EFFECTS OF MULTISENSORY SOCIAL STORY ON READING COMPREHENSION AMONG STUDENTS WITH AUTISM SPECTRUM DISORDER

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Many studies frequently reported reading comprehension difficulty in students with Autism Spectrum Disorder (ASD). Present study has developed multisensory social story (VEKITS) to enhance reading comprehension of students with ASD. A single-subject study with multiple-baseline design was conducted. Three students with ASD and two educators who teach children with special needs participated in this study. Results revealed that students with ASD have high decoding but low receptive vocabulary before the intervention. The level of decoding and receptive vocabulary continues to improve across the phases. The improvement in both variables had resulted in better reading comprehension in all participants. Teachers reported several elements to be markedly enhancing decoding and receptive vocabulary in students with ASD including repetitive read aloud activity, simple and repetitive text. This study is significant in providing essential reading comprehension intervention to students with ASD; likewise, imparting the insights of multisensory strategy to educators for children with special needs.

Keywords: Multisensory social story, reading comprehension, students with ASD

INTRODUCTION

Reading is a complex process involving word recognition and comprehension (Gabig, 2010). It has been the primary element in our lives which is necessary for an individual to obtain a favourable outcome in social, education and vocational aspects (Nelson, Benner & Gonzalez, 2005). From an educational perspective, reading comprehension is known to be the core pedagogy in teaching literacy skills. A good reading comprehension is vital to achieve academic success (Wright et al., 2011), furthermore, leading an individual to function independently in the future (Mucchetti, 2013; Chiang & Lin, 2007). Without reading comprehension, students are unable to construct the meaning of the written content, fail to make predictions from the text, and most critically, they are incapable of connecting their prior knowledge to the text (Clarke et al., 2010).

It is vital to develop sound reading comprehension in order to accumulate information while, helping us to apply knowledge efficiently. Hence, students are encouraged to engage in reading comprehension activities as early as possible for a productive life (Browder et al., 2009). It is essential to obtain reading comprehension for all students despite of their disability severity (Hua et al., 2012). Therefore, reading comprehension should be identically performed by typically developing students as well as students with ASD (Browder et al., 2009). Nonetheless, majority of students with ASD constantly reported with 'reading comprehension disability' (Speirs et al., 2011; Whalon & Hart, 2011; Whalon, Otaiba & Delano, 2009; Flores & Ganz, 2007). More than 65 percent of students with ASD who had measurable reading skills are having difficulty in reading comprehension (Randi, Newman & Grigorenko, 2010).
Common teaching methods used for enhancing reading comprehension in students with ASD include scaffolding, visually cued instructions, computer-assisted instructions, peer tutoring, cooperative learning groups, anaphoric cuing and procedure facilitation (Mucchetti, 2013; Whalon, Otaiba & Delano, 2009; Chiang & Lin, 2007). To date, there has been an increase number of educational setting using multisensory equipment and approaches. Multisensory networks help an individual to combine distinct types of energy in the environment into a coherent and integrated information (Botts, Hershfeldt & Christensen-Sandfort, 2008). Applying multisensory strategies according to the literacy progress of students with ASD may help to promote better reading comprehension. Students with ASD needs appropriate reading comprehension instruction to be well to do in reading comprehension (Basil & Reyes, 2003). Therefore, the main purpose of this study is to propose an evidence-based multisensory social story for students with ASD. The second purpose of this study is to enhance the reading comprehension of students with ASD using the multisensory social story.

REVIEW OF RELATED LITERATURE

In this study, decoding and receptive vocabulary are two important domains leading to reading comprehension. Absence of either of this domain will significantly affect the reading comprehension of students with ASD. This is supported by many noted researchers such as Kendeou, Broek, White and Lynch (2009) who found decoding as independently predicting reading comprehension of children in Second Grade. The importance of decoding towards reading comprehension was further supported by Kerins, Trotter and Schoenbrodt (2010) where they stated that having desirable skill in phonemic awareness and letter knowledge in the first two years of school can best predict competent reading comprehension in later age.

Other than that, it is important that students understand the meaning of the text besides decoding the text accurately and fluently. Language comprehension has been widely known as significantly contributing to reading comprehension. This was supported by Guo, Roehrig and Williams (2011) who found correlations between vocabulary knowledge and reading comprehension. Besides, Bianco and colleagues (2012) conducted a three-year longitudinal study to examine the relationships between oral language development, early training programme on word identification and reading comprehension. Their study indicated the significant contribution of oral comprehension on reading comprehension of pre-kindergarten and first grade children. This is paralleled with the findings done by Ricketts and colleagues (2013) where oral language comprehension has shown to be unique predictors towards reading comprehension.

Reading Comprehension among Student with Autism Spectrum Disorder

Reading comprehension is a process where readers involve in written text and then construct the meaning of the text. It often involves complex cognitive demands due to the increase length and difficulty level of the comprehension text (Randi, Newman & Grigorenko, 2010). Students with ASD often develop sound decoding. However, comprehension is a common key impairment in this population (Whalon, Otaiba & Delano, 2009; Wei et al., 2014).

Several studies had examined the level of reading comprehension of students with ASD. For instance, Nation, Clarke, Wright and Williams (2006) investigated the reading skills in students with ASD. The mean standard scores of word reading, text reading and
disturbance and reading problems. *Journal of Emotional and Behavioral Disorders, 13*(1), 3-12.


