

Chapter 65

Enhancing the Acquisition of Social Skills through the Interactivity of Multimedia

Vivi Mandasari

Swinburne University of Technology, Malaysia

Lau Bee Theng

Swinburne University of Technology, Malaysia

ABSTRACT

Autism Spectrum Disorders (ASD) are a group of neuro-developmental disorders caused by brain abnormalities which result in impaired social story. Research on treatment in helping children with ASD to improve social story is growing as the cases of children diagnosed with ASD are on the rise. Social story is one of the proven methods of treatment in helping children with ASD to acquire social story through scenarios written in the form of stories. However, the current approaches to present the social story lack interactivity, consuming more intensive efforts to acquire the social story. Learning is most effectual when motivated; thus, the purpose of this study is to discover a learning tool that children with ASD will be motivated to learn independently, and it is achievable by combining elements that they are interested in. This research utilizes the interactivity of multimedia as a medium to present an interactive pedagogical tool for children with ASD to acquire social story. This combination is anticipated to be an effective tool in teaching social story to children with ASD, as they are naturally drawn to computers and visual cues, combined with the fact that Social Story™ has been effective in changing the social behavior of children with ASD. Thus, this study has contributed to the emergent research of treatment for children with ASD in social story acquisition. The result of this study is important as it presents a novel assistance that can be used effectively in assisting children with ASD to improve their main deficit, social story.

INTRODUCTION

Today, ASD is a neurodevelopmental disorder with high prevalence rates of 90 to 110 per 10000 children (Matson & Kozlowski, 2011). There has

been evidence of growing rates in cases of ASD in the past decade (Fambonne, 2003; Bogdashina, 2006; Shattuck, 2007; Stillman, 2009; Kaufmann & Silverman, 2010; Lewandowski, 2010; Williams & Williams, 2011). There have been many

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controversies in identifying the causes of the brain abnormalities in children with ASD, among which are environmental contributions, genetics, drug therapy/vaccine, onset in infancy, onset in prenatal period or complications in pregnancy (Kaufmann & Silverman, 2010; Lewandowski, 2010; Roullet & Crawley, 2011; Burstyn et al., 2011). Autism Spectrum Disorders (ASD) include Asperger's Syndrome, Pervasive Developmental Disorder-Not Otherwise Specified, Autistic Disorder, Rett Syndrome and Childhood Disintegrative Disorder. The broad spectrum makes a wide variation of symptoms among the children with ASD, each with his own individual pattern of autism.

There are many treatments claimed to be effective for children with ASD, but each child has his/her own unique profile. Therefore, a treatment that is suitable for one child might not be suitable for another child (Ball, 2008). As the case with the cause, there have been controversies in the search for an effective treatment for children with ASD, which has branched into a wide variety of treatment approaches (Williams & Williams, 2011). Lack of knowledge in the specific causative factors of ASD is the reason behind the controversies that surround the treatment for children with ASD (Williams & Williams, 2011).

SOCIAL SKILL DEFICIT

Social skill deficits in children with ASD lay the concepts of *Theory of Mind* and *Triad of Impairment*, which both entered the literature around the same time (Doherty, 2009). This elicited Baron-Cohen et al. (2009) to hypothesize that the two concepts might be related.

Deficits in Theory of Mind

Theory of Mind (ToM) could be referred to as empathy in general. However, this term has been popularly used to define the concept that is lacking in children with ASD and it explains the social

challenges they are having (Bogdashina, 2006; Doherty, 2009; Baron-Cohen et al. 2009). ToM, or empathy, is crucial for social awareness in a complex social environment.

ToM is defined as the ability to take and surmise perspectives such as belief, desire, emotion, perception and intention of self and others to interpret behavior. This ability involves making a distinction between the real world and the mental representation of the world. ToM can be explained as the ability to understand other people as mindful beings who have their own mental states that are different from self (Lantz, 2002; Elzouki et al., 2007).

Normal children are said to have ToM because of their ability to explain and predict others' behavior by attributing them to independent mental states (Gallagher & Frith, 2003). In contrast, children with ASD often rely on a backup system like intellectual reasoning and experiences for their daily decision making and social interaction, which could lead a simple social interaction into a complex social calculation for them (Hickson & Khemka, 1999).

The development of ToM begins within the first year of life, such as by gaze following, joint attention, drawing attention of others with pointing, ability to understand if an object is animate or inanimate, and an awareness of others as intentional agents (Weiss et al., 2009).

The inability to impute mental states of self and others that underpins the essential human ability to communicate and interact in a meaningful way (Parsons & Mitchell, 2002) has caused children with ASD to have a difficult time in understanding and interacting with other people. They find it difficult to understand that other people have their own point of view of things that is different from their own point of view. They also cannot understand that a comment could embarrass or offend other people and that an apology would help to make a person feel better (Sicile-Kira & Grandin, 2006).

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