

PROGRAM EVALUATION

Why is student ability training important?

- Research has found that investment in developing *cognitive* and *non-cognitive* abilities in **childhood** and **adolescence** has a stronger impact on academic motivation, achievement in test scores, employment and work productivity, *than IQ alone*.
- Studies have also indicated that interventions conducted in **early childhood** resulted in better outcomes for students both academically and later in life, than interventions conducted in *adolescence* or *adulthood*. Furthermore, it was found that the outcomes of *early intervention* were even greater, when followed up with *subsequent interventions* during adolescence.
- Therefore, the **NEUROMITE** Program was explicitly designed to focus on both *cognitive* and *non-cognitive* abilities through **cognitive training** and **coaching** throughout both the *foundation* and *consolidation* years of formal education.

Neuroscience in the classroom

A recent study was conducted with a Brisbane State School where a cohort of Grade 5 students participated in an 8-week **cognitive training program**. This took place during normal school hours, with the students spending 30 minutes, three times per week undertaking the **NEUROMITE** Program. The results below show *significant* improvements in key abilities which *underpin* learning and overall academic achievement.

- **Sustained Attention:** Over **85%** of the children who had average or below levels of attention for their age, improved *significantly* after training. Of those who scored at the bottom end of the range prior to training, **80%** scored in the average or above average range at the end of the program.
- **Alertness:** About **95%** of children in the average or below range for their age, demonstrated improvements in their level of alertness following the training program. Of those who scored below average or worse prior to training, **85%** improved *markedly* to score in the average or above average range at the end of the program.
- **Working Memory:** Over **60%** of children with average or below memory ability demonstrated *considerable* improvement in working memory, even though memory was not directly trained in this study!
* **Neuroscience tells us that alertness and attention are crucial building blocks for memory.**

Post-Training Maintenance Assessment (6 Months)

A maintenance assessment was conducted with the same students 6 months following the completion of the 8 week NEUROMITE Program. 90% of the students who initially undertook the assessment and training program were available for this re-assessment. The results were outstanding and showed that the improvements gained from the training program were *not only maintained*, but that *further improvements* were gained by students across ALL the abilities trained. ** **See overleaf for graphical representation**

- **Sustained Attention:** All (**100%**) of students scored in the average or above range 6 months post training, in comparison to 93% immediately post training and 65% at the initial assessment before training. Of those students, **42%** scored in the **high range** (>84th percentile) 6 months post training compared to **23%** who scored in the high range immediately after training.
- **Alertness:** **94%** of students scored in the average or above range 6 months post training, in comparison to 91% immediately post training and only 56% at the initial assessment before training. **44%** of students scored in the **high range** (>84th percentile) 6 months post training compared to **23%** who scored in the high range immediately after training.
- **Working Memory:** **78%** of students scored in the average or above range 6 months post training in comparison to 65% immediately post training and only 50% at the initial assessment before training. There were **46%** more students who scored in the high range (>84th percentile) 6 months post training compared to immediately following training.

The teachers across the grade 5 cohort have observed greater in-class participation and longer time periods of engagement for most tasks, especially those that are lower in stimulation and variety (e.g. reading). There has been an increase in students' energy management, which has led to more pro-social and appropriate behavior during all classroom activities.