficulties of adults who experience dyslexia have been reported in articles such as the dyslexia diary (Fawcett, 2014) and by those living in close contact with them in particular with regard to memory lapses and daily experience (Fawcett, 2004; Alexander-Passe, 2015; Cameron, 2016). A recent article by Smith-Spark et al., (2016) concerning the executive function of adult individuals who experience dyslexia noted, most particularly, difficulties in relation to inhibition, set shifting and working memory. They also refer to Nicolson and Fawcett's hypothesis that adults use conscious compensation to mask deficits (Nicolson and Fawcett, 1990), and propose that an impairment in the Supervisory Attentional System (SAS) requires the extra conscious attention necessary to deal with new tasks and in constructing a pattern of thought or behaviour. Further research is needed to support this link with executive function, but it is interesting to speculate that this may underlie some of the organisational difficulties reported in dyslexic adults.

It is well known that anxiety and stress exacerbate dyslexic traits (Carroll and Iles, 2006, Miles, 2004) and as each individual experiences dyslexia in a different way, so the way stress affects each individual will be expressed uniquely.

A key area of diagnosis of dyslexia is difficulty in acquiring literacy skills, so there are some commonalities, for example, an increase in spelling and reading difficulty. As a person who experiences dyslexia, I can appreciate the articles cited above.

"it is well known that anxiety and stress exacerbate dyslexic traits and as each individual experiences dyslexia in a different way, so the way stress affects each individual will be expressed uniquely."

Assistive software can do a tremendous amount to mitigate difficulties in the area of literacy but not under all circumstances. It is often in a setting which is less formal than an academic setting that frustration becomes hard to bear. For example, typing in the wrong bank pin number and having your card swallowed by the ATM, out of bank hours, when you need to pay for a taxi waiting by the curb! In this article I want to give my personal view and describe my own thoughts and experiences.

When there is no time constraint and I am given free rein with content and word count, I enjoy writing. The whole process of researching a subject, making connections, following themes and then thinking about and planning how to set out my thoughts in an accurate and simple style, thus allowing the reader to follow my discoveries and arguments, is work I find engrossing and fulfilling. It is, for me, not a time-conscious process; it is a process of distillation of ideas and crystallisation of the appropriate words. It is almost as if I am not just using my head but my whole self to express my thoughts. However, writing without a deadline looming is so rare as to be a practical impossibility. Why does a deadline make such a difference? Because it fixes in stone the time I have available to process information. I put pressure on myself to short cut this most enjoyable and, for me, necessary process. The pressure and stress I put on myself exacerbates my dyslexic tendencies.

If I allow myself to become very stressed by pressure of work or agreeing to unrealistic deadlines (because, as Ginney Stacey puts it, I am in the here and now, even the next room needs imagination and future), I reach a point each day when I think non-verbally and it is hard to retrieve words and express ideas, although I can 'see' ideas or solutions. My sequential skills are compromised, leading to reading inaccuracy, and in writing my spelling mistakes increase and my sentence structure is compromised. As I hold a responsible position in work, I need to organise my environment to keep stress within healthy parameters. This means giving myself enough exercise and sleep and trying to keep to a healthy diet. I need to plan my diary and give myself adequate time to complete tasks and not take on too much either at work or at home. I can plan for the events I know about, but it can be hard to know what new committee may suddenly require my help and time. I can also allow my ever growing Inbox and the requests contained therein to give me a sense of information overload.

From my early teenage years, meditation has formed part of my daily routine. Meditation and mindfulness are known to reduce stress (Tarrasch et al., 2016) and meditation is known to quiet the sympathetic nervous system (Arch et al., 2016), but what has made the most dramatic effect on my ability to deal with stress is the Alexander Technique (AT). This has been adopted and explored by many AT teachers but it led Dimon (1999) to develop his Neurodynamics or Mindfulness in

Action, an apt designation (Dimon, 2015). AT was developed by Frederick Matthias Alexander, known as FM (1869-1955), as a way of consciously working with mind and body in order that you may achieve your goals in life.

FM was born in Tasmania and his love of Shakespeare together with his talent for acting led him to give recitals and to become involved in theatrical productions. On a tour of New Zealand he started to suffer from loss of voice towards the end of each recital. Medical doctors suggested that he rest his voice which led to restoration of his speech, but this was short lived once he returned to the stage. He recognised that it was the way he was speaking on stage that interfered with his voice production and that the medical profession could not help him. This was an eureka moment. He set out, by observation and experimentation, to discover what he was doing to interfere with his natural ability to speak, and to correct this interference. He discovered that when he was on stage and was about to speak, he pulled his head back unnecessarily which led to him depressing his larynx and the consequent hoarseness of voice. By becoming aware of what he was doing, he had taken the first step towards being able to change his usual, habitual way of speaking.

His next discovery was that it was how he **thought** that changed his musculature. After becoming aware of what he was doing in pulling back his head, he had to learn to stop, or in the terms of AT **inhibit**, producing his voice in this harmful way (see below). He achieved this by **consciously changing his thinking** and then his voice was strong for the whole stage performance. FM recognised that he had built up extra muscular tension when speaking on stage. If he stopped interfering with the natural mechanisms of voice production, he could maintain optimum coordination and poise when reciting. He also realised the importance of the, "dynamic relationship between the head and neck, and between the head, neck and trunk that enhances the individual's locomotor coordination and its overall functioning," (Vineyard, 2007), which he called the **Primary Control**.

Primary Control is a natural phenomenon. If you watch children move and play, their primary control functions optimally such that they do not have to consciously think about it. However, as children grow, they develop habits of standing, sitting and moving which compromise their

"If you watch children move and play, their primary control functions optimally such that they do not have to consciously think about it. However, as children grow, they develop habits of standing, sitting and moving which compromise their primary control, such that additional muscles are activated in ordinary movement."

primary control, such that additional muscles are activated in ordinary movement. This is exacerbated by social demands and activities such as sitting at desks for long periods.

An example of this additional muscular tension is that most car drivers tense up when driving in heavy traffic, particularly if they are in a hurry. I find that I grip the steering wheel tightly and tighten the muscles in my arms, neck and legs. To change this habit I have to become aware of it, stop and then make a conscious decision to release any unnecessary muscular tension. If I allow myself to become tense before or as I get into the driving seat, my muscles are already fired up to make my habitual tension movements when driving during the rush hour. I have to stop or **Inhibit**, the extra muscles being fired up. Vineyard (2007) explains inhibition as “at a neurological level...the capacity of a neuron to cause another neuron to be less easily activated”. She also states that in AT conscious inhibition is the “skilled use of the mind” so that only necessary muscular tension is activated in movement.

Underpinning AT is the principle of ‘a unified view of the organism’, so that no act is purely physical or purely mental (Dimon, 1999). In developing his skill, FM considered the ‘process’ to be more important than the end or goal, and he considered his technique to be educational. He details his discoveries most succinctly in his third book, written in 1932, *The Use of the Self*. I suggest this is the most accessible.

FM was successful teaching AT in Australia, the UK, where he settled in London in 1904, and the United States. He had a thriving practice giving lessons to such people as Sir John Dewey, Aldous Huxley, Sir Henry Irving and Sir Stafford Cripps (Bloch, 2004). His work was recognised by senior men in the medical profession who sent him patients they could do nothing further for, and he had many success stories, many letters from such patients thanking him for their cure or improved health (Alexander, 1932).

In 1931, FM started a training course in London for teachers of his technique and eventually, after his death, the Society of Teachers of the Alexander Technique (STAT) was formed in the UK. Other societies such as Alexander Technique International (ATI) have formed to continue training, scientific research and developing FM’s legacy. (It should be noted that FM’s brother, AR Alexander, also taught the Technique mainly in the USA.) Many AT teachers have websites with podcasts etc. and some are detailed at the end of this article, but concrete scientific research has been relatively scarce. The UK National Health Service has run a study of AT and back pain (Little et al, 2008) and is presently conducting another study on AT and neck pain (<http://www.nhs.uk/Conditions/alexander-technique/Pages/clinical-trial.aspx?CT=0&Rec=0&Countries=All+Countries>).

At the recent AT conference in Limmerick in 2015, there were workshops on AT and Hypermobility (Barber, 2015), often associated with Developmental Coordination Disorder (DCD) known in the UK as Dyspraxia. In addition, Freeman (2014) described the positive effect of AT with individuals who experience Autistic Spectrum Condition (ASC). Thus, I would venture to suggest that AT has the potential to help many individuals with Dyslexia and other Specific Learning Difficulties.

Because AT emphasises that the individual uses **conscious** thinking to re-educate herself, there is a shift in the individual's locus of control (Rotter, 1966), that is, she may realise more deeply that she is able to effect change in her own use of herself and understand the variety of choices available to her rather than pursuing routines without thinking. Currently, I am about to start my third and hopefully final year of training to be an AT teacher at the Bristol Alexander School (BAS). I had my first lessons in 2000 and fairly soon after realised that I would like to undergo the 3 year teacher training because AT improved the quality of my life. As I have applied the principles of the technique, the extra muscular activation and tension I created as I used my body have quietened down such that I now experience a certain lightness and energy which I did not have before. I am more consciously aware of when I am feeling stressed, of how stress affects my muscles, for example, in the tightening of my leg muscles, so that my legs are pulled into my torso.

By inhibiting and **changing my thinking**, I am able to stop interfering with my primary control which improves my coordination and this is accompanied by a clarity of mind. I now find that under pressure, I am able to think more clearly and write with fewer mistakes in numbers and words. It is almost as if I experience a different sense of time and more space in the moment. Using AT I have been able to stop the ways in which I interfere with my natural good coordination and poise, and no longer expend energy bound up in this muscular tension. This enables me to release any emotional tension so that I experience a more positive mood. I am more able to plan my day, I no longer work through the night and I can make better decisions in work and at home. This is anecdotal but I look forward to future research into AT and Dyslexia/SpLDs to explore how conscious control helps individuals to work with their difficulties.

The Dyslexic Academic Network (DAN) launched in March 2016 has allowed scholars in academic positions to voice their solidarity and to indicate to colleagues that dyslexia both is a reality and does not affect innate ability, creativity or the capacity to 'think out of the box'. In my case, using the Alexander Technique (AT) to change my

"In my case, using the Alexander Technique (AT) to change my responses to daily situations, has allowed me to more fully acknowledge and accept myself."

responses to daily situations, such as those described above, has allowed me to more fully acknowledge and accept myself. It gave me the freedom to join DAN, and to be more appreciative of what I have achieved academically and professionally.

Editor's Note

As a friend and colleague of Margaret I can totally endorse her feelings about the impact of AT on her life, and in particular on her processing. This is why I suggested she should contribute this article to the DAS Handbook. As a researcher, Margaret has impressively strong ideas and her support work is second to none. As a dyslexic herself, she has a very real understanding of the complexities of the condition in everyday adult life, even for those whose problems are largely remediated. It is notable that Margaret is able to deal so much more calmly with all the demands that she encounters through her work, and those that she imposes on herself in completing contributions such as this. I would like to congratulate her on seeking out and following through a training that is challenging in itself, but that seems to have enhanced her capacity and her abilities, that were previously masked by the stress of her dyslexia. It is interesting to note that there are many different ways in which we can help those we work with, and help ourselves to achieve greater success and satisfaction in life.

Websites

Articles and other writings on the Technique by Tim Soar:

www.timsoar.com/alexandertechnique/articles.htm

Alexander Technique International:

www.google.co.uk/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=alexander+technique+international

Bristol Alexander School:

bristolalexanderschool.co.uk

British Medical Journal Back Pain Study BAS Video:

bristolalexanderschool.co.uk/bmj-research-into-alexander-technique

Society of the Teachers of the Alexander Technique:

alexandertechnique.co.uk

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ABOUT THE AUTHOR**DR MARGARET MEEHAN**

Dr Margaret Meehan has a PhD in chemistry and is the coordinator of specialist tuition for the Academic success programme at Swansea University. Margaret is co-author with Barbara Pavey of Dyslexia Friendly Further and Higher Education and Dyslexia friendly toolkit.

Dr Margaret Meehan has worked with adults with Specific Learning Difficulties in Higher Education for over 15 years. Initially supporting dyslexic students who experienced difficulties with mathematics and science, she delivers specialist tuition to students across all disciplines. She was a researcher on an award winning Tempus Project on the Identification and Support in Higher Education of Dyslexic Students (ISHEDS) in the Balkan countries and Wales, and has carried out small research projects on Dyslexia and the Experience of Students in Higher Education; Dyspraxia, Dyscalculia and Mathematics; Dyslexia and Entrepreneurship; and Dyslexia, Welsh and Bilingualism. The co-author of Dyslexia Friendly Further and Higher Education (Sage, 2010). Margaret has also delivered Dyslexia Awareness Training to Universities, Local Authorities and private companies. Margaret's main areas of expertise are:

Dyslexia Awareness Training (including other Specific Learning Difficulties)
Diagnostics Assessment 16 years – Adult

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