

**Literature Review and Research Proposal:
Comprehending Literacy for Students with ASD**

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Comprehending Literacy for Students with ASD

Literature Review

The world of literacy instruction is a blend of white, black, and grey areas. One grey area comes from literacy instruction for students with Autism Spectrum Disorder (ASD). Our topic of research is tailoring instruction and differentiation for students with ASD. After close examination of research and our personal teaching background, we are focusing on middle elementary aged students with ASD. As a special education teacher, a special education-inclusion classroom teacher, or a general education teacher, all educators are likely to experience educating a student with ASD, making it important to understand instructional strategies and methods of differentiation. Though classroom teaching can be done without research, research is essential to utilizing effective instructional methods.

All students have diverse needs in the classroom, but needs in the classroom vary when some specifics are present. Students with ASD are each unique in their own ways, having similar characteristics and patterns within learning patterns and behavior methods as other students with ASD. Many students with ASD have similar patterns in reading difficulties, especially those regarding comprehension. El Zien explains that many students with ASD can read accurately, but reading comprehension is poor (2016).

Research shows us that students with ASD are often delayed in reading and lack skills in comprehension, therefore teachers need a variety of methods to differentiate their instruction to meet the needs of students with ASD. Research proposes that these numbers can be improved with forms of differentiation of literacy acquisition and comprehension.

Before diving into what instructional methods may benefit children with Autism Spectrum Disorder the most, it is essential to look at the science behind the disorder. ASD “is a term used to describe a constellation of early-appearing social communication deficits and repetitive sensory–motor behaviours associated with a strong genetic component as well as other causes” (Lord, 2018). The two strongest determiners of ASD usually include repetitive behaviors and delayed social communication skills. Because it is a spectrum, people who have this disorder each have different severities. Some people are very low on the spectrum and can function almost fully independently. Other people who are very high on the spectrum are often nonverbal and struggle to complete tasks independently, therefore needing a greater level of support. The different levels of severity are another reason for teachers to tailor instruction to children with ASD and their individual needs.

Determining the best practice for developing literacy acquisition and comprehension for students with ASD is essential as these students may be left behind in schooling. Because each student is so unique to the way they absorb instruction, there are complications that come with research regarding the topic. Various research studies regarding students with ASD and literacy acquisition contain small sample sizes. While the data showed effectiveness in the use of iPads, Spooner only had four participants to complete the research (Spooner, 2014, p. 33). Many students may also have various limitations to abilities, including verbal and physical abilities. The small sample sizes and limitations on abilities serve as difficulties in determining what practices can be considered effective across the majority of students with ASD. The world of research is working towards finding a solution to this dilemma to benefit all students with ASD and ensure each student is exposed to an equitable literacy education.

The question we have concluded with the research we discovered is which method of instruction, teacher-directed or technology assisted, is the most effective, transferable instructional method for the population of lower-elementary students with ASD? There is evidence from past studies that both teacher-directed and technology assisted methods are effective in the classroom, but the studies contain small sample sizes and diverse variables that leave questions regarding the transferability of the instructional methods to each student with ASD (Spooner, 2014, p. 1), (O'Brien, 2018, p. 1). Many of the studies contain small sample sizes and diverse variables that leave questions regarding the transferability of the instructional methods to each student with ASD. As we dive further into research, we find more evidence suggesting how a variety of different instructional methods and tools can benefit the needs of learners with ASD, but there isn't a specific answer as to what method is the most effective and transferable for the population of lower-elementary students with ASD.

Research Proposal

The purpose of the research proposal is to determine the most effective, transferable method of literacy instruction for the population of lower-elementary students with ASD. The study will investigate the use of teacher-directed instruction versus the use of technology assisted instruction in the classroom setting. This study will be monitored and assessed by students of the Reading, Literacy, and Learning (RLL) graduate program of Longwood University. The RLL graduate students have teaching licenses in the state of Virginia for the grades PK through six. The community of Longwood University has access to professional judgments from various graduate students and professors within the other education programs.

Two schools from each of the eight regions of Virginia will be used as samples for the study. The top two schools with the highest population of students with ASD in the grades kindergarten through third will be chosen from each region. In all, 16 public elementary schools will be used in the state of Virginia. In each of the eight regions, classrooms will be assigned to either using teacher-directed instruction or technology assisted instruction. For each region, teacher-directed instruction will be used in one of the schools and technology assisted instruction will be used in the second school. Eight schools will utilize teacher-directed instruction and eight schools will utilize technology assisted instruction in grades K through six classrooms containing students with ASD. This includes special education classrooms and inclusion classrooms. Classroom teachers, paraprofessionals, and resource teachers of each school will be trained and instructed on the literacy instruction that will be used in their particular school.

The teacher-directed instruction and technology assisted instruction will be administered during a 90 minute literacy period each day over the course of eight weeks. Literary skills including phonological awareness, letter knowledge, vocabulary and sight words, fluency, writing, and comprehension will be taught and assessed. Students will be instructed in their classroom environment by their classroom teacher.

Using the *Qualitative Reading Inventory-6* (Leslie & Caldwell, 2017), pre-assessments will be given to students prior to the implementation of the study. Using the same assessment with altered details, a postassessment will be given to students when the study ceases. Assessments will be administered in the student's classroom by graduate students of Longwood's RLL program. Ongoing formative assessment data will be recorded by the classroom teacher using a checklist for monitoring each skill.

Teachers will be given explicit lesson plans and supplies for their classroom setting, whether teacher-directed or technology assisted. The lesson plans will include intensive differentiation. Each literacy block will begin with a class read aloud. Teacher-directed instruction will use a book while technology assisted instruction will use a slideshow of a book projected to the class. Following the read aloud, teacher-directed classrooms will follow procedures to teach and practice literacy and comprehension skills using flashcards, worksheets, manipulatives, and hands-on activities administered by the teacher. Technology assisted classes will teach and practice skills with the use of iPads, computers, and online applications and activities while the teacher gives procedural support. Writing will be practiced by either pencil and paper in teacher-directed classrooms or on iPads in technology assisted classrooms. Comprehension questions and activities will be supported by the teacher or by the use of technology.

As an exception to this study, any student with limited verbal ability that was using assistive technology prior to this study will be able to continue the use of such technology during the study. Small group and one-on-one instruction may also be used in the classrooms, as long as the assigned instructional method is consistently being used.

The intensive study will continue in each school for eight weeks. Growth will be determined based on pre and post assessment results to determine if teacher-direct instruction or technology assisted instruction is more effective for the population of lower-elementary students with ASD.

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