

April 2001

Classroom Teachers and Speech Therapists Collaborating to Improve Listening and Reading Comprehension

Lynn Calvert
Eastern Illinois University

Rebecca Throneburg
Eastern Illinois University, rmthroneburg@eiu.edu

Megan Grimaldi
Eastern Illinois University

Pamela Paul

Janice Althoff

Follow this and additional works at: http://thekeep.eiu.edu/commdis_fac



Part of the [Communication Sciences and Disorders Commons](#)

Recommended Citation

Calvert, Lynn; Throneburg, Rebecca; Grimaldi, Megan; Paul, Pamela; and Althoff, Janice, "Classroom Teachers and Speech Therapists Collaborating to Improve Listening and Reading Comprehension" (2001). *Faculty Research and Creative Activity*. 2.
http://thekeep.eiu.edu/commdis_fac/2

This Article is brought to you for free and open access by the Communication Disorders & Sciences at The Keep. It has been accepted for inclusion in Faculty Research and Creative Activity by an authorized administrator of The Keep. For more information, please contact tabruns@eiu.edu.

Classroom Teachers and Speech Therapists Collaborating to Improve Listening and Reading Comprehension

Lynn Calvert is an associate professor and the student teaching coordinator in Communication Disorders and Sciences at Eastern Illinois University since 1992. She has published and presented at the national and state level in the area of collaborative service delivery in the elementary school setting. Previously she worked for over 10 years as a speech therapist in elementary and preschools.

Rebecca Throneburg is an assistant professor in Communication Disorders and Sciences at Eastern Illinois University. She has several publications and presentations in the area of collaborative service delivery in the elementary school setting. Other areas of interest include phonological awareness and early childhood stuttering. She previously worked as a speech therapist in an elementary school, rehabilitation companies and home health care.

Lynn Calvert
Rebecca Throneburg
Megan Grimaldi
Pamela Paul
Janice Althoff

Megan Grimaldi was a graduate student at Eastern Illinois University in Communication Disorders and Sciences. She has delivered collaborative classroom-based services to school-aged children as a student clinician and collected data for this project as part of a master's thesis.

Pam Paul has worked as a speech therapist in schools in Chateston, Illinois for more than ten years. She has been actively implementing classroom-based service delivery models to serve children with speech-language deficits for almost five years. Her caseload includes children in first through third grades with speech-language deficits.

Janis Althoff has worked as a speech therapist in the school setting for seven years. She serves preschool through high school age children with speech language deficits. She is active in the East Central Illinois Speech-Language Hearing Association.

Abstract

This study examined collaborative intervention between classroom teachers and speech therapists for targeting reading and listening comprehension skills as compared to a traditional service delivery model where the teacher and speech therapist function in a relatively independent manner. Results revealed that listening comprehension improved to a greater degree for children with and without speech-language deficits in first through third grades in the collaborative condition.

Classroom Teachers and Speech Therapists Collaborating to Improve Listening and Reading Comprehension

School speech therapists have traditionally used a pull-out model of individual or small group therapy sessions for treating children with speech or language deficits. The end result is that children with special education needs may be pulled out of their regular classroom to receive services several times per day, resulting in missed classroom instruction. The Regular Education Initiative (Will, 1986) has encouraged special education service providers to deliver more services in the regular classroom working collaboratively with classroom teachers, however the traditional pull-out service delivery model continues to be frequently employed. Advantages of pull-out include allowing structured training that may be necessary for goals such as teaching speech sounds (i.e. /r/ instead of /w/) or syntax (i.e. past tense verbs), increased opportunities to produce specific targets, and distractions can be minimized. Advantages of collaborative classroom-based speech-language

services include children not missing classroom instruction and integration of speech-language and goals (Cirrin & Pannor, 1995). When providing lessons collaboratively with the classroom teachers, speech therapists learn about the classroom curriculum and can practice speech-language goals in a natural/functional environment. Collaborative classroom-based services allow the speech therapist to develop a better understanding of classroom curriculum and encourage the use of speech/language goals in a natural/functional environment. Classroom teachers may develop strategies to assist with children's speech-language needs throughout the week (Meyer, 1997; Miller, 1989).

A strong relationship exists between language skills and academic success. Numerous studies have documented that children with speech-language deficits often have difficulty with reading as well as oral language tasks (Aram & Hall, 1989; Catts, Swank, McIntosh, & Stewart, 1989; Catts, 1993). Classroom teachers are the "experts" in written language (reading and writing) while speech therapists are the "experts" in oral language (listening and talking). Classroom teachers and speech therapists collaboratively working to improve listening and reading skills may benefit students more than the traditional model with the teacher and speech therapist working separately.

Presently, the degree to which teachers and special educators work together to target goals and plan activities varies greatly. Recent surveys have indicated that 50-70% of speech therapists were providing intervention in the classroom setting for an average of 2 1/2 hours per week. The remainder of services was provided in a traditional pull-out setting. (Beck & Dennis, 1997; Elksnin & Capilouto, 1994; Paramboulas, Calvert, & Throneburg, 1998). Few

limited studies with collaboration between the speech therapist and regular classroom teacher have been reported, and these seem to have mixed results. The studies that have been conducted are primarily concerned with the intervention of young children, often preschool-aged, who have identified language disabilities (Roberts, Prizant & McWilliam, 1995; Wilcox, Kouri & Caswell, 1991; Valdez & Montgomery, 1997).

Studies that have examined collaborative service delivery with speech therapists and teachers for school-aged children have only compared classrooms as a whole who have received collaborative services to control classrooms who did not receive collaborative services. Ellis, Schlaudecker, and Regimbal (1995) evaluated the effects of collaborative consultation on basic concept instruction with forty kindergarten children from two classrooms. The results indicated the consultative group scored significantly higher on the Boehm Test of Basic Concepts than the control class who received the regular education curriculum. Recently, Farber and Klein (1999) evaluated the effects of collaborative intervention in 12 kindergarten and first-grade classes. Results indicated that children who participated in the collaborative language enrichment program demonstrated significantly higher abilities in understanding vocabulary and cognitive-linguistic concepts, as well as increased writing skills, when compared to control classrooms who received regular curricular instruction from the classroom teacher only. There currently exists only one study that has looked at the effects of collaboration versus traditional services with school-aged children with and without speech-language deficits (Throneburg, Calvert, Sturm, Paramboulas & Paul, 2000). The study by Throneburg et al (2000) included twelve (K-3) classrooms and found positive effects of collaboration on curricular vocabulary acquisition. The purpose of the present study was to build on past research by comparing collaborative classroom based intervention with traditional services for children in grades one through three with and without speech-language deficits for increasing listening and reading comprehension skills.

Methods

Subjects

Subjects included 139 students enrolled in 12 classes (four sets of first through third grades) at two elementary schools, located in east central Illinois. Mean ages for the children in each grade level were similar at both schools.

The students in grades first through third were exposed to only one of the two types of intervention strategies investigated, collaborative or traditional intervention. One set of grade levels participated in collaborative intervention and a second set participated in traditional intervention. Table 1 presents the

number of subjects from each school with and without speech language deficits who participated in the collaborative or traditional service delivery models.

Table 1

Number of Children Participating in the Study With and Without Speech-Language Deficits who Participated in the Collaborative or Traditional Classrooms at Two Schools.

Type of Service	n at School A	n at School B	Total n
Speech-Language Deficits	13	13	26
Collaborative Classrooms	6	9	15
Traditional Classrooms	7	4	11
No Speech-Language Deficits	58	55	113
Collaborative Classrooms	35	30	65
Traditional Classrooms	23	25	48
Total Number of Children	71	68	139

Collaborative Intervention

Children in each of the six classes participating in collaborative group received instruction in the classroom from the classroom teacher and a speech therapist for 40 minutes weekly for 10 weeks during the spring semester. The instruction occurred during the language arts curriculum and included vocabulary along with curricular comprehension skills such as using picture clues, stated detail, stated and implied cause and effect, prediction, sequencing, comparing and contrasting, and drawing conclusions. Curricular targets were chosen and specific vocabulary words were identified which related to the week's lesson. A story from the language arts curriculum was often selected for the week's collaborative lesson. In the first and second grades a short story was often read to the children. In third grade classrooms, chapters from longer stories were frequently read either to the class or by the students in the class. Following the stories some type of activity relating to the curricular targets was performed such as sequencing story events from jumbled sentences from the story. Each collaborating member was assigned a certain task or activity to lead during the collaborative session with many activities assigned as joint responsibilities. During the sessions, the classroom teacher and speech therapist would participate equally in the week's language lesson, primarily using team teaching service delivery models but also employing some one-teach/one-drift or station teaching service delivery models. The speech-language goals were also targeted during the collaborative time in the classroom. In addition to the collaborative classroom intervention, children with speech and language goals received a minimum of 15 minutes of pull-out therapy a week in order to meet the number of minutes per week recommended on the individualized education plan (IEP).

The teachers and speech therapist met at the beginning of the semester to generally plan the collaborative activities for the semester. Throughout the

semester, weekly 30 minute conferences were scheduled with each teacher and speech therapist to discuss the previous lesson and plan for the upcoming lesson.

Traditional Intervention

Children with and without speech-language deficits from the six classes of traditional intervention were exposed to the comprehension curriculum goals through instruction from the regular classroom teacher. The speech therapists did not provide intervention or other services in these classrooms.

Children in the traditional classrooms with speech and language deficits received pull-out therapy each week in order to meet the number of minutes recorded on the IEP. Traditional pull-out intervention was provided to children individually or in small groups, away from the classroom environment.

Assessment

The children with signed parental permission slips from the 12 classrooms were given portions of the Wechsler Individualized Achievement Test which assesses listening and reading comprehension skills. The children were tested individually by graduate students in Communication Disorders and Sciences from Eastern Illinois University in the beginning of February and the end of April.

Results

Results of the listening and reading comprehension test gains are presented in Figure 1. The children with speech-language deficits who participated in the collaborative language lessons (presented by the teacher and speech-language therapist together) made more than double the gain in listening comprehension when compared to the children with speech-language deficits who participated in the traditional classes (where the teacher taught the language arts lessons without involvement of the speech therapist, the speech therapist targeted speech-language goals for these children during pull-out therapy time). Reading comprehension gains were also larger for the children with speech-language deficits who participated in the collaborative lessons as compared to the children with speech-language deficits in the traditional classrooms.

A similar pattern was demonstrated in listening comprehension by the children without speech-language deficits. The children in the collaborative classrooms made greater gains in listening comprehension as compared to the gains made by children in traditional classrooms. The reading comprehension gains for the children without speech-language deficits were similar in the two conditions.

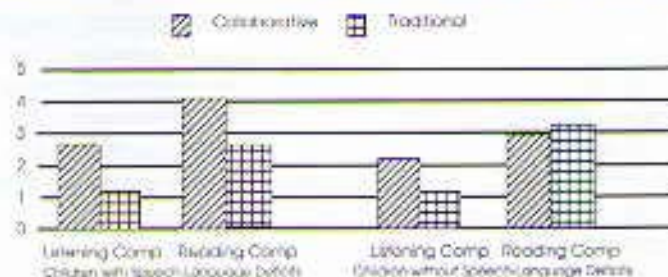


Figure 1. Listening and reading comprehension gains for children with and without speech-language deficits who participated in collaborative or traditional service delivery from teachers and speech therapists.

Discussion

The present study supports past studies reporting groups of school-age children receiving collaborative services from classroom teachers and speech therapists make larger gains than children receiving traditional services (Farber & Klein, 1999; Ellis, Schladecker, and Regimbal, 1995; Throneburg, Calvert, Sturm, Paramboukas, & Paul, 2000). The current study was designed similarly to Farber and Klein (1999) and Ellis, Schladecker, and Regimbal (1995) which compared treatment in collaborative classrooms to control classrooms to substantiate the effectiveness of collaborative services. However, when teaching in the collaborative condition is compared to teaching in the control (traditional) condition it becomes difficult to sort out the effects of collaborative services (including meeting, planning, brainstorming, co-teaching) and the effect of having an additional professional in the classroom at times.

The current study and past studies have shown larger progress in collaborative than traditional conditions, however collaborative service delivery models may require increased costs for the school system to allow for adequate time for collaborative planning meetings and co-teaching lessons. Collaborative lessons and meeting times have varied in past studies and it is currently unknown the necessary or optimal amount of time for weekly collaborative meetings or time for co-teaching language lessons in the classroom. For example, Farber and Klein (1999) reported significant differences in writing skills and listening comprehension when collaborative language lessons were taught with classroom teachers and speech therapists three times weekly for a total of 2.25 hours weekly with 1 hour weekly planning times. Throneburg, Calvert, Sturm, Paramboukas, and Paul (2000) reported significant differences in curricular vocabulary knowledge when collaborative language lessons were taught with

classroom teachers and speech therapists once weekly for 40 minutes with 40 minute weekly planning times. The current study demonstrated larger gains in listening and reading comprehension in the collaborative condition for children with speech-language deficits. It also presented larger gains for the collaborative group in listening comprehension for children without speech-language deficits. Time commitments for the present study included 40 minute weekly collaborative language lessons with 30 minute weekly planning meetings. These findings illustrate the need for administrators, teachers and speech therapists to continually evaluate the time allotted for components of alternative service delivery models.

Several limitations were present in the current study. Although the gains on the WIAT were generally higher in the collaborative than the traditional condition, the ability of the WIAT to measure functional gains is questioned by the present investigators. The WIAT manual lists specific questions within the listening and reading comprehension subtests which evaluate skills such as using picture clues, recognizing stated detail, sequencing, recognizing implied and stated cause and effect, making inferences, comparing, and contrasting. Although the test reportedly examines skills frequently targeted in the language arts curriculum, the questions in the WIAT are not similar to questions teachers frequently ask in classes. Many items in the WIAT's subtests placed a significant emphasis on remembering small, insignificant details after listening or reading several paragraphs filled with many details.

The study ran for a relatively short period of time (10 weeks). More significant gains may have been seen if the collaborative lessons would have taken place for an entire school year instead of only a portion of one semester.

Another limitation of the study was the difference in the consistency of meetings between the schools. One school received a small grant related to the study that funded a substitute teacher for the classroom teacher so the weekly half-hour collaboration meeting consistently occurred during the school day. The meetings occurred less consistently at the second school. This school did not have a grant that funded a substitute teacher, and although regular times for the collaboration meetings were scheduled during teachers' planning periods, lunch, or after school, the meetings were canceled occasionally.

Ferguson (1991) reported that it may take three to five years to effectively implement an alternative service delivery option. The speech therapist at the first school had several years of experience delivering classroom-based services, however it was her first year working at a new school. The second speech therapist had been employed by the school for several years, but had limited experience provid-

ing classroom-based services. Greater organization and improved implementation of collaborative intervention may have been seen if this study had included speech therapists who had been regularly collaborating with teachers at their schools for several years.

Positive effects were seen from the collaboration in the children's performance and also the positive feelings and mutual respect generated among professionals. Classroom teachers and speech therapists who agreed to participate in the current study were generally very cooperative with each other and able to share their roles at times. Teachers learned more about children with speech-language needs and speech therapists improved skills for working in the classroom.

Continued research in the area of collaborative services as a possibility for supplementing or enhancing traditional services in schools must be conducted. A long list of factors may influence the success of collaborative services such as teachers' and speech therapists' personalities, educational philosophies, training in alternative service delivery models, ability to share and release traditional roles, flexibility in trying new methods, optimism, attitude, and administrative support. Future research needs to investigate which variables are most related to successful implementation of collaborative services. Future research should also evaluate the relationship between various service delivery models and functional classroom performance. Additional research is necessary for determining the best methods for serving children with and without speech-language deficits in the school setting.

References

- Aram, D., & Hall, N. (1989). Longitudinal follow-up of children with preschool communication disorders: Treatment implications. *School Psychology Review, 18*, 487-501.
- Beck, A.R., & Dennis, M. (1997). Speech therapists' and teachers' perceptions of classroom-based interventions. *Language, Speech, and Hearing Services in the Schools, 28*, 146-152.
- Catts, H. (1993). The relationship between speech-language impairments and reading disabilities. *Journal of Speech and Hearing Research, 36*, 948-957.
- Catts, H., Swank, L., McIntosh, S., & Stewart, L. (1989). Precursors of reading disabilities in language-impaired children. Paper presented at the annual convention of the American Speech-Language-Hearing Association, St. Louis, MO.
- Cirrin, F.M., & Penner, S.G. (1995). Classroom-based consultative service delivery models for language intervention. In Fey, M.E., Windsor, J., & Warren, S.F. (Eds.), *Language Intervention: Preschool through the elementary years* (pp. 333-362). Baltimore, MD: Paul H. Brooks Publishing Co.
- Elksin, L.K., & Capillouto, G.J. (1994). Speech therapists' perceptions of integrated service delivery in school settings. *Language, Speech, and Hearing Services in the Schools, 25*, 258-267.
- Ellis, L., Schlaudecker, C., & Rogimbal, C. (1995). Effectiveness of a collaborative consultation approach to basic concept instruction with kindergarten children. *Language, Speech, and Hearing Services in the Schools, 26*, 69-74.
- Farber, J., & Klein, E. (1999). Classroom-based assessment of a collaborative intervention program with kindergarten and first grade students. *Language, Speech, and Hearing Services in the Schools, 30*, 83-91.
- Ferguson, M.L. (1991). Collaborative/consultative service delivery: An introduction. *Language, Speech, and Hearing Services in the Schools, 22*, 147.
- Mayer, J. (1997). Models of service delivery. In P.F. O'Connell (Ed.), *Speech, language, and hearing programs in schools: A guide for students and practitioners* (pp. 241-285). Gaithersburg, MD: Aspen Publishers, Inc.
- Miller, L. (1989). Classroom-based language intervention. *Language, Speech, and Hearing Services in the Schools, 20*, 153-169.
- Paramboulas, A.A., Calvert, L.K., & Throneburg, R.N. (1998). A survey of school speech therapists' survey delivery models. Paper presented at the American Speech-Language Hearing Association's national convention, San Antonio, TX.
- Roberts, J.E., Prizant, B., & McWilliam, R.A. (1995). Out-of-class versus in-class service delivery in language intervention: Effects on communication interactions with young children. *American Journal of Speech-Language Pathology, 4*, 87-93.
- Stark, R.E., Bernstein, L.E., Condino, R., Bender, M., Tallal, P., & Catts, H. (1984). Four-year follow-up study of language impaired children. *Annals of Dyslexia, 34*, 49-68.
- Throneburg, R., Calvert, L., Sturm, J., Paramboulas, A., Paul, P. (2000). A Comparison of Service Delivery Models: Effects on Curricular Vocabulary Skills in the School Setting. *American Journal of Speech-Language Pathology, 9*, 10-20.
- Valdez, F.M., & Montgomery, J.K. (1997). Outcomes from two treatment approaches for children with communication disorders in Head Start. *Journal of Children's Communication Development, 18*, 65-71.
- Wachsler Individual Achievement Test. (1992). San Antonio, TX: Harcourt Bruce & Company.
- Willcox, M.J., Kourl, T.A., & Caswell, S.B. (1991). Early language intervention: A comparison of classroom and individual treatment. *American Journal of Speech-Language Pathology, 1*(1), 49-62.
- Will, M. (1986). *Educating students with learning problems: A shared responsibility*. Washington, DC: U.S. Office of Education, Office of Special Education and Rehabilitative Services.