What Child Language Research May Contribute to the Understanding and Treatment of Stuttering

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According to the data available from the 2001 American Speech-Language-Hearing (ASHA) Omnibus Survey (Janota, 2001) investigating the caseloads of speech-language pathologists (SLPs) who are employed full time and working in a variety of settings including schools, just less than two thirds of all SLPs who completed the questionnaire (65.2%) regularly provide speech therapy to individuals with fluency disorders. This percentage represents an average of 2.4 clients per clinician. More specifically, for SLPs employed in the schools, the numbers are somewhat higher, with 78.3% of clinicians reporting individuals who stutter on their caseloads, representing an average of 2.5 clients per clinician’s caseload. Although these numbers do not speak to extraordinarily high proportions of our school clientele as presenting with fluency disorders, they do suggest that an appreciable majority of school-based clinicians are called on to provide speech or speech-language services to some children who stutter (CWS).

Anecdotal evidence would suggest that the disorder of stuttering, especially stuttering in children, is an area of the average SLP’s realm of expertise where there is relative discomfort when called on to assess, plan, and carry out treatment. Research has shown that assessment appears to pose somewhat less of a concern than actual therapy (Brisk, Healey, & Hux, 1997). In fact, when surveyed with regard to their attitudes about providing speech therapy to CWS, SLPs have reported that they are significantly less confident in working with clients who stutter than they are with, for example, individuals who demonstrate speech sound disorders or language disorders (Brisk et al., 1997; Kelly et al., 1997). Although most of the evidence is anecdotal, I have been told by my colleagues who spend considerable time providing continuing education workshops focusing on the treatment of CWS to practicing SLPs that clinicians often express that they are fearful that the treatment they currently provide to CWS could exacerbate the problem rather than alleviate it (J. Scott Yaruss, personal communication, September 4, 2002; Patricia Zebrowski, personal communication, September 6, 2002). For example, clinicians may fear that asking too many questions or otherwise inadvertently causing the child to feel pressured to participate in the therapy session might result in an increase in stuttering. Similarly, clinicians may believe that drawing attention to the child’s disfluencies may inhibit the client’s willingness to participate in therapy sessions. Certainly given the scope of practice expected from SLPs, there will always be areas of practice where one may feel more or less secure (Kelly et al., 1997), but expressing fear of causing a disorder to worsen appears thus far to be limited to the realm of fluency disorders. To this writer’s knowledge, it is rare for practicing SLPs to express concern that their provision of therapy might actually make the communication problem worse even if their experience in a disorder area is limited.

What is the genesis of this concern? Clinicians have expressed the sentiment that lack of what they perceive as sufficient training and experience working with this population at both the preprofessional and the professional level lies at the root of the problem (Mallard, Gardner, & Downey, 1988; St. Louis & Durrenberger, 1993; Yaruss & Quesal, 2002). Judging by the references listed, this
appears to be a perception of long standing. This notion may have its roots in Wendell Johnson’s “diagnosogenic theory” of stuttering onset and development (Johnson, 1959) that argued for the importance of listeners’ reactions to the disfluencies in the child’s developing perception of him- or herself as a competent speaker or a person who stutters. Thus, SLPs may be afraid that attending directly to the child’s disfluencies through intervention may create a bigger problem than already exists. Some investigators have suggested that the potential psychological component of fluency disorders causes SLPs to proceed with caution, if at all (Lass, Ruscello, Pannbacker, Schmitt, & Everly-Myers, 1989). That is, SLPs are not trained psychologists, and intervening with stuttering, where issues of identity and repressed thoughts have been indicted as potential causes for the disorder, may seem to be outside the realm of most SLPs’ practice. The perception of the limited success achieved by clinicians in their attempts at treating persons who stutter (PWS) has also been shown to be a factor in SLPs’ reluctance to work with PWS (St. Louis & Durrenberger, 1993). In fact, where concomitant communication disorders have been diagnosed, it is not uncommon to find SLPs providing therapy for speech sound errors and/or language disorders in preference to addressing the presence of a fluency disorder directly. Please note that there certainly are instances where this approach may be appropriate for concomitant problems, especially in the treatment of young CWS (Conture, 2001; Louko, Conture, & Edwards, 1999).

However, there are SLPs who will work on speech sound disorders or language issues only with CWS, regardless of the appropriateness to do so. This may occur because in the clinician’s view, the latter do not carry with them the burden of potential failure in the same way that fluency disorders do, and SLPs generally appear to be more comfortable assessing and treating children who present with speech sound disorders and/or language disorders.

THE RELEVANCE OF WHAT WE KNOW ABOUT LANGUAGE LEARNING AND DISORDERS TO TREATING CWS

The purpose of this clinical forum is to capitalize on the relative ease that SLPs profess to have when dealing with therapy involving speech sound disorders and language disorders and to use what we know about the interface between normal language learning and fluency development and disorders to make some suggestions that may be useful in providing therapy to young CWS. Each of the authors of this clinical forum has spent her career investigating language learning, language disorders, and fluency disorders, although not necessarily in that particular order of emphasis. What connects each of these authors to one another is an abiding belief that both the strategies of language learning and the data that investigators have amassed in describing that process can inform the therapy provided for young CWS.

Theories of normal language development, as well as the theories that explain why some children are not successful language learners, continue to intrigue researchers in the fields of communication disorders, developmental psycholinguistics, psychology, and early childhood special education, among others. Those of us in the field of communication disorders are also concerned with how these theories, as well as information gleaned from children who are developing language in a normal manner, can assist in the design of treatment programs that are efficacious in building the language competencies of those children having disorders of language learning and communication use.

When teaching a course in language development, I often divide language into pragmatics, semantics, syntax, morphology, and phonology for the ease of teaching these concepts. A quick perusal of many of the textbooks commonly used for this purpose supports this approach. Although teaching may be facilitated by deconstructing language into its components, I recognize that a critical appreciation of the whole being greater than the sum of its parts can be lost by the students. Thus, I compensate by ensuring that I focus the students on appreciating the inherent relationships between the component language parts. For example, most children learn early on that language can be used to request (pragmatics), and with the addition of lexical items (semantics) such as “want” or “gimme” or “help,” they can be more explicit in their requests. Thus, the child’s knowledge of semantics is mapped onto what is known about pragmatics. The growth of this variety of forms and functions signals growing language competence. Similarly, when children learn how to produce elaborated noun phrases (syntax), they can incorporate them into their narratives (discourse/pragmatics) to create more complete and interesting stories. Leonard (1973) demonstrated that when attempting to convey new information to a listener, children who had not yet mastered the /s/ phoneme were more likely to produce the /s/ intelligibly. Here, phonology is being affected by a child’s knowledge of pragmatics and more specifically by the aspect of presupposition, being sure to tell the listener what he or she must know to communicate successfully. These are only a few instances that illustrate a crossover effect for all combinations of language components during the learning process.

In a seminal study, Panagos and Prelock (1982) successfully demonstrated the effect that increasing syntactic difficulty can have on the production of intelligible utterances for children with known speech sound disorders and vice versa. There is a sizeable literature that has addressed the phenomenon of interaction between language components in both normal language learning and disordered language, as well as in studies of language intervention (Kamhi, Catts, & Davis, 1984; Leonard et al., 1982; Schwartz, Chapman, Terrell, Prelock, & Rowan, 1985; Tyler & Teipner Sandoval, 1994, among others). When you increase the degree of difficulty in one area, especially for an individual who has not achieved linguistic competence, another area “suffers” as a result, as the investigators have generally demonstrated. Speculation has been that this commonly observed outcome results from having less time and fewer language resources to simultaneously attend to all language components. Nelson and Bauer (1991)
demonstrated that even 2-year-olds are observed to “trade off” between their linguistic and phonetic processing.

In 1987, Crystal described what he referred to as a “bucket theory” of language learning. Simply put, his perspective was that all areas of language learning are interrelated. That is, a child learning language does not focus on vocabulary learning and then move on to pragmatics, but rather all of the components of language that comprise a fluent system of expressive language are being learned simultaneously and exert an effect on one another.

Crystal (1987) added into this mix of language components a focus on children’s fluent production of their utterances as well. That is, as the language he expected his young subject to produce grew in complexity, the more often an increase in the frequency of fluency breakdowns was observed. The investigator blamed the inability of the child to maintain fluency on the additional resources that had to be spent on more sophisticated syntax structures, the need for advanced vocabulary, the addition of morphological markers that the child did not yet have firmly fixed in his repertoire, or a combination of any or all of the above. That is, with all of the traditional language structures to manipulate, there were insufficient resources left over to produce the sentence without disfluencies.

I believe the bottom line to be that language context matters where fluency maintenance is concerned for young CWS. Context can be viewed at the utterance level and at the discourse level. As sentences become longer and more complex, determining how best to incorporate those sentences into conversation, stories, or expository text also increases complexity for fluent production. When complexity is increased, so is the likelihood that disfluencies will be produced. As Conture (2001) noted in his listing of “some relatively safe generalizations about stuttering” (p. 17), “stuttering is most likely to occur during bidirectional communication” (p. 17). That is, speaking rarely occurs in a vacuum. In conversations, expository text, or storytelling, it is incumbent on the speaker to take the listener’s perspective into consideration in order to facilitate the success of the communication. Thus, there is a bidirectional influence at work. Of course, prerequisite to putting discourse contributions together is mastery of the ability to manipulate the language’s lexical, morphological, syntactic, and phonological symbols, rules, and relationships in a grammatical fashion.

**CONTRIBUTIONS TO THIS FORUM**

In the first article in this forum, Weiss (2004) presents a model of pragmatic competencies that has proven useful for both assessment and intervention. The article also describes research findings that have assisted both investigators and clinicians in understanding how the pragmatic competencies of young CWS may or may not be compromised in different discourse contexts. Suggestions for how to use this information in the planning of treatment to maximize fluency-maintaining strategies are provided.

Next, Nan Bernstein Ratner (2004) has contributed a provocative article dealing with the quality and quantity of caregiver–child interactions and their impact on children’s fluency and their potential implications for treatment. Well known for focusing her research on answering practical questions about the relationship between caregivers’ behaviors and their influence on CWS, Bernstein Ratner has dispelled some commonly held beliefs along the way with solid data. Her information can be used to guide SLPs to make good choices for counseling caregivers and in the treatment of young CWS.

In the following article, Nancy Hall (2004) has focused her attention on the semantic piece of the language pie. Her article takes into account recent information about vocabulary learning, as well as controversies concerning the word retrieval problems that have been reported by some researchers in their studies of CWS. Research in this area has been equivocal; however, Hall provides the reader with some food for thought for how word retrieval problems can be related to fluency disorders in children.

In her many years of training preprofessional SLP students and providing therapy herself to individuals who stutter, Margaret Leahy, the next contributor, has studied methods of discourse and conversational analysis and applied them to transcripts of treatment sessions to yield a better understanding of the dynamics of the therapeutic interaction. Professor Leahy (2004) has demonstrated in her article that insights provided by such analyses may facilitate the efficacy of the treatment provided to PWS, both children and adults.

Ruth Watkins and Bonnie Johnson (2004), the final contributors to this forum, have worked together on the language portion of what they refer to in their paper as the “Illinois Project,” directed by Professor Ehud Yairi at the University of Illinois. Yairi’s current funding was awarded to study the development of stuttering and spontaneous recovery from stuttering that is observed in young children. Watkins’ and Johnson’s investigations have focused on the development of syntax and morphology in young CWS to better understand the longitudinal course of stuttering and the predictive nature of language competencies on spontaneous recovery. That is, can language competencies be used as markers to determine which children are likely to recover early on from stuttering and which ones are more likely to retain their disfluent status? Their article confronts some of the principles they believe must be adhered to if useful efficacy data is to be collected from CWS.

It is our hope that taken together these articles will provide SLPs with some useful information concerning the interface between language learning and fluency that can be used in their day-to-day practice with CWS. Once on the track of thinking about language learning and its potential relationship with stuttering, individual readers may discover their own nuggets of insight about working with young children with language disorders that will assist them in the assessment and treatment of the CWS on their caseloads. Many SLPs are already focusing on strategies to facilitate the language learning of the many young children on their caseloads and doing so without the anxiety that working with CWS can apparently provoke. Understanding that fluency disorders exist within the highly manipulable contexts of spoken language should lead clinicians to the
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recognition that they do have a sizeable knowledge base for successfully treating CWS.

REFERENCES


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