

9-1-2017

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## Recommended Citation

Rinehart, Adam Paul, "Autism, Literacy, and Special Education" (2017). *Student Publications*. 108.  
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# Autism, Literacy, and Special Education

*Adam Rinehart*

The teacher gently touches the student's shoulder, and almost immediately, the student jumps as if he had been stung by a bee, covers his ears with his hands, and begins to rock back and forth. Quickly, the teacher is reminded that this particular student is autistic and does not like to be touched unless he initiates the touch. To calm down, the student begins to recite: "Mariah Carey, Lady Gaga, Toby Mac, John Legend...." The teacher is again amazed at this child's incredible ability to memorize anything related to music. She knows that the student spends hours each day reciting hundreds of musical artists, hit songs, album release dates, and concert venues. This child is incredibly bright, and he has outstanding memory capabilities. The teacher sighs in frustration, "What can I do with a child who is so incredibly bright, yet cannot understand what is happening when I read a simple story or present basic literature concepts?" This is the question that many teachers ask in the education system today: "How do I effectively teach literacy skills to children with autism, and what tools might I use to get there?" Generally speaking, children with Autism Spectrum Disorder (ASD) struggle to some degree with reading and/or language deficiencies, and they often have difficulty interpreting texts (Whalon & Hart 243). Consequently, teachers have a great need for techniques that will help them meet the individual needs of their students with ASD. The purpose of this essay is to explore the struggles that children with ASD face regarding literacy, and to present different teaching techniques designed to help children affected by ASD improve their reading comprehension and language abilities.

Children with ASD experience a wide range of literacy struggles that can be related to different experiences or based on the symptoms of ASD. To understand these literacy struggles, Autism Spectrum Disorder and reading comprehension must be defined. Additionally, the relationship between ASD and reading

comprehension as well as the cognitive profiles of individuals with ASDs should be explored.

Autism can be defined as a developmental disorder that results in poor social and communication skills and repetitive behavior patterns. Asperger's syndrome (AS) is a form of autism in which individuals have better communication abilities (Randi et al 893). Even though individuals with High Functioning Autism (HFA) and AS show similar cognitive and behavioral profiles, people with HFA are generally more delayed than people with AS, because they are not as imaginative or communicative (893). Since there is such a wide range of abilities within ASD, it is hard to establish the individual abilities of students with autism (893). According to another source, people with ASD vary greatly in their expressive and communicative abilities, which makes it difficult to define the reading abilities of the population as a whole (Fleury et al 275). Additionally, children with ASD find it difficult to interact with peers and adults through expressive and receptive language, nonverbal gestures, and the social aspect of language (275).

After exploring the different aspects of autism, another issue must be addressed: reading comprehension. Reading comprehension is a common issue in the United States that affects a wide range of individuals. In the article "Linking Cognition and Literacy in Students with Autism Spectrum Disorder," reading comprehension is defined as the ability to decode words and understand what those words mean (Carnahan et al 54). Another article suggests that reading comprehension is more than just word recognition; rather, it involves knowing the meaning of words, analyzing word combinations, interacting with the topic based on personal knowledge and experience, and drawing conclusions based on evidence and reasoning (Randi et al 891). This article also mentions that as readers become more accomplished at word recognition, their cognitive resources focus more on comprehension, and they eventually become just as good at understanding written language as they are at understanding spoken language (892). Now that both autism and reading comprehension have been defined separately, a connection can be made between the two.

The article "Linking Cognition and Literacy in Students with Autism Spectrum Disorder" presents three theories that explain

how the characteristics of ASD influence comprehension. The Theory of Mind suggests that, because students with ASD have difficulty understanding other people's thoughts and feelings, it is extremely hard for them to comprehend the perspectives of literary characters (Carnahan et al 56). Second, executive function (the idea that organizing, planning, and self-monitoring help eliminate distractions when completing a task) is difficult for students with ASD because they often times continue reading even when their thoughts about the text do not make sense (57). Finally, weak central coherence (focusing on details rather than the big picture) is something that autistic children struggle with because they get excited about the little details and never combine them into a logical whole (57). The article "Teaching Children with Autism to Read for Meaning: Challenges and Possibilities" also mentions weak central coherence, and describes it as the reluctance of children with ASDs to combine parts of stories into a coherent whole (Randi et al 894). Similar to the Theory of Mind, this article suggests that narrative text is difficult for students with ASD to comprehend because they have difficulty determining the emotions and intentions of others (895). Even though the afore-mentioned struggles seem like difficult challenges, Randi et al suggests that it is possible to teach children with ASDs by focusing on their strengths to accomplish literary tasks. Examples of this include: guided instruction that keeps students focused on the things that matter, and instruction that prompts students to focus on the possible causes of literary characters' mental states (895-6). Since there are many correlations between ASD and reading comprehension, different teaching techniques have been developed that are designed to help students with autism learn inclusively, efficiently, and effectively.

Many different teaching techniques and ideas exist that attempt to promote language learning and reading comprehension among children with ASD. One of these techniques is the TECH method which discusses how to effectively integrate technology into teaching students with disabilities. TECH consists of four main steps: Target students' needs, Examine the technology choices, Create ways to incorporate technology with other activities, and Handle the implementation of technology and its impact on the students' learning (King-Sears et al 570). In order to target students' needs, the article suggests that students have different learning styles that must

be matched to what they are learning. Furthermore, the article says that examining technology choices is important because technology is constantly changing, and therefore, all options must be weighed. Creating ways to incorporate technology with other instruction activities is considered useful because it can be damaging to use technology as a stand-alone activity. Finally, the article suggests that handling the implementation of technology and its impact on the students is important in making sure that technology is actually being used to impact the students' learning. (571-2) Overall, this article promotes the idea of teachers embracing current technology and using it for instructional purposes in the classroom.

The article entitled "Special Education versus Inclusive Education: the Role of the TEACCH Program" discusses a study that was conducted to determine the effectiveness of the TEACCH program, which is a program designed to use structured interventions and environmental adaptations to teach children with autism (Panerai et al 875). The results of the study confirmed TEACCH to be an effective program, producing positive results in both natural and inclusive settings (880). "TEACCH stresses the importance of an appropriate environmental organization and the use of clear visual cues to circumvent communication difficulties" (879). In other words, the goal of TEACCH is to cater to the individual needs of autistic children, and to provide a setting that promotes ease of communication. Moreover, the program promotes the collaboration of parents and teachers. This collaboration creates shared objectives and ultimately helps the program become a natural part of the child's life (879).

Whalon and Hart, in their study on elementary inclusive settings, observe three students who receive instruction in a classroom setting in order to determine how students with ASD engage in reading instruction and respond to different teaching strategies. Overall, Whalon and Hart determine that students in the study showed strengths in decoding but struggled with reading comprehension, and they conclude that children with ASD require teaching strategies that focus mainly on text comprehension (Whalon and Hart 253). The authors also say, "Implementing strategies to enhance the reading and language development of all students, but in particular those with ASD, will require collaboration between general and special educators" (253). They suggest a reading comprehension

strategy that addresses how to interact with text and about text. Another strategy is a questioning strategy that promotes students' abilities to form and ask questions (254). The following article also discusses reading comprehensions and presents its own strategies for comprehension instruction.

The authors of "Teaching Children with Autism to Read for Meaning: Challenges and Possibilities" provide some reading comprehension interventions for children with ASDs. This article argues that reading comprehension instruction has, in general, been neglected in schools (Randi et al 897). To teach reading comprehension, teachers can benefit from using direct instruction, using authentic materials and rewards in natural settings, peer-mediated instruction, and computer-assisted instruction. The article promotes the idea of teaching students with ASD in a social setting by the use of peer-tutoring, interactive practicing, and games. In addition, the authors express that direct instruction is an effective way to teach oral language skills, and that it can help students with ASD increase their expressive language skills (899). Direct instruction, according to this article, is also helpful in improving reading comprehension skills because it teaches students to independently work on skills such as statement inference and using facts and analogies (899). At the end of the article, the authors present the growing need for researches to come up with new interventions to meet the needs of children with ASD (900). While this article focuses on multiple types of reading comprehension techniques, the following focuses on one specific technique: dialogic reading.

Dialogic reading involves adults asking questions that encourage children to think critically and talk about books. Specifically, the authors of this article state, "Dialogic reading is a particular method of shared story reading in which the adult uses specific question prompts to encourage children to talk during book readings" (Fleury et al 240). This article observes a study that was conducted to determine whether children with ASD benefit more from standard book reading or dialogic reading. Because children are required to answer questions posed by adults in dialogic reading, they are given the opportunity to hear language and practice using it. The study concluded that children with ASD talked more during interactive dialogic reading than during baseline reading sessions with minimal initiated conversation (281). Children also participated

for a longer amount of time in the dialogic reading sessions than in the standard reading sessions (282-3). The authors conclude that dialogic is a simple yet effective way for adults to engage children book reading that elicits verbal participation and critical thinking (284).

The final article, “Linking Cognition and Literacy in Students with Autism Spectrum Disorder,” provides steps for supporting reading comprehension for students with ASD. Organizing the learning environment and materials is important, according to the article, because it helps students understand daily routines and activities and can keep them more focused and organized (Carnahan et al 58). Beginning with students special interests and gradually building on them can help students with ASD stay engaged for longer periods of time; additionally, linking teaching materials to students’ background knowledge can help them understand what information is relevant versus what is unrelated to the topic at hand (59). Presenting texts using alternative mediums is useful for adapting the text to meet the needs of the students, and teaching specific strategies such as summarizing identifying the main idea can help students increase comprehension. Finally, the authors believe that providing a variety of techniques is useful—especially techniques that make use of both group instruction and individualized instruction (60).

This essay explores the struggles that children with ASD face regarding literacy, and presents different teaching techniques designed to help children affected by ASD improve their reading comprehension and language abilities. Though the articles used for this paper differ in style and in content, it is obvious that there is a general need for teaching techniques designed to help students with autism. Autism has become a prevalent issue in society, and these articles express that need in their own unique ways. The articles also outline the fact that children with autism are intelligent and therefore, research should be conducted that promotes different techniques and interventions for autism and literacy.

## **Annotated Bibliography**

Carnahan, Christina R., Pamela S. Williamson, and Jennifer Christman. “Linking Cognition And Literacy In Students With Autism Spectrum Disorder.” *Teaching Exceptional Children* 43.6 (2011): 54-62. Online.

This article discusses ideas about reading comprehension for children with Autism Spectrum Disorder (ASD). Specifically, the article presents a series of vignettes about a boy with ASD regarding three different theories explaining cognitive processes: Theory of Mind, Weak Central Coherence, and Executive Function. The authors eventually provide an overview discussing how individuals with ASD relate to the rules and meaning of language as well as vocabulary. The authors effectively present different solutions or options for helping students with ASD improve their reading comprehension, and each solution includes a small example that can help with practical application. Overall, the authors argue that increasing reading comprehension for children with ASD is a big commitment that requires an understanding of the cognitive profiles of students with ASD.

Many of the ideas and suggestions presented in this article could be used to support an expository essay that discusses literacy and its effects on special education and autism. Moreover, the information regarding linking language to comprehension and the application suggestions for helping students with ASD improve reading comprehension is especially useful for discussing special education techniques.

Fleury, Veronica P., et al. "Promoting Active Participation In Book Reading For Preschoolers With Autism Spectrum Disorder: A Preliminary Study." *Child Language Teaching & Therapy* 30.3 (2014): 273-288. Online.

Fleury's article offers the idea that active participation is overall better than passive participation when interacting with children with ASD through book reading. Taking a structural approach, Fleury and the other authors discuss the aspects of dialogic reading (adults asking intentional questions to encourage children to talk about books), then they discuss children

with ASD and their struggles with literacy, then provide an overview of a study conducted to prove the validity of dialogic reading, and finally the implications of the final results. This article provides a unique technique for helping to improve the literacy of young individuals with ASD through the means of active participation in book reading. It is practical, mainly easy to understand, and well-formatted. This article can be useful for the expository essay because it provides another concrete technique for improving literacy among individuals with ASD and it is backed by viable evidence, data, and explanation. Any teacher or parent trying to discover different ways to approach literacy for ASD would find this article interesting and appealing.

King-Sears, Margaret Elaine, Christopher Swanson, and Lynne Mainzer. "Technology And Literacy For Adolescents With Disabilities." *Journal Of Adolescent & Adult Literacy* 54.8 (2011): 569-578. Online.

The four authors involved in writing this article present a mnemonic device called TECH (Target, Examine, Create, Handle) which describes a framework that teachers can use to decide what technology can be used in the classroom to improve the learning environment for students with disabilities. After describing the different aspects of TECH, the article presents to different scenarios regarding a student with a learning disability and a student with ASD. The framework provided for how to choose technology based on the needs of the students is useful and is presented in a well thought-out argument. The scenarios provide great practical application and allow the reader to imagine him/herself going through the actual process. This article provides another unique topic that is still related to the overall topic of special education and literacy, and it can be used to add yet another dynamic of information to the expository essay. Many teachers would find this article quite useful for the technology-based decisions that they must face in the ever-increasing realm of technology.

Panerai, Simonetta, et al. "Special Education Versus Inclusive Education: The Role Of The TEACCH Program...Treatment And Education Of Autistic And Related Communication Handicapped Children." *Journal Of Autism & Developmental Disorders* 39.6 (2009): 874-82. Online.

In this largely analytical article, the authors advocate for the validity of the TEACCH program which is a program designed for children with autism that attempts to minimize the struggles these children experience related to literacy. The article overviews a study conducted in three different educational settings and approaches, and then discusses the validity or lack thereof in each approach. Each setting presented different challenges based on the environment, and provide detailed analysis of each. The information on each setting is fairly understandable and well-presented, and the procedures are seemingly effective. The facts in the article make it a great source for logos information. In the expository essay, this article will provide yet another teaching technique that could prove useful for anyone in the field of education or even a parent seeking out options to help his/her child with autism. This source can be a great opportunity to provide logos, and thus build up more credibility with the reader.

Randi, Judi, Tina Newman, and Elena L. Grigorenko. "Teaching Children With Autism To Read For Meaning: Challenges And Possibilities." *Journal Of Autism & Developmental Disorders* 40.7 (2010): 890-902. Online.

The three authors of this article focus on providing a review of the challenges children with autism face regarding literacy, focusing mainly on reading comprehension, and some solutions and ideas related to improving reading comprehension. A general overview of the requirements for reading comprehension is provided and then applied to children with ASD. Next, the authors present instructional interventions for children with ASDs. The interventions provided

revolve around teaching reading comprehension and vocabulary. Finally, a strong conclusion is provided that wraps up the article and presents a call to action for researchers to spend more time researching in order to provide more interventions for teaching comprehension to children with ASDs. The provision of multiple interventions in this article as well as the overview of challenges for children with ASD and literacy make the article easy to include in the expository essay.

Whalon, Kelly J., and Juliet E. Hart. "Children With Autism Spectrum Disorder And Literacy Instruction: An Exploratory Study Of Elementary Inclusive Settings." *Remedial & Special Education* 32.3 (2011): 243-255. Online.

This article explores a study conducted on three elementary school students with ASD that focuses on how the individual students engage in daily reading and respond to the strategies of their teachers. The authors describe the intricate method that was used to carry out the study, and then the results of the study were presented in a detailed manner. Each child used for the study is given an individual section that discusses their individual successes and struggles. The authors continue and provide a discussion combining the studies conducted on the three children, and emphasize the specific strategies that can be used for improvement within the educational system. Overall, the content of the article is useful, well-formatted, and adequately sourced. The article can be useful for the expository essay as it presents different strategies for providing literacy instruction to children with autism. Furthermore, the studies of the three different children can be used for practical examples within the essay.