

# Comparing Service Delivery Models: SLP Teaching Behaviors and Child Practice

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## Changes in Theory

- Changes in educational laws and theories have led to the development and implementation of alternative service delivery models in speech-language pathology.
- Alternate models provide services in the more naturalistic environment of the regular education classroom.
- These models are collectively referred to as collaborative and classroom-based intervention.

## Service Delivery Research

- Studies that have investigated collaborative classroom-based services for school-age children have evaluated the progress of whole classes of children who received collaborative services and whole classes who received teacher-only instruction in the classroom (Farber & Klein, 1999; Hadley et al., 2000; Throneburg et al., 2000).
- Results of these studies generally found that the collaborative method was more effective than teacher-only instruction for the whole class.
- Only 2 studies have been conducted to compare the effectiveness of pull-out and classroom models for speech-language intervention (Wilcox, Kouri, & Caswell, 1991; Valdez & Montgomery, 1997).
- Both studies involved only preschool children with language impairments. They found similar gains in pull-out and classroom-based services. Wilcox et al. (1991) suggested that children in the classroom intervention demonstrated greater carryover in their homes.
- Roberts, Prizant, & McWilliams (1995) examined pull-out vs. classroom services on communication interactions between language impaired preschool children and the SLP.
- SLP took more turns in pull-out intervention. Children took the same amount of turns in both settings.

## Surveys

- Several surveys (Beck and Dennis, 1997; Elksnin and Capilouto, 1994; Paramboukas, Calvert, & Throneburg, 1998) found that:
  - Articulation therapy was not usually provided in the classroom.
  - SLPs thought that language intervention was appropriate for the classroom.
  - SLPs were concerned about the difficulty involved with practicing speech/language goals in the classroom.

## Research Questions

- Is there a statistically significant difference in SLP treatment behaviors during intervention:
  - Provided in the classroom versus the speech room?
  - Targeting speech IEP goals versus language IEP goals?
- Is there a statistically significant difference in the number of practice productions from a child during intervention:
  - Provided in the classroom versus the speech room?
  - Targeting speech IEP goals versus language IEP goals?
- Does SLP teaching or child production practice opportunities vary in either of the two settings (classroom versus speech room) over time (beginning of the year, or end of the school year)?

## Subjects

- |   |   |
|---|---|
| ■ Pull-out Group                            | ■ Collaborative Group                       |
| ■ N=9                                       | ■ N=9                                       |
| ■ N with Language deficits= 4               | ■ N with Language deficits= 4               |
| ■ N with Speech deficits= 5                 | ■ N with Speech deficits= 5                 |
| ■ 1 <sup>st</sup> & 2 <sup>nd</sup> graders | ■ 1 <sup>st</sup> & 2 <sup>nd</sup> graders |
| ■ Mean age: 7:0                             | ■ Mean age: 7:5                             |

## Collaborative Classroom-based Intervention

- One SLP provided intervention in both settings.
- Weekly collaborative meetings.
- Collaborative instruction by the classroom teacher and SLP during a language arts curricular lesson. Teacher & SLP targeted curricular and speech-language goals 30 minutes weekly.
- 10 minutes more of classroom intervention was provided for each child with IEP goals; SLP used a "drift" approach.

## Traditional Pull-out Intervention

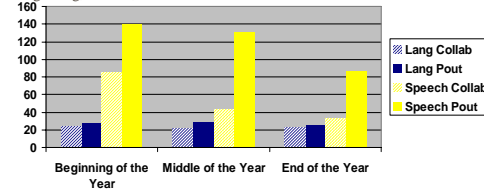
- Intervention was provided in two 20-minute therapy sessions per week.
- Therapy was either provided individually or in small groups of 2 students in a separate room away from the classroom environment.

## Measures

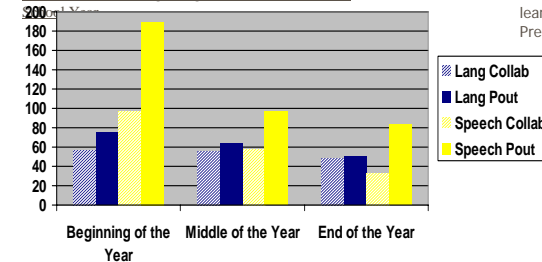
- Four hours (40 minutes per week X 6 weeks) of classroom-based or pull-out treatment were observed for each of 18 children with speech or language disorders, which resulted in 72 hours of direct observation and measurement of intervention over the course of the school year.
- SLP Behaviors
  - Models
  - Elicitations
  - General feedback
  - Specific feedback
- Child productions
  - an attempt by the child to produce their targeted behavior.

## Results

Children's Mean Number of Production Practice of IEP Target Behaviors During 40 Minutes of Intervention at the Beginning, Middle, and End of the School Year.



Mean Number of SLP Treatment Behaviors While Targeting IEP Goal Behaviors During 40 Minutes of Intervention at the Beginning, Middle, and End of the School Year.



## Results Summary

- Children with language disorders received very similar amounts of practice in the two settings with the SLP using a similar amount of treatment behaviors for these children.
- Children with articulation disorders produced less than half as many IEP objective productions in the classroom compared to the pull-out setting, with the SLP using significantly fewer treatment behaviors in the classroom compared to the pull-out setting for these children.

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## Discussion

- The larger amount of production practice by the children, and the frequency of the SLP targeting IEP behavior in pull-out as compared to collaborative classroom-based intervention may be attributed to:
  - The number of students with speech-language deficits in treatment groups (pull-out 1-2 students M=1.75; classroom 1-9 students M=4.41)
  - The number and types of goals targeted during intervention
- Practical implications of similar practice for language goals, but distinctly different amounts of practice for speech goals may suggest that speech goals may be best targeted in pull-out.
- However, similar amounts of practice in a more functional environment may indicate the classroom is the most appropriate setting for language intervention.
- Future research is needed about the amount of learning of IEP objectives in the two settings. Preliminary results about progress on articulation and language deficits are being presented (Benefiel, Calvert, Throneburg, & Paul, 2001; Davidson, Throneburg, Calvert, & Paul, 2001.)