



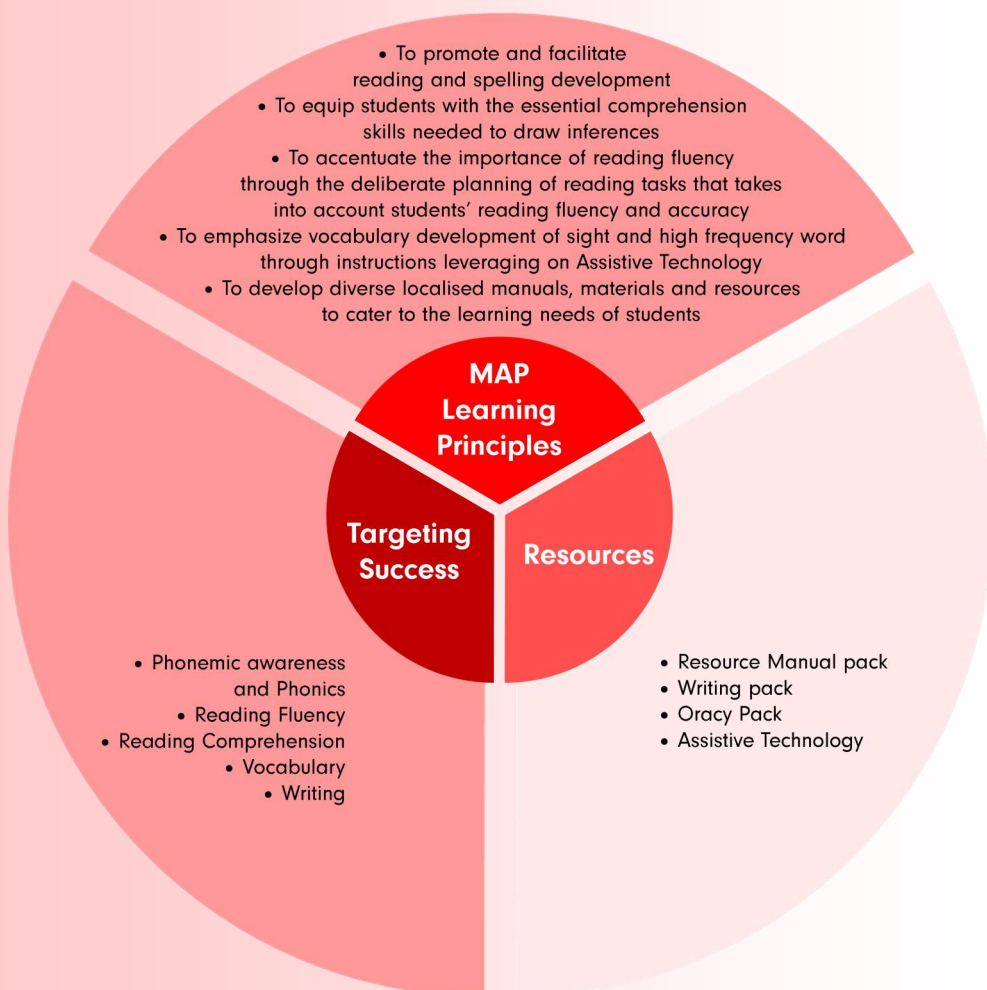
MOE-AIDED DAS LITERACY PROGRAMME (MAP)



MOE-aided DAS Literacy Programme MAP

"To Map the way for young dyslexics to live a life of beauty and promise through a comprehensive, high quality service provided by inspired professionals"

Curriculum Framework - Map provides a comprehensive and quality curriculum to support dyslexic students facing literacy challenges.



MOE-aided DAS Literacy Programme (MAP)

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Dyslexia Association of Singapore

1. BACKGROUND OF PROGRAMME

The Dyslexia Association of Singapore's (DAS) mission is to help dyslexics achieve. The DAS has adopted the Professional Practice Guidelines (PPG) definition of dyslexia which recognises it to be a specific learning difficulty of language learning and cognition that primarily affects accurate and fluent word reading and spelling skills with associated difficulties in phonological awareness, verbal memory and processing speed (Ministry of Education, 2011). All MOE-Aided DAS Literacy Programme (MAP) students require a diagnosis of dyslexia by a registered psychologist to receive help at the DAS.

MAP offers intervention, taught in accordance to Orton-Gillingham (OG) principles, which is language based, cognitive, structured, sequential and cumulative, multisensory, diagnostic/prescriptive and emotionally sound. It aims to skill dyslexic students in the areas of phonics/phonemic awareness, reading, comprehension, spelling and writing.

MAP focuses on these elements:

- ♦ the recommended areas of instruction for learners with dyslexia (National Reading Panel, 2000; Rose, 2009) individualised group lessons taught in accordance to the OG principles (Ritchey & Goeke, 2006; Rose & Zirkel, 2007) and modified in view of institutional and funding limitations

- ♦ a suggested framework of information bearing in mind cultural sensitivities and emphasising conceptual teaching of language components as "[k]nowledge organisation is one element that has been used to differentiate novices from experts" (Ridgeway & Dunston, 2000)

In the year of 2016 and up to October alone, MAP has provided intervention for over 3000 students.

2. VISION

Acquisition of literacy skills is far more than managing school, it's to manage and live life with possibilities. MAP not only looks to provide the literacy skills but as an important by product of its intervention, MAP looks to instil learners with the belief that they indeed can and deserve a future that is beautiful as a child's dream and is full of promise – a potential that is not limited by their dyslexia but instead enhanced by it once they've been given the tools to overcome their challenges.

Given the responsibility of enabling our learners to achieve and put simply, recognising what is at stake if it doesn't, MAP has set itself very high goals and continuously looks towards enhancing its service, both in coverage of knowledge and skills as well as in quality. Not to be forgotten, the dedicated team of MAP educational therapists are reminded of the value of their roles in the lives of these children and through their commitment to the cause, help our learners form these dreams and make them a reality.

Hence, MAP's vision is:

*To MAP the way for young dyslexics to live a
life of beauty and promise through a
comprehensive high quality service,
provided by inspired professionals.*

3. PROGRAMME DESCRIPTION

MAP comprises of three main departments: Admissions, Curriculum Development and Enhancement and Quality Assurance. The main roles of the various departments are summarised below:

- ◆ **Admissions** – A team of psychologists participate in screening of learners to enable identification of at-risk students. Upon receipt of applications from parents, schools and other professionals supporting learners, MAP specialist and educational psychologists conduct assessments to formally diagnose the needs of the learners, and subsequently, make placement referrals for intervention. A team of administrative staff support the referral process as well as bursary needs of students who may require financial assistance.
- ◆ **Curriculum Development and Enhancement** – A team of experienced senior and lead educational therapists regularly evaluate the current curriculum and its relevance based on profiles of students and recommended intervention by the Admissions team. Further development, implementation and enhancement of the curriculum are based on these evaluations and proposals for additional programmes within the curriculum are also considered so that all students equally benefit from MAP.
- ◆ **Quality Assurance** – A team of educational advisors conduct needs analysis, and assist with the development and support of educators through broad based support as well as intensive remediation guidance. The evaluation of educator performance and formulation of further training to groom educators further ensures that the educators are able to effectively translate the curriculum to meet the needs of their learners. Additionally, through progress monitoring of students and their graduation, this department keeps its view on the quality of the programme through the learners.

MAP ... in numbers

Assessments

MAP has continued to provide services to meet the requirements of our clients. This is demonstrated in the number of assessments we have conducted and the increase in student enrolments. From the start of the year till end of August 2016, Admissions received a total of 739 new referrals into MAP. Of these, 547 were for assessments. The remaining 192 referrals were from MOE, for direct placement into the programme.

At the end of August, MAP psychologists conducted 640 assessments, including new assessments as well as review assessments for current MAP students.

Student enrolment

Also at the end of the same period, MAP enrolment stood at 3076, with a waitlist of 87 students.

Intensive Remediation (IR)

Students who enter the programme are not homogenous in nature and some students need more support. The Intensive Remediation (IR) team, which consists of a multidisciplinary panel of professionals, helps both Educational Therapists (EdTs) and their students by observing classes and offering suggestions to manage behaviour and learning.

In 2016, the total number of students on IR increased, as shown in the table below:

	Jan – Mar 2016	Mar – June 2016	June – Sep 2016
Total	27	29	32

In seeking to understand the reasons for this gradual increase, the applications and feedback following observations were reviewed. The noted reasons include:

- ◆ There were more challenging cases in terms of behaviour and cognitive profiles
- ◆ More students with varied co-morbidities were placed together in the same class
- ◆ Students prolonged stay in IR due to the complexity of their profiles

MAP's IR team will continue to monitor this with the intention to improve the management of students with complex profiles.

Financial Assistance

As a part of our mission to benefit all learners with dyslexia, potential students are given bursaries. As of end 2015, 31% of all MAP assessment applicants were given a DAS bursary to assist with the assessment fee payment.

As of June 2016, 46.7% of all MAP students received MOE FAS or DAS bursaries. This is nearly half of the student population at MAP.

Piloting the IDA Institutional Accreditation Process

The International Dyslexia Association (IDA), the oldest and only international organisation, champions the needs of the people in the special needs community. In 2014, IDA proposed the creation of a formal accreditation process to recognise the efforts taken by organisations to maintain standards and implement services of quality. Consequently, a set of Institutional Quality Standards were developed with the following goals:

- ◆ Improve and validate the quality of information and services available to people with dyslexia, including educators, parents, students, and other stakeholders;
- ◆ Provide an organisational framework to mentor applicant institutions;
- ◆ Assist IDA Global Partners in maintaining consistently high-quality operational standards;
- ◆ Increase transparency of external quality assurance.

The Institutional Quality Standards and Accreditation process was then piloted with the Dyslexia Association of Singapore's main literacy programme, MAP. We are proud to note that DAS was one of the first international partners chosen to be evaluated based on recognition of our strengths, and it is also with great pleasure that we report that DAS and MAP met all of IDA's institutional Quality standards.

Just as important, MAP benefited from Dr Charles Haynes, Professor at the Massachusetts General Hospital of Health Professions, who pointed out areas which DAS can continue to strengthen.

4. BANDING

In 2013, MAP introduced banding as a way to ensure that:

- ◆ Student's learning needs are matched with the level of teaching within the MAP curriculum
- ◆ Educational targets are set at the start of the intervention and adjusted as the student progresses through the MAP curriculum.
- ◆ Teaching is more responsive to the student's changing literacy profile so that measures can be put in place to address any lack of response to intervention.
- ◆ Programme evaluation can occur and quality assurance standards can be met
- ◆ Student's exit from MAP may be based, in part, on his progress from his initial banding

In grouping existing students, psychologists utilised available information from the students' psychological reports to position them as Band A, B or C students. Within each band, there are three levels of literacy learning, making it nine levels in total. Each year, MAP monitors and seeks to understand the needs of students who are referred to its programme, knowing that each dyslexic student is different and some may require more intensive forms of support (e.g. speech and language therapy) or a different emphasis of teaching (e.g., more language based work versus more literacy based work).

For instance, Band A covers emergent literacy skills and students who are assigned to be in this band typically have language or cognitive weaknesses that co-occur with their dyslexia. They often show emergent literacy skills, such as having some awareness of the alphabet, how letters are formed, how text goes across the page from left to right and being able to read and spell some basic words. These students need support in boosting their listening and speaking skills while improving on their literacy foundations. They may also need a slower pace of learning, with more opportunities for repetition.

Band B, on the other hand, covers functional literacy skills and students who are placed in this band would likely have fairly developed language skills but significant basic literacy difficulties. They may have some reading and spelling skills of familiar words but struggle with understanding and applying letter-sound correspondence rules in reading and spelling new words. They also have reading fluency, reading comprehension and paragraph writing difficulties.

The total number of students referred for enrolment was 690 from January to August 2016, out of which 29 of them were students who were-joining the programme after a period of absence. The distribution of banding levels of students entering into MAP is shown in Figure 1.

As illustrated, a slight majority of students coming at Band A at 54% as compared to those coming in at Band B at 46%. This suggests that students who were referred to MAP for help were likely to also have weak (listening and oral) language skills in addition to dyslexia. Such language weaknesses signal a need for the teaching to infuse elements of language teaching alongside literacy teaching. This is certainly addressed within the MAP curriculum, given that those who receive a Band A profiling would be placed in classes where listening and oral (vocabulary) work is given greater attention. For those with severe language disorders and dyslexia, speech and language therapy would be activated.

Secondly, in terms of grade levels at entry (as shown in figure 2), a far majority of students enter MAP at the primary school levels, with 51% at lower primary and 40%

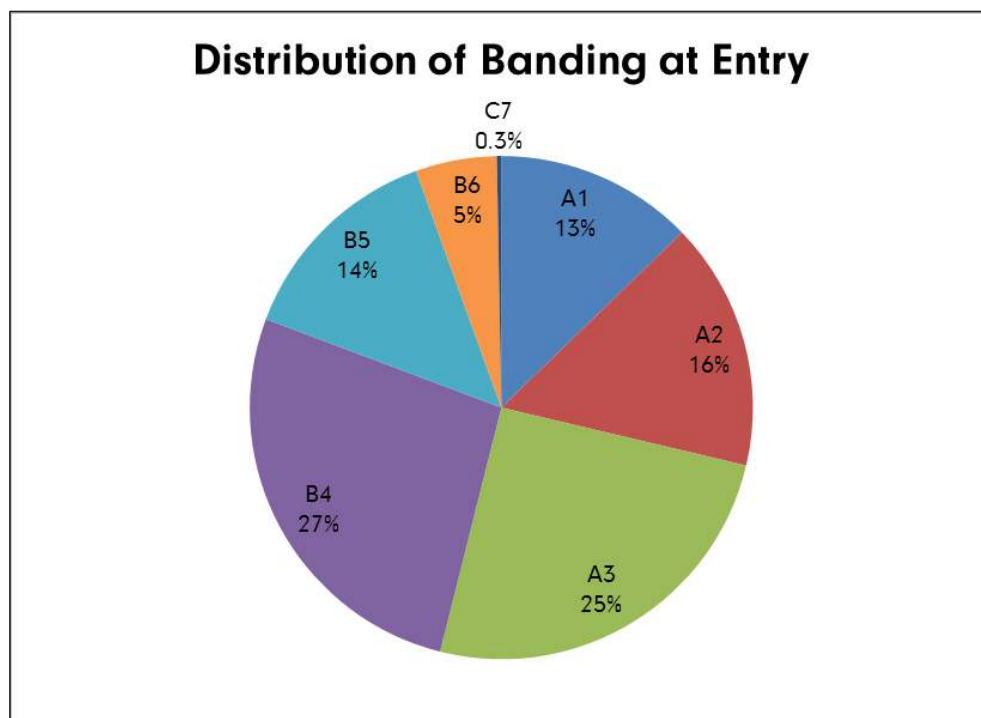


Figure 1. Distribution of Banding at Entry

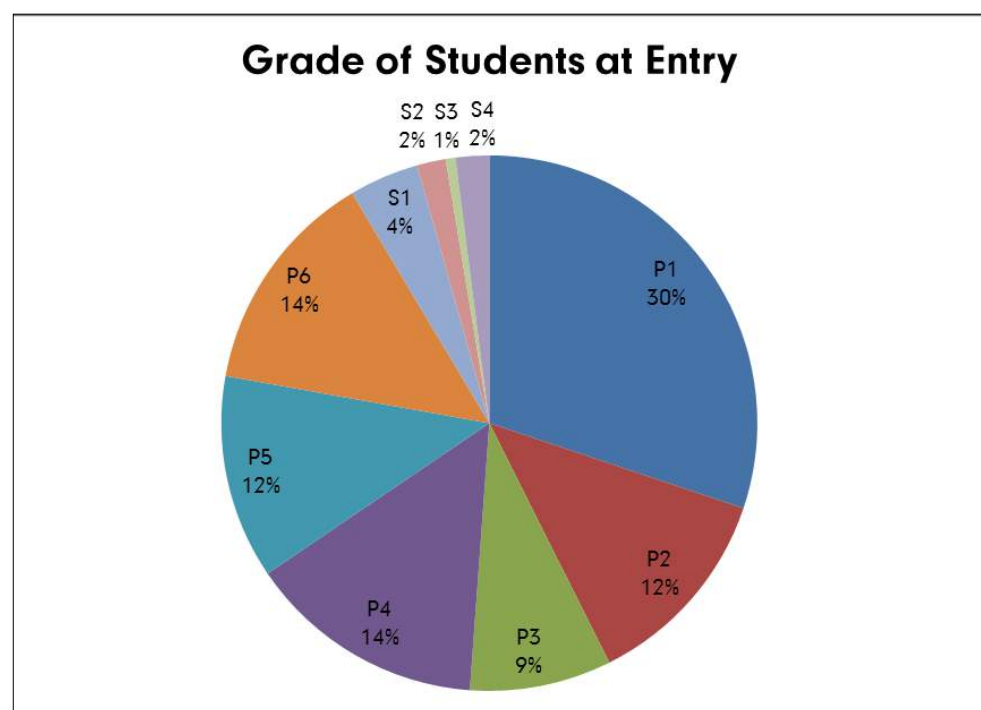


Figure 2. Grade of Students at Entry

at upper primary. Very few students were referred when they were in Secondary school. The latter finding may suggest that more awareness needs to be built among those who work with older students. Further, it may indicate that most students have their needs identified and addressed at an earlier (primary school) age and this is an encouraging thought, given that it was found previously that the earlier one receives intervention, the better the outcome.

Lastly, it is interesting to note that 46% of students who are referred for MAP were seen by DAS psychologists, with 28% seen by psychologists in various settings such as those in private practice, hospitals and community based organisations. 26% of students were assessed by MOE. (Figure 3)

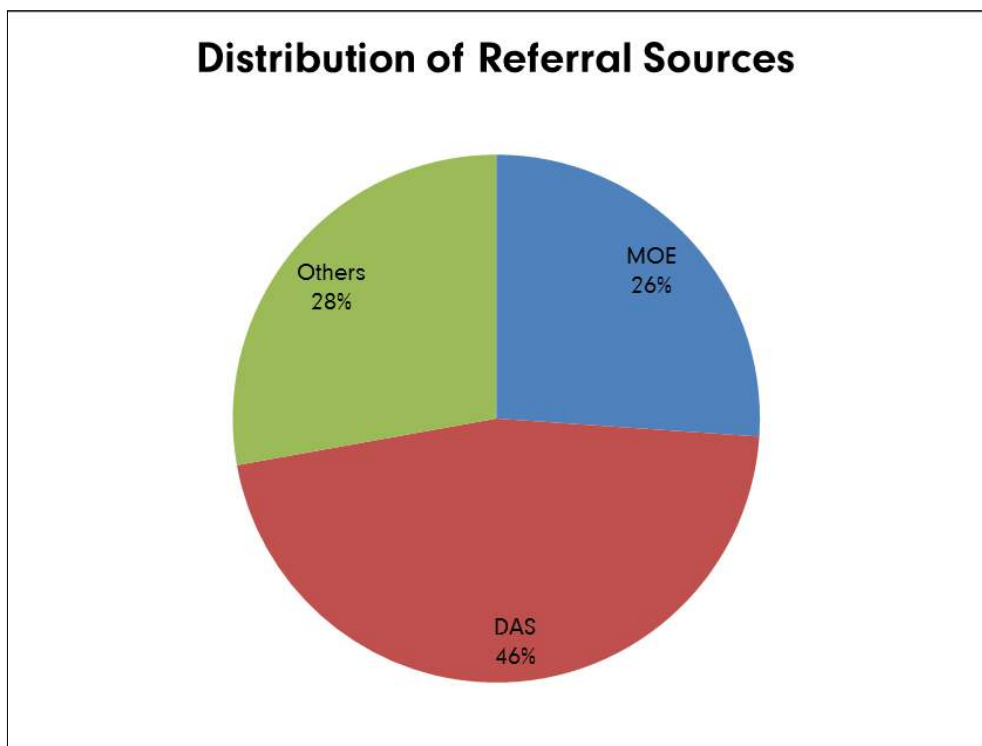


Figure 3. Distribution of Referral Sources

5. LITERACY FOR LIFE

MAP curriculum aims to cater to the varied profiles of students across the different bands (Band A, B and C) to ensure that they progress smoothly up the different bands in a cumulative and sequential manner, building up on their strengths as well as working on their weaknesses. Further, the endgame for all MAP learners is

independence and skills and strategies required to acquire this independence is uppermost in the minds of the curriculum team that develops the content and resources for instruction. As mentioned previously, the curriculum was enhanced to include the following key essential learning components-Language and Vocabulary, Phonemic Awareness, Phonics, Reading Fluency, Reading Comprehension and Writing (Grammar for Writing, Advanced Writing), areas which are necessary as the learners progress in their learning journey. Moreover, technology – with its irreplaceable presence and advantages, has also become an integral aspect of the curriculum and instruction.

Writing

Structured Writing Instruction and Writing Checklist aid Learners with Dyslexia in Writing - A Case Study

The MOE-Aided DAS Literacy Programme's (MAP) Integrated Curriculum at the Dyslexia Association of Singapore (DAS) offers individualised lessons taught in accordance to the Orton-Gillingham Principles (Ritchey & Goeke, 2006; Rose & Zirkel, 2007). The learners attending MAP at the DAS are profiled based on a psychological assessment and subsequently banded according to their learning needs before starting intervention. Writing, other than the other essential blocks of literacy, is taught to the learners in a structured, sequential and cumulative manner.

Thus, a structured writing instruction that follows the process-genre approach (Badger & White, 2000) has been adapted alongside Derewianka's 1990 Curriculum Cycle (i.e. building knowledge of the field, modelling, joint, constructing, and independent writing.) to ensure that the process of writing does not only emphasize on the linguistic skills such as planning, drafting, revising and editing, it also stresses upon the importance of background knowledge, linguistic features as well as text structure that are taught explicitly to learners.

These concrete reminders of critical steps provide learners with a structure that develops their writing skills. Additionally, an adaptation of the 6+1 Traits 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.

Berninger's (2006) research reported that participants with Dyslexia often overcame their reading problems but faced significant problems in spelling and written composition.

Moreover, Summer, Connelly and Barnett (2016) also indicated that the narrative writing of children with Dyslexia was significantly lower than peers of the same age in the following areas:

1. Ideas and development
2. Coherence
3. Vocabulary
4. Sentence structure
5. Grammar
6. Punctuation

Hence, a year-long case study was conducted to explore whether the use of a structured writing instruction and student-friendly checklist could lead to an improvement in dyslexic learners' narrative writing skills as well as their motivation.

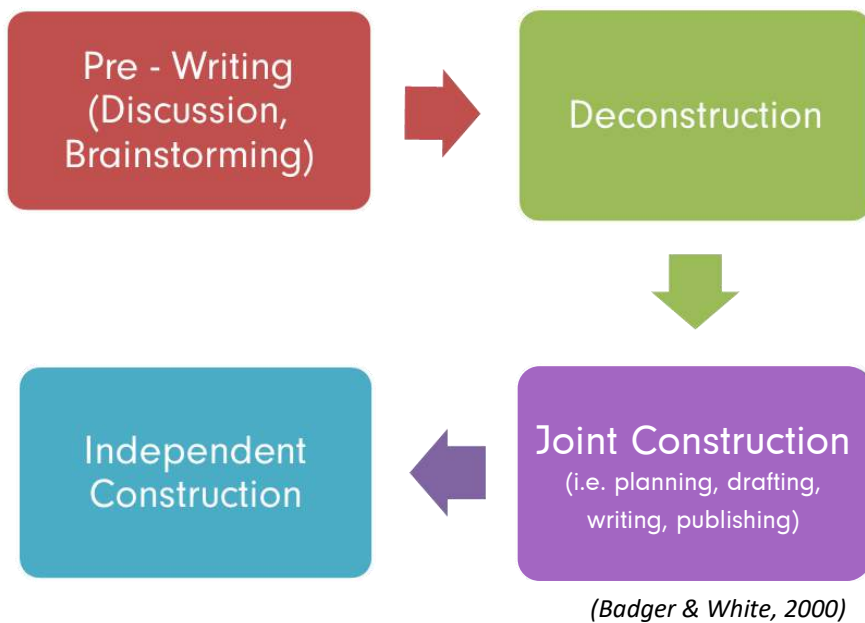
Four classes of students with similar abilities have been identified to take part in the study for four terms (4 cycles) and they were grouped to either be in an experimental or comparison group. Their ages ranged from 10-12 years and they attend mainstream schools. Additionally, all of them have been diagnosed to have Dyslexia with below average scores in their reading and spelling. In other words, the selected participants are not only weak in their basic literacy skills, they also struggle with advanced literacy skills such as Writing and Reading Comprehension. The participants also need a structured, sequential and cumulative teaching approach to enhance their understanding as well as to retain the skills and concepts taught to them. Therefore, over-learning and reinforcement are central to their learning.

A pre-test was conducted at the beginning of the school term (Term 1) of 2016. The comparison group was taught writing using only the structured writing instruction while the experimental group was taught using both the structured writing instruction and the student-friendly checklist.

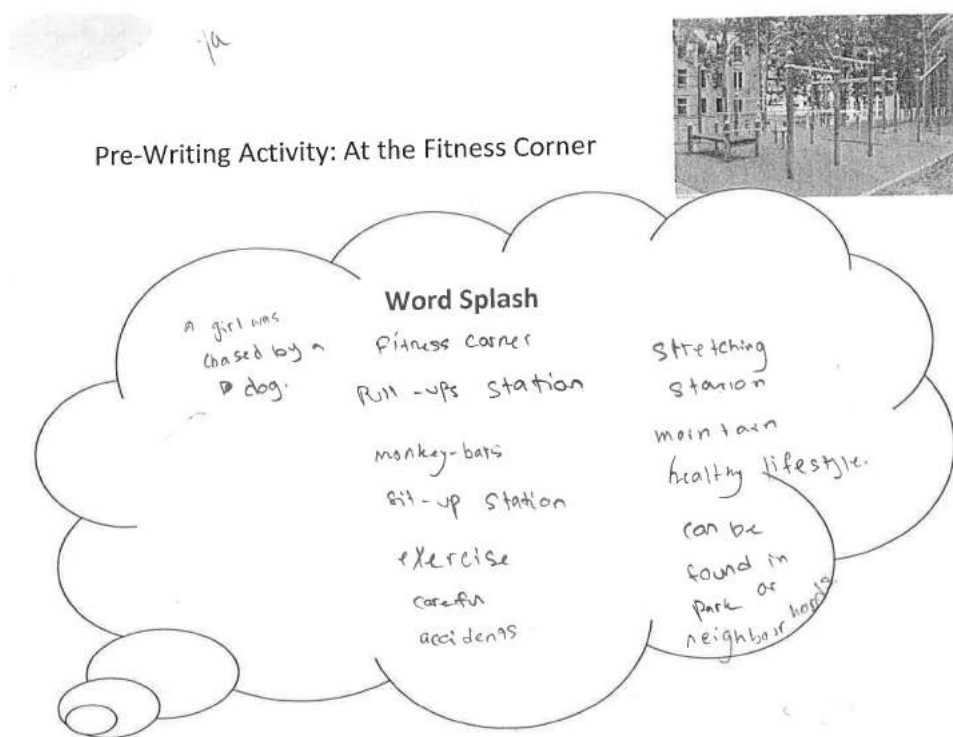
As the study is currently ongoing, only results and data collected from Term 1 (cycle 1) will be shared in this paper.

Stages of Writing: The stages of writing are incorporated into all 4 cycles to teach the students Narrative Writing in a structured, sequential and cumulative approach to:

- ◆ facilitate the pre-activity discussions through modelling
- ◆ scaffold and guide the participants through deconstruction and joint construction provide opportunities for the participants to be independent in applying the skills and concepts learnt



A sample of a participant's work- Stages of Writing Cycle 1



Deconstruction Stage

A2 –B4 exemplar

Exemplar -
Student's copyVocabulary -
words/phases in bold**Text structure**First paragraph:
Introduction

Who

What

When

Where

Why

Second paragraph:

Body

Problem

Solution

Third paragraph:

Conclusion

Language features

Punctuation

Indentation

Subjects/nouns

Action words

Past tense

At the playground

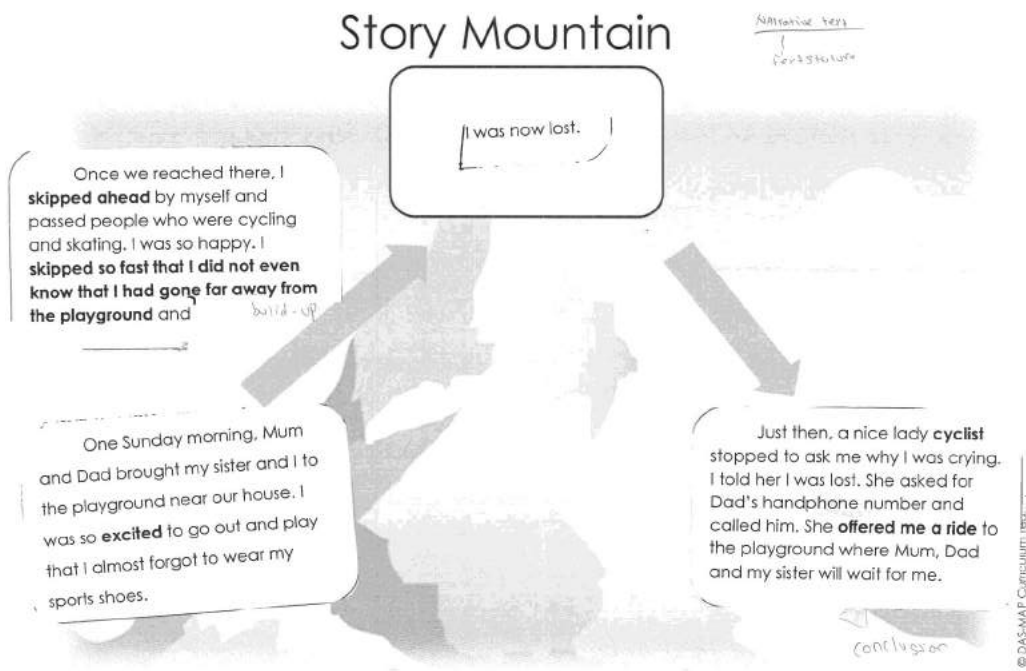
when who who
One Sunday morning, Mum and Dad brought my
who who where
sister and I to the playground near our house. I was so
to look for her
excited to go out and play that I almost forgot to wear
to do something
my sports shoes.

Once we reached there, I skipped ahead by
walk faster than the parents
myself and passed people who were cycling and
skating. I was so happy. I skipped so fast that I did not
even know that I had gone far away from the
playground and I was now lost! I was so scared that I
started to cry. Just then, a nice lady cyclist stopped to
ask me why I was crying. I told her I was lost. She asked
for Dad's handphone number and called him. She
offered me a ride to the playground where Mum, Dad
and my sister will wait for me.

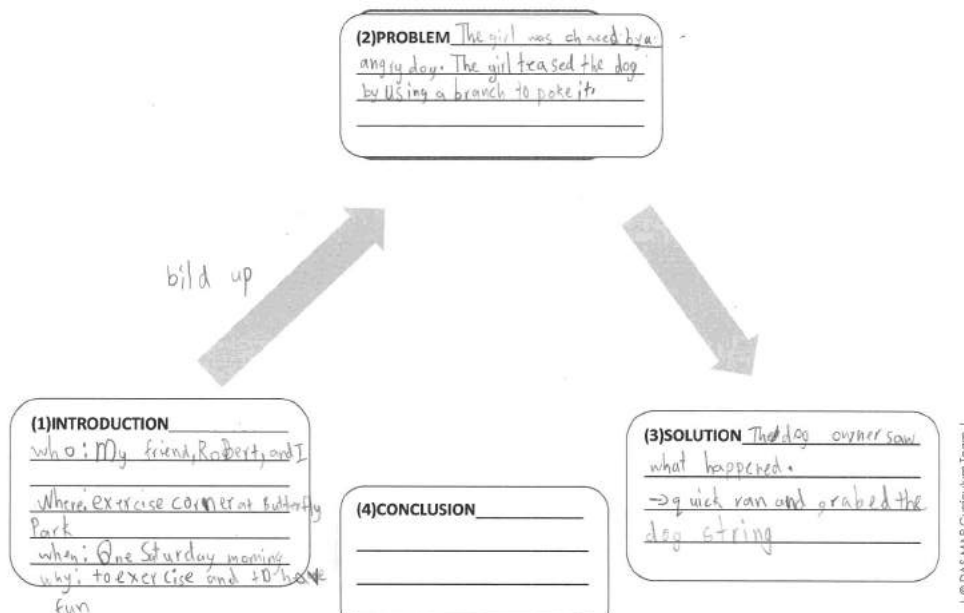
When I saw my parents, I hugged them very tightly.
Feeling relieved, I began to play happily. I slid down the
slides, went up and down the see-saw with my sister and
even made sandcastles. It was a fun day, and I learnt
never to walk ahead by myself again.

Last updated 19.1.16
Serena, Nur Alia, Rosalyn

Deconstruction Stage



Joint Construction Stage

Story Mountain (A Day at the Fitness Corner)

Independent Writing

Writing Activity: Write a story based on the given picture

morning
It was a fine Saturday. Me and my friend Robert decided to go to the exercise corner at Butterfly Park. We want to exercise and to have some fun.

Suddenly there was a girl who was chased by an angry dog because the girl teased the dog by using a small branch to poke it and the dog's owner saw what happened and ran quickly and grabbed the dog's string.

Me and Robert saw that the girl said sorry to the dog's owner. The dog's owner accepted her sorry.

Thank you for your Effort! :)

Samples of Research Materials used

1. Motivation Survey on Writing

The motivation survey used in this study was adapted from Elbow & Belanoff's (1989) "*A community of writers: A workshop course in writing* and a student attitude writing survey".

Two versions of the motivation survey were used to evaluate whether there was a difference in students' motivation towards writing. The first was carried out before the intervention and the second was conducted after Cycle 1. Only the short-answer questions differ, which reflected questions to find out how students feel before and after the intervention.

The components include:

- ◆ Attitude towards writing (3-point Likert scale)
- ◆ Writing process (5-point Likert scale)
- ◆ Short-answer questions on learners' writing topic interests, writing experience in school and their confidence in their writing skills.

Attitude towards writing:

Motivation Survey 2 on Writing

(Adapted from *A Community of Writers* by Peter Elbow and Pat Belanoff and Student Writing Attitude Survey: http://www.english.utoronto.ca/~elbow/1982/2633106/attitude_survey-postal.pdf)

Name: _____ Date: _____

Level: _____ Gender: Male / Female


Dear student,

This survey is to let your teacher know how you feel towards writing. Please answer as honestly as you can. There are no right or wrong answers.

If you do not understand any of the questions asked, ask your teacher for help. You should take about 10 min to finish the survey. Thank you.

Directions: There are three parts to this survey. Read each question carefully and answer all questions.

Attitude towards writing (General) **Circle your answers**

1. 

2. Writing Process (rating scale) **Tick in the given boxes**




























5= All the time	4= Most of the time	3= sometimes	2= rarely	1= never
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Short-answer questions (open-ended) **Write your responses on the lines provided.**

Section A: ATTITUDE TOWARDS WRITING

Circle your answers.

Here is an example:

I like to write using a pencil than a pen.	 Yes	 Sometimes	 No
1. I like to show my writing through drawings.	 Yes	 Sometimes	 No
2. Drawing pictures help me get ideas for my writing	 Yes	 Sometimes	 No
3. I enjoy writing compositions.	 Yes	 Sometimes	 No
4. Writing is hard.	 Yes	 Sometimes	 No
6. I enjoy writing in my spare time.	 Yes	 Sometimes	 No
7. I wish I have more time to do my writing tasks in school.	 Yes	 Sometimes	 No
8. I enjoy my writing lessons at the DAS.	 Yes	 Sometimes	 No
9. I am good at writing compositions.	 Yes	 Sometimes	 No

Writing Process

Section B: WRITING PROCESS

For each question, tick in one of the boxes.

5= All the time	4= Most of the time	3= sometimes	2= rarely	1= never
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Here is an example:

1. On a topic that I do not know much about, I need my teacher's help.

5= All the time	4= Most of the time	3= sometimes	2= rarely	1= never
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Let's begin!

2. If I like or know the writing topic, I am able to come up with ideas fast and independently- not be stuck?

5= All the time	4= Most of the time	3= sometimes	2= rarely	1= never
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3. If I like or know the writing topic, I am able to come up with the vocabulary words to use fast and independently?

5= All the time	4= Most of the time	3= sometimes	2= rarely	1= never
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4. On a topic that I do not know much about, (could be an assignment or examination topic), I am able to come up with ideas to include in my writing fast and independently- not be stuck?

5= All the time	4= Most of the time	3= sometimes	2= rarely	1= never
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5. On a topic that I do not know much about (could be an assignment or examination topic), I am able to come up with the vocabulary words to use fairly quickly and independently?

5= All the time	4= Most of the time	3= sometimes	2= rarely	1= never
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6. On any given topic, I need my teacher to brainstorm ideas together with me before I can write.

5= All the time	4= Most of the time	3= sometimes	2= rarely	1= never
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7. I am able to organise my ideas logically and in the right sequence independently.

5= All the time	4= Most of the time	3= sometimes	2= rarely	1= never
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8. I am able to organise my ideas and thoughts logically and in the right sequence using a writing organiser (e.g. story mountain).

5= All the time	4= Most of the time	3= sometimes	2= rarely	1= never
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9. I am able to organise my ideas and thoughts ONLY with the help of my teacher.

5= All the time	4= Most of the time	3= sometimes	2= rarely	1= never
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Short-answer questions

Motivational Survey 1

1. How do you feel whenever you are asked to write?

2. What topics do you like to write about? (E.g. Sports, Food, Holiday, Games etc)

3. How do your teachers in school teach writing?

4. Would you have more confidence if writing is taught to you in a clear, step-by-step manner?

Motivational Survey 2

1. How do you feel whenever you are asked to write now?

2. What topics do you like to write about now? (E.g. Sports, Food, Holiday, Games etc)

3. Are you more confident now that writing is taught to you in a step by step way?

Thank You!

2. Writing Rubrics

A narrative writing rubric was adapted based on the 6+1 Trait Writing[®] Rubric (Northwest Regional Educational Laboratory, 2004). The rubric was developed for learners:

- i. Whose predominant difficulties are reading, spelling and phonological awareness
- ii. Are beginner writers

The writing rubric was used to assess participants' writing as well as to chart their progress after every writing activity administered over the course of one year.

3. Lesson Plans

A scheme of work that outlines the lesson focus for each writing period was developed to include the writing activities as well as the corresponding teaching resources to use.

DAS-MAP Curriculum Team's Writing Research Cycle 1
Term 1, 2016: 4th Jan - 7th Feb 2016

Writing Lesson Plans - To tick components carried out.

Lesson /Week	Lesson Objectives	Resources	Activities	Notes
1/Wk 1				
2/Wk 1	- Administer Pre-test	- CBA test kit	Administer pre-test (30mins)	Absentees:
3/Wk 2	- Students to complete Student's consent form - Administer Motivation survey 1	- Student's consent form - Survey sheet	1) Students to fill up consent form 2) Administer motivation survey 1 (20mins)	To pass letter and consent forms to students. Absentees:
4/Wk 2	Pre-writing stage	- Picture stimulus (at the playground) => Exam Paper 2, pg 3 - Word splash	Class discussion on topic: At the playground - Introduce topic and vocabulary words	To collect consent forms Absentees:
5/Wk 3	- Give feedback on students' writing	- Rubrics (experimental) - Student-friendly checklist (experimental)	Inform students how they did for pre-test and what to look out for to improve their writing (Control - oral feedback, Experimental - using rubrics and checklist)	Absentees:
6/Wk 3	Deconstruction	- Sample written text (to find) - Story mountain	Introduce text structure -> Sequencing of events in a story mountain -> Highlight importance of paragraphing, indentation	Absentees:
7/Wk 4	Deconstruction	- Student-friendly checklist (experimental)	Introduce language features -> Highlight tenses, importance of punctuation (Control - orally, Experimental - checklist)	Absentees:
8/Wk 4	Joint-construction	- Story mountain	Plan writing topic: At the playground in a story mountain -> Recall vocabulary words and spelling to use in writing.	Absentees:

DAS-MAP Curriculum Team's Writing Research Cycle 1
Term 1, 2016: 4th Jan - 7th Feb 2016

9/Wk 5	Independent writing (mini pilot test 1)	- Story mountain from Week 3 - Writing sheet - Student-friendly checklist (experimental)	To write out their first draft based on story planned -> Recall tenses, punctuation and paragraphing (Control - remind orally, Experimental group: use checklist to check writing)	Absentees:
10/Wk 5	Administer motivation survey 2	- Survey sheet	Administer motivation survey 2 (20mins)	Absentees:

For any changes in lesson plans due to factors such as students/teacher's absence:

Lesson /Week affected	Date to conduct lesson	Resources	Lesson objectives & Activities	Notes

Student G (Pre-test)

It is was a wonder ful day. There got many
 (Pupils) (Butterfly Park)
 pupuuls in butter fly park. There am an davin yoga
 beside the man there Two Churam play sisor their
 (tapping her rabbit)
 a small girl is tap her rabbit.

There is a girl hold a baby and beside her
 family. there is a frog pond beside the pond there is a boy
 are jing in the park and in front the
 old ungal is riding a bicycle beside the ungal
 there is a girl play with a jumping rope be in
 the girl a boy play with his foot ball be me bang
 in to old ungal.
 There a boy throwing his letter into the bushy
 beside he there is three girl playing snec and ledor.

Student G (Post-test)

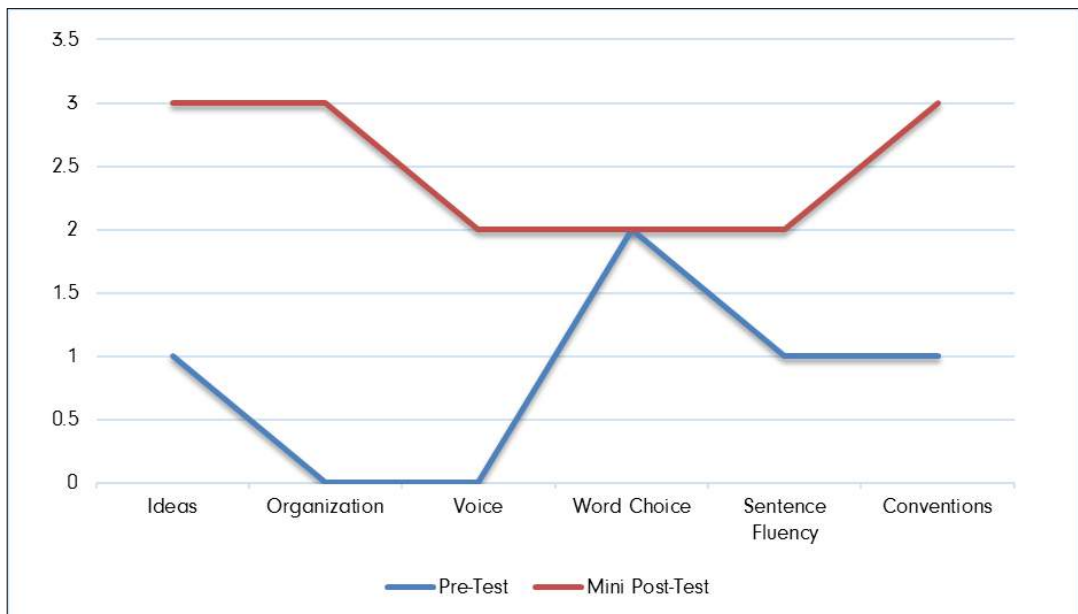
Writing Activity: Write a story based on the given picture

morning
 It was a fine saturday. Me and
 my friend Robert decided go to the exercise
 corner at Butterfly Park. we want to exercise
 and to have some fun

Suddenly There were a girl was
 chased by a angry dog because the girl
 teased the dog by using a small branch to
 poke it and the dog's owner saw what
 happened and ran quickly and grabed
 the dog's string.

Me and Robert saw that the girl
 saved sorry to the dog's owner. The dog's
 owner aspeped her sorry.

Progress observed for Student G (Comparison Group)



Before intervention: Student G was not aware that a narrative writing (story) includes an introduction, a build-up, a problem, a solution and a conclusion. There was also an absence in the development of his characters and setting. Furthermore, his sentences were incoherent and his ideas were not relevant to the given topic.

After intervention: Student G is now aware of the text structure of a narrative text. His ideas were also relevant to the story with the setting, characters and time clearly stated. Although there are still areas to be worked on, Student G has demonstrated small but commendable improvements after a term of intervention.

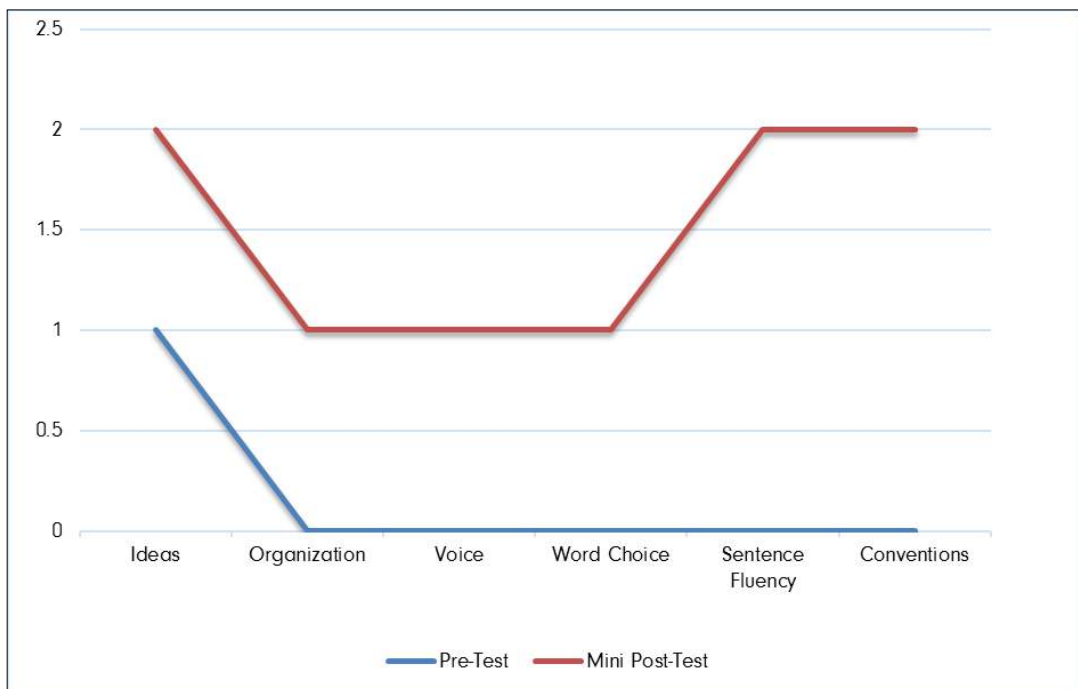
Student C (Pre-test)

Ail^{side} said to the father^{want would} I^{would} want to play (outside^{uwa}
 (satan). To play^{bicycle} buscka^{and} and the father^{outside}
 said I Don't want to play (uwa satan). Bacas^{because}
 ail do not^{listen} listen to the father. Bacas^{do}
 ail so^{rude} real to the father. The father^{out} don't
 want to ail. Ail was^{afraid} afraid to the father.
 Ail said to he self^{himself} he want^{want to make my} make my
 father^{sleep} to sleep are home. My^{my} father^{don't} nag
 wake^{wake us at home} us at home. waka are home.

Student C (Post-test)

Me and my friends climbing at the
 monkey-Bar at the pasir Ris. It's Sunday morning. My
 friends scared to climbing at the monkey-Bar.
 The girl accidentally stepped on the dog's tail.
 The dog chased the girl she was scared. She run^{away} away.
 The dog tripped over a stone. The dog was sad the girl
 stopped^{stopped} stopping. The owner came and said sorry.

Progress observed for Student C (Experimental Group)



Before Intervention: Student C was not aware of the text structure of a narrative text. His writing did not have a problem, a solution and a conclusion. His ideas were also irrelevant to the given topic and picture stimulus. Additionally, there was no paragraphing and his sentences were either incomplete or incoherent.

After Intervention: Student C included a setting, characters and time in his introduction although they were not well-expanded. He also included a problem in his writing which was absent in his pre-test. Furthermore, there was an attempt at paragraphing which made his essay easier to read. As the intervention consists of taking students through the writing stages, students would have received some help with spelling during the prewriting stage. Although so, this final piece was done at the independent stage where no other spelling help was given. Overall, Student C has shown small but steady progress in his writing.

Results (Motivational Survey)

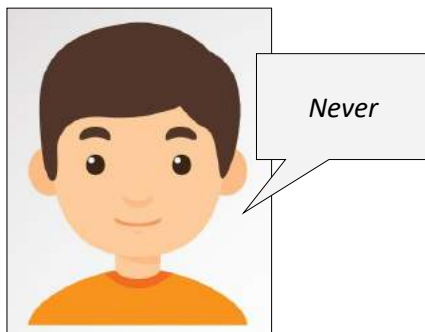
Two questions from the motivational survey are highlighted below to draw comparisons on the participants' motivational levels before and after intervention.

Section B: Writing Process

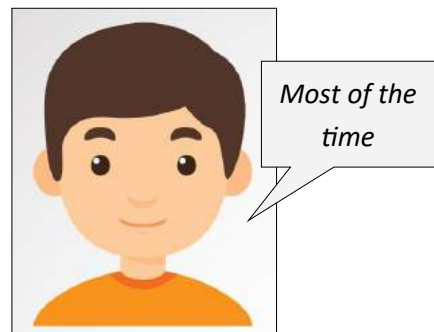
Q 10: I am aware that a narrative text (or story) needs an introduction, a build-up, a problem, a solution and a conclusion.

Student G

Before Intervention (Cycle 1)

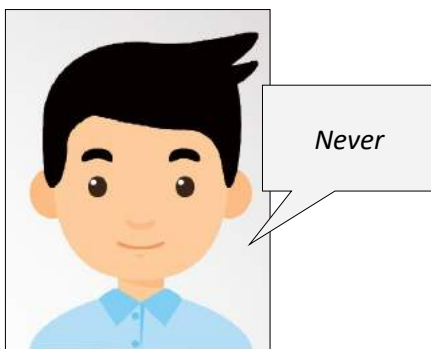


After Intervention (Cycle 1)

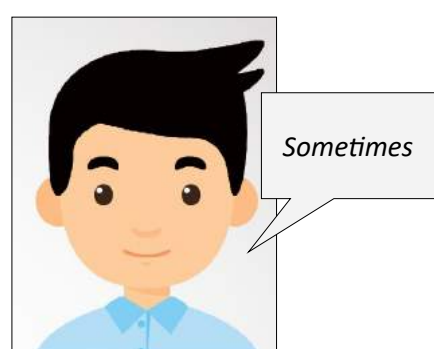


Student C

Before Intervention (Cycle 1)



After Intervention (Cycle 1)



Section C: Short-Answer Question

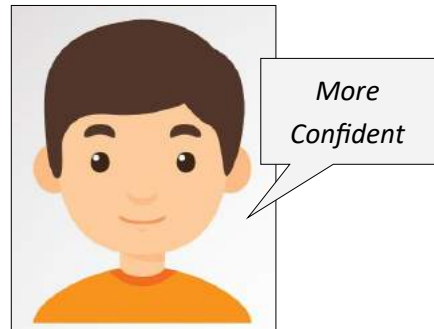
Q 1: How do you feel whenever you are asked to write?

Student G:

Before Intervention (Cycle 1)

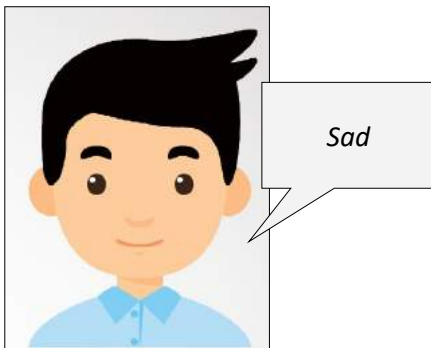


After Intervention (Cycle 1)

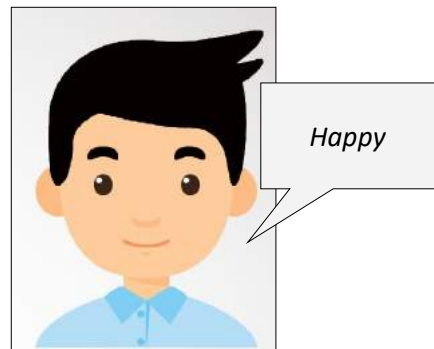


Student C:

Before Intervention (Cycle 1)



After Intervention (Cycle 1)



Future Research

The overall aim of this study is to empower as well as to encourage learners to gradually rely less on the checklist as they become more independent and confident in writing.

The study will continue for another three school terms. All participants will be required to take a mid-year writing test which will be administered at the end of Term 2. A post writing test will also be conducted towards the end of the year.

Additionally, the results collected from the motivational surveys will be further analysed to determine if there have been any significant increase in the participants' motivational levels at the end of the study.

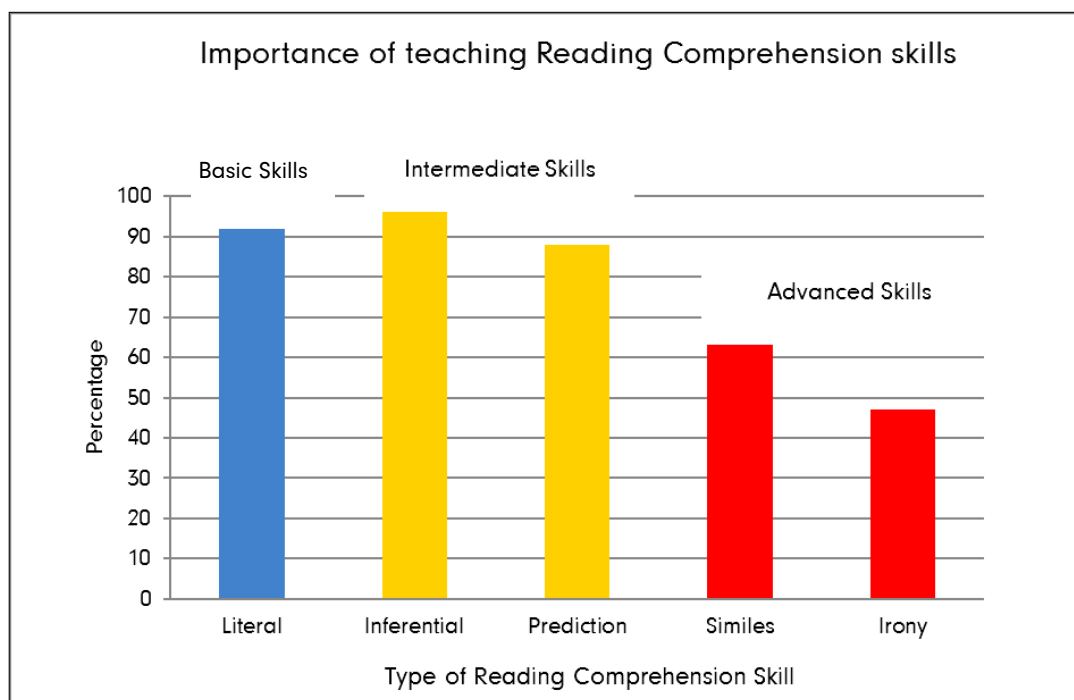
Reading Comprehension

Reading comprehension is defined as the “process of simultaneously extracting and constructing meaning through interaction and involvement with written language” (Snow, 2002). Thus, aside from experiencing difficulty in reading, spelling and writing, learners with dyslexia also struggle with comprehending text which involves higher-order thinking processes such as extrapolating meaning from the text and making sense of what they have read. Therefore, the MOE-Aided DAS Literacy Programme (MAP) Integrated Curriculum at the Dyslexia Association of Singapore (DAS) emphasises on the integration of key building blocks of literacy including Reading Comprehension.

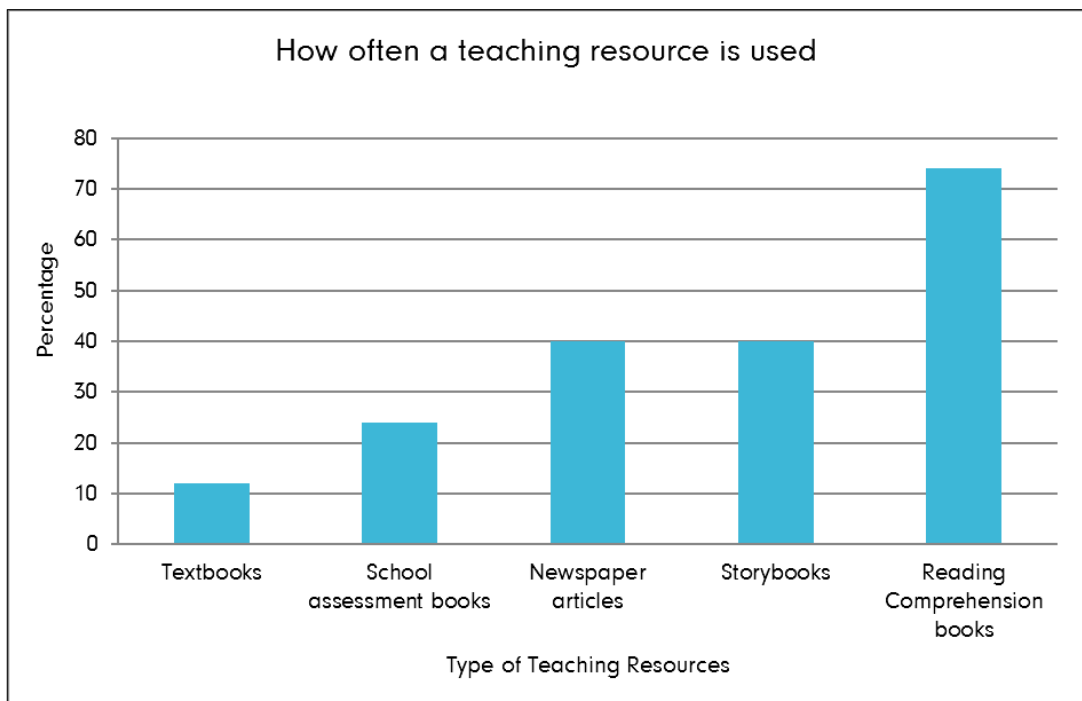
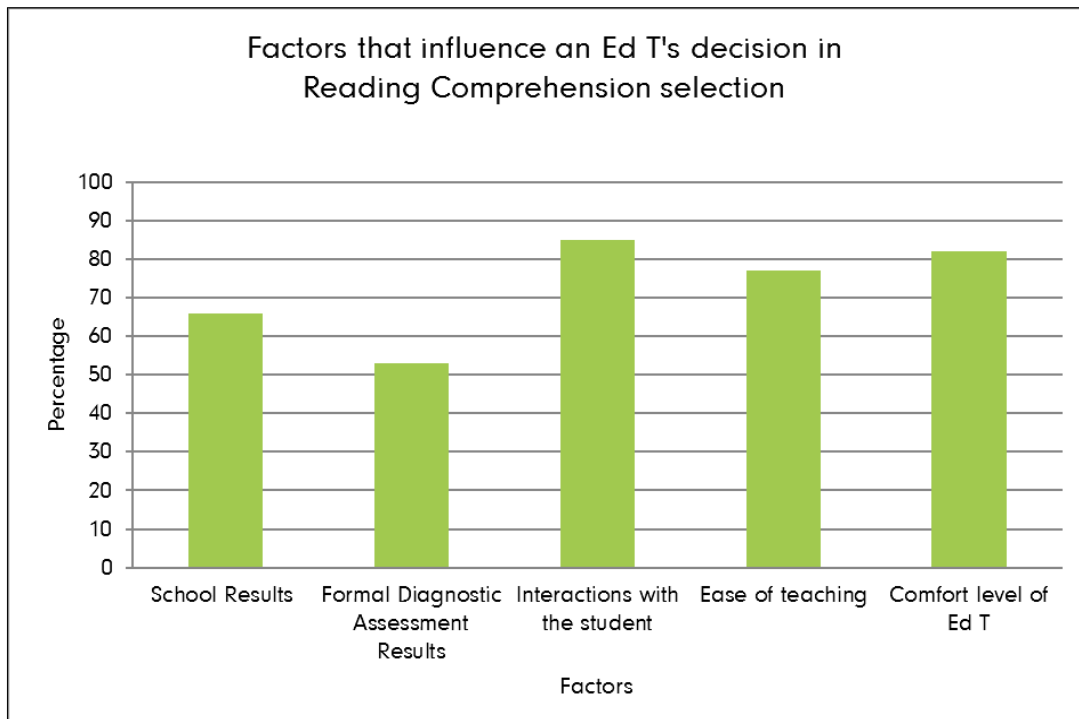
A survey on Reading Comprehension was administered to all Educational Therapists to explore how they feel about the current Reading Comprehension curriculum. The preliminary results for some of the survey questions have been highlighted and presented in the following graphs. The survey results are crucial in enabling the curriculum developers to understand the current sentiments as they work on enhancing the Reading Comprehension curriculum to ensure that it remains relevant, robust and effective for the learners as well as the Educational Therapists.

In one of the questions, Educational Therapists were asked to rate the importance of teaching different kinds of reading comprehension skills ranging from basic (e.g., literal questions), to intermediate (e.g., making predictions) to advanced skills (e.g. figurative language). A sample of the results is presented here by selecting and summing up the Educational Therapists' ratings of five different types of reading comprehension questions.

From the above graph, most Educational Therapists are in agreement (summing up those who agreed and strongly agreed that those RC skills are important) that teaching learners the basic skills (literal questions - 92%) as well as the intermediate skills (inferential questions - 96% and making predictions - 88%) are important to reinforce in their lessons. However, there is a significant decline in the rating of the degree of importance for advanced skills such as similes and irony. The results could suggest that the learners taught by these Educational Therapists may not be required to answer comprehension questions where the knowledge of advanced skills in figurative language is tested.



The survey also aimed to find out the factors that drive the Educational Therapists' decisions in planning and delivering Reading Comprehension in their classes. It is interesting to note that most Educational Therapists do not really consider school results (66%) as the most important factor that help determine what reading comprehension skills to teach. On the contrary, interactions with students ranked the highest (85%). Therefore, it could be hypothesised that the Educational Therapists planned their lessons according to the profiles and abilities of the students they teach, where being prescriptive and diagnostic is pivotal in ensuring that the learners learn in an environment that caters to their needs and pace of learning.



From the survey results, most Educational Therapists ranked 'Reading Comprehension books' (74%) as the most frequently used teaching resource to aid them in delivering reading comprehension in their classes. This could suggest that teaching resources that are specific to reading comprehension that highlight the key essential comprehension skills and the structure provided in scaffolding and guiding the learners in reading and comprehending text are more beneficial and meaningful to the Educational Therapists as compared to teaching resources such as newspaper articles and storybooks.

Enhancements made to the Reading Comprehension Curriculum

Therefore, the results obtained from the survey, the changing needs and demands of our learners as well as the need to keep abreast with the mainstream curriculum were instrumental in the efforts made to enhance the existing Reading Comprehension curriculum. The enhanced Reading Comprehension curriculum aims to empower the Educational Therapists as well as to teach learners how to effectively comprehend and answer questions based on the skills and strategies taught in class.

Each reading comprehension skill is put together according to the PPP (Presentation, Practice and Production) stages to:

1. facilitate the pre-activity discussions through modelling
2. scaffold and guide students through deconstruction and joint-construction
3. provide opportunities for students to be independent in applying the concepts/skills learnt

Lastly, the enhanced reading comprehension resource packs developed also emphasised on the use of relevant and localised content with appropriate teaching principles to enable learners to apply skills learnt to a diversity of context and situations.

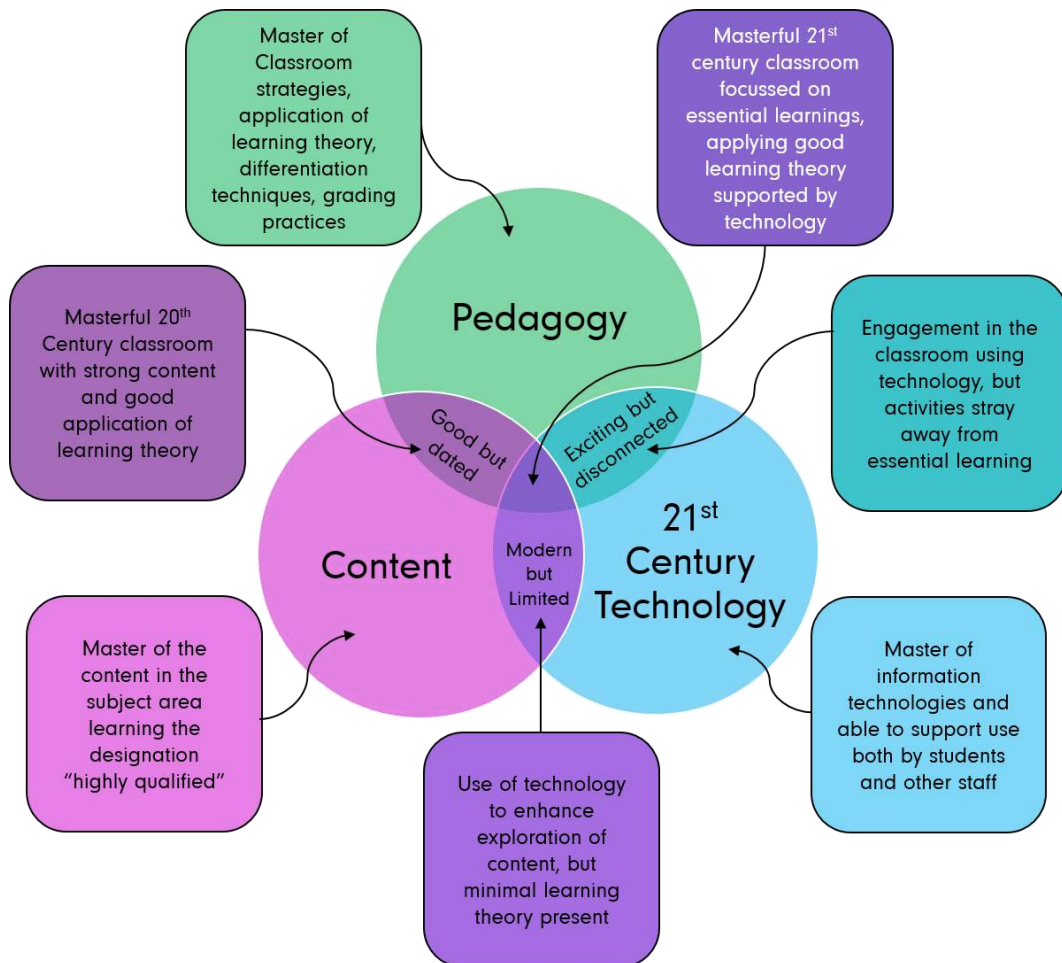
Educational Technology

MAP has adopted an inclusive approach to technology in its literacy classrooms. It started in 2005 with the introduction of touch typing software and later, phonics based software that complemented literacy lessons. Backed by supportive leadership and armed with new innovations, devices and access to world class technology, MAP strives to keep abreast with educational technology.

US National Reading Panel's technology report stated that rapid development of capabilities of computer technology, particularly in speech recognition and multimedia presentations, promises even more successful applications in literacy for the future.

MAP EduTech Pedagogical Theories

There are two frameworks that DAS uses to help guide us as we integrate technology into the learning environment. These are not rules or steps that our Educational Therapists must follow, but are concepts and ideas that can help us make meaningful decisions when using technology to enhance the learning environment for our students.



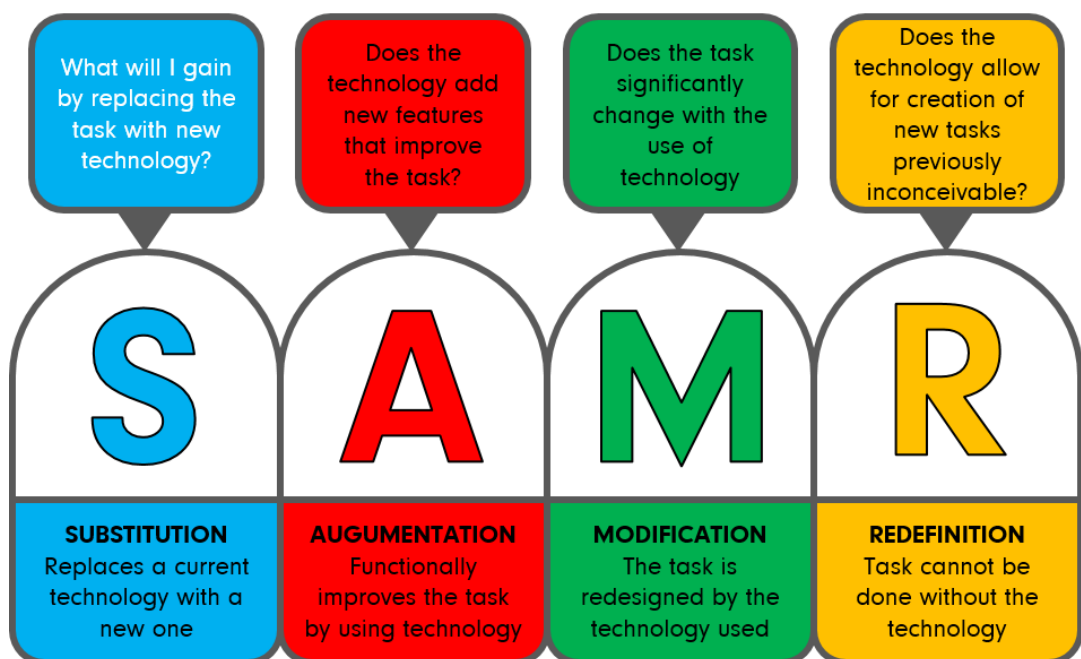
Based on Mishra P. & Koehler, M. j. (2006). Technological Pedagogical Content Knowledge: A new framework for teacher knowledge. Teachers College Record. 108(6), 1017-1054

TPACK

The Technological Pedagogical and Content Knowledge (TPACK) framework describes the three distinct types of knowledge that teachers need in order to teach with technology, and the complex ways in which these bodies of knowledge interact with one another.

In the TPACK framework, what educators need to know is characterised by three broad knowledge bases – technology, pedagogy, and content – and the interactions between and among these knowledge bases. In this approach, technology in teaching is characterised as something well beyond isolated knowledge of specific hardware or software. Good teaching with technology, therefore, cannot be achieved by simply adding a new piece of technology upon existing structures. Good teaching, with technology, requires a shift in existing pedagogical and content domains.

SAMR Model



The key to powerful and authentic technology integration is selecting digital tools that are appropriate for the task. One way to measure this is through the SAMR Model, which was developed by Dr. Ruben Puentedura to provide educators with a framework for successful technology integration. SAMR stands for Substitution,

Augmentation, Modification, and Redefinition. The SAMR model allows educators the opportunity to evaluate why and how they are using a specific technology to design tasks that enable higher-order thinking skills and engage students in rich learning experiences.

MAP has trialled the use of iPads in the classroom and while more can be done to enhance the use of technology in the classroom, the initial feedback and evaluation on iPad use have been positive and encouraging. In the study, 100% of all EdTs surveyed used the iPad for instructional purposes and felt the benefits when using technology in order to ensure that instructions were kept closely relevant to the differing needs of the students in a class. Furthermore, 63 out of 70 teachers surveyed felt that students were more motivated and learned better when they introduced and used iPads during their lessons. Hence, when used appropriately, the benefits of technology and devices such as iPads, cannot be discounted.

Moreover, student progress monitoring has also leveraged on these devices in order to make the task more manageable in a group setting and without taking up too much time from the learning and teaching activities. Moving forward, MAP will be implementing initiatives such as M-learning weeks and “e-teacher of the Term” and “Must-try e-learning activity” awards to encourage the meaningful use of technology in the classrooms. Currently, MAP is also trialling the use of Smartbars, in conjunction with the use of iPads, laptops and projectors.

6. PROGRESS MONITORING

MAPTrack

In 2014, when Curriculum-based Assessment (CBA) was first conceptualised, the intention was to have the CBAs done on a digital platform.

We envisaged a system whereby students did the various components of the CBAs through a digital platform. The system will collate all scores to determine if the student can proceed to the next banding or should the student be at a lower band. In other words, we wanted the following for the digitalised system :

1. CBAs done through I-pads instead of pen and paper.
2. System calculates the scores the students attain in accordance to a defined scoring system.
3. System determines what should the next banding level of the student be and EdT feedback on the suggested banding is collected to accept or reject the suggested banding.

4. Students' scores are stored for easy retrieval and tracking.
5. A graphical representation on how the student progressed from the time they joined our programme to any point in time that we call up their files from the system.

We engaged systems solution developers and started working with them from 2014 onwards. I-pads were purchased to be utilised by EdTs to conduct CBAs. DAS MAPTrack, the domain came into fruition in 2015. It now contains our e-CBA, MAPTrack, in a digitalised format as it tracks our students' progress.

Brief walk through of MAPTrack System

Student's login screen: Student has to key in his/her Birth Certificate (BC) number and password to get logged on to MAP TRACK to start doing their tests.



After logging in, the students will come to the DASHBOARD - This screen shows all the tests that the student is supposed to complete. The students' banding will determine which tests they are supposed to do. This information is automated, i.e. teachers need not select the band appropriate tests. Grey indicates teacher led tests i.e. teacher has to start the test and the test is synced with the student's iPad and teacher does "live" marking. Green indicates student led tests i.e. independent tests that student does on his own which EdT can mark later.

At the same time, EdTs will also be able to see students who are logged in. Yellow circles indicate EdT-led tests. Red circles with white crosses indicate tests not applicable or not done yet.

DAS DYSLLEXIA ASSOCIATION OF SINGAPORE
HELPING STRUGGLING READER STUDENTS

Hi! student 55 Settings Logout

Select 1 of the boxes below to start your assessment.

Picture Naming
Start

PA – Identification
Start

Phonics
Start

Word Reading Accuracy
Start

Letter Formation
Start

Edit And Diagram 1
Start

DAS DYSLLEXIA ASSOCIATION OF SINGAPORE
HELPING STRUGGLING READER STUDENTS

Manage Absentees Class: All ▾ Hi! Teacher 55 ▾

	Picture Naming	Picture Description	PA – Identification	Phonics	Word Reading Accuracy	Word Spelling	Letter Formation	Edit And Diagram 1	Edit And Diagram 2	Edit And Diagram 3	Narrative Writing	Exposition Writing	Persuasive Writing
student 55	●	✗	✗	●	●	✗	✗	✗	✗	✗	✗	✗	✗

English and David Somers-Smith

Listen to Instruction

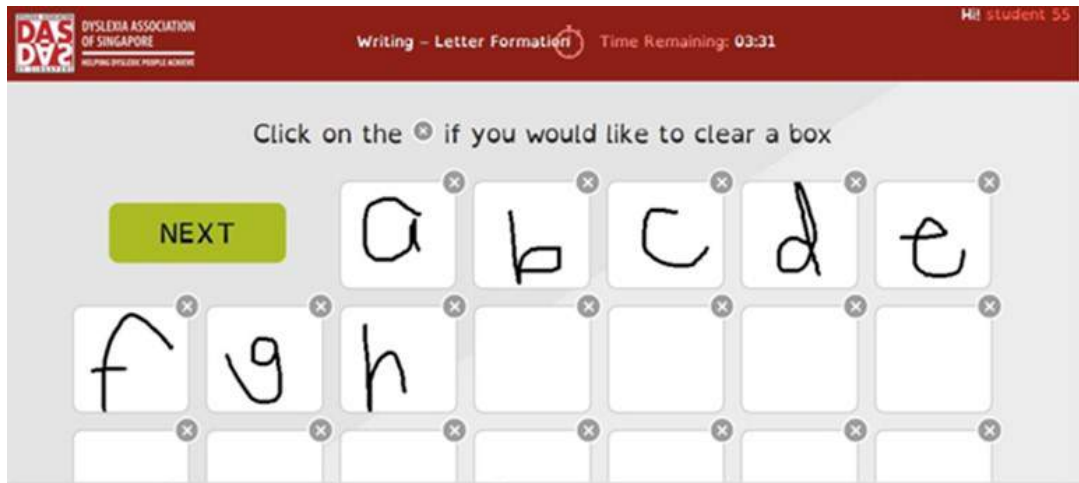


YES

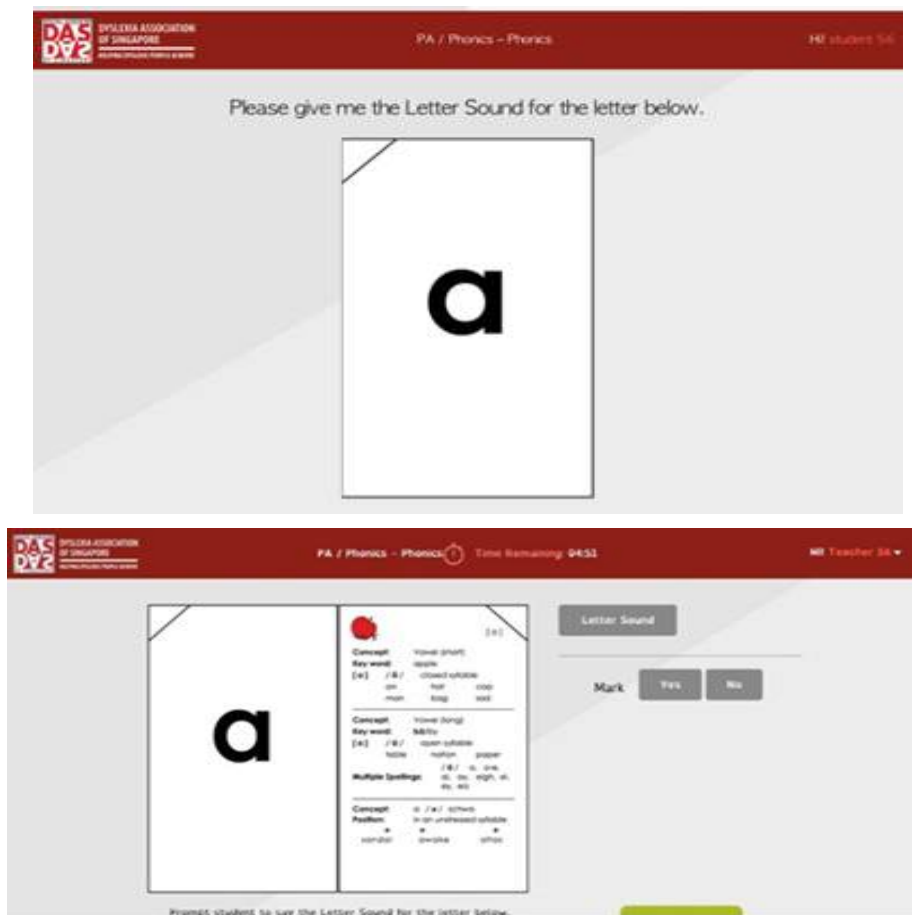
NO

<http://193.237.166.50/assessments/assessments.aspx?GrId=42281>

Letter-formation test sample



Visual Drill – teacher-led test



MAP-TP Programme Evaluation Project

[Based on Interim Report from Temasek Polytechnic (Sept 2016)]

The importance of programme evaluation cannot be overstated. Any intervention given in support of students in addressing their learning challenges needs to be able to provide evidence that it works. Far too many programmes available in the special needs community and commercial market tout benefits of its methods without any real evidence of its effectiveness and this often leads to parents' and students' frustration when there seems to be no improvement. More evidence based practice is certainly welcomed and needed to ensure that more children and their families access programmes that provide good support that is value for their investment of time, money and effort.

The Integrated MOE-Aided DAS Literacy (MAP) Curriculum (IMC) aims to cater to the varied profiles of students and to ensure that they progress smoothly in a cumulative and sequential manner, building on their strengths as well as working on their weaknesses. Hence, the curriculum was enhanced to include the following key essential learning components, Language and Vocabulary, Phonemic Awareness, Phonics, Reading Fluency, Reading Comprehension Writing (Grammar for Writing, Advanced Writing) and Morphology.

MAP is constantly seeking ways to monitor and evaluate its work with students with dyslexia. A year ago, in collaboration with the School of Humanities and Social Sciences at Temasek Polytechnic, MAP developed a simple set of progress monitoring literacy tools to track the progress of students who enrolled into its programme every 3 months. These monitoring tools covered three areas of literacy including reading, spelling and writing and the selection of words of the reading and spelling tasks was based on the IMC's word bank of phonetically regular words graded in difficulty level according to its scope and sequence. The interim results of the MAP-TP Programme Evaluation Project (PEP) are reported here.

Students aged 7 to 9 years old were recruited by seeking parental consent for involvement in PEP upon enrolment into MAP. Four age groups of students were tracked every 3 months: Group A (7-7.5 years old), Group B (7.5-8 years old), Group C (8-8.5 years old) and Group D (8.5-9 years old). The numbers in each age group that has been collected thus far are in Table 1. It is important to note that the total number of participants (at the start) as well as those at session 1 includes a second cohort of participants just at the initial stage of their progress monitoring. The numbers of participants at sessions 2 to 5 are reflective of the first cohort of participants who have completed a year of intervention in this research project.

Table 1. Participants Tested from September 2015 to August 2016

	TOTAL (At the Start)	0 Month (Session 1)	3 Months (Session 2)	6 Months (Session 3)	9 Months (Session 4)
Age Group A (7- 7.5 years)	23	23	18	18	13
Age Group B (7.5 - 8 years)	15	15	8	8	7
Age Group C (8 - 8.5 years)	8	8	6	5	5
Age Group D (8.5 - 9 years)	13	13	9	8	8

The students were tested at each 3 month interval on three literacy tasks that covered the skills of reading, spelling and writing. These included:

1. **Reading Task.** Students were given 3 minutes to read as many words as they can from a list of 18 words provided, as quickly and as accurately as possible.
2. **Spelling Task.** Students were required to spell each word in 3 different ways, namely: sound spelling, letter spelling, and written spelling.
 - a. **Sound Spelling.** Students were required to say all the sounds in the word.
 - b. **Letter Spelling.** Students were required to spell the letters of the word out loud.
 - c. **Written Spelling.** Students were required to write down the spelling of the word.
3. **Writing Task.** Students were given 10 seconds to look at a picture. Afterwards, they were given 5 minutes to write down as many sentences as they could about the picture.

The results of all age groups across all tasks are reported in Table 2.

Table 2. Descriptive Statistics for Groups A, B, C, and D

		Group A		Group B		Group C		Group D	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Reading	0 Months	3.27	3.14	4.13	2.48	3.62	3.66	7.54	3.73
	3 Months	4.47	2.85	5.87	2.42	6.83	3.55	8.56	3.50
	6 Months	8.38	4.75	6.57	3.60	8.60	4.67	11.5	3.59
	9 Months	8.00	3.03	5.75	3.01	8.00	4.42	10.25	3.15
Sound Spelling	0 Months	4.17	3.13	4.40	3.23	3.88	5.33	4.92	2.78
	3 Months	4.13	2.87	5.25	4.20	3.83	3.43	6.44	3.17
	6 Months	4.13	2.42	3.88	2.64	6.40	1.34	4.38	3.20
	9 Months	5.50	4.21	6.29	4.31	8.60	4.04	4.25	3.81
Letter Spelling	0 Months	5.96	3.93	5.80	3.32	8.75	4.20	9.69	3.95
	3 Months	5.25	4.06	6.75	2.96	7.50	3.21	10.67	3.24
	6 Months	6.00	3.16	5.13	2.70	8.40	2.61	9.25	2.96
	9 Months	6.17	2.85	6.00	2.00	7.60	2.41	8.00	2.51
Written Spelling	0 Months	6.26	4.01	6.07	3.01	8.75	3.96	9.85	4.36
	3 Months	5.31	3.81	6.38	2.88	7.33	3.45	9.78	4.30
	6 Months	6.56	3.60	6.25	3.37	9.40	1.95	10.1	2.95
	9 Months	6.25	3.33	6.29	2.50	8.20	2.68	8.25	2.05
Writing	0 Months	13.03	6.44	15.73	4.91	17.06	8.27	15.31	4.37
	3 Months	12.05	8.26	14.19	3.58	17.58	2.44	15.90	4.83
	6 Months	10.60	7.30	11.22	5.08	14.80	4.13	14.63	6.39
	9 Months	14.33	5.95	15.50	4.60	18.70	3.55	17.31	4.94

Of these results, it is encouraging to observe that there is a general increasing trend in the change in scores across most literacy tasks, from the start (0 Months) of the programme to 9 months into the programme.

The preliminary results for spelling and writing are notably on an upward trend, though most of the changes in scores have not yet reached statistical significance. This could be because there are not yet enough students' performances to include in the analyses and ongoing efforts to collect more data from students will help to improve the power of the analyses in future. Further, there is also the possibility that it may take a longer time for the intervention in general to make a noticeable impact in improving spelling and writing.

In particular, the positive gains are most evident in reading, with the changes in reading scores across all age groups (Groups A to D) reaching statistical significance. This suggests that the effects of intervention on improving reading in those aged 7 to 9 years old may become evident after 9 months into the programme. This is a very encouraging finding.

To address the possible effects of developmental change (i.e. reading skills improving as an outcome of one growing older), this study used age control groups to evaluate the effectiveness of the IMC. That is, this study compared students of similar age groups who just entered the programme (0 months) and 6 months after. For instance, students aged 7.5 years old who underwent 6 months of intervention are compared to students aged 7.5 years old who had not undergone the intervention yet.

It was found that the results for the youngest group (7 years old) for reading showed significant change, but not the other age groups (8 to 9 years old). This suggests that the positive gains in reading, with changes in development accounted for, are possibly most robust in those who are younger. This concurs with previous findings that the earlier one receives intervention, the better the outcome may be.

This study is still ongoing, with intentions to continue to add to the numbers in each age group so that more analyses could be run. Currently, the results after months of intervention appear promising and with greater sample sizes and the measurement of skills beyond 9 months, it is expected that future reports of this evaluation will continue to include interesting and encouraging results.

Graduation

“Graduation is not the end, its the beginning”

In 2015, 249 students graduated from MAP programme. This is an increase from the 167 students who graduated in 2014. EdTs recommend students for graduation and these recommendations are reviewed by the graduation panel which compares their performance in MAP against their performance in school before approving their graduation.

MAP graduates consist of two groups:

- ◆ Auto-graduates, who exit the programme because they are about to exit secondary school education and,
- ◆ Graduates, who meet the graduation criteria

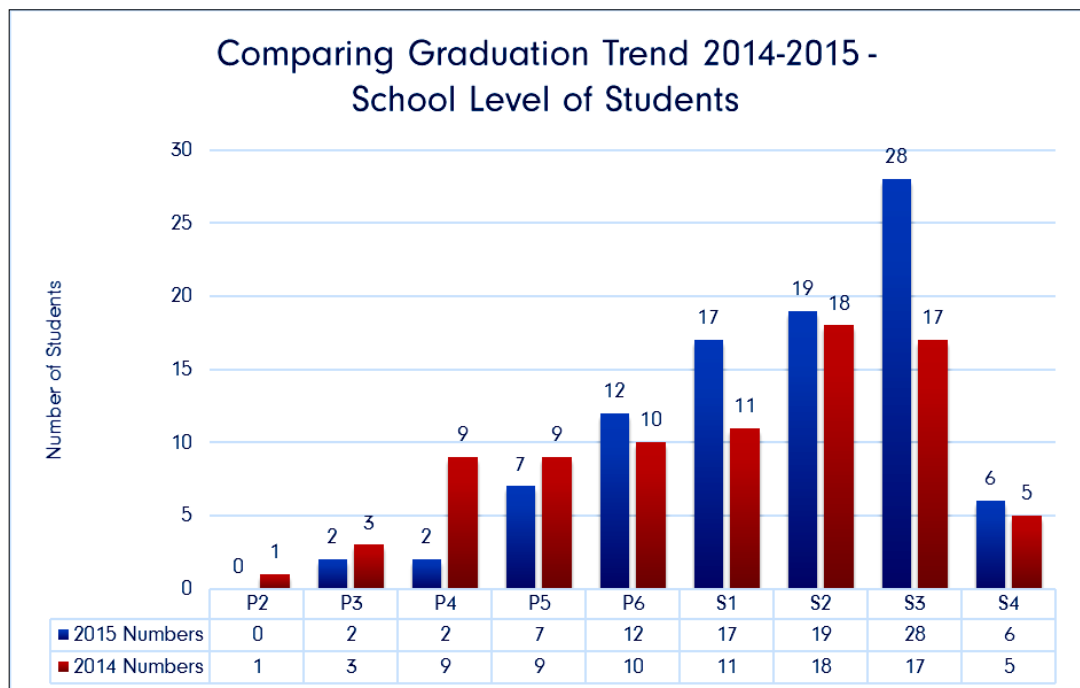
A total of 96 recommendations for graduation were received - 93 students were approved and the other 3 students were recommended to stay on the programme and continue with the remediation.

Comparing 2014 and 2015 Graduates

An analysis of the graduates revealed the following:

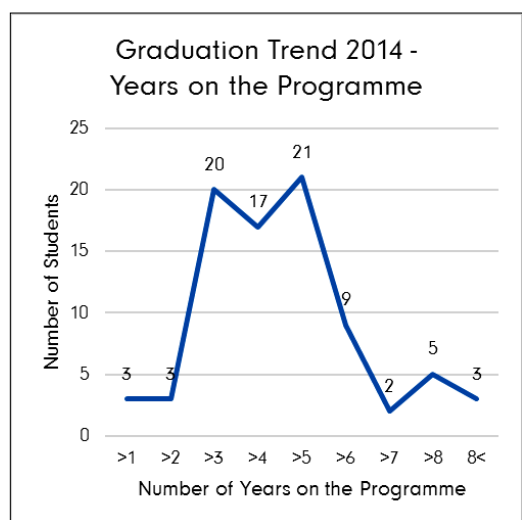
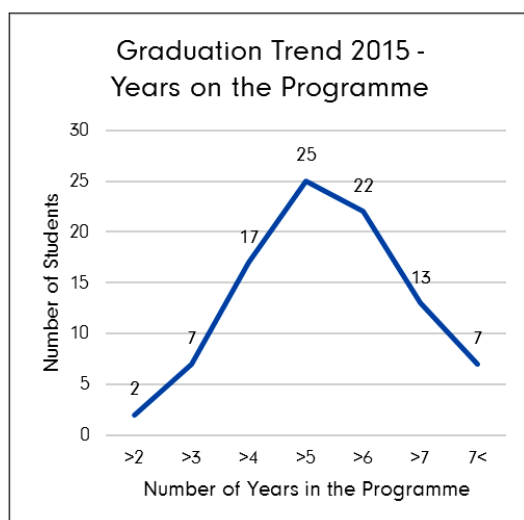
- ◆ Highest number of graduates was from the Sec 3 level – they constituted 30.11% of the total number of approved graduates, 28 of the 93 students.
- ◆ Highest percentage of students stayed on the programme between 5 years to 6 years – they constituted of about 26.88% of the total number of approved graduates, 22 of the 93 students.

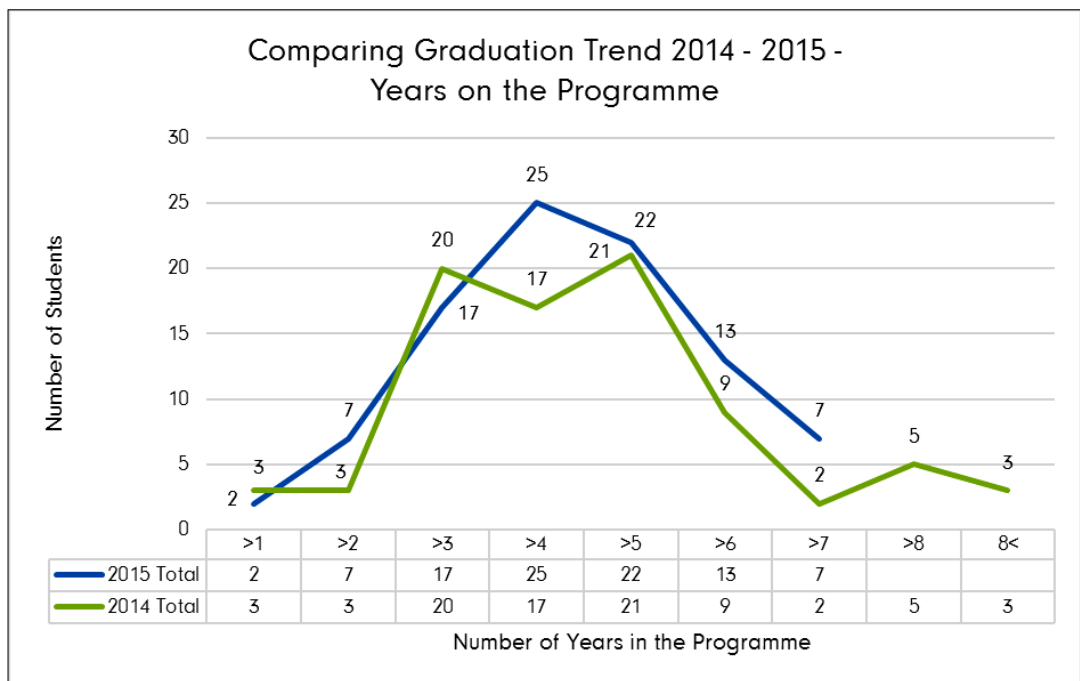
	P2	P3	P4	P5	P6	S1	S2	S3	S4	TOTAL
2015	0	2	2	7	12	17	19	28	6	93
2014	1	3	9	9	10	11	18	17	5	83



In 2015, the highest number of graduates was from the Sec 3 cohort of students whereas in 2014, the highest number of graduates came from the Secondary 2 cohort.

For both 2014 and 2015, the highest number of graduates falls within the range of Secondary 2 to Secondary 3. This trend is probably due to secondary students gaining the ability to take ownership of their own learning.



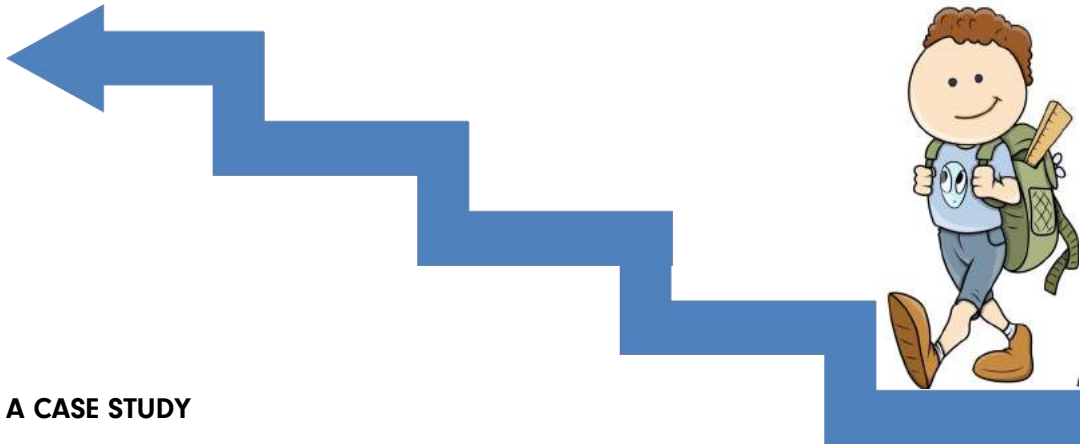


Observing from both the 2014 and 2015 cohort of graduates, the graduation numbers started increasing from students who have been in the programme for about 3 years 11 months to 4 years 11 months.

In 2014, it was reported that that we will continue to monitor the age at which learners start their remediation with MAP and study the trend of whether students are graduating sooner and within a shorter duration, which is the aim of the programme.

Given the above-mentioned figures, the Secondary 3 students stayed on for a duration of 4 years to 5 years 11 months, it suggests that most of these students enrolled when they were in primary 4 to 5. There is a change in trend from the 2014 cohort whereby the highest number of graduates was from the Secondary 2 cohort and the students in this cohort enrolled when they were in primary three or four.

Judging from 2014 and 2015 results, our students who start in Primary 3 to Primary 5 stay on the programme between 5 to 6 years on average. This duration has been reported two years consecutively and may therefore reflect the necessary time for the majority of our students to achieve competency in their literacy skills.



A CASE STUDY

Matthias had an assessment done with DAS when he was in Primary 1, i.e. October 2012. The reason for the referral was due to his parents' and teacher's concerns regarding his difficulties with learning literacy skills in school.

At the point of referral, he was receiving support from the Learning Support Programme in school as attending reading development classes at British Council. Despite the support that he was receiving, he was still having difficulties recognising and reading familiar words. He attained the following scores in the assessment :

Chronological Age (CA):	6 years 9 months
Reading Age (RA):	6 years 9 months (Average)
Spelling Age (SA):	6 years 3 months (Average)
Pseudo word decoding :	6 years 0 months (Average)

Matthias did not join DAS for remediation despite the diagnosis. His parents registered him into the programme in March 2014. For his 2014 school exams – Matthias scored 58.3 marks.

He continued on with the remediation with us and slowly started showing improvements in his reading and spelling. He had difficulty in answering comprehension questions and also had difficulties when it comes to writing.

In 2015, Matthias started showing improvements. He had started to apply the skills that were taught to him at DAS to his school. For 2015, he managed to score 74.3 for his P4 school exams. In 2016 January, Matthias' started his Exam skills classes at the DAS in the help him cope better with school curriculum.

Parents decided to have another assessment done with us so that they can apply for exemption from Mother Tongue. Matthias' scores for his new assessment showed

YEAR	ATTAINMENTS
2012	<p>P1</p> <p>CA: 6 years 9 months (Average)</p> <p>RA: 6 years 9 months (Average)</p> <p>SA: 6 years 3 months (Average)</p> <p>Pseudo word decoding – 6 years 0 months (Average)</p> <p>There is a discrepancy between Mathias performance on the reading and listening comprehension suggests that his comprehension of texts is hindered by difficulties with reading.</p> <p>Has difficulty in reading sentences fluently and accurately.</p> <p>Showed difficulty in applying phonics rules to assist him in reading and spelling unfamiliar words.</p>
2014	<p>P3</p> <p>English – 58.3</p> <p>Joined DAS remediation programme at Rex in March 2014</p> <p>Started to show improvement in reading and spelling</p> <p>Has weakness in open ended comprehension and writing skills</p> <p>Not keen on doing writing activities</p>
2015	<p>P4</p> <p>English – 74.3</p>
2016	<p>P5</p> <p>English – 71</p> <p>Parents wanted to get an exemption from Chinese hence they did another assessment.</p> <p>CA: 10 years 3 months</p> <p>RA: more than 19 years 11 months</p> <p>SA: 13 years 8 months</p> <p>Mathias joined Exam skills classes on 13 January 2016</p>

	CBA 2014	CBA 2015	CBA 2016
Reading Score	133	165	132
Spelling Score	45	46	53
English Exam Scores	58.3	74.3	71

that he had made great improvements in his reading and spelling. He obtained the following scores :

Chronological Age:	10 years 3 months
Reading Age:	more than 19 years 11 months
Spelling Age:	13 years 8 months (Average)
Pseudo word decoding:	16 years 0 months (Average)

From the scores we can see that his pseudo word decoding has risen from 6 years to 0 months to 16 years 0 months within a remediation period of 1 year. He has begun to apply the phonics skills taught to decode unknown words.

The Educational Therapist felt that Matthias was becoming an independent learner and should be able to cope on his own, as such he was recommended for graduation from the programme. His graduation was approved by the panel and Matthias will be leaving the DAS programme as a graduate.

7. EDUCATING THE EDUCATORS

"The quality of an education system cannot exceed the quality of its teachers' is an obvious truth, which applies to the assessment and teaching of learners of any age who are dyslexic." (Rose 2009, p.15) and DAS recognises that "[i]t is important to develop high quality interventions for children with literacy and dyslexic difficulties and to implement them thoroughly. This will require well trained, knowledgeable teachers and support staff." (Rose 2009, p.1)

Being a recognised teacher training organisation in the field of specialist education, the DAS is one of the educational institutions in Singapore that offers fresh graduates and mid-career professionals the opportunity to train to be specialist educational therapists through their employment. Consequently, inexperienced staff are trained and developed into skilled practitioners through initial training.

Any new Educational Therapist (EdT) joining the DAS has to undergo the following training:

- ◆ 3 weeks of DELA – Dyslexia and Essential Literacy Approach (DELA)
- ◆ 2 terms of AET – Applied Educational Therapy (AET)
- ◆ 7 weeks of ECI – Enhanced Curriculum Instruction (ECI)

Dyslexia and Essential Literacy Approach—DELA

Number of Hours: Total hours 86 hours
TESTS: 1 Oral Procedure Test + 1 Written Tests
Observations: 1 Informal Observation + 1 Formal Observation

- ◆ Week 1 - EdTs undergo 6 full days of training on the elements of teaching language to dyslexic learners.
- ◆ Week 2 - EdTs attend half day lectures on the other areas of teaching, i.e. literacy, language and vocabulary grammar for writing and morphology and in the afternoon they will co-teach for 10 hours for the week with a Supervising EdT and a co-operating EdT at the learning centre.
- ◆ Week 3 - EdTs attend half day lectures on Advance Writing and progress monitoring and in the afternoon they will co-teach for 10 hours for the week with a Supervising EdT and a co-operating EdT at the learning centre.

Applied Educational Therapy—AET

Number of Hours: Total 30 hours lecture (over 2 terms)
One-to-one mentoring: One-to-one mentoring sessions with an Educational Advisor assigned to them. As a minimum over the 2 terms, they should meet up with their Educational Advisors for 12 times.
Mode of Testing: 2 Informal Observation + 2 Formal Observation
Submission of Folder of Evidence

- ◆ Folder of Evidence – It should contain lesson reflections for 1 group of students for 2 terms.
- ◆ Reflective report on the entire mentoring experience
- ◆ 1 to 1 mentoring session reports (minimum 12 reports for 2 terms)

Enhanced Curriculum Instruction—ECI

Number of Hours : Total 21 hours of lecture

- ◆ EdTs must create a learning resource and write a report as to how this resource can enhance learning

EDT Training conducted in 2015-2016

Recruitment took place as follows for FY 2015 – 2016:

DATE	Number of Permanent EdTs	Number of Sessional EdTs	Total
February 2015	7	4	12
June 2015	8	2	12
August 2015	9	1	11
TOTAL	24	7	31

All in all we had a total of a 31 new EdTs, 24 permanent EdTs and 7 sessional EdTs.

During FY 2015-2016 – one EdT, did not successfully complete the AET module (i.e. 2nd phase of training). The EAs flagged this EdT out as needing extended support in terms of lesson planning and execution.

In situations where an EdT is flagged out for extended support – the Educational Advisor working with the EdT will draw up targets and highlight areas where the EdT has to work on. The EdT in turn takes ownership of his or her own learning and draws up their action plan to achieve the targets set.

We are what we say we are – MAP Quality Assurance Audits (QAA)

“The quality of your work in the long run, is the deciding factor in how much your services are valued by the world” – Orison Swelt Marden

DAS Quality Assurance Framework and QAAs are significant for several reasons and have been implemented to meet the following requirements:

- ♦ to satisfy our key stake holders of the standards we promise and deliver as a part of our service
- ♦ to motivate and promote good practices amongst staff

- ◆ to provide a platform to recognise excellent staff performance and contribution, and ongoing, continuous dialogue (rather than a annual exercise)
- ◆ to serve as a mechanism to improve training and support

Evaluation tools include the professional e-portfolio, surveys, feedback forms as well as learner performance against the educational targets set for the learner. By ensuring that the training, key performance indicators and evaluation tools are aligned, MAP ensures that the objectives mentioned above are met.

The quality assurance audits are put in place to serve as an evaluative as well as a supportive tool for Educational Therapists (EdTs) and comprises two key areas – lesson observation and documentation audits.

The lesson observation audit consists of the following:

1. Lesson planning and execution
2. Communication and class management
3. Professionalism

If EdTs do not receive “Competent” status for lesson planning and execution, a re-observation is required (Evaluative tool). If EdTs do not receive “competent” status in points 2 and 3 – an Educational Advisor (EA) will advise the Educational Therapist on how to improve in these areas (Supportive).

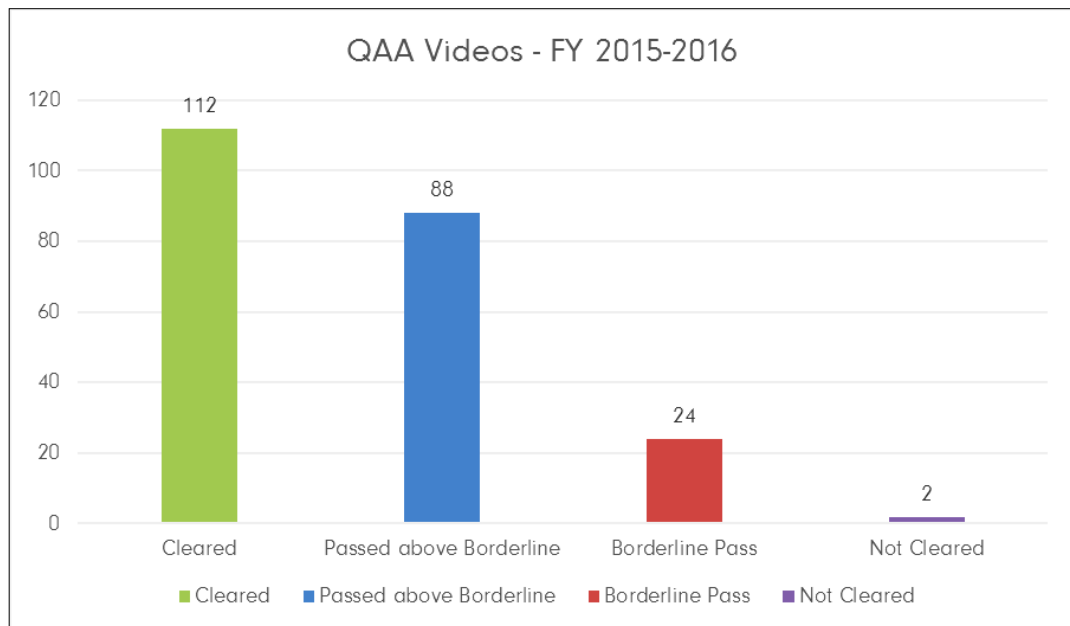
After lesson observations, Educational Advisors meet up with the EdTs and discuss with them on the gaps in planning and execution of the lesson and an action plans are discussed. Educational Advisors give educative suggestions are given so that the EdT can adjust their teaching accordingly.

For the year 2015/2016 the following graph details the summary of the lesson observation audit:

Documentation audit was not taken into consideration for FY 2015-2016.

In 2015-2016, a total of 114 Educational Therapists were audited and 4 EdTs did not clear the audit. A re-audit was conducted and the 2 out of 4 EdTs managed to clear the audit after the second review.

24 EdTs out of the 114 EdTs scored a borderline pass mark. Educational Advisers have had a one-to-one meeting with these EdTs and spoken to them on areas where they should sharpen their skills.

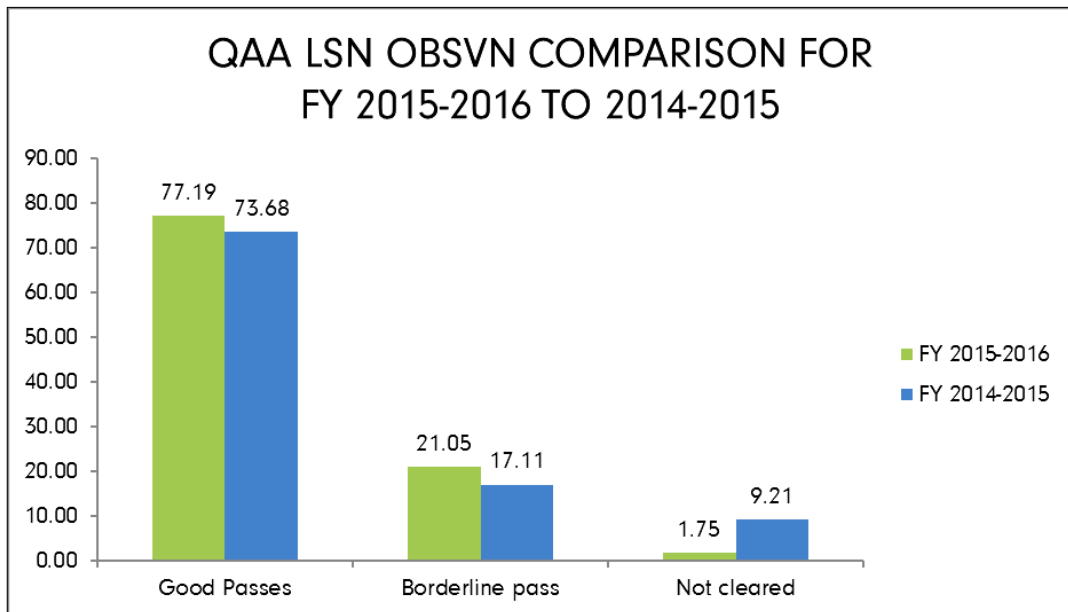


Audit failure procedures:

- ◆ A second marker will vet the video and give the scores accordingly. If second marker also fails the EdT, then a follow up meeting will be arranged with the EdT. The EA will advise the EdT on the outcome of the audit and will share with the EdT ideas on how to improve.
- ◆ EdT will be given the opportunity to submit another audit video within the financial year for review.

If EdT still fails after the re-audit, they will not be given another opportunity to submit another fresh video for that financial year. The following are the consequences for failing audit twice :

- ◆ KPIs will be affected and as such it will affect appraisals.
- ◆ EdT will be given 2 videos to review and learn good teaching points from the video observation.
- ◆ EdT must write a reflection report for both of the videos on what they have learnt.

Comparing FY2015-2016 and FY 2014-2015 audit

For FY 2015-2016, there was a higher rate of passes as compared to FY2014-2015. Although there was an increased number of videos submitted for the audit (FY2014-2015 – 76 videos and FY2015-2016 – 114 videos) the percentage of EdTs who had scores beyond borderline passes (i.e. good passes) still remained high.

The percentage of EdTs who had borderline passes also rose, from 17.11 % for FY2014-2015 to 21.05% for FY2015-2016. Numerically, this number rose from 13 in FY2014-2015 to 24 in FY2015-2016. The reason for identifying borderline passes is to look at areas where EdTs might need additional help. Regular dialogue sessions take place between EdTs and EAs to help them make improvements.

On the whole, there was an increased number of EdTs who were audited in FY 2015-2016 (114 EdTs) compared to FY2014-2015 (76 EdTs). Despite the increase in the number of EdTs the percentage of EdTs who passed the audit for FY 2015-2016 is higher.

For FY 2016-2017, the Educational Advisors will be updating and adjusting the QAA audit form to include scorings according to the different bandings as the components taught varies according to the different bands.

MAP EDUCATIONAL THERAPIST OF THE YEAR

The MAP EdT of the Year 2015 Award is the first of its kind to be given out at the DAS. It's in tribute of the invaluable service provided by the EdTs to enable their learners to succeed in their literacy efforts.

MAP EdTs provide intervention as well as other forms of support. Often they are called to act as listening ears and sympathetic shoulders to lean on. They care for their students' social and emotional well-being and partner parents, schools and other professionals in the educational journey of the children.

MAP EdTs don't make learning happen, they make life happen.

Along with the nominations, fellow colleagues were asked to name what characteristics that they think a MAP EdT of the year should possess and the following were the top 6 nominated characteristics:

1. Helpful
2. Team player
3. Caring
4. Shows initiative
5. Role model
6. Knowledgeable

Being a role model and a knowledgeable EdT garnered equal number of votes. Altogether in 2015, there were a total of 128 nominations for 54 EdTs.

A further selection process involving a review of their performance in the preceding years audit among other things was then conducted. The number then became 33.

After this, a survey was conducted amongst randomly selected EdTs. CMs at the centre where the nominees were teaching were also required to participate in the survey. Random codes were given to survey participants to ensure anonymity.

The following were the questions that were asked in the survey and participants ranked each question in order of importance:

1. S/he respects students
2. S/he creates a sense of community and belonging in the classroom.
3. S/he is warm, accessible, enthusiastic and caring
4. S/he sets high expectations for all students
5. S/he has his own love of learning
6. S/he is a skilled leader

7. S/he can "shift-gears" i.e. flexible during lessons
8. S/he collaborates with colleagues on an ongoing basis
9. S/he maintains professionalism in all areas
10. S/he eagerly mentors junior colleagues
11. S/he understands the importance of rigour in teaching
12. S/he is student centred without compromising control over the students, their learning and the environment

The scores were tabulated for each EdT to arrive at the final, MAP EdT of the Year.

To everyone's pleasant surprise for 2015 – DAS gave the TOP 2 EdTs this award, hence in 2015 –we had MAP EDTs of the year.

The 2015 winners were



Miranda Chng
Educational Advisor



Tarsheeni Rajoo
Educational Therapist

8. PARENT FEEDBACK

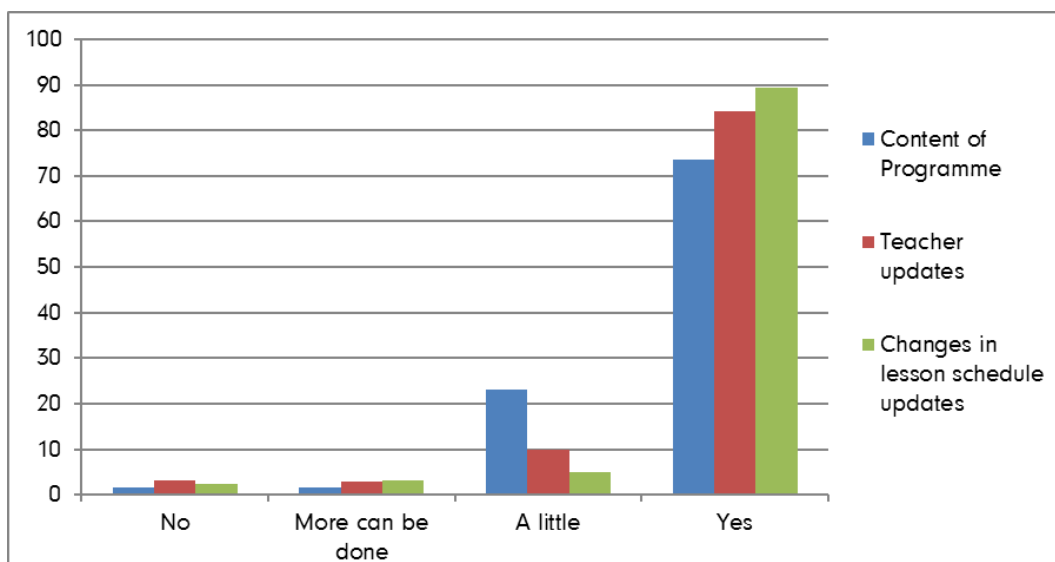
Parents of MAP students have always been regarded as important partners in our mission to help learners with dyslexia. In order to better understand the needs of our clients and to ascertain their feedback on the services rendered so far, EdTs meet parents at least twice a year and communicate with them at least once a month. In order to better understand the evolving needs of our clients, their awareness of the support that is available to their children and to get feedback on services offered and rendered, MAP created an online feedback form.

This form was shared with parents at the end of May, following the parent-teacher conference. In total, we received feedback from 246 parents. Some of the responses are included below.

In trying to ascertain if parents were aware of the provision of support available, we queried if they were aware of why their children were attending MAP classes. 96.7% of parents responded that they were aware of why their child was attending MAP classes, with only 0.4% saying that more could be done to clarify this.

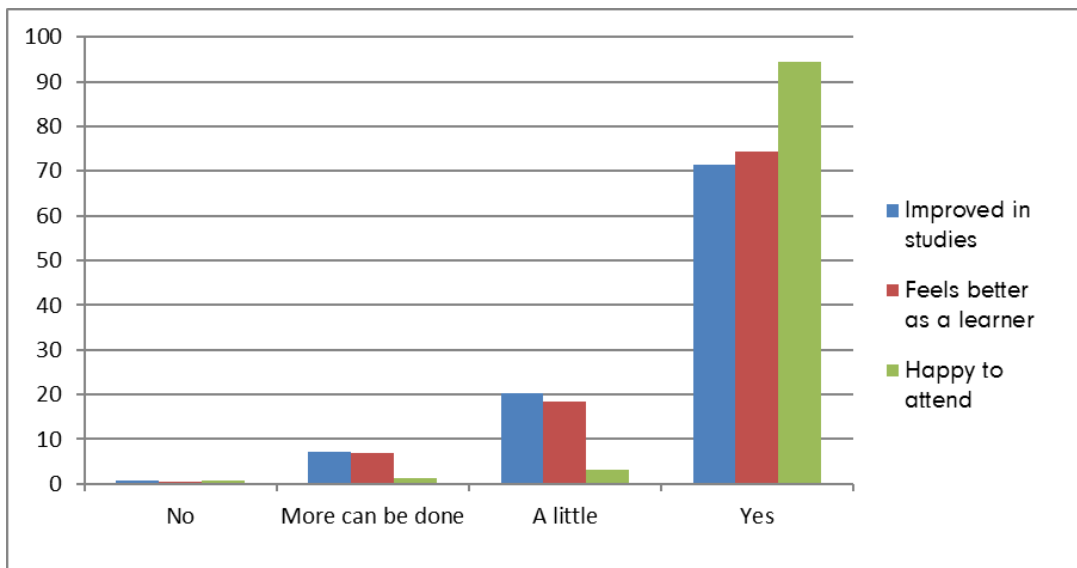
Further, parents responded on several questions targeting to understand if the communication from the DAS to the parents were effective.

Generally, the feedback suggests that MAP has been largely effective in reaching out to parents and updating them in a timely fashion. This was reassuring as several initiatives had been implemented to reach out to parents through multiple platforms.



However, from this it's clear that parents continue to need information about the programme and regular programme updates must continue. This was further confirmed when 85.8% of parents who responded would like to be kept informed if there were MAP talks, workshops and / or programme updates.

Another important series of questions touched on the learning journey of the children and the educational and emotional impact MAP had on them. Again, parents were largely positive about the learning experience and benefits of attending MAP.



Interestingly, despite the majority of parents demonstrating satisfaction with the services rendered by MAP and DAS, 63% parents felt the support was still inadequate and indicated that they would like additional support for their child outside of the DAS, while 15% of parents felt that no further support beyond MAP was required. Together, this could suggest that DAS parents fully appreciate what DAS has to offer their children and would like to be able to benefit from even more support from DAS. In the subsequent questions, parents expanded on their needs:

- ◆ Intervention for science
- ◆ Multisensory brain training for older students
- ◆ Tutoring service to assist learners with their school work

Currently, DAS, through Specialised Educational Services (SES), provides science related holiday workshops. DAS has always responded to parents and community feedback in implementing new services. As such, these suggestions will be considered for future programmes in order to enhance the learning experience of our students further.

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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.



LOIS LIM

Assistant Director, Admissions, MAP

Lois has worked at DAS since 2005 as a psychologist. She graduated with a Bachelor of Social Sciences (2nd upper honours) from the National University of Singapore and later with a Master of Arts in Applied Psychology from the National Institute of Education, Nanyang Technological University. In addition to her interest in specific learning difficulties, she has developed a specialisation in the assessment of dyslexia and is actively involved in the training and supervision of psychologists at DAS as well as in enhancing DAS' intervention efforts.



SUJATHA NAIR

Assistant Director, Quality Assurance, MAP

Sujatha Nair is the Assistant Director for the Quality Assurance Department of the DAS MOE-aided DAS Literacy Programme (MAP). Sujatha attained a Master of Education from The University of Adelaide in 2015 and a Bachelor of Business in Accountancy from Royal Melbourne Institute of Technology (RMIT) in 2001. Her other qualifications include a Cambridge International Diploma for Teachers and Trainers (Dyslexia) and a Diploma in Management Studies (SIM). She joined the Dyslexia Association of Singapore (DAS) as an Educational Therapist in 2006 and has over the years also held the positions of Centre Manager and Resources Manager. She leads a team of Educational Advisors which oversees the training of new Educational Therapists and serves as the advisory body for learning centres.



SERENA TAN ABDULLAH

Assistant Director, Curriculum Development & Implementation, MAP

Serena Abdullah is the Assistant Director of the MOE-aided DAS Literacy Programme (MAP) and is currently overseeing the development and the implementation of the Integrated Curriculum at DAS. She is also a Senior Educational Therapist who enjoys working and teaching children with learning difficulties. Her love and passion for teaching has led her to continuously seek new and innovative teaching methods to bring out the potential and self-confidence in her learners. She graduated with a Masters in Education (Curriculum and Teaching) from NTU/NIE and has obtained a Cambridge International Diploma for Teachers and Trainers. She hopes to continue to enhance the Curriculum to ensure that learners from diverse backgrounds or with varying learning needs benefit and learn effectively in class.



NUR ALIA BTE SALIM

Senior Educational Therapist—MAP Curriculum Team

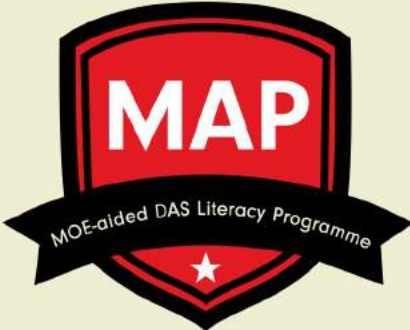
Nur Alia Bte Salim is a senior educational therapist with the Dyslexia Association of Singapore (DAS). She has a Diploma in Dyslexia Studies and a Certificate in Dyscalculia and Numeracy Teaching by DAS as well as the Cambridge International Diploma for Teachers and Trainers. She has a Master of Education (Special Education) from the Nanyang Technological University/ National Institute of Education (NIE). Nur Alia is a core Curriculum Team member for the MOE-aided DAS Literacy Programme (MAP). As a dual-specialist, she teaches learners with Dyslexia both in the MAP and the Essential Math Programme.




ROSALYN WEE

Senior Educational Therapist—MAP Curriculum Team

Rosalyn Wee is an educator with six years of experience working with children with Dyslexia. She has a Post Graduate Certificate in Specific Learning Differences from London Metropolitan University, a Certificate in Gifted Education from University of New South Wales, and a Cambridge CELTA. Other than being a Senior Educational Therapist, she is also a certified trainer with a WSQ Advanced Certificate in Training and Assessment and has been training Educational Therapists as part of the MAP Curriculum Team for three years. As part of the Curriculum Team, Rosalyn has designed the Advanced Writing Curriculum as part of the MAP Integrated Curriculum launched in 2014, the MAP Comprehension Pack [phase 1] for secondary school learners launched in 2016.






MAP ADMISSIONS

Where the learner's profile is drawn up and placement into programme is recommended.


- Assessments
- Profiling of students
- Recommendations for intervention



MAP QUALITY ASSURANCE

Where the learner's progress is monitored and abilities furthered through support.


- Progress monitoring
- Placement support
- Quality standards in teaching




MAP INTEGRATED CURRICULUM


Where the learner participates in collaborative learning through the integrated curriculum.

- Group-based individualised intervention
- Use of Technology
- Phonics, vocabulary, reading fluency / comprehension and writing





"We brought our daughter to DAS for a psychological assessment for dyslexia in late 2014. We were referred to Ms Tan Lyn Lee Jae. Ms Tan was not only highly intuitive in her assessment, she was very approachable and affable and went out of her way to address all of our concerns and queries. We are very grateful to Ms Tan for the support she has offered to us as parents who were learning something relatively new about our daughter's learning profile. All in all, we found the level of service offered by DAS beyond satisfactory." - Parent of a primary school student







DYSLEXIA ASSOCIATION OF SINGAPORE

HELPING DYSLEXIC PEOPLE ACHIEVE

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