

Children with Speech and Language Disabilities

KeShawn J. Hurst

Middle Georgia State University

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Abstract

This paper will examine the cognitive development. Specifically, it will include and inform others about the cognitive development of children with speech and language disabilities. In addition, it will be discussing the major factors of speech and language impairment and assistive technologies that can affect the students' academic performance.

Children with Speech and Language Disabilities

Speech and language are main factors to the study of human practice; which people use knowledge and other central involvement. Speech and language disorders can have impacts on the ability to communicate, to promote fresh knowledge, and to become engaged in society. Critical interruptions in speech or language have explicit and ambiguous importance on the child's development. Siegel, Hogan, and Green (2017) concluded through studies that "speech inconsistency is a core feature of Childhood Apraxia of Speech (CAS) and is efficacious in differentiating between children with Childhood Apraxia of Speech (CAS) and speech delay". A major factor of speech and language impairment is Childhood Apraxia of Speech (CAS). According to Siegel, et al. (2017), "Childhood Apraxia of Speech (CAS) is a speech disorder that is arguably caused by difficulty programming the motor commands that activate speech musculature". This paper examines Siegel, et al (2017) "purpose of current research to determine of speech inconsistency is a feature of Childhood Apraxia of Speech (CAS) and to determine if speech inconsistency is a sensitive and specific diagnostic marker for differentiating between children with Childhood Apraxia of Speech (CAS) and those with speech delay".

Siegel et al. (2017) reviewed an additional study conducted in 2017 to prove their purpose of research. "They found that forty-eight children ranging in age between 4;7 and 17;8 (years; months) participated as part of a larger investigation on the biological pathways that underlie childhood speech and language disorder". "All participants passed a bilateral pure-tone hearing screening and completed series of assessments". Children received honor for imprinting an applicable feedback even if they did not pronounce the words correctly to avoid unfairness. According to research, Siegel et al. (2017) "phonemic inconsistency was calculated using an adaptation of a procedure previously used to characterize preschoolers with speech sound

disorders”. Sanjeevan, Arnold, Alibali, and Evans (2016) “examined the relationship between word frequency and timing of communicative gestures in children with specific language impairment” (SLI). “Nine children with Specific Language Impairment (SLI) and twelve age matched training development children produced a narrative after watching an animated cartoon”. “Redundant gesture-speech pairs were identified and coded for temporal alignment between gesture and speech onset and gesture duration”. No significant group differences were found for temporal alignment or gesture duration. In addition, Sanjeevan et. al (2016) “Specific Language Impairment (SLI) is a developmental language disorder, in which children exhibit deficits in language development in the absence of intellectual disabilities”. The language impairment Specific Language Impairment (SLI) is common to be detected for grammatical capability. Specifically, Sanjeevan et.al (2016) stated that “individuals with Specific Learning Impairment (SLI) show poor application and comprehension of derivational and inflectional verb morphology, and poor production and comprehension of complex sentences consisting of relative clauses and long-distance dependencies”. According to Sanjeevan et. al (2016) “although the majority of past research has focused on grammatical impairments in children with Specific Learning Impairment (SLI), impairments in lexical and semantic areas of language have been observed in children with Specific Language Impairment (SLI), as well”.

According to McCauley, Fey, and Gillam (2017) “there are two classification categories in the Individuals with Disabilities Improvement Act (IDEA) of 2004 that are used for children who present significant language learning difficulties”. In addition, phonological awareness interventions are explained as factors associated with reading and spelling acquisition. McCauley, Fey, and Gillam (2017) defines “phonological awareness as a critical component in the process of recognizing and decoding words in print and is also important in learning how to

spell”. Children who approach reading and spelling instruction with strong phonological awareness knowledge are more likely to move forward in their education with a quick ease. In contrast, children with poor phonological awareness skills and difficulty in processing and holding phonological information in memory are more likely to experience difficulty of moving forward in their education because of poor performance in reading. In like manner, McCauley, Fey, and Gillam (2017), “children with diagnosed written language disorders, such as dyslexia, frequently display severe phonological awareness deficits”. McCauley, Fey, and Gillam (2017), stated that “phonological awareness interventions have developed, therefore, as a method to resolve phonological awareness deficits that contribute to children’s reading and spelling difficulties, and a method to prevent or limit difficulties for children identified as at risk for literacy problems, or an instructional method to enhance all children’s early reading and spelling success”.

Although it is more complex to communicate with each other, technologies are becoming very relevant for children with speech and language disabilities. Technology is becoming a strong impact pertaining with the child’s education. Moreover, Beals, Fink, and Linebarger (2016) “Speech and language technologies are technologies that allow computers to perform some of the functions of human linguistic communication- including recognizing and understanding speech, reading text out loud, and engaging in a conversation”. The technology that I will introduce during this research paper is speech recognition. According to Beals, Fink, and Linebarger (2016) “Speech recognition is defined as technology that enables a computer to turn speech into written language”. The speech recognizer simply records the words that it hears, without attempting to understand them. There are different types of models that accommodate speech recognition. Correspondingly, Beals, Fink, and Linebarger (2016) “Statistical language

model is used with speech recognition which is increasingly becoming more common as the underlying accuracy of basic speech recognition technology increases”. According to Beals, Fink, and Linebarger (2016) they examined that “a statistical model is based on not rules, but on an analysis of large amounts of text.” The benefits of speech recognition is that they are used to help those who are experiencing speech and language disorders in variety of ways. According to Beals, Fink, and Linebarger (2016) “Speech recognition technology is stated to be widely available”. According to Beals, Fink, and Linebarger (2016) “It is built into current desktop computers and mobile devices and can be accessed programmatically in most cases by developers who would like to integrate it into applications”.

Identically, Beals, Fink, and Linebarger (2016) “one of the first steps in addressing the needs of those with developmental language disorders is determining what sort of remediation is necessary and placing the student appropriately within a remediation program”. According to Beals, Fink, and Linebarger (2016) “Vocabulary tests are also easily computerized – substantially sparing the manpower of traditional assessments. But vocabulary by itself gives an incomplete picture of language skills, especially given that, in both autism and it tends to be a relative strength compared with grammar and (in the case of autism) pragmatics.. According to Beals, Fink, and Linebarger (2016) “reading difficulties can occur in all the different developmental language disorders”. A child who struggles to understand words and sentences usually occur in speech or in writing. Similarly, Beals, Fink, and Linebarger (2016) “stated that since the number of applications that address speech and language disorders is large and continually expanding, it is not possible to provide a definitive list of high-quality applications here”.

According to Uilenburg, Wiefferink, Verkerk, van Denderen, van Schie, Oudesluys-Murphy (2018) “Language development is the most prevalent developmental disorder among young children”. Furthermore, Fish (2011) “stated that children with CAS may demonstrate prolonged pauses between phonemes, syllables, and words resulting from challenges making smooth articulatory transitions from phoneme-to-phoneme or syllable-to-syllable”. According to Uilenburg, Wiefferink, Verkerk, van Denderen, van Schie, Oudesluys- Murphy (2018) “findings that point toward challenges in planning and programming of speech movements (e.g., token-to-token variability, reduced vowel repertoire, increased number of errors as length increases, excessive equal stress) will support a diagnosis of CAS far more accurately than features that commonly are observed in children with other types of speech and language disorders”.

According to Uilenburg, Wiefferink, Verkerk, van Denderen, van Schie, Oudesluys- Murphy (2018) “speech characteristics are characterized as a token-to-token variability, phoneme error variability, prolonged pauses or breaks between phonemes, syllables, and words, frequent vowel errors, and groping, struggling to speak. In like manner Fish (2011) “stated that most in need of communicative assistance, of course, are children with the most severe language impairments: children who often have speech impairments in addition to productive language impairments”.

For this population, the most common assistive communication devices are those that use stored word and phrase recordings. However, According to Beals, Fink, and Linebarger (2016) it has been stated that “for those who have language-impaired children who do have keyboarding skills, there is a different assistive technology”. Equally important, Beals, Fink, and Linebarger (2016) examined that “this assistive technology can be used to plug into word processing programs on both laptops and tablets”. The software can read the selected words out loud. According to Beals, Fink, and Linebarger (2016)” stated that another technology we all are

familiar with, but which can serve in an assistive capacity, in particular, for children with grammar difficulties, are the auto corrections and the corrective feedback – squiggly, color-coded underscores – seen in programs like Microsoft Word”.

Many students with a history of speech or language impairment have an elevated risk of reading difficulty. In like manner, Zipoli and Merrit (2017) explained that “specific subgroups of these students remain at risk of reading problems even after clinical manifestations of a speech or language disorder have diminished. However, Student Support Team (SST) are known for their accomplishments of supporting students who have speech and language disabilities. In addition, Zipoli and Merrit (2017) examined that “Student Support Teams (SST) already exist in many school districts and can provide an ideal venue for identifying and monitoring students with an increased risk of reading disability because of a history of speech or language impairment”.

These teams often include classroom teachers, an administrator, and specialized support staff, such as reading and special education teachers. Zipolo and Merrit (2017) “stated that when considering support for students with a history of speech or language impairment, it can be very helpful to have a Speech Language Pathologist (SLP) participate on the Student Support Team” (SST). Speech Language Pathologists (SLPs) have knowledge of speech disorders and speech impairments. Their approach of practice contains to motivate the advancement of reading and writing. Also, Zipoli and Merrit (2017) “suggested that students who experience difficulty to learning to read or write may require the additional learning supports of Tier II or Tier III intervention within a Response to Intervention (RTI) system”.

Conclusion

In my conclusion, speech and language are main components to the individual practice. Speech and language skills allow a child to engage in change of new knowledge, also it allows the children to grow and develop speech and language skills progressively. Communication skills are crucial to the development of thinking ability, a sense of self, and participate fully in society. Furthermore, Siegel stated that “Childhood Apraxia of Speech (CAS) is a core feature of speech inconsistency which means that it is a disorder which a child has difficulty making accurate movements when speaking”. In Childhood Apraxia of Speech (CAS) I stated previously in my paper that in Childhood Apraxia of Speech (CAS), the brain struggles to develop plans for speech movement. With this disorder, it is commonly to state that the speech muscles aren’t weak, but they don’t perform normally because the brain has difficulty directing or coordinating the movements. Thus, even if children with such disorders make some progress from growth and with their treatment, the gap between their abilities and functional expectations widens. In like manner, there are many varieties of assistive technologies that are given to children who have speech and language disabilities. These assistive technologies that I have stated previously in my paper are highly effective to help with phonological disorders, morphological disorders, semantic difficulties, and pragmatic difficulties. In addition, this is where the Student Success Team (SST) will become highly effective with students who have speech and language disabilities. Students with speech or language disorders will develop a process of growth when there is a Student Success Team (SST). This organization provides a variety of professional services, and while doing research in my paper, I learned that these services have an aim of developing effective communication skills for students who have a speech and language disorder. This team comes together and works with the Speech Language Pathologist (SLP) to come up with different

approaches to help the student practice approaches mastered in speech therapy. This can include corrective measures, helping with speech and language exercises, and providing the student with immediate feedback. In order to know if a child has a speech or language disorder you must first know the Specific Learning Impairment. In determining the existence of a specific learning disability, it must be presented that if there are not achieving at the proper age then they could be suggested with taking these special services that are provided to strongly effect their speech and language disability. Learning disabilities have a strong historic factor on speech and language impairment. Reading difficulty has a strong impact on the effectiveness of speech and language. So therefore, it is important that faculty staff come together and provide appropriate strategies for students who have speech and language disability. Speech and Language impairment is a strong factor that can affect students having the ability to not read, however, if we work purposely with our students, we will see effective growth in our school systems worldwide. Speech and language are strong historic factors to consider how far the children will grow in their education. These skills are prevalent in developing potential growth to be successful in school. Difficulties affecting the ability of speech and language are known for those who are struggling in reading and writing. This can be shown during assessments or class participation. Speech and language therapy services have an important role in examining who may need these special services. It is their job to make sure that there are using the appropriate strategies to make sure the students are making proper improvement. So therefore, these technologies that has been presented in this paper will help our children develop a strong foundation of reading and writing. Language is essential to learning, so therefore, it is our job as teachers to make sure we are providing the right assistive help to accumulate our students with speech and language disabilities.

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