

Tracing with Dots as a Strategy to Teach Writing to
Young Children with Autism Spectrum Disorder

Yanirys Rios

Florida International University

Tracing with Dots as a Strategy to Teach Writing to Young Children with Autism Spectrum Disorder

Abstract

Developing preschoolers' control of the muscles of their hands is known as fine motor skills (Huffman & Fortenberry, 2011). This skill enables young children to make accurate movements required for drawing and writing. The purpose of this study is to explore the use of connecting dots intervention to improve the ability to trace letters in students with autism spectrum disorder.

Statement of the Problem

Writing is essential to the learning process. Acquiring basic skills like tracing and then imitating is extraordinarily important for the later success of students when learning how to write (Huffman & Fortenberry, 2011). A child in preschool who is initiating his pre writing skills, is confronted with a hard and complex process that requires a lot of focus, encouragement and practice. At this young age (three and four years old) those are difficult to have. For students with autism spectrum disorder (ASD) the process is even harder and more complex. According to Jasmin (2009), students with ASD show significant fine motor delays and difficulties with motor coordination compared to the norm. In addition, they present an atypical sensory responses that influence their fine motor skills development (Jasmin et al., 2009). Learning tracing skills for preschoolers is a big accomplishment. Learning tracing skills for preschool students with ASD is a big step that represents a challenge for the student and the teacher. Failing to achieve such an important skill brings negative implications for the development of the student, since the development of the tracing skill precedes more complex skills like copying and

then writing. Without this basic skill, students will not be able to grow academically and accomplish the developmentally appropriate requirements of the program. In other words, handwriting quality is considerably associated with academic success and a predictor of more general learning difficulties later in life (Kushki, Chau, & Anagnostou, 2011).

Purpose and Research Questions

The purpose of this study is to find out whether the use of connecting dots intervention improves the ability to trace letters in students with autism spectrum disorder. The subsequent research question will be investigated: How effective is the use of connecting dots on the letter tracing skills of pre-kindergarten students with autism spectrum disorder?

Literature Review

In pre-kindergarten classrooms, writing is an important skill because it provides the inclusion of language and developing literacy skills that are embedded in children's future reading skills (Gerde, Bingham & Wasik, 2012). Developing prewriting skills at young age is critical because it supports future literacy growth. There is evidence of the interrelationship between preschoolers' emergent literacy skills, like writing skills, and their reading achievement in later grades (Cabell, Justice, Zucker & McGinty, 2009). For teachers, it may be a challenge to teach tracing skills to young students, especially those with autism spectrum disorder.

According to Puranik, Lonigan, and Kim (2011), writing letters or writing their names is the beginning of conventional writing for preschoolers. Their study examined the contributions of emergent literacy skills to letter writing, name writing, and spelling and the interrelation between them in prekindergarten students. The study involved 296 preschool children from 4 to 5 years old (Puranik, Lonigan & Kim, 2011). As a result, they found that letter writing modeling

and activities that promote writing letters may perhaps be great for interventions to improve emerging literacy skills (Puranik et. al. 2011).

Kushki, Chau, and Anagnostou (2011) considered the prevailing evidence about possible influences to compromised handwriting function in students with ASD. The authors defined handwriting as a functional skill that influences students' academic and psychosocial development (Kushki, Chau, & Anagnostou, 2011). Having poor handwriting skills at early ages could lead to future and broad learning difficulties (Kushki et. al. 2011). Poor writing skills may unfavorably affect children's personal relationships, psychosocial well-being and self-esteem, and general perception of their abilities (Kushki et. al. 2011).

To stimulate fine motor skills among young pre-kindergarten students teachers need to design an array of developmentally appropriate activities and include them into their daily routine (Huffman & Fortenberry, 2011). The development of motor skills is acquired by children at different rates. By offering differentiated instruction to all children with different developmental stages, responsive teachers relieve students' frustration and contribute to develop and support emerging fine motor skills (Huffman & Fortenberry, 2011).

Research Methodology

This action research will take place in a Pre-Kindergarten Reverse Mainstream Full Day classroom with 14 special students and one paraprofessional. The two students involved have been diagnosed with ASD. Both students are males. One student is Hindu and the other student is Hispanic. The classroom teacher will be responsible for employing the strategies and collecting the data.

Connecting dots is the intervention to be used. When students trace lines from dot to dot, the lines measurements are shorter than when tracing the entire letter. Therefore, tracing becomes easier for them. The data collected will be analyzed in three ways. Pretest and posttest results from two worksheets will be displayed using a Bar Graph. It will provide a visual display for comparing students' results from pre-intervention test and post-intervention test. Day by day, students' intervention results will be compared to demonstrate the effectiveness of the interventions and student progress depending on how many letters has been correctly written. The data table will show students' results from the 20 days of intervention. Measurements of how long it takes the student to start working on the on the task assigned (intervention) after the instruction is presented will be displayed using a Scatter Chart. This chart will inform the researcher how engaged the students are with the intervention.

Results

By the ending of my action research project my expectations are to find that my students have improved the ability to trace letters. If progress is seen, I will be able to use the tracing with dots strategy with other students who lack the ability to trace letters. The data collection will start at the beginning of January 2016. The data collection review and results are intended to be finished by early March 2016. I hope that the project will be able to adhere to the scheduled dates.

Implications

Writing is a talent that students will use throughout their lifetime. For that reason, it is significantly important that students during the early stages of the writing process, learn how to trace correctly. Connecting dots may be a strategy that teachers can implement to improve the ability to trace letters in preschool students with autism spectrum disorder. The success of this

study will provide teachers and students with a strategy to teach and learn an important pre-writing skill.

References

- Cabell, S. Q., Justice, L. M., Zucker, T. A., & McGinty, A. S. (2009). Emergent name-writing abilities of preschool-age children with language impairment. *Language, Speech & Hearing Services in Schools, 40*(1), 53-66.
- Gerde, H. h., Bingham, G., & Wasik, B. (2012). Writing in early childhood classrooms: guidance for best practices. *Early Childhood Education Journal, 40*(6), 351-359.
- Huffman, J. M., & Fortenberry, C. (2011). Helping preschoolers prepare for writing: Developing fine motor skills. *YC Young Children, 66*(5), 100-103.
- Jasmin, E., Couture, M., McKinley, P., Reid, G., Fombonne, E., & Gisel, E. (2009). Sensory -motor and daily living skills of preschool children with autism spectrum disorders. *Journal of Autism & Developmental Disorders, 39*(2), 231-241.
- Kushki, A. a., Chau, T. t., & Anagnostou, E. e. (2011). Handwriting difficulties in children with autism spectrum disorders: A scoping review. *Journal of Autism & Developmental Disorders, 41*(12), 1706-1716.
- Puranik, C. c., Lonigan, C.J., & Kim, Y. (2011). Contributions of emergent literacy skills to name writing, Letter writing, and spelling in preschool children. *Early Childhood Research Quarterly, 26*(4), 465-474.

