SLP- ABA: Collaborating to Support Individuals with Communication Impairments

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Abstract

This paper addresses collaboration between professionals in the fields of speech-language pathology and applied behavior analysis (SLP and ABA). Although the fields of SLP and ABA each address a wide range of different concerns, they share an interest in supporting individuals with communication impairments. However, despite this significant area of overlap, the history of collaboration between these professionals has varied markedly over the past 50 years. This paper provides (a) a historical sketch of events that have led to renewed interest in collaboration among professionals within these fields. (b) the advantages of collaboration, and (c) suggestions for ways to strengthen current levels of collaboration in the service of individuals with communication impairments.
Keywords: Applied Behavior Analysis, Speech-Language Pathology, Scope of Practice, Collaboration, History.

Introduction

The fields of applied behavior analysis (ABA) and speech-language pathology (SLP) each have a unique but overlapping range of interests. ABA professionals offer support for a wide variety of problems that challenge individuals and organizations in the performance of socially-valued verbal and nonverbal behaviors (e.g., BACB, no date). The scope of practice for SLP professionals is limited to communicative enhancement, although the types of problems requiring intervention are as diverse as the communication system itself (e.g., developmental and acquired language disorders, speech production impairments, voice and fluency problems, augmentative and alternative communication needs, dysphagia, and others) (ASHA, 2001). An overlap between ABA and SLP professionals involves support for the needs of individuals with communication impairments, including the reduction of problem behaviors that stem from inadequate communication skills. Despite this significant overlap, the history of collaboration between professionals in these fields has varied over the years. The purpose of this paper is to provide a brief historical sketch of the relationship between the professions of ABA and SLP; to discuss current avenues and benefits of collaboration; and to suggest ways of strengthening this collaboration in the service of individuals with communication impairments.

A Brief Historical Sketch

Many changes have occurred over the past 50 years in the practices of ABA and SLP. This is not at all surprising for at least three reasons. First, each profession has a relatively short history and a complex range of interests as noted above. Second, the context of service delivery, including evolving theoretical frameworks and consumer demands, has influenced the work of professionals in each field. Third, each profession has a commitment to evidence-based practice, which forces change in response to new findings.

Changes in theoretical frameworks have had considerable impact on the practice of SLP. Some of these changes widened the gap between the fields of SLP and ABA while others had the opposite effect. For example, in the period between 1950 and 1975, the application of behavioral techniques to clinical practice was frequently reported in the SLP literature and in other literature consumed by SLP professionals. Some of the earliest articles refer to stimulus presentation and reinforcement (e.g., Enquist & Wagner, 1950), as well as response shaping and modeling (e.g., Backus & Beasley, 1951; Bloodstein,

1950). Moreover, behavioral techniques were used to treat a variety of speech-language problems, including disorders of articulation (e.g., McReynolds, 1966; Sommers et al., 1966), fluency (e.g., Brookshire & Martin, 1967; Brutten & Shoemaker, 1967), voice (e.g., Shriberg, 1971), and language (e.g., Baer & Guess, 1971; Holland & Harris, 1968; Sailor & Tackman, 1972). An excellent review of details regarding the integration of behavioral techniques within the profession of SLP is provided by Ogletree & Oren (2001).

In the late 1970s and 1980s, the field of SLP became increasingly influenced by models of generative grammar and generative semantics (e.g., Chomsky, 1957; Bloom, 1970; Brown, 1973). These models relied heavily on concepts from theoretical linguistics and cognitive psychology – far from the roots of applied behavior analysis. The idea that language behaviors were a manifestation of a more basic, underlying, abstract rule -system suggested different methods of management. The appropriateness of using behavioral techniques for teaching a generative language system was questioned (e.g., Prizant, 1982), and SLP professionals became "…facilitator of the language-learning process who did not strictly control stimuli and responses in treatment but [rather] worked in natural, non-intrusive ways" (Ogletree, 2001, p 104). In addition, some of the heat resulting from Chomsky's (1959) review of Skinner's (1957) *Verbal Behavior* trickled down to ABA and SLP practitioners, thereby creating a considerable rift between many members of the two professions (e.g., MacCorquodale, 1970; Palmer, 1986).

By the late 1980s, however, limitations of generative language models, combined with new potential offered by the pragmatics framework (e.g., Bates, 1976; Halliday, 1975; Bruner, 1981), began to bring SLP professionals as a group back to a closer alignment with ABA. Specifically, the pragmatics framework focused the attention of SLP professionals on the importance of communicative functions (and other aspects of social interaction) to natural and assisted language learning. From that point to about 1990, the fields of ABA and SLP continued on a relatively parallel course with regard to the practice of communicative enhancement. With few exceptions (e.g., Fey, 1986; Ogletree, 2001), there appears to have been little exchange of substantive information. For example, articles on language instruction in behavioral journals rarely cited literature produced by professionals in SLP or psycholinguistics and vice versa. Each profession appeared to be operating in a parallel universe despite important common interests (Koenig & Gerenser, 2000).

Several events in the 1990s contributed toward significant changes in the degree of substantive information exchanged between ABA and SLP professionals. All were related in one way or another to a dramatic increase in the incidence of autism. Perhaps one of the most significant events was the publication in 1993 of Catherine Maurice's book *Let me Hear Your Voice*, which described the diagnosis and recovery of two children with autism spectrum disorders (ASD) from a parent's perspective. Included was a description of the many challenges that Maurice faced in finding appropriate treatments for her children and the nature of the therapies that she ultimately attributed to both children's recovery. Included among the latter were ABA and (to a lesser extent) SLP.

In summarizing the scientific evidence supporting behavioral interventions, Maurice (1993) referred to O. Ivar Lovaas' (1987) research, which compared the treatment outcomes of children with autism in an experimental group receiving early, intensive, long-term behavioral intervention with the outcomes of children in two control groups, who received either less intensive behavioral intervention or a variety of non-behavioral interventions. The best outcomes were obtained by 9 (47%) of the 19 participants in the experimental group. By the end of the study, these children were characterized as "indistinguishable from same-age peers" in an academic setting. As noted by Green (1996), other studies provided similar patterns of support (e.g., Anderson et al., 1994; Birnbauer & Leach, 1993; Sheinkopf & Siegel, 1998).

Since no other treatment approaches offered efficacy data of this nature, it is not surprising that early intensive behavioral intervention (EIBI) soon became the treatment of choice for many families of children with ASD, and a momentum began to build. EIBI programs began to surface across the USA and internationally. In the best case scenario, these programs were led by experienced ABA professionals, and many included SLP professionals as team members. Workshops began to be offered around the country on the use of behavioral interventions for children with autism (e.g., Lovaas, 1995); and several manuals were published to support home-based programs (e.g., Fovel, 2002; Maurice, Green, & Luce, 1996; Leaf & McEachin, 1999; Sundberg & Partington, 1998). The availability of internet listservs enabled families to network with each other rapidly at regional, national, and international levels about the challenges and successes of behavioral (and other) interventions. The need for behavioral intervention options was also eventually communicated to public school systems by families whose children had made progress with this approach in home-based EIBI programs.

Of relevance to this discussion is the fact that a large proportion of the EIBI curriculum for children with autism targeted language and pre-language skills (e.g., imitation, play, vocal production, etc.) (e.g., Lovaas, 1981; Freeman & Dake, 1997; Harris & Weiss, 1998; Taylor & McDonough, 1986; Leaf & McEachin, 1999; Maurice, Green, & Foxx, 2001; Partington & Sundberg, Taylor & McDonough, 1986). In deed, one recent manifestation of behavioral intervention (Sundberg & Partington, 1998) has come to be known (with some reservation among its proponents) as "Verbal Behavior" because it targets the verbal behavior functions described by Skinner (1957).

Given the emphasis of EIBI programs on social-communicative enhancement, and given the evidence of treatment efficacy associated with behavioral methods, it is not surprising, that SLP professionals became increasingly interested in a reconsideration of the behavioral framework. Those who had participated on home-based early intervention teams had observed the impact of behavioral interventions directly; and those who worked in schools were becoming increasingly exposed to behavioral interventions through in-service programs. For example, the Pennsylvania Training and Technical Assistance Network (PaTTAN) has offered a large-scale annual "Autism Conference" for teachers, related service providers (including ABA and SLP professionals), and families of children with autism since 1998; and a major portion of this conference offers information on behavioral approaches to communicative enhancement.

To date, the interest among SLP Professionals in behavioral approaches to communicative enhancement has had several tangible results. First, since 2001, a growing number of SLP professionals have expanded their post-graduate education to earn certification in ABA through the Behavior Analysis Certification Board (see http://www.bacb.com/). Second, a listserv was established in 2001 for professionals in ABA and SLP who wish to dialogue about issues of mutual interest (see http://health.groups.yahoo.com/group/SLP_ABA/). Third, the Association for Behavior Analysis developed a special interest group in 2005 for SLP professionals who attend the ABA convention (see http://behavioralspeech.com/). In recent years there has also been an increase in the number of SLP professionals presenting papers at annual ABA conventions and (slowly but surely) in the number of behavioral papers presented at annual ASHA (American Speech-Language and Hearing Association) conventions. Clearly, there is an interest in collaboration among members of each profession.

Benefits to Collaboration

In this discussion, the word collaboration refers to a variety of activities involving the contribution of each profession towards evidence-based practices that can improve the services for individuals with communication impairments. Collaboration can occur in team work during clinical practice, in the pursuit of research, in reading the literature of each profession, in dialogue on listservs, in

participation at conferences and in any other context where professionals from both fields can have an impact on advancing evidence-based services to support people with communication impairments.

The benefits of collaboration are clear to ABA and SLP professionals who are already engaged in the process. One example can be seen in the creation of evidence-based therapeutic approaches and practices by individuals with combined expertise in ABA and SLP (e.g., Dyer & Kohland, 1991; Frost & Bondy, 2001; Gerenser, 2005; Koegel & Koegel, 1996; Mirenda, 1997; Reichle & Wacker, 1993).

Another important benefit to collaboration may be its ability to improve the integration of support provided by SLP and ABA professionals as participants on home-, school-, and center-based intervention teams. Areas where improvement is needed can be illustrated by examples of situations where problems have been observed. For example, in the context of our own clinical experiences, we have spoken with families who were confused about how to integrate recommendations from their ABA consultant for verbal behavior targets with seemingly conflicting recommendations from their SLP consultant for language intervention targets. Additionally, differing technical terms used by ABA and SLP professionals for referring to similar strategies are also sometimes a source of confusion. For example, SLPs may talk to families about "communicative temptations" while ABA professionals talk to them about "motivating operations." Further, the precise technical definitions of various behavioral procedures (e.g., DRA, DRO, DRI, functional assessment, functional analysis) are sometimes poorly understood by SLP professionals, while the complexities of oral speech and language development are sometimes poorly understood by ABA professionals. In both cases, this can result in programmatic problems. Moreover, the concept of "verbal behavior" itself is often grossly misunderstood by consumers as well as many SLP professionals as referring to something other than evidence-based behavioral methodology for supporting communication development. With better collaboration, professionals from both disciplines may learn to present clearer information to consumers.

Another benefit of collaboration may be a reduction in the number of reinvented wheels. In the SLP and psycholinguistic literature there is quite a history of research demonstrating that adult-directed techniques (e.g., discrete trials) are effective for establishing skills that are not already within repertoire while child-oriented and hybrid techniques (e.g., natural environmental training, or NET) are more effective in promoting generalization (e.g., Fey, 1986; Paul, 2001). Despite this fact, EIBI programs based on the Lovaas (1981) model appeared to emphasize discrete trial instruction without much attention to child-oriented or hybrid techniques. In fact, for a period of time, "ABA" became (incorrectly) synonymous with "discrete trial teaching" in the minds of many consumers, public school administrators, and non-ABA professionals. Moreover, the inclusion of NET was cited by Carr & Firth (2005) as an innovation associated with the most recently documented manifestation of EIBI (e.g., Sundberg & Partington, 1998).

For further evidence of how the fields of ABA and SLP have reinvented the wheel while operating in relatively parallel universes, please see Prizant and Wetherby (1998). The fact that some of the same principles have been identified independently by professionals in two different fields tends to supports the validity of those principles. At the same time, however, some consumers are not provided with optimal services when professionals in the field that has not yet discovered the principle are using less effective teaching strategies.

Finally, while the desire for stronger collaboration may have been prompted by the communication needs of individuals with autism, the benefits of stronger collaboration between ABA and SLP professionals would extend beyond the needs of this population. As indicated earlier, other communication needs frequently addressed by both ABA and SLP professionals include fluency disorders, aphasia, voice, and phonological disorders. However, despite this overlap in treatment interests, there is limited overlap in research, publications, or presentations. Stronger collaboration could reduce

these limitations. For all of the above reasons, it seems obvious that better collaboration between ABA and SLP professionals could result in a higher quality of service delivery for individuals with communication impairments.

Recommendations for Continued Collaboration

As indicated previously, the work of ABA and SLP professionals overlaps with respect to supporting individuals with communication impairments. Any collaborative activity that enhances the quality of services provided to these consumers is worthy of consideration. Below are some suggestions:

1. **Share treatment efficacy data**. This can be accomplished at various levels. The *Journal of Applied Behavior Analysis and Speech-Language Pathology (JSLP-ABA)* welcomes data-based articles involving case studies, single subject designs, and group designs. Data-based research can also be shared in the form of presentations at national and regional conferences for ABA and SLP professionals. Information can be shared informally on the SLP-ABA Listserv.

2. **Share innovative teaching procedures**. This can be done informally on the SLP-ABA listserv and at special interest group meetings. Before a procedure's efficacy can be assessed, it needs to be defined. The advantage of sharing such ideas within a mixed forum (e.g., SLP-ABA listserv) is that the contributor has the potential to receive helpful feedback relatively quickly from other professionals with similar interests.

3. **Share basic information**. If you work in an applied context where information about your area of expertise (ABA or SLP) is repeatedly misunderstood by professionals from the other area (SLP or ABA), consider sharing a clear summary of the targeted information with readers of *JSLP-ABA*. Chances are that your experience is not unique, and that an article on the topic may serve to clarify issues at a broader level.

4. **Share your experience of successful collaboration** within an applied environment. As with the previous two suggestions, this can be done in the form of an article in *JSLP-ABA*, a presentation at a professional conference, or even on the SLP-ABA listserv. Given the various ways in which collaboration sometimes fails, models of effective collaboration have the potential to improve systems in other locations.

5. **Read articles in journals associated with the other profession**. If you are an ABA professional, consider reading some of the articles in the *American Journal of Speech-Language Pathology; Language, Speech, and Hearing Services in the Schools; and the Journal of Speech and Language Research*. If you are an SLP professional, consider reading some of the articles in the *Journal of Applied Behavior Analysis*; *The Analysis of Verbal Behavior; Behavior Analysis Today;* the *Journal of Early Intensive Behavioral Intervention,* or *The Journal of Precision Teaching*. By reading the literature of the other profession, you will learn the vocabulary and gain a better understanding of where overlaps do and do not exist between the professions. Even if you completely disagree with the concept, philosophy or theory behind the material you are reading, the process of constructive professional disagreement can go a long way to inspire new and even better interventions.

6. **Share your concerns** about collaboration breakdowns. If you experience a collaboration breakdown, it may be helpful to share (in general terms) what happened and how it may be resolved. Chances are the same problem may be brewing elsewhere, and your experience may help others solve it more easily.

7. **Share lunch**: If you're an ABA professional, take an SLP professional to lunch. If you're an SLP professional, take an ABA professional to lunch. Discuss the ways in which your roles overlap. You may discover that the individual resources which each of you bring to the table can be combined in helpful ways to improve the services for individuals with communication impairments.

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