



CASE STUDY

How an Adolescent with Dyslexia uses Meta-Cognitive Strategies to Significantly Increase his reading abilities in a 30-hour Reading Intervention

Nicole Chua, Senior Educational Therapist and Specialist Teacher with DAS International

Higher Education Specialist tutoring

DAS International also supports students who are in Higher Education or at the Tertiary level. The aim of the case study is to show the development of a 17-year Thai student T who attended specialist tutoring through an intensive 30-hour one to one Literacy programme which was spread over 4 weeks. Specialist Teacher, Nicole Chua documented his case study as the progress made during the 30 hours reflected T's potential in significantly improving his English Literacy.

Profile

T is a 17-year boy from Thailand, diagnosed with dyslexia when he was 12. T. was an interesting subject as he possesses high meta-cognitive functions and a positive outlook towards learning which are less typical of a learner with dyslexia of his extent. His parents are aware of and are knowledgeable about his condition and actively support his academic journey by maintaining close ties with his schools and seeking bi-weekly literacy intervention for T.

T displayed typical characteristics of an adolescent with dyslexia whose reading and spelling abilities are exceptionally delayed. His psychological report shows him to have an IQ of 126 which is within the Superior range. An initial assessment found that T possesses little word attacking skills and decoding ability, making reading difficult and effortful. He is almost unable to decode without teacher's guidance and guesses wildly at words based on their initial and final sounds or base of what the words 'look' like. He was also unable to read the first 100 high-frequency words successfully. The gap in his reading abilities transgresses into his spelling and writing as well. Initial writing assessment revealed T's lack of knowledge in sentence construction and grammatical conventions even though the quality of ideas that he tries to put across are indeed those of an above-average learner. It can be observed that T is a high performing learner, clearly hindered by his ability to read and write at the level that is expected of a high school student. It has been suggested through the reading assessment that at the time that T entered this intensive intervention, that he was reading below the age of 8 years old.

Introduction

As part of DAS International service, we provide intensive tutoring for learners who require a specific intervention during a limited time frame. Many times, we get students from overseas seeking remediation that is otherwise not available in their home country. T is a 17-year-old learner who is graduating to Grade 11 in a bilingual school that teaches in Thai but encourages students in their school to speak English to one another. Teachers in the school also speak English widely to students. T's father is of Thai-British descendant and spent some of his childhood years in the United Kingdom, therefore, speaks English fluently. T is exposed to English daily as he lives with his British grandmother and his parents since birth. T is effectively bilingual and the intervention he seeks at DAS International is conducted in



English. T's father was concerned that T was not receiving the help he needs to help him read and write in English, so he approached the DAS International for a 30-hour reading intervention for his son. Before the intervention commenced, a reading comprehension and fluency test was conducted using PM Benchmark Reading Assessment. It was assessed that T's reading age was below the age of 8-year-old. It was decided that it was best that T's remediation focused on his immediate need, reading.

What is Meta-Cognition?

Meta-Cognition can be defined as taking control of and directing one's own thinking processes and being aware of one's own cognitive strengths and limitations. It is the ability to understand, monitor and self-regulate cognition and is inseparable from intellectual functioning and learning. An important aspect of metacognition is the ability to show reflective awareness about the self, and knowledge in tandem with conscious monitoring during learning (Goldfus, 2012).

The Importance of Meta-Cognition During Intervention

During the intervention plan, the greatest challenge was seeking the best approach to teach him. Most available materials were either too child-like or too complex for him. Therefore, all strategies and materials used during this intervention were customized by the teacher herself according to his interest and reading level. As Thai language was his first language and one that he is most comfortable expressing himself in, it is significant to note that his tutor is also bilingual in English and Thai. This is a key contributing factor as meta-cognition involves thinking about thinking and having a common language has also allowed his tutor to gain insight to the problem he faces and understand his thought processes, therefore, facilitating effective self-questioning, self-monitoring and self-reflection that took place through these sessions.

A study by Goldfus (2012) suggested that the development of meta-cognitive awareness is an important tool in intervention for dyslexic and/or learning-disabled students. Therefore, she stresses the importance of meta-cognitive intervention to take place before or together with any form of literacy intervention. The same finding was found in a similar study on dyslexic teenagers on spelling. Chua (2015) found that the use of morphological instruction that uses meta-cognitive strategies, using Structured Word Inquiry (Bowers 2006), has empowered her students to be able to think about how and why a word is spelled in a certain way. Each time the learner experiences success in helping themselves make sense of a word, they became more motivated to do more which increases their academic self-concept. This cycle continues and meta-cognition continues to develop.

However, with T, he possessed meta-cognitive strategies that were his own and probably developed through the years that he found himself to be different from his peers but was not sure how. He went through primary school not knowing why he was different and had to stay back a year as his teacher found him to be "slow" and was not able to read and spell like the rest. Despite his rough start, he moved into another primary school where it was more conducive for his learning and more "understanding" to his learning differences. At 12, he visited a child psychiatrist and was then diagnosed with Dyslexia. From then on, his academic journey has been memorable, and his current school has a strong learning support system that accommodates his learning needs using assistive technologies.

The Intervention

When T commenced his first lesson, he sat for a reading assessment. When given the reading material, he flipped it front and back and observed the pictures on them. He was required to read silently on his own and answered some questions then after. These questions were arranged according to their



complexity i.e. literal, inferential, applied knowledge. After his silent reading, he answered all the questions correctly. Some of his questions were not found in the text and he was reminded to seek answers only from the text. After which he managed to provide answers that were close to the suggested answers. Next, he was required to read the text out loud to measure his reading fluency. It caught his tutor by surprise that he found the text to be difficult and he seemed to be struggling. Puzzled, his tutor asked if he understood what he just read. He said no and when questioned how he managed to answer all the questions. He explained that he tried to make sense of the pictures in the text (it showed a girl holding a cup in front of a basin) and using his prior knowledge together with what he felt the questions wanted from him, he made up his own answers.

After calculating the result, it was found that he was reading below the age of 8. That was highly surprising as T was well-versed in the English language and express himself well. At 17, it was amazing that T was able to cope and do well for his English subjects, though he has been failing Thai language all through school. He found the Thai language complex and had no interest to be better at it. He explained that he does not see the need of doing well in Thai language as he will be pursuing his learning through the English route. He has planned for further studies in Canada or America.

Over the few sessions, the tutor closely observed the way he learnt and got to know T on a personal level. The tutor felt it was crucial to understand how he managed to develop such sophisticated coping strategies to compensate for his literacy deficits, therefore being able tap on what he already knows or on how he processes information to maximize the intervention efforts. His tutor who coincidentally also spoke some Thai and is partial Thai parentage, has helped in building the rapport as she could help him expressed some of his thought processes otherwise a challenge for him to convey in English. Many times, when he does not understand certain words or concepts, she was able to clarify in Thai (which is his first language) and checked for understanding by getting him to retaliate back in Thai. Even though less than 10% of the time Thai is being used, it worthy to note that a common ground has helped T open up faster and helped put him at ease in his learning environment. This can be clearly seen in a classroom recording session where he had to read a set of lifestyle quotes that he could not read the first time round. Through the session it shows how well the teacher knew T and how she was able to pin-point exactly what he knew and encouraged him to recall what he knew but still could not apply automatically. Being able to provide him that assurance, promotes confidence in the learner to challenge himself, knowing that it is something that was within his knowledge. Through prompting and guided reflection, he was able to attempt many words on his own. The modeled thinking that the teacher provides together with his own meta-cognitive strategies can translate such interaction to a very effective way to retain learning and raising self-esteem.

An Example of Self -Questioning

T: /f/.../a/.../rrr...What is this word?

Teacher: Far

T: No...it can't be far, it does not look like it!

Teacher: Why not?

T: I mean this word makes me think of something long and it is way too short to be 'far'



An Example of Self-Monitoring

T talking aloud to himself: The kite fell on to the waiter. Why would a waiter be in the sea? (laughs) Does not make any sense! (tried to decode.) water! Of course, it is water. Jesus Christ!

An Example of Self-Reflection

When asked why he reads the word "caught" as "control"

"When I read this word silently, I could read the word 'caught' but when I read it out loud it came out wrong. I don't realised that (until you told me)."

Recommendations

Because of his atypical profile, finding the best way to support him in the way that it maximizes his potential would be a challenge for any adult supporting him. Within the next two years, before he graduates from high school, it is important to increase his reading capabilities to prepare him for a college education. It is recommended that he continues to attend similar intensive remediations to escalate his reading age and reinforce previous skills learned in past sessions. At present, although the reading assessment shows an increase in reading age of at least a year, it is based on the increased number of words that he is now able to read and recognize, compared to the beginning of the intervention, as well as his overall text comprehension. However, he does pause on certain words and may even take a while to read the word. There is still a need for deliberate practice reading sessions to sustain his progress. It is crucial that the adult supporting him initiates reading opportunities that are of high interest, pegged to his reading level and his topics of interest. These are some incidental type reading materials that may suit him:

Text-based tales Apps - these short stories are being narrated in the form of text messages. It is a conversational style storytelling where words are short and simple.

Life Quotes - these quotes can often be found shared on Facebook and Instagram. These words often contain quite a number of affixes and have underlying meanings which promote discussions.

Newspaper Headlines - bite-sized wordings that give a big picture of the story.

Brochures - avoid travel/tourist brochures, focus more on event brochures and flyers where the language used are friendlier.

It might be good for the adult that is supporting him to consider word study i.e. <equal> expands to the various possible spelling of this word such as <equality>, <equalized>, <inequality>, discuss various scenarios in which the word <equal> is used and providing him real sentences where the selected words are being used. This is an excellent way to get him to remember a word as it involves using his strength in analysis and making sense out of things.

In planning for an intervention plan that suits his profile, meta-cognitive strategies such as self-questioning, self-monitoring and self-evaluation need to be embedded in teaching to allow the learner to independently make sense of what he is learning and make learning meaningful to him, thus, easier to remember. With such planning, the learner will then be able to experience success through automatic application of the skills taught and transfer them to the various aspects of his academic journey.