

INTRODUCTION

Dyslexia is a life-long learning difference (Ramus et al., 2003). Hence, there is need for specialist support even as individuals at risk or diagnosed with dyslexia transit into post-secondary education or tertiary education (Dobson Waters & Torgerson, 2021; MacCullagh et al., 2017; Mortimore & Crozier, 2006; Olofsson et al., 2015; Pino & Mortari, 2014). Certainly, with the acquisition and competence in essential study skills and techniques, these students may become selfdirected, independent and responsible learners, which are invaluable traits and characteristics for any tertiary learner. More importantly, these skills provide a strong foundation for them to be able to reach their goals and aspirations not only in school but also in their future workplace.

The English Language and Literacy Division (ELL) at the Dyslexia Association of Singapore (DAS) developed the **iStudySmart™** programme, a two-term online learning programme, which aims to empower tertiary students with learning differences in the areas of time management and prioritisation, planning and organisation, tertiary writing and presentation skills while using an explicit, systematic, cumulative, teacher-directed instruction. The online learning approach also allowed more educational technology to be incorporated into the lessons making it multisensory and multimodal. Adaptation and differentiated instruction were also incorporated into the sessions to accommodate individual differences in cognitive, linguistic, sociocultural, and behavioural aspects.

iStudySmart™ also aims bridge the gap in intervention and resources catered for students with learning challenges in higher education but also to keep abreast with changing times, demands and expectations observed in the post-secondary and tertiary education sector.

PURPOSE OF RESEARCH

This paper evaluates the relevance and effectiveness of **iStudySmart™** and also measures student self-confidence, motivation, and independence in applying the skills and strategies taught on the programme.

LITERATURE REVIEW

Executive Function

- Executive functions (EF) are higher-level cognitive functions which comprise two close but separate executive abilities: meta-cognitive ability and motivational-emotional ability (Ardila, 2008; Dawson & Guare, 2004).
- Individuals with learning disabilities (LD) show gaps in Executive Function
- (Compton et al., 2012; Horowitz-Kraus, 2014; Varvara et al., 2014)

affects the productivity and efficiency displayed by an individual

Study Skills

- The acquisition and application of study skills have been positively associated with academic achievements (Hoover, 1989; Miranda et al., 2022).
- Students who have inadequate study skill techniques with or without learning differences are likely to be at risk of underperforming (Proctor et al., 2006; Reaser et al., 2007)

Online Learning

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- For students with dyslexia, they might benefit more from instruction using multimodal learning (Andreour & Vlachos, 2013)
- Teacher and student interaction is also vital in promoting effective communication and learning (Al-Otaibi, 2017; Moore, 2014; Nortvig et al., 2018; Rasskazova et al., 2017; Swan & Shih, 2005)

RESEARCH QUESTIONS

What are the effects of an online executive functioning and study skills programme on:

- executive function, specifically in time management, planning and **RQ1**: organisation of students with learning differences?
- tertiary skills (writing and presentation) of students with learning **RQ2**: differences?
- motivation and independence level of students with learning differences?
- perceptions of online learning of students with learning differences?

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EXECUTIVE FUNCTIONING, STUDY SKILLS, DYSLEXIA, TEENS - EXAMINING AN ONLINE PROGRAMME'S EFFECTIVENESS By Rosalyn Wee, Serena Abdullah, Dr Geetha Shantha Ram - Dyslexia Association of Singapore



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LIMITATIONS AND FUTURE RESEARCH

• Small sample size

• statistical tests may not be able to identify important relationships cannot be generalised to a large population

• not able to establish if the impact and gains observed is due to the intervention provided and not other extraneous variables

• Future Research to counter the limitations:

• Include a larger sample size to draw more meaning conclusions • Involve a control group

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