A comparison of two oral language facilitation programs for kindergarten children with language impairments.

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UMI
A Comparison of
Two Oral Language Facilitation Programs
for Kindergarten Children With Language Impairments

by
Melinda A. Hinch

A Thesis

Submitted to the Faculty of Graduate Studies
through the
Faculty of Education in Partial Fulfilment
of the Requirements for the Master of Education Degree
at the University of Windsor
Windsor, Ontario, Canada
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Abstract

The difference in oral language skill development between language-impaired kindergarten children in a direct intervention group planned and executed by a speech-language pathologist and an indirect intervention parent training group were investigated. Standardized and non-standardized tests were administered prior to and following the programs. The results indicated that the direct intervention group improved in some areas of receptive language, expressive language and early literacy measures while the indirect language group showed improvement in some areas of expressive language development. The findings support service delivery modifications for speech-language pathologists in school board systems.
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INTRODUCTION

From birth, children use patterns of vocal noises to communicate needs, demonstrate feelings, and express satisfaction or pleasure. These vocal noises become systemized or rule based. They are transmitted through a phonetic system unlike the adult form but nevertheless following established rules. Such speech and language productions are used habitually until children change the rules by modifying them to match the speech and language of adults. Bloom and Lahey (1978) categorized the language paradigm into three components: form, content and use. Form includes phonology, morphology and syntax. Phonology is the knowledge about sounds and sound sequences permissible in one's language. Sounds combine together to make morphemes - the smallest meaningful units of any language. Morphology is a part of grammar that provides rules for combining morphemes into words. The set of rules that determine how words are combined to make sentences is the syntax. The second language component is content. Content involves word knowledge (i.e., vocabulary), knowledge of word relationships, and understanding of time and event relationships. The final aspect of the language paradigm is use. Use includes the pragmatic aspects of language which are the rules of language in varying contexts or social situations.

When children's speech and language rules remain unchanged or change into maladaptive patterns, children enter school with habitual linguistic codes that differ significantly from their normal developing peers (O'Brien, 1985). It is assumed, in the development of curriculum, that children have the knowledge of language and know how to apply this knowledge for learning new skills and information (Bashir, 1989). In the case of children with language disorders, this presupposition is not valid. Consequently, language-impaired children enter school already at risk for academic failure of varying degrees and types.
According to Wiig and Semel (1984), language-impaired preschool children have language deficiencies in most areas associated with early success. Language-impaired children can have difficulties with some or all components of communication. For example, such children may exhibit difficulties acquiring phonologic, morphologic, syntactic and/or semantic systems. Also, the linguistic rules that are required to dictate appropriate language use in different social situations and with varying communication partners (i.e., pragmatic skills) may be emerging appropriately. The aforementioned components of oral language development, including metalinguistic awareness, have been evaluated at the preschool level and associated with academic success (Catts, 1993; Paul & Smith, 1993; Bishop & Adams, 1992; Catts, 1991; Magnusson & Naucler, 1990; Leonard, 1989; Johnston, 1988; Kail & Leonard, 1986; Kamhi & Catts, 1986; Gillam & Johnston, 1985).

Metalinguistic awareness is the ability to reflect deliberately on language (i.e., to think and talk about language) in and of itself, as opposed to the use of language to convey meaning (Flood and Salus, 1982; Cazden, 1972). Consequently, this language component plays an important role in early reading acquisition (Catts, 1991a; Catts, 1989a). Wallach and Liebergott (1984) divided metalinguistic awareness into two areas; implicit and explicit. Implicit language knowledge means the less conscious abstraction of phonologic, syntactic, semantic, and pragmatic rules during the various stages of language acquisition while explicit language knowledge refers to the conscious judgements and analyses of various uses of language of instruction. When faced with a task of decoding a word for reading, children must manipulate phonemes at a more conscious level. They must talk about sounds and their relation to the letters on the page. The relationship between spoken and written language systems reflects interplay between implicit and explicit language rather than a simple auditory-to-visual transfer. The
findings by many authors strongly support that preschool and kindergarten children with poor metalinguistic awareness are likely to have later reading problems (Catts, 1991; Magnusson & Naucler, 1990; Maclean, Bryant & Bradley, 1987; Bradley & Bryant, 1985; Mann & Liberman, 1984; Stanovich, Cunningham & Cramer, 1984; Torneus, 1984). In addition, learning disabled children lack metalinguistic skills (Baker, 1982). Fey (1994) reported that by the time they reach school age, language-impaired children have not developed rich linguistic and metalinguistic foundations on which written language depends.

Results of a large body of research have consistently shown that language-impaired children are at risk for learning disabilities (Stark & Wallach, 1980; Gerber & Bryan, 1981; Wiig & Semel, 1984; Catts, 1991). In fact, many of the learning disabled children of later primary grades were the language-impaired children of preschool and beginning grades (Bashir, 1989). Subsequently, language deficits do not seem to go away with maturity, but instead take on different forms (Simon, 1985; Wallach & Butler, 1984; Wiig & Semel, 1984; Aram & Nation, 1980). In fact, according to Wallach and Liebergott (1984), language problems change over time. Overt symptoms frequently seen in young children with language difficulties may become more subtle. For example, a preschool child may have impaired sentence length and vocabulary but by the early grades these areas have been remediated while higher level yet age-appropriate skills such as inferencing, problem-solving, word-retrieval and pragmatics are not evident. The authors determined that oral language problems may show up in reading and writing and that verbal language problems (i.e., listening and speaking) may continue to persist.
Reading problems in the early school years can be predicted by oral language ability (Menyuk, Chesnick, Liebergott, Korgnold, D'Agostino & Belanger, 1991; Catts, 1991; Bishop & Adams, 1990; Aram & Nation, 1989). Kamhi and Catts (1989), because of their findings, stated that educators must recognize the language basis of reading disabilities. Prospective studies for children who were diagnosed as speech and language impaired as preschoolers yield two important findings: these children have persistent oral language problems into later school years and adulthood, and secondly, they obtain lower levels of academic achievement (Catts, 1993; Bishop & Adams, 1990; Aram, Ekelman & Nation, 1984; King, Johnes & Lasky, 1982; Aram & Nation, 1980; Hall & Tomblin, 1978; Griffiths, 1969). Retrospective studies by Ingram, Mason and Blackburn (1970) and Lyle (1970) lend additional support to this relationship as they detected that the past histories of children who demonstrate school learning problems in reading, spelling and writing frequently include delayed or disordered oral language acquisition.

It appears that educators must recognize the oral language basis of reading disorders. Early identification and appropriate management procedures of these language-based deficiencies have been documented and henceforth, should occur. Consequently, Marge (1972) expressed that it is important to apply intervention techniques as early as possible and that early intervention can be considered preventative. Also, in a response to her data collection, Hodson stated that it is paramount that language-based deficiencies be identified early and intervention services provided consequently (1994). In a discussion paper distributed by the Ontario Ministry of Health it was outlined that the acquisition of appropriate speech and language skills may prevent the onset of a variety of potentially costly consequences affecting children's ability to cope and function during later years of life such as poor academic development, drop-out rate, behavioural problems, psychiatric disorders and prison terms. Therefore, early detection and intervention are
critical as any failure to acquire essential language skills can develop into persistent and serious problems as children grow up. The long-term societal costs of unremediated speech and language problems are significant. Furthermore, language recovery becomes increasingly difficult with age. Weber, Kushnir, and Weber (1982) examined a comprehensive approach to language disorders and determined that: if a cause exists such as a hearing loss, this should be eliminated or alleviated as much as possible, improvement of language interaction should be attempted prior to focusing on language skills themselves, and the treatment or teaching of specific linguistic skills should occur. Thus, there is significant support for the oral language-written language relationship, the need for early identification and the importance of management.

Because of the complexity of issues related to language and learning problems, management must be functionally coordinated with instruction from the onset of formal schooling. According to Dale and Cole (1991), researchers and educators in language development must move away from a medical model toward an educational model of language facilitation. The educational model emphasizes individual differences, developmental causality, criterion referenced assessment and direct treatment of deficits. Educational approaches are more supportive than medical ones in use of natural locations such as in the home and classroom and interactive styles of treatment including communication and collaboration with parents in the design and implementation of intervention. A medical model emphasizes uniformity within a syndrome, external causality, differential diagnosis and treatment directed toward an underlying causal mechanism rather than the presenting symptoms.
Studies of traditional "clinical" approaches to language intervention support that generalization of acquired skills outside of the isolated setting in which they were taught does not occur (Spradlin, 1982; Leonard, 1981). That is, what the child learns in a quiet room may not be used outside of that quiet room. Schory stated that classroom-based language intervention has advantages over traditional pull-out intervention (1990). Such as, in more integrative approaches, speech–language pathologists may provide a combination of direct and indirect intervention services while emphasizing the integration of language intervention services into more naturalistic environments of children (Fey, 1986). However, according to Hodson (1994), language specialists and teachers in early grades need to collaborate to develop and implement effective programs to enhance metalinguistic, age-appropriate language and phonology skills. Thus, it appears that there is a need for alternative curriculum, specialized instruction and alternative programs: programs enhancing the development of oral language skills in school-age children. There is also a need to make parents partners as language facilitators for their children so that generalization of the specific language structures taught in school will occur.

However, because of the financial constraints most government facilities are experiencing, special education programs are being eliminated even though the numbers of children with special needs is growing continually. In some school boards, speech and language departments are being reduced or eliminated. Speech–language pathologists are required to do more with less: to become more efficient yet remain effective. Thus, service delivery models are being re-evaluated. One alternative model is utilizing group intervention instead of individualized treatment. For example, kindergarten and primary language classes are offered as a supplement to regular classroom instruction although such classes are not offered routinely or regularly across school boards. According to data collected by Fey, Cleave,
Long, and Hughes (1993), Yoder (1991), Connell (1987), and Friedman and Friedman (1980), language intervention, whether its implementation is direct or indirect, is effective. Classes, when run by speech-language pathologists, have been described as effective in facilitating the children's faulty syntactic, semantic, pragmatic and phonological systems; however, no quantitative data have been collected to support this type of service delivery. Fey et al. (1993) evaluated two approaches to grammar facilitation in preschool-age children with language impairment. One approach was administered by a speech-language pathologist and the other was presented by the subjects' parents, who were trained by the speech-language pathologist. Both treatment programs ran for 4 1/2 months and made use of natural facilitation techniques (i.e., learning language rules via observing models of the target rule instead of through imitation) and cycled the modelled targets (i.e., targeting one goal for a pre-determined amount of time and continually rotating to another goal). Subjects were 30 children between the ages of 3 - 8 and 5 - 10 (years-months) who had marked delays in grammatical development.

Children who served in a delayed-treatment control group averaged no gains over their no-treatment period. In contrast, large treatment effects were observed for both treatment groups on three or four measures of grammatic expression. However, closer inspection of the data revealed that the effects for clinician treatment were more consistent across treatment administrations than were those for the parent treatment. The results support the viability of group instruction by a Speech-Language Pathologist. This study did not evaluate the specific contributions of the language facilitation techniques and the cyclical goal attack strategy. Much controversy exists that language-impaired children learn language rules via imitation. However, a delayed-treatment control group was an asset as it added strength to improved assessment battery scores.
The results also support the participation of parents as primary intervention agents in grammar facilitation programs. When parents take such a large role in the intervention process; however, it is imperative that the children's progress be monitored carefully and that the program adjustments be made whenever gains are smaller than expected. Quantitative evidence to support the planning and execution of language class programs in primary grades is scant.

Aside from this study, a six week summer language program for children with heterogeneous language needs was planned, executed and analyzed by Leighty-Troester, Doubledee, Deakin and Ruder (1991). Leighty-Troester et al., (1991) examined a qualitative study regarding a summer language program staffed by two speech-language pathologists, and one undergraduate student. This program was run three days per week over six weeks. The children in the program were initially screened and any child with speech and/or language impairment was considered a candidate. Thus, the program was heterogeneous according to the severity and types of impairments. The summer program had the following daily routines: greeting, free play, opening, projects, group speech and language time, activities of daily living (e.g., toileting, washing, snack), the individualized speech and language intervention, language and motor, language and music, and closing. The periods were flexible and were approximtely 20 minutes each.

The children demonstrated qualitative progress specifically in the areas of intelligibility, pragmatics (e.g., turn-taking, politeness, expressive vocabulary, auditory awareness, listening skills, and grammar).
One weakness in the design is the role of the parent(s). In this program the parents' only commitment was to ensure the children's attendance. This program could have utilized the care givers more. Also, quantitative data were not collected.

Feinberg (1981) proposed an ideal pre-academic self-contained classroom for language disabled children who lack pre-requisite skills needed to succeed in a typical kindergarten class. The purpose of this class was to provide necessary language skills to children identified with severe language impairment yet average or better intellectual abilities. The children in this program attended a self-contained class conducted by a speech-language pathologist.

Group settings for language facilitation were ideal as they utilize peer modelling and choral response. Children were often more receptive to assistance offered by other children and are less likely to feel fear of independent responding. The children were given cues to facilitate the grammatical target with the intent of helping the children formulate the desired production with the least amount of information. These cues were varied depending on the children's needs and were given in a sequential order (e.g., unison, provision of part of or the entire model, etc.).

The content of the class included language skills required to cope with an academic classroom. This consisted of age-appropriate syntax, morphology, pragmatics, vocabulary and concepts) within the following contexts language related to daily meaningful group activities (e.g., calendar, weather, special events), personal experiences (e.g., show and tell), curriculum (e.g., themes at circle time), everyday functions (e.g., snack), and shared entertainment (e.g., storytime).
Feinberg also stressed the importance of parent education to facilitate generalization of language structures. Unfortunately, this proposal was not supported by any data. Dale and Cole (1991) emphasized that the use of natural locations such as the home environment is crucial for the success of the intervention. In relation to this, Fey et al. (1993) found significant gains in training parents of language-impaired children to use language facilitation techniques at home and other settings. Programs such as *It Takes Two To Talk*, - a Hanen early language parent guidebook by Manolson (1983), have successfully offered parents of language-impaired children suggestions to enhance their development.

Further research is required to determine the most effective and efficient way for school boards to utilize their special education staff. It is evident that the traditional one-to-one intervention is neither time efficient nor conducive to generalization of goals. Nonetheless, the oral language-learning relationship must be considered more seriously than it has been before in order for educators to meet the academic needs of children with significant communication needs. The medical/clinical approach that has been traditionally accepted for treatment of language disorders may no longer be an option as it does not address long-term language-based academic needs.

The purpose of this investigation was to examine and compare two academic approaches of service delivery to language-impaired kindergarten students: direct intervention of oral language skills in self-contained class planned and executed by a speech-language pathologist and indirect intervention of oral language skills via parent training classes by a speech-language pathologist. What approach is the most effective in the areas of oral language and early literacy development?
It is predicted, based on the existing studies by Fey et al. (1993), Leightly-Troester et al. (1991) and Feinberg (1981), that both approaches to language facilitation will yield gains on measures of grammar, vocabulary, auditory awareness, and listening skills. It is likely that there will be more improved measures for the direct intervention group and when both groups improve, the direct intervention group will reveal more significant differences than the indirect group similar to the findings reported by Fey et al. (1993). It is also predicted that little improvement will occur in story telling measures as these skills are not directly targetted in either group and generalization of other language areas into story telling skills is unlikely.
Methodology

Subjects

Twenty-one junior and senior kindergarten children from four schools in the Windsor Board of Education in Windsor, Ontario participated in this investigation. The children's ages, at the beginning of the study, ranged from three years, nine months to six years, two months. Fourteen males and seven females participated. Two schools were randomly selected for the direct intervention group leaving the remaining two schools receiving the indirect intervention. Twelve children received direct intervention while nine children received indirect language intervention.

Procedures

The investigation was initiated in early September, 1995. The junior and senior kindergarten teachers of the four schools were given an oral language checklist to complete for any children with suspected oral language difficulties (Appendix 1). The children identified by their teachers were recommended for a speech-language assessment by the researcher who is a speech-language pathologist. Upon parent consent, these children were assessed and included in the language programs if oral language difficulties existed. Refer to Appendix 2 for parent consent letters.

Pre/Post Test Battery

A broad assessment battery was needed to ensure that all areas of language development were assessed. According to Wallach and Liebergott (1984), both qualitative and quantitative analyses of children's language behaviours are necessary for formulating appropriate goals. The American Speech and Hearing Association in 1989 stated that the assessment of language must go beyond vocabulary, morphologic and syntactic testing so that pragmatics and cognitive underpinnings of the communication process as well as aspects of literate language use are included. Thus, both
standardized language tests and descriptive analyses are required. The standardized tests would support the existence of problems and need for further assessment and/or intervention while descriptive tests identify behaviours relevant to the real world such as communication important for social interactions and classroom success.

For the purpose of this investigation, both qualitative and quantitative measures were selected and are listed in Appendix 4. Each child was withdrawn from his or her classroom into a quiet room and administered the following set of tests for the following purposes. Initially, the Peabody Picture Vocabulary Test - Revised (PPVT-R) was given (Dunn & Dunn, 1981). It is designed to measure the subject's receptive vocabulary. Next, the second and third subtests of the Test of Auditory Comprehension of Language - Revised, (TACL-R) were administered (Carrow-Woolfolk, 1985). The second subtest assesses the auditory comprehension of grammatical morphemes in simple sentences. The third subtest reveals auditory comprehension of elaborated sentences. The Structured Photographic Expressive Language Test - II, (SPELT-II) (O'Hara Werner & Dawson Kreshank, 1993) identifies difficulties in the areas of early expressive morphologic and syntactic development. The Test of Auditory Analysis Skills, (Rosner, 1971), a metalinguistic test, examined the subject's ability to delete syllables and sounds in words. Phoneme and syllable manipulation has been a skill related with reading success (Swank & Catts, 1994; Swank, 1986). The TAAS can be located in Appendix 5. An informal baseline designed by the researcher further evaluated the metalinguistic skills of generating rhymes and segmenting syllables within words. Refer to Appendix 6 for a copy of this test. Phoneme and syllable segmentation has been identified as the skill most related to success in beginning reading (Swank & Catts, 1994; Stanovich, Cunningham & Kramer, 1984 and are therefore, included in the baseline). Within the informal baseline were ten complex and lengthy utterances loaded with
developmentally appropriate syntax and morphology that the subjects must imitate. According to Zachman, Husing, Jorgenson and Barrett (1978) and Carrow (1974) sentence imitation yields information relative to the development of receptive and expressive language. A child reproduces a sentence using the linguistic rules he or she knows. The final test administered assessed discourse skills. Discourse is a unit of connected language that is longer than one sentence (Lahey, 1988). A specific type of disclosure, a narrative, which is an extended unit of text that has an introduction and organized sequence of events and leads to a logical conclusion, would be formulated (Lahey, 1988; Ripich & Griffith, 1988; Bishop & Edmundson, 1987). A normed story formulation task entitled One Frog Too Many by Mayer (1967) required each subject to tell a story with pictures. Each child looked at pictures of the story and verbally described what each picture was about. The stories were audio taped and were completely transcribed verbatim upon analysis. This particular narrative was evaluated according to story flow and grammatical structures. Story flow measures includes the numbers of garbles, fillers, and extraneous remarks. Garbles are defined as phrase repetitions, revisions or false starts, unnecessary words, and unintelligible words. Fillers include non-word syllables (for example, "um," "uh")." Comments irrelevant to the story were counted as extraneous remarks (eg. "I don't know anymore). The percent of simple sentences were tallied under the grammatical measures. A sentence is simple if it consists of a group of words connecting one subject or set of subjects to one action or set of actions. The percentage of sentences remaining would be complex, compound and compound/complex. Also, under grammatical measures, the percentage of correctly used cohesive devices (i.e., correct pronoun referencing, subordinate conjunctions and coordinate conjunctions) were determined. The total sum of numbers of words were tallied.
In addition to these tests administered to the students, the teachers completed questionnaires. Refer to Appendix 7 for the questionnaire. The questionnaires were based on Johnson (1994)'s Daily Living Questionnaire which was developed for parents and teachers to measure potential changes in adaptive behaviour, particularly social and communication function, at home and in the school. Presently, there are no other significant protocols or questionnaires for the judgement of overall communicative functioning by children's teachers and parents. The teachers were also required to fill out a primary reading behaviour inventory based on Heald-Taylor's design (1986) (Appendix 8). The teachers determined which early literacy behaviours are exhibited by each subject.

Each subject's battery of tests were analyzed by the researcher upon the completion of administration. Children identified with a language-impairment were eligible for the duration of this investigation. Fey (1986) expressed that once the clinician has decided on ways in which the child's communicative performance is to be evaluated, some criterion of what can be considered to be a significant deviation from the norm must be established. Unfortunately, this decision is arbitrary. According to Leonard (1991), children with language-impairments are a rather heterogeneous group of children and they get their diagnosis principally on the basis of their low scores relative to the norm on language measures. He also expressed that three characteristics of a language-impaired child exist: a long standing limitation in language ability, a profile of linguistic strengths and weaknesses not identical to that of any age group, and additional limitations in non-linguistic areas. Many of these children may fall at the very low end of the normal distribution in ability. Furthermore, Aram (1991) suggested that children with language-impairment have been documented to vary in the degree to which they experience difficulty comprehending and producing the multi-components of language. For these reasons, any child assessed with a
mild to severe language disorder in one or more language components were eligible for one of two language programs depending on the school he or she attends. That is, if a child's test score on any standardized test places him or her below the first standard deviation or below the sixteenth percentile he or she continued in the training programs.

**Intervention Programs**

Two language programs, a kindergarten language centre (KLC) and a parent training class, were designed. Two schools per program were randomly selected. The two KLC's were run two times per week for one-and-a-half hours for ten weeks and were planned and executed by the school's speech-language pathologist. They occurred in available rooms in the two schools. The subjects did not leave their home schools. They were withdrawn from their class for the KLC if it is offered at the same time as their regular kindergarten class. If the KLC was offered in the half-day the subjects do not attend school, then each child's parent(s) or guardian were responsible for bringing and picking up the child.

The general language goals targeted for intervention are located in Appendix 9 and include:

1. improving oral language skills (i.e., morphology, syntax, semantics and pragmatics),
2. establishing early literacy skills,
3. preventing later academic difficulties,
4. preventing later behavioural difficulties,
5. providing diagnostic therapy,
6. educating teachers regarding language and learning difficulties, and
7. educating parents regarding language and learning difficulties.
Specific language goals, as described by Wiig and Semel (1984) and Owens (1984) to improve oral language skills, include:

1. using subjective pronouns correctly (i.e., "I," "you," "he," "she," "we," "they"),

2. using copula and auxiliary verbs correctly (i.e., "is," "am," "are),"

3. using prepositions correctly (e.g., "behind," "in front," "under),"

4. increasing vocabulary and improve semantic relationships,

5. establishing "wh" and "yes/no" questions,

6. establishing social use of language (e.g., eye contact, turn-taking, requesting and sharing information, telling stories, etc.), and,

7. establishing sequencing skills.

Specific metalinguistic skills as researched by Fey (1994), Warrick, Rubin and Rowe-Walsh (1993) and Catts (1991), includes:

1. segmenting syllables within words, and

2. establishing sensitivity to rhymes.

The structure of the KLC's was similar to the pre-academic language class designed by Watson, Layton, Pierce and Abraham (1994) and Feinberg (1981) as there will be routine times for circle, show and tell, craft, snack, story, and good-bye. All activities were incorporated into the daily themes. For example, colours, shapes, seasons, farm animals, etc. were some themes that were chosen. The language goals previously listed were facilitated by the speech-language pathologist throughout these activities. Refer to Appendixes 10 through 15 for lists of themes, snacks, parent information letter and lesson plan samples.
Teaching of the language goals included both direct and indirect teaching of oral language skills. When using direct instruction, one assumes that language-impaired students learn language rules differently than children who learn language normally. Therefore, language-impaired children will learn language rules more readily via imitation than by simply observing models of the target rule (Fey, Catts & Larrivee, 1995; Connell, 1987). Both studies by Yoder (1991) and Friedman and Friedman (1980) added further support by determining that language-impaired children made more gains with an imitation approach than by a loosely structured approach utilizing imitation as a secondary technique. However, Fey et al. (1993) successfully used a focused stimulation approach for a language group that consisted of high concentrated presentations of target forms without requiring children to imitate them. This was thought to be more natural; therefore, increasing the likelihood that the target forms will generalize and be used spontaneously. For the purpose of this study, both methods of teaching instruction were utilized with the primary instruction being direct. Teachers were encouraged to observe the KLC.

Concurrently, the parents of the identified children in the other two schools were invited to attend three weekly workshops given by the researcher and another speech–language pathologist. Within the three workshops, parents learned language facilitation techniques to use with their children at home or in other settings. All nine parents attended all sessions. The language goals targeted were the same ones previously discussed for the KLC’s. As mentioned previously, Dale and Cole (1993) supported parent training groups as they emphasize the use of natural locations such as the home environment and both Fey et al. (1993) and Manolson (1983) obtained significant results when training parents of language–impaired children to use language facilitation techniques. Refer to Appendices 16 and 17 for parent group outlines and information packages.
The specific techniques that have been studied by these researchers were discussed and demonstrated with the parents. They included: getting on the same physical level as the child, following the child's lead, talking about events occurring in the here-and-now, allowing the child time to respond, using good speech models, offering the child new experiences, expanding on what the child says, etc. The nine families were required to use these techniques at home daily for at least ten weeks and completed homework activities. Teachers were invited and encouraged to attend the workshops. All participants were re-assessed with the same test battery used prior to the programs upon completion of the ten week language program (i.e., the training period).
Results

Means and standard deviations of percentiles for all standardized tests were calculated for the pre-training assessment and post-training assessment. The obtained data were recorded according to receptive language measures (Table 1), expressive language measures (Table 3), story telling measures (Table 5), reading readiness measures (Table 7), and teacher questionnaire measures (Table 9). Repeated measures two-way analyses of variance (ANOVA) with Programme (School, Home) and Time (Pretest, Posttest) as the independent variables were calculated for each measure to evaluate the effects of training methods. The researcher had selected a value of \( p = .01 \) as her criteria for determining significance. A more conservative criteria was used because of the high number of tests administered. Raw data for all direct and indirect intervention pre-instruction and post-instruction test measures are located in Appendices 18 through 29.

Receptive Language Measures

Two-way analysis of variance values of receptive language measures are presented in Table 2. The PPVT-R, a standardized test administered to assess receptive vocabulary growth, yielded no significant main effects or interaction effect between group and time. Receptive morphology and syntax were assessed with the TACL-R-subtest two. There was no main effect for Group, \( F(1, 19) = 3.10, p > .05 \), but there was a main effect for Time, \( F(1, 19) = 54.17, p < .001 \). This was qualified by a Group by Time interaction, \( F(1, 19) = 29.93, p < .001 \). The interaction was due to progress for the Direct Intervention group, \( t(11) = 9.55, p < .001 \), but not the Indirect Intervention group. The TACL-R-subtest three was given to determine comprehension of complex sentences. Again there was no main effect for Group, \( F(1, 19) = .36, p > .05 \), but there was a main effect for Time, \( F(1, 19) = 22.93, p < .001 \), and a Group by Time interaction, \( F(1, 19) = 10.40, p < .01 \). The interaction was due to progress for the Direct Intervention group, \( t(11) = 5.49, p < .001 \), but not the Indirect Intervention group. Refer to Figure 1.
TABLE 1
Means and Standard Deviations of Percentiles for Receptive Language Measures

<table>
<thead>
<tr>
<th>TEST</th>
<th>Direct Instruction</th>
<th>Indirect Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard deviation</td>
</tr>
<tr>
<td>PPVT-R - pre</td>
<td>13.50</td>
<td>19.88</td>
</tr>
<tr>
<td>PPVT-R - post</td>
<td>19.00</td>
<td>19.49</td>
</tr>
<tr>
<td>TACL-R-II - pre</td>
<td>3.33</td>
<td>3.82</td>
</tr>
<tr>
<td>TACL-R-II - post</td>
<td>44.08</td>
<td>15.16</td>
</tr>
<tr>
<td>TACL-R-III - pre</td>
<td>6.42</td>
<td>10.82</td>
</tr>
<tr>
<td>TACL-R-III - post</td>
<td>43.42</td>
<td>23.99</td>
</tr>
</tbody>
</table>
### TABLE 2

**Two Way Analysis of Variance for Receptive Language Measures**

<table>
<thead>
<tr>
<th>TEST</th>
<th>Significance of F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group</td>
</tr>
<tr>
<td>PPVT - R</td>
<td>3.160</td>
</tr>
<tr>
<td>TACL-R-II</td>
<td>0.094</td>
</tr>
<tr>
<td>TACL-R-III</td>
<td>0.554</td>
</tr>
</tbody>
</table>

* value is significant
Pre/Post Receptive Language Measures Between Both Treatment Groups

Receptive Language
PPVT-R

Receptive Language
TACL-R-II

Receptive Language
TACL-R-III
Expressive Language Measures

A standardized test that evaluates the use of morphology and syntax, the SPELT-II, yielded significant results with a Group effect, $F (1, 19) = 8.76$, $p < .01$, Time effect, $F (1, 19) = 10.81$, $p < .01$, and Group by Time interaction, $F (1, 19) = 8.81$, $p < .01$. The interaction was due to progress for the Direct Intervention group, $t (11) = 3.64$, $p < .01$, and a trend was observed for the Indirect Intervention group, $t (8) = 2.51$, $p < .05$. An informal measure created by the researcher to examine specifically targeted morphologic and syntactic structures and metalinguistic skills was administered. This baseline measure's data was significant across Time, $F (1, 19) = 42.23$, $p < .001$ and a Group by Time interaction was found, $F (1, 19) = 7.35$, $p < .01$. The interaction was due to greater progress for the Direct Intervention group (See Figure 2). Table 4 includes the expressive language two-way ANOVA information. See Figure 2.

Story Telling Measures

Story telling skills were assessed with an informal, nonstandardized test. Story telling measures were divided into two components: story flow measures and grammatical measures. Two-way ANOVA calculations are presented in Table 6. Story flow measures included the total number of prompts given by the researcher to encourage the student to continue his or her story. Also, the total number of garbles, fillers and extraneous remarks were tallied. Two-way ANOVA calculations for all story flow measures yielded no significant data across time or between groups. No group by time interactions were evident. Grammatical measures included the total number of sentences used by each student and how many of those sentences were simple. Coordinate conjunctions, subordinate conjunctions and correct pronoun referencing were tallied separately. Each student's total number of words was counted. No significant differences were found across time or between groups. No significant group by time interactions were evident.
### TABLE 3

Means and Standard Deviations for Expressive Language Measures

<table>
<thead>
<tr>
<th>Group</th>
<th>Direct Instruction</th>
<th>Indirect Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard deviation</td>
</tr>
<tr>
<td>SPELT-II - pre</td>
<td>1.58</td>
<td>2.02</td>
</tr>
<tr>
<td>SPELT-II - post</td>
<td>43.00</td>
<td>40.01</td>
</tr>
<tr>
<td>Baseline - pre</td>
<td>19.08</td>
<td>11.95</td>
</tr>
<tr>
<td>Baseline - post</td>
<td>36.92</td>
<td>2.07</td>
</tr>
</tbody>
</table>
TABLE 4

Two Way Analysis of Variance for
Expressive Language Measures

Significance of F

<table>
<thead>
<tr>
<th>TEST</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPELT-II</td>
<td></td>
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<tr>
<td>Group</td>
<td>0.008 *</td>
</tr>
<tr>
<td>Time</td>
<td>0.004 *</td>
</tr>
<tr>
<td>Group By Time</td>
<td>0.008 *</td>
</tr>
<tr>
<td>Baseline</td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>0.260</td>
</tr>
<tr>
<td>Time</td>
<td>0.000 *</td>
</tr>
<tr>
<td>Group By Time</td>
<td>0.014 *</td>
</tr>
</tbody>
</table>

* value is significant
Pre/Post Expressive Language Measures Between Both Treatment Groups

Expressive Language
Baseline Measure

Expressive Language
SPLET-II
<table>
<thead>
<tr>
<th></th>
<th>Groups</th>
<th>Direct Instruction</th>
<th></th>
<th>Indirect Instruction</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Story Flow Measures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># prompts - pre</td>
<td>3.92</td>
<td>5.45</td>
<td></td>
<td>6.11</td>
<td>4.59</td>
</tr>
<tr>
<td># prompts - post</td>
<td>3.58</td>
<td>2.97</td>
<td></td>
<td>5.56</td>
<td>4.72</td>
</tr>
<tr>
<td># garbles - pre</td>
<td>17.33</td>
<td>9.29</td>
<td></td>
<td>19.11</td>
<td>11.06</td>
</tr>
<tr>
<td># garbles - post</td>
<td>9.33</td>
<td>6.18</td>
<td></td>
<td>22.67</td>
<td>22.60</td>
</tr>
<tr>
<td># fillers - pre</td>
<td>1.75</td>
<td>3.47</td>
<td></td>
<td>6.22</td>
<td>6.20</td>
</tr>
<tr>
<td># fillers - post</td>
<td>1.42</td>
<td>1.62</td>
<td></td>
<td>10.11</td>
<td>13.95</td>
</tr>
<tr>
<td># extraneous remarks - pre</td>
<td>0.50</td>
<td>0.90</td>
<td></td>
<td>0.67</td>
<td>0.87</td>
</tr>
<tr>
<td># extraneous remarks - post</td>
<td>1.83</td>
<td>2.89</td>
<td></td>
<td>0.89</td>
<td>1.17</td>
</tr>
<tr>
<td>Grammatical Measures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># total sentences - pre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># total sentences - post</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># simple sentences - pre</td>
<td>8.67</td>
<td>4.79</td>
<td></td>
<td>7.67</td>
<td>5.74</td>
</tr>
<tr>
<td># simple sentences - post</td>
<td>7.75</td>
<td>2.63</td>
<td></td>
<td>6.89</td>
<td>1.83</td>
</tr>
<tr>
<td># coordinate conjunctions - pre</td>
<td>1.00</td>
<td>1.76</td>
<td></td>
<td>7.44</td>
<td>10.58</td>
</tr>
<tr>
<td># coordinate conjunctions - post</td>
<td>3.00</td>
<td>2.34</td>
<td></td>
<td>7.00</td>
<td>8.19</td>
</tr>
<tr>
<td># subordinate conjunctions - pre</td>
<td>0.42</td>
<td>1.00</td>
<td></td>
<td>2.53</td>
<td>4.36</td>
</tr>
<tr>
<td># subordinate conjunctions - post</td>
<td>0.17</td>
<td>0.39</td>
<td></td>
<td>2.53</td>
<td>5.59</td>
</tr>
<tr>
<td># correct pronoun referencing - pre</td>
<td>0.17</td>
<td>0.39</td>
<td></td>
<td>0.56</td>
<td>0.88</td>
</tr>
<tr>
<td># correct pronoun referencing - post</td>
<td>0.67</td>
<td>0.98</td>
<td></td>
<td>1.56</td>
<td>2.60</td>
</tr>
<tr>
<td># words - pre</td>
<td>95.25</td>
<td>55.06</td>
<td></td>
<td>166.11</td>
<td>98.98</td>
</tr>
<tr>
<td># words - post</td>
<td>117.50</td>
<td>35.00</td>
<td></td>
<td>167.44</td>
<td>128.45</td>
</tr>
</tbody>
</table>
TABLE 6

Two Way Analysis of Variance for
Story Telling Measures

<table>
<thead>
<tr>
<th>Story Flow Measures</th>
<th>Significance of F</th>
</tr>
</thead>
<tbody>
<tr>
<td># prompts</td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>0.340</td>
</tr>
<tr>
<td>Time</td>
<td>0.673</td>
</tr>
<tr>
<td>Group By Time</td>
<td>0.916</td>
</tr>
<tr>
<td># garbles</td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>0.109</td>
</tr>
<tr>
<td>Time</td>
<td>0.542</td>
</tr>
<tr>
<td>Group By Time</td>
<td>0.123</td>
</tr>
<tr>
<td># fillers</td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>0.025</td>
</tr>
<tr>
<td>Time</td>
<td>0.325</td>
</tr>
<tr>
<td>Group By Time</td>
<td>0.245</td>
</tr>
<tr>
<td># extraneous remarks</td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>0.453</td>
</tr>
<tr>
<td>Time</td>
<td>0.188</td>
</tr>
<tr>
<td>Group By Time</td>
<td>0.107</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grammatical Measures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td># sentences</td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>0.239</td>
</tr>
<tr>
<td>Time</td>
<td>0.188</td>
</tr>
<tr>
<td>Group By Time</td>
<td>0.107</td>
</tr>
<tr>
<td># simple sentences</td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>0.478</td>
</tr>
<tr>
<td>Time</td>
<td>0.500</td>
</tr>
<tr>
<td>Group By Time</td>
<td>0.956</td>
</tr>
<tr>
<td># coordinate conjunctions</td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>0.041</td>
</tr>
<tr>
<td>Time</td>
<td>0.601</td>
</tr>
<tr>
<td>Group By Time</td>
<td>0.414</td>
</tr>
<tr>
<td># subordinate conjunctions</td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>0.059</td>
</tr>
<tr>
<td>Time</td>
<td>0.894</td>
</tr>
<tr>
<td>Group By Time</td>
<td>0.894</td>
</tr>
<tr>
<td>correct pronoun referencing</td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>0.165</td>
</tr>
<tr>
<td>Time</td>
<td>0.900</td>
</tr>
<tr>
<td>Group By Time</td>
<td>0.559</td>
</tr>
<tr>
<td># words</td>
<td></td>
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<tr>
<td>Group</td>
<td>0.080</td>
</tr>
<tr>
<td>Time</td>
<td>0.468</td>
</tr>
<tr>
<td>Group By Time</td>
<td>0.519</td>
</tr>
</tbody>
</table>

* value is significant
Reading Readiness Measures

Two-way ANOVA calculations for reading readiness measures are charted in Table 8. The TAAS, a test evaluating the subject's ability to delete syllables and sounds in orally presented words, yielded a significant difference across time only. Neither a group difference nor a group by time interaction were obtained. However, a whole language reading inventory completed by each student's teachers revealed differences across time $F(1, 19) = 32.53$, $p < .001$ as well as a significant group by time interaction, $F(1, 19) = 9.12$, $p < .01$. The interaction was due to progress for the Direct Intervention group, $t(11) = 5.74$, $p < .001$, but not the Indirect Intervention group. For more information refer to Figure 3.

Teacher Questionnaire Measures

A questionnaire was completed by each student's teacher. Five of the questions required responses on a five point severity scale. Two-way ANOVA calculations are provided in Table 10. No group differences, time differences or interactions were found for the following questions: how well the child carries on conversations once the conversation are started, how well the child engages in conversation (e.g., turn-taking, listening, speaking, etc.), and how well the child tells you about his or her activities and/or experiences. However, a difference across time was significant for how well the child starts a conversation, $F(1, 19) = 9.21$, $p < .01$ and a group by time interaction was significant for how likely the child asks questions if he or she does not understand the speaker, $F(1, 19) = 7.93$, $p < .01$. This interaction was due to progress for the Direct Intervention group, $t(11) = 3.45$, $p < .01$ but not the Indirect Intervention group. Refer to Figure 4.
TABLE 7

Means and Standard Deviations for Reading Readiness Measures

<table>
<thead>
<tr>
<th>TEST</th>
<th>Direct Instruction</th>
<th>Indirect Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard deviation</td>
</tr>
<tr>
<td>TAAS - pre</td>
<td>0.42</td>
<td>1.00</td>
</tr>
<tr>
<td>TAAS - post</td>
<td>1.92</td>
<td>2.39</td>
</tr>
<tr>
<td>Reading Inventory- pre</td>
<td>2.58</td>
<td>2.07</td>
</tr>
<tr>
<td>Reading Inventory-post</td>
<td>5.83</td>
<td>2.79</td>
</tr>
</tbody>
</table>
TABLE 8

Two Way Analysis of Variance for
Reading Readiness Measures

<table>
<thead>
<tr>
<th>Significance of F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TEST</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>TAAS</td>
</tr>
<tr>
<td>Group</td>
</tr>
<tr>
<td>Time</td>
</tr>
<tr>
<td>Group By Time</td>
</tr>
<tr>
<td>Reading Inventory</td>
</tr>
<tr>
<td>Group</td>
</tr>
<tr>
<td>Time</td>
</tr>
<tr>
<td>Group By Time</td>
</tr>
</tbody>
</table>

* value is significant
FIGURE 3
Pre/Post Reading Readiness Measures
Between Both Treatment Groups

Reading Readiness Measures
TAAS

Reading Readiness Measures
Reading Inventory
<table>
<thead>
<tr>
<th>Teacher reports:</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>how well child starts conversation</td>
<td><strong>Direct Instruction</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Indirect Instruction</strong></td>
</tr>
<tr>
<td>pre -</td>
<td>Mean</td>
</tr>
<tr>
<td>post -</td>
<td>2.08</td>
</tr>
<tr>
<td></td>
<td>2.67</td>
</tr>
<tr>
<td>how well child carries on conversation once it is started</td>
<td>pre -</td>
</tr>
<tr>
<td></td>
<td>post -</td>
</tr>
<tr>
<td>how well child engages in conversation (turn-taking, listening, etc.)</td>
<td>pre -</td>
</tr>
<tr>
<td></td>
<td>post -</td>
</tr>
<tr>
<td>how likely child asks questions if he/she doesn’t understand speaker</td>
<td>pre -</td>
</tr>
<tr>
<td></td>
<td>post -</td>
</tr>
<tr>
<td>how well child tells you about his/her experiences/activities</td>
<td>pre -</td>
</tr>
<tr>
<td></td>
<td>post -</td>
</tr>
</tbody>
</table>
## TABLE 10

Two Way Analysis of Variance for Teacher Questionnaire Measures

<table>
<thead>
<tr>
<th>Teacher reports:</th>
<th>Significance of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>how well child starts conversation</td>
<td>Group 0.740</td>
</tr>
<tr>
<td></td>
<td>Time 0.007 *</td>
</tr>
<tr>
<td></td>
<td>Group By Time 0.418</td>
</tr>
<tr>
<td>how well child carries on conversation once it is started</td>
<td>Group 0.559</td>
</tr>
<tr>
<td></td>
<td>Time 0.070</td>
</tr>
<tr>
<td></td>
<td>Group By Time 0.236</td>
</tr>
<tr>
<td>how well child engages in conversation (turn-taking, listening, etc.)</td>
<td>Group 0.212</td>
</tr>
<tr>
<td></td>
<td>Time 0.032</td>
</tr>
<tr>
<td></td>
<td>Group By Time 0.032</td>
</tr>
<tr>
<td>how likely child asks questions if he/she doesn't understand speaker</td>
<td>Group 0.211</td>
</tr>
<tr>
<td></td>
<td>Time 0.050</td>
</tr>
<tr>
<td></td>
<td>Group By Time 0.011 *</td>
</tr>
<tr>
<td>how well child tells you about his/her experiences/activities</td>
<td>Group 0.043</td>
</tr>
<tr>
<td></td>
<td>Time 0.045</td>
</tr>
<tr>
<td></td>
<td>Group By Time 0.187</td>
</tr>
</tbody>
</table>

* value is significant
Pre/Post Teacher Questionnaire Scale Measures Between Both Treatment Groups

Teacher Questionnaire Measures
Starts Conversation

![Graph showing mean rating over time for starts conversation with two methods of instruction: direct and indirect.]

Teacher Questionnaire Measures
Carries Conversation

![Graph showing mean rating over time for carries conversation with two methods of instruction: direct and indirect.]

Teacher Questionnaire Measures

Engages In Conversation

![Graph showing the change in mean rating over time for engaging in conversation.]

Teacher Questionnaire Measures

Asks Questions

![Graph showing the change in mean rating over time for asking questions.]

Method of Instruction:
- Direct
- Indirect
Teacher Questionnaire Measures
Talks About Experiences

![Graph showing mean ratings over time for direct and indirect methods of instruction.]
The questionnaire also included four "yes/no" questions that were answered for each subject by their teachers. Cross tabulations were computed for instruction groups by question category to assess significance as binomial data was collected. The questions examined whether the teacher reports the following:

1. regular contact with the child's family,
2. if the child is frustrated by his or her speech and language difficulties,
3. if the child talks about or refers to people, activities, and objects present in the child's immediate environment, and
4. if the child talks about people, activities, and objects not in the child's immediate environment.

When these four questions were asked, no significant differences were found between responses. Refer to Table 11 for Chi Square Analyses of these questions.
TABLE 11
Chi Square Analyses By Groups
Teacher Questionnaire Measures

<table>
<thead>
<tr>
<th>Teacher reports:</th>
<th>Pre-intervention</th>
<th>Post-Intervention</th>
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</thead>
<tbody>
<tr>
<td>Regular contact with family</td>
<td>0.42249</td>
<td>0.23672</td>
</tr>
<tr>
<td>Child frustrated by speech/language difficulties</td>
<td>0.19789</td>
<td>0.83008</td>
</tr>
<tr>
<td>Child talks about/refers to people.</td>
<td>0.74833</td>
<td>0.23672</td>
</tr>
<tr>
<td>objects in immediate environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child talks about/refers to people,</td>
<td>0.25630</td>
<td>0.71882</td>
</tr>
<tr>
<td>activities, objects not in immediate environment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N.B. Pearson calculation used

* value is significant
Discussion

No significant differences were detected on the PPVT-R, a standardized test evaluating receptive vocabulary skills. This test may not have been sensitive to the severity level of the subjects. If the program was longer to include more exposure and experiential opportunities then perhaps differences may have resulted. As the test may not measure improvement in severely-impaired language delayed children a nonstandardized probe, like the expressive language baseline measure, may be beneficial. For example, many subjects did not obtain basals on the PPVT-R; henceforth, testing stopped immediately. An informal measure with no basals may address the vocabulary specifically targetted in the programs and subsequently yield significant differences. One must also consider the raw data collected from this test. Eleven out of twelve students in the direct intervention program had increased scores. Therefore, more vocabulary is being comprehended but not enough to increase the percentiles and subsequently the group by time interaction.

Receptive language skills, specifically comprehension of morphologic and syntactic structures as well as complex sentences, were assessed with the second and third subtests of the TACL-R. (i.e., TACL-R-II and TACL-R-III) Dramatic differences were found for the direct intervention group only. In this program, there is a great deal of explicit instruction and repetition used by the researcher regarding grammatical markers. All students take individual turns identifying and using the morphologic and syntactic structures and are encouraged to listen to their peers' attempts. In this direct approach, the students are taught to listen and to utilize cues they have not used before (e.g. visual supplementation, reading body language, etc.). In regular classrooms, teachers usually do not regularly repeat or revise their language. Also, the complexity of their language level is often too high for language-impaired children at the kindergarten level (Warr-Leeper, 1992).
With respect to Expressive Language Measures, both programs showed significant differences on the SPELT-II a standardized test evaluating expressive morphologic and syntactic development. However, the direct instruction program yielded a much stronger difference than the indirect instruction program. It is likely that the parent group benefitted in this area as the children's communication errors are easily detectable. The parents were offered explicit instruction on how to model correct grammatical use and to encourage imitation of specific structures (e.g. the pronouns "I", "he", "she"; the copula verbs "is", "am", "are", etc.). The students in the direct intervention group frequently heard explicit rules for grammar use and repetition of correct forms. In fact, at times all students were practicing using the same forms in drilled activities.

Similar findings were determined on the informal baseline measure. That is, both groups showed significant differences; however, the direct instruction group yielded a stronger difference. This informal evaluation tool made by the researcher is sensitive to the specific syntax, morphology, syllable segmentation, and rhyming skills as they are specifically taught in the direct intervention group. In the indirect instruction program, parents are informed of the importance of remediating the specific items addressed on this test and are taught how to remediate these forms through modelling and encouraging imitation.

It is not peculiar that there were no significant differences detected on any of the story telling measures. It is likely that this measure, as the receptive vocabulary measure, was too difficult for the severely language-impaired children and may have been more appropriate for mildly to moderately language delayed children. Such a high level task may not have reflected small yet critical gains. Severely-impaired language delayed children require long term instruction for oral narrative development and the direct intervention group did not offer them enough explicit instruction.
of the higher level language structures required to tell stories. A modification that may be more sensitive to beginning story telling development would be to use a three or four card sequenced short story. The students could place them in the correct sequence in a left-to-right directionality and describe each picture.

Early reading behaviours were assessed with the **TAAS** and a whole language reading behaviour inventory checklist. On the **TAAS**, there were no group by time differences. This task requires students to delete syllables or phonemes from orally presented words. Even though syllable segmentation was explicitly taught in the direct intervention group, deletion was not. Severely language-impaired children likely require explicit instruction of how to do this task and that was not provided by the researcher directly or indirectly via parents. The syllable segmentation and rhyming components of the informal baseline measure appeared to be better indicators of metalinguistic development for language-impaired kindergarten children.

However, the analyses of the data accumulated from the reading behaviour inventory checklist completed by the teachers for each student showed that both groups were significant but the direct intervention program was much stronger. The direct intervention program had an established routine, was theme based and oriented around books and stories. Many of the early literacy concepts such as left-to-right and top-to-bottom directionality were emphasized. Improvement in the parent group may be attributed to the attention given to books to promote oral language and early literacy development. The importance of carrying though on the classroom themes at home to ensure generalization of language skills was also reiterated.
On the teacher questionnaire only the question pertaining to how likely the student would ask questions if he or she does not understand the speaker was significant. The direct intervention group showed a higher likelihood of asking such questions. It is reasonable to guess that this may be related to the explicit instruction of question formation during show and tell time and snack time. In the indirect intervention group, parents may not see question formation as a problem area and therefore, not attend to it. Similarly parents may not detect that their children are not initiating or continuing conversations.

The present investigation provided much information regarding group intervention to kindergarten students with language impairments. It appeared that both direct and indirect language intervention programs improved some of the students' language skills. The direct language intervention program yielded significant improvements in the areas of receptive language, expressive language, and early literacy development while the indirect language program benefitted to a lesser yet still significant degree, expressive language and whole language components of early literacy.

This information can provide speech and language departments in school systems with significant data that group intervention is effective and efficient as so many students can be serviced at one time. The implications of utilizing these programs in school systems are vast. However, planning and executing direct language intervention groups require full support and cooperation from school staff administrators. For instance, a regular appropriate setting in the school must be located for the speech-language pathologist, teachers must identify the special needs students, etc. Also, rotating block systems of children serviced in the schools must be accepted. If a kindergarten language group intensively services one set of students at one time, higher grades of students' communication management must wait until the three month program has been completed. Also, parents can act as
facilitators of their children's communication skills especially for expressive language development. Administrators may consider flexibility in speech-language pathologists' schedules so to allow them to do evening workshops as part of their work week.

According to statistical analyses it is evident that both the direct and indirect intervention language program were beneficial with direct intervention being stronger in the kindergarten students' expressive language development. This pattern was also seen on the whole language reading behaviour checklist. Dramatic differences for the direct intervention program only was observed on the receptive language tests and on one question from the teacher questionnaire. No group differences were detected on the receptive vocabulary measure and story telling measures. A metalinguistic task requiring the subjects to delete syllables and sounds in orally presented words generated a time difference only.

It is important to note that the children, for the purpose of this study, were selected by the teachers within the first two weeks of the school year. It is probable that these children's difficulties were salient as they were more severe. If the study would have been initiated later on in the academic year, more mild to moderate language impaired children would have been identified and have also been appropriate for the language programs. In addition, even though the teacher's received some written information about characteristics to look for in the children prior to filling out the language checklist, it would have been beneficial for the researcher to offer them additional inservice regarding identification. A more heterogeneous sample ranging from mild to moderate language impairments would likely yield stronger benefits of both programs. In this study, where most of the subjects' language scores placed them in the severe range, the standardized tests may not have been the most sensitive measures for three month language programs.
In conclusion, early intervention of language delays has been well supported so that later academic difficulties do not occur. Two programs that take into account increased caseloads with decreased staffing have been identified as benefitting language-impaired kindergarten children. Kindergarten language classes for language-impaired students taught by speech-language pathologists is statistically supported and should be considered an alternative to the traditional itinerant service delivery.
References


Teacher Checklist for Identifying Language Impairments

Child's Name:  ______________________

<table>
<thead>
<tr>
<th>Receptive Language</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Can the child follow 3-step commands?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>2. Does the child respond appropriately to &quot;wh&quot; and &quot;yes/no&quot; questions?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>3. Does the child understand prepositions concepts like &quot;in&quot;, &quot;on&quot;, &quot;under&quot;, &quot;behind&quot;, etc.?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>4. Can the child categorize common objects by shape, colour, size?</td>
<td>___</td>
<td>___</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expressive Language</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does the child speak in complete sentences of 5 to 6 words?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>2. Does the child use pronouns appropriately (I, he, she, we, they, him, her)?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>3. Does the child use copula/auxiliary verbs (is, am, are)?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>4. Does the child use past and future tenses?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>5. Does the child ask questions correctly?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>6. Can the child define common words and tell you how they are used?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>7. Does the child use the &quot;s&quot; sound to mark plurals, possessives and 3rd person verbal agreement?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>8. Does the child find the right word to express his/her meaning?</td>
<td>___</td>
<td>___</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Use of Language</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is the child coherent and relevant?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>2. Does the child maintain the topic?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>3. Can the child retell a fairy tale or story?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>4. Does the child use terms like &quot;hello&quot;, good-bye&quot;, &quot;please&quot;, &quot;thank you&quot;?</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>5. Does the child interact frequently with his/her peers?</td>
<td>___</td>
<td>___</td>
</tr>
</tbody>
</table>
Dear Parent,

I am a graduate student in The Faculty of Education at the University of Windsor as well as a Speech-Language Pathologist for The Windsor Board of Education in conjunction with the Faculty of Education at the University of Windsor. The purpose of the research is to determine the best way to manage the needs of junior and senior kindergarten children with oral language difficulties.

In recent years, schools' speech-language pathologists have helped these children by withdrawing them individually or in small groups for a short period of time weekly. Because of the high number of referrals, speech-language pathologists' time is limited and subsequently the amount of time consulting to teachers and parents regarding the students' goals is limited. By developing oral language classes, the children would receive intensive language intervention in a natural class-like setting. Both parents and teachers would participate in the program to ensure generalization of the language goals to the home and regular classroom. At this time; however, little information is available supporting the best speech and language service delivery for kindergarten children.

To obtain this information, your child's kindergarten teacher has identified your child as possibly having oral language difficulties and may be at risk for later learning difficulties. Upon your consent, your child will be given a speech-language assessment to determine if oral language difficulties exist. If oral language skills are delayed, your child will be considered as participants in an oral language class which will run two times per week for one-and-a-half hours per class for ten weeks in your school. Your child will be assessed following the program and also in his/her grade one year to determine progress. There are no know risks associated with any of the tasks. You may refuse to participate and if you agree to participate, you may withdraw from the study at any time without question.
If you have any questions or concerns regarding this research, please feel free to leave a message for me at your child’s school and I will return your phone call as quickly as I can. If you have any concerns regarding the ethics of this investigation, please contact the chair of the ethics committee of The University of Windsor at the Faculty of Education at 253-4232 extension 3800. Thank you for your time and effort.

Please sign the attached form.

Sincerely,

Melinda Hinch, B.Sc.(C.D.), M.Cl.Sc.
Speech-Language Pathologist
Reg.OSLA, Reg.CASLPO.
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If you have any questions or concerns regarding this research, please feel free to leave a message for me at your child’s school and I will return your phone call as quickly as I can. If you have any concerns regarding the ethics of this investigation, please contact the chair of the ethics committee of The University of Windsor at the Faculty of Education at 253-4232 extension 3800. Thank you for your time and effort.

Please sign the attached form.

Sincerely,

Patricia Lee, B.A., B.Ed., M.A.
Speech-Language Pathologist
Reg.OSLA, Reg.CASLPO

Melinda Hinch, B.Sc.(C.D.), M.C.I.Sc.
Speech-Language Pathologist
Reg.OSLA, Reg.CASLPO.
FILE FOLDER CONTENTS

Each file should have the following:

Letter of information

Consent form

Diagnostic test forms:
- SPELT-II
- PPVT-R
- TACL-R
- TAAS
- Baseline Probe
- Teacher Questionnaire
- Primary Reading Inventory

Parent Package

Teacher checklist after completed

In addition, children's files in the Kindergarten Language Class should have:

Snack/Theme List

Class information letter

NOTE: Story formulation is to be audiotaped
ROSSNER'S TEST OF AUDITORY ANALYSIS SKILLS

A. **Say cowboy.** Now say it again, but don't say bow. (cow)

B. **Say steamboat.** Now say it again, but don't say steam. (boat)

1. **Say sunshine.** Now say it again, but don't say shine. (sun)

2. **Say picnic.** Now say it again, but don't say pic. (nic)

3. **Say cucumber.** Now say it again, but don't say cu (cumber)

4. **Say coat.** Now say it again, but don't say /K/ (oat)

5. **Say meat.** Now say it again, but don't say /M/ (eat)

6. **Say take** Now say it again, but don't say /T/ (ache)

7. **Say game.** Now say it again, but don't say /M/ (gay)

8. **Say wrote.** Now say it again, but don't say /T/ (row)

9. **Say please.** Now say it again, but don't say /Z/ (plea)

10. **Say clap.** Now say it again, but don't say /K/ (lap)

11. **Say play.** Now say it again, but don't say /P/ (lay)

12. **Say stale.** Now say it again, but don't say /T/ (sale)

13. **Say smack.** Now say it again, but don't say /M/ (sack)

**Total**

<table>
<thead>
<tr>
<th>TAAS Score</th>
<th>Expected for Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 3</td>
<td>Kindergarten</td>
</tr>
<tr>
<td>4 - 9</td>
<td>Grade 1</td>
</tr>
<tr>
<td>10 - 11</td>
<td>Grade 2</td>
</tr>
<tr>
<td>12 - 13</td>
<td>Grade 3</td>
</tr>
</tbody>
</table>
APPENDIX 6

LANGUAGE AND ARTICULATION GROUP  PRE/POST - TEST

SCORE

Syllable Awareness

- Clap out each syllable of the following words.
- do trial items first. These can be demonstrated hand-over-hand or imitated responses.

TRIAL 1 - popcorn
TRIAL 2 - elephant
TRIAL 3 - mommy

SCORE: hand-over-hand = 0, imitated = 1, elicited = 2

1. hotdog
2. butterfly
3. bunny
4. dinosaur
5. peanut butter

Sound Awareness

- Generate an additional rhyme for each list.
  If no response or an incorrect response is given, give the phonemic cue in the brackets.
- For trial items only:

  • State "all these words sound the same but are a little different".

  • Stress the first sounds of the words.

  • Have the child imitate the lists of rhymes.

TRIAL 1 - can, man, tan (fff ___ )
TRIAL 2 - bit, fit, kit (sss ___ )

(SCORE: imitated = 0 , phonemic cue = 1, elicited (no cues) = 2)

bat, sat, rat, (ccc___)
float, note, coat (bbb___)
cow, now, how (ppp___)
Sentence Imitation

- Say the following sentences after the examiner.
  Encourage that all the words are repeated.

TRIAL 1 - She is running to her mom.

TRIAL 2 - We are going home.

(SCORE: No errors = 2, 1 error = 1, more than 1 error = 0)

TRANSCRIPTION

What is it?
What is it?
Where do you keep it?
Where do you keep it?
Who gave it to you?
Who gave it to you?
How does it work?
How does it work?
Can I have a cup?
Can I have a cup?
Are you done?
Are you done?
Is it a doll?
Is it a doll?
It is not a truck.
It is not a truck.
I don't want juice.
I don't want juice.
He is sleeping in his bed.
He is sleeping in his bed.
I am colouring my picture.
I am colouring my picture.
They are going to school.

TOTAL


APPENDIX 7

TEACHER QUESTIONNAIRE
KINDERGARTEN LANGUAGE CENTRE
Speech and Language Services

DAILY COMMUNICATION QUESTIONNAIRE FOR TEACHERS
(adapted from Daily Living Questionnaire for Teaching Personnel, G. Warr-Leeper, 1992)

<table>
<thead>
<tr>
<th>STUDENT'S NAME:</th>
<th>TEACHER:</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDENT'S BIRTHDATE:</td>
<td>DATE:</td>
</tr>
</tbody>
</table>

A. GENERAL IMPRESSIONS

1. How long have you known the students? ______ weeks

2. Do you have regular contact with the student's family and/or caregiver? Yes ___ No ___

3. How much time does the student spend with you in an average day?
   • in one-on-one activity ______ minutes
   • in group activity ______ hours

4. Describe the main activities in which you are involved with the student.
   ______________________________________
   ______________________________________

5. Are there any problems other than the student's speech and/or language difficulties that you feel affect his/her day-to-day functioning? Please specify.
   ______________________________________
   ______________________________________

6. Briefly describe how the student typically spends his/her day.
   • Weekday Mornings ______________________________________
   • Weekday Afternoons ______________________________________
7. What activities does the student enjoy? List three activities.

________________________________________  ____________________________  __________________________

8. What activities does the student dislike? List three activities.

________________________________________  ____________________________  __________________________

B COMMUNICATION FUNCTIONS

1. If the student requests your assistance when he/she needs help, please describe what the student says and/or does.

____________________________________________________________________________________

____________________________________________________________________________________

2. How does the student ask for information? Please describe what the student says and/or does.

____________________________________________________________________________________

____________________________________________________________________________________

3. If you are sharing an activity with the student, and it is interrupted, what does the student say and/or do?

____________________________________________________________________________________

____________________________________________________________________________________

4. Does the student ever appear excessively frustrated because of his/her speech and/or language difficulties?

Yes _____  No _____

IF YES, please answer the following questions by checking one choice.

a) How often does the student act our excessively?

Daily _____ Weekly _____ Monthly _____

b) How often does the student shut down communications?

Daily _____ Weekly _____ Monthly _____
5. Does the student talk about or refer to people, activities or objects which are present within the immediate environment?

Yes _____ No _____

6. Does the student talk about or refer to people, activities or objects which are not present in the immediate environment?

Yes _____ No _____

C. SOCIAL COMMUNICATION SKILLS

*Please rate this student's ability on a variety of skills by circling the appropriate number.*

1. How well can this student start a conversation?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>limited ability</td>
<td>average ability</td>
<td>above average ability</td>
<td>exceptional ability</td>
<td></td>
</tr>
</tbody>
</table>

2. How well can this student carry on a conversation once it is started?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>limited ability</td>
<td>average ability</td>
<td>above average ability</td>
<td>exceptional ability</td>
<td></td>
</tr>
</tbody>
</table>

3. How well can this student tell you about his/her activities and experiences?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>limited ability</td>
<td>average ability</td>
<td>above average ability</td>
<td>exceptional ability</td>
<td></td>
</tr>
</tbody>
</table>

4. How well does this student engage in conversation (i.e. taking turns listening and speaking)?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>limited ability</td>
<td>average ability</td>
<td>above average ability</td>
<td>exceptional ability</td>
<td></td>
</tr>
</tbody>
</table>

5. How likely is this student to ask questions if he/she does not understand you?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>limited ability</td>
<td>average ability</td>
<td>above average ability</td>
<td>exceptional ability</td>
<td></td>
</tr>
</tbody>
</table>
## PRIMARY READING BEHAVIOUR INVENTORY

**Name:**

### I. EMERGENT
- chooses to look at or read books
- holds book right side up and turns pages front to back
- when listening to a favourite song notices if reader skips, adds, and/or changes the text
- after listening to the story retells it including information on characters and important events in the story
- demonstrates awareness of cause and effect

### II. EARLY
- develops awareness of line directionality (child's finger moves left to right across line of print then down and left to track next line of print)
- attempts to track when reading along and reconstructing a story
- tracks to identify a particular word in a line of text
- reads high frequency words in a familiar selection (names of characters, places, objects)
- dictates personal story of 5-10 sentences

### III. DEVELOPING
- uses a combination of strategies to gain meaning from print (pictures, memory, syntax, semantics, phonetics, tracking, etc.)
- self-corrects when reading a passage that doesn't make sense
- reads many familiar, predictable selections, chart stories, dictated stories, accurately
- begins to read unfamiliar predictable texts
- discusses characters and events in stories

### IV. INDEPENDENT
- uses many strategies to choose books to read
- begins to read silently with subvocalizations
- comprehends main idea, details, cause and effect, inferences
- competent at different levels: literal, interpretive, critical
- attempts/discusses material reading with: peers, staff
- In terms of: likes, dislikes, comparisons, "wh" questions
KINDERGARTEN LANGUAGE PROGRAM GOALS

General Goals

1. To improve expressive oral language skills (i.e. syntax, morphology, semantics, pragmatics)

2. To establish early literacy skills (i.e. metalinguistics)

3. To prevent later academic difficulties

4. To prevent later behavioural difficulties

5. To provide diagnostic therapy on all participating students

6. To educate the students' kindergarten teachers regarding language and learning difficulties and provide classroom support

7. To educate parents of the participating students regarding language and learning difficulties and provide home support

Specific Goals

a) To use pronouns in subjective position correctly in sentences (i.e. "I", "he", "she", "we", "they")

b) To use copula and auxiliary verbs correctly in sentences (i.e. "is", "am", "are")

c) To use prepositions correctly in sentences (i.e. "in", "on", "under", "behind", "beside", "in front")

d) To increase vocabulary and semantic organization

e) To establish 'wh' and 'yes/no' questions

f) To establish social use of language (e.g. eye contact, turn-taking, requesting information, sharing information, telling stories, etc.)

g) To establish sequencing skills
THEMES AND SNACKS FOR
THE KINDERGARTEN LANGUAGE PROGRAM

TENTATIVE

FALL 1995

1. Fall - Oct. 18 - apple sauce
2. Fall - Oct. 20 - popcorn
3. Fall events - Oct. 25 - cookies
4. Fall events - Oct. 27 - jello jiggler
5. Colours - Nov. 1 - apples, grapes, oranges
6. Colours - Nov. 15 - cheese, crackers
8. Clothes - Nov. 17 - pudding
9. Farm Animals - Nov. 22 - crackers
10. Zoo Animals - Nov. 24 - animal cookies
11. Forest Animals - Nov. 29 - teddy graham
12. Insects - Dec. 6 - celery, peanut butter, raisins
14. Winter events - Dec. 15 - rice crispy squares
15. Winter events - Dec. 20 - jello jiggler
16. Winter - Jan. 10 - hot chocolate, marshmallows
18. Food - Jan. 19 - fruits and vegetables
19. Food - Jan. 24 - fruits and vegetables
20. Feelings/Emotions - Jan. 26 - bread faces with cheese whiz

*** Please notify me if your child has any food allergies.

Melinda Hinch
Speech-Language Pathologist
Parent Letter  RE: Direct Intervention Information

Dear Parents,

The Kindergarten Language Class will begin on Wednesday, October 18, 1995 and meet as follows:

**DAYS:**  
Wednesdays and Fridays

**DATES:**  
October 18, 1995 to January 26, 1996

**TIME:**  
Victoria students -  
McGregor students -

**LOCATION:**  
at your child's school  
(classroom to be announced)

Group activities will focus on a different theme each class. Your child will bring home a craft or work item. Please discuss it with him/her to reinforce the program. Please help your child by trying the following suggestion.

1. Use your child's speech and language goals in other daily activities.

2. Use the "theme" vocabulary words and phrases in your conversation. Children learn most of their words from everyday discussions. Use theme words often.

3. Expand on the theme subject and creating new activities. I can give you many ideas if you are interested.

4. Help your child find books, objects, pictures, or tapes relating to the themes.

Your child will make much more progress when you are helping.

Thank you for your co-operation.

**** SHOW-AND-TELL WILL OCCUR EVERY SESSION. Please remind your child to bring something he/she would like to talk about.

**** Please inform me of any food allergies your child may or does have.

Melinda Hinch,  
Speech-Language Pathologist
KINDERGARTEN LANGUAGE PROGRAM DAILY SCHEDULE

Session # __________

Theme ____________________

Activities:

9:15 - 9:30  • Arrival  -

  • Activity Time  -

9:30 - 9:55  • Circle Time  -

  -

  -

  -

  -

  -

9:55 - 10:10  • Show’n Tell

10:10 - 10:25  • Snack Time  -

10:25 - 10:35  • Story Time  -

10:35 - 10:45  • Good-bye  -
# KINDERGARTEN LANGUAGE PROGRAM

## Daily Schedule Example 1

**Session #**

**Theme:** Food - 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:15 - 9:30</td>
<td><strong>Arrival Table Time</strong></td>
<td>Make Hungry Caterpillar book</td>
</tr>
<tr>
<td>9:30 - 9:55</td>
<td><strong>Circle Time</strong></td>
<td>• determine general and snack helper</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• give out mats with printed names</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• greeting song</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• puppets “he/she is eating” play food</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• role play eating food</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• fruits vs. veggies</td>
</tr>
<tr>
<td>9:55 - 10:10</td>
<td><strong>Show and tell</strong></td>
<td></td>
</tr>
<tr>
<td>10:10 - 10:25</td>
<td><strong>Snack Time</strong></td>
<td></td>
</tr>
<tr>
<td>10:25 - 10:35</td>
<td><strong>Story Time</strong></td>
<td>The Hungry Caterpillar</td>
</tr>
<tr>
<td>10:35 - 10:45</td>
<td><strong>Good-bye</strong></td>
<td>• Song</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Say one thing the caterpillar ate</td>
</tr>
</tbody>
</table>
**KINDERGARTEN LANGUAGE PROGRAM**

**Daily Schedule Example 2**

**Session #**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:15 - 9:30</td>
<td>Arrival Table Time</td>
</tr>
<tr>
<td>9:30 - 9:55</td>
<td>Circle Time</td>
</tr>
<tr>
<td></td>
<td>Winter Lotto</td>
</tr>
<tr>
<td>9:55 - 10:10</td>
<td>Show and tell</td>
</tr>
<tr>
<td>10:10 - 10:25</td>
<td>Snack Time</td>
</tr>
<tr>
<td>10:25 - 10:35</td>
<td>Story Time</td>
</tr>
<tr>
<td></td>
<td>The Snowman</td>
</tr>
<tr>
<td>10:35 - 10:45</td>
<td>Good-bye</td>
</tr>
<tr>
<td></td>
<td>• Say one winter word</td>
</tr>
</tbody>
</table>

**Activities:**

- determine general and snack helper
- give out mats with printed names
- greeting song
- make snowman using winter pictures on snowballs
- add on snowman parts - "He is getting....."
KINDERGARTEN LANGUAGE PROGRAM

Daily Schedule Example 3

Session #

<table>
<thead>
<tr>
<th>Theme: Body Parts</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:15 - 9:30 Arrival Table Time</td>
<td>Make hand leaves</td>
</tr>
<tr>
<td>9:30 - 9:55 Circle Time</td>
<td>• choose general and snack helperes</td>
</tr>
<tr>
<td></td>
<td>• give out mats with printed names</td>
</tr>
<tr>
<td></td>
<td>• greeting song</td>
</tr>
<tr>
<td></td>
<td>• pictures of body parts</td>
</tr>
<tr>
<td></td>
<td>• potato heads</td>
</tr>
<tr>
<td></td>
<td>• song - &quot;Head and Shoulders&quot;</td>
</tr>
<tr>
<td>9:55 - 10:10 Show and tell</td>
<td></td>
</tr>
<tr>
<td>10:10 - 10:25 Snack Time</td>
<td></td>
</tr>
<tr>
<td>10:25 - 10:35 Story Time</td>
<td>Gingerbread Man</td>
</tr>
<tr>
<td>10:35 - 10:45 Good-bye</td>
<td>• Simon Say - “Touch your.....”</td>
</tr>
<tr>
<td></td>
<td>• Good-bye Song</td>
</tr>
</tbody>
</table>
A TRAINING GROUP

FOR PARENTS OF LANGUAGE-IMPAIRED KINDERGARTEN CHILDREN

Planned and Administered by:
Melinda Hinch and Patricia Lee
Speech-Language Pathologists
The Board of Education for the City of Windsor

Schools involved:
Davis and Campbell Public Schools

Date:
November 1, 8, and 15, 1995

Time:
6:00 - 7:30 p.m.
PARENT WORKSHOP - 1

Environment: a room (e.g., a kindergarten classroom) that is warm and conducive to conversation.

Materials Required: An overhead, VCR/T.V., toys (bubbles, fisher price, book), juice, snacks, markers, and chart paper are needed.

1. Greetings/Introduction/Purpose/Format

2. What is communication?
   - Give a definition: A process by which information is changed. It can be verbal or non-verbal.
   - Discuss the importance and relevancy of communication.

3. What is the role of a Speech-Language Pathologist?
   - She is the professional who prevents, assesses, and manages children and adults with communication difficulties. She also consults, liaises and refers to other appropriate professionals.

4. Communication problems may include:
   - Speech sound errors;
   - Dysfluencies, and
   - Language problems: This includes reduced quantity and/or quality of vocabulary, incorrect sentence structure, inappropriate use of language in social situations. Semantic, syntactic, and pragmatic aspects of language in receptive and expressive modalities are discussed.

5. What goes wrong?
   - Language has many rules during acquisition (a code to crack).
   - Language is extremely complex (show overheads of mislearned rules).
   - Language is acquired in stages.
   - By the time kids go to kindergarten, most of them have learned the rules "naturally" and have the necessary tools for academic learning to occur. We didn't have to sit down and "teach" oral language to these children.
   - However, for 10 to 16 percent of children, the oral language rules have not been learned, therefore, we have to "teach" them.
6. Video - Talking Together - 18 minutes

7. How to set up an atmosphere for oral language to be learned:

   - 12 examples are discussed and can be referred to on a chart.
   - Discuss that the Speech-Language Pathologists will be role-playing. One will act as the child and the other will act as the parent.
   - The 1st 6 are demonstrated by the Speech-Language Pathologists.
   - 7-10 are evaluated by the parents. The parents share the preferred strategy.
   - 11-12 are scenarios shared with the parents.
1. **Same Physical Level:**

   ***We need a table, two small chairs and one big chair.***

   - Typical: The parent and child are at the table sitting in two different sized chairs.
   - Preferred: The parents are at the table sitting in two small chairs.

2. **Follow child's lead:**

   ***We need bubbles and a toy vehicle.***

   - Typical: The parent is interested in bubbles while the child is interested in the toy.
   - Preferred: The child likes toy and the parent joins in and leaves bubbles.

3. **Talk about the here and now:**

   ***We need piece of paper.***

   - Typical: The parent says: What did you do this morning at school?
   - Preferred: The child brings home a painting done in class. The parent says, "Tell me about your beautiful painting."

4. **Get the child's attention:**

   - Typical: The parent requests information or gives direction without looking at our addressing the child.
   - Preferred: The parent uses prompts "Look at me," tactile cues (touch the child's chin), and says child's name first.

5. **Get the child to initiate:**

   ***We need juice and donuts.***

   - Typical: The parent bombards the child with questions and statements about wanting and choosing a snack.
   - Preferred: The child is encouraged to gesture and vocalize for a snack.

6. **Allow child time to respond:**

   ***Relate to (5) and discuss the importance of pausing and waiting for the child to respond.***
7. **Provide good speech models:**

***We need book with too high vocabulary and syntax.

- Typical: The parent reads words verbatim and doesn’t respond to the child’s questions.
- Preferred: The parent describes pictures and encourages the child to do so.

8. **Repeat labels and new words frequently:**

***We need a book.

- Preferred: The parent says the child’s name and might say, "Let’s read the "sheep" book. Go get the "sheep" book. Boy, I love this story about mommy sheep and baby lamb. Lamb is so cute and fuzzy."
- Typical: The parent says, "Go and get a book. I will read it to you."

9. **Combine gestures with words:**

- Preferred: The parent looks at the child and says "hang up your coat and put your shoes away" while pointing in the directions.
- Typical: The parent walks away and gives the child a two part instruction with no eye contact and no gestures.

10. **New experiences:**

- Typical: The parent says "We’re going in the car. Get your coat on."
- Preferred: The parent says "We need to get you a new warm coat for winter. We need to go to the mall to look for one. We are going to go into two stores. Maybe you want a black one, a red one or a blue one. Why don’t we look in the catalogue first and you can show me what you want." While at the mall the parent says "This blue one is pretty. I like the buttons. The red one looks very warm. It has a hood, etc."
11. **If your child does not initiate:**

   - Set up temptations to talk: The parent is making pudding in a bowl and is stirring it with a spoon. The child wants to help. The parent pours some pudding into another bowl and gives it to the child without a spoon. The parent continues to stir and waits for the child to request a utensil to complete the action.
   - Give the child a "choice:" The child wants a drink but just points to the fridge. The child does not respond to "Tell me what you'd like." The parent gives the child a choice "Do you want milk or juice?"
   - Open ended questions can be used.

12. **If your child's talking is hard to understand:**

   - We need to focus on "communication;" that is, giving and receiving messages. At this point the speech sounds are not important; they will likely develop with time.
   - It is preferred that we do not make the child say words over again if he/she uses incorrect sounds unless instructed by your school's speech-language pathologist. Instead, the parent can repeat back the sentence the child has said while utilizing the correct sounds. It is important to not interrupt the "flow" of communication.

**HOMEWORK**

- Give out booklets.
- Discuss language calendar.
- Use these strategies for 10 to 15 minutes a day for the next week and record that you have used them and how this went for three of the days. This can be done in the booklet.
Materials Required:

Re-use the chart with three divisions for three nights. General suggestions are discussed on night 1, specific suggestions are discussed on night 2, and generalization activities are discussed on night 3.

1. Greetings/Introduction/Purpose/Format.

2. Feedback of night 1’s homework.

3. Questions and Concerns regarding the strategies.

4. Describe chart and review 12 suggestions from night 1. This leads into tonight’s focus: 3 Specific Language Facilitation Techniques and what to avoid.

5. Distribute booklet 2 and 3. Have the parents refer to the pink booklet which is number 3.

The Do’s - 3 specific language facilitation techniques:

1. Provide appropriate model - Use the correct model.
   - Demonstrate with the SPELT-II, a standardized assessment.
   - This is what is typical in an assessment. It can be used as a training tool for teachers, parents and SLP’s as well. The information accumulated provides an inventory of strengths and weaknesses.

   e.g., "Me can’t see" (you mean, I can’t see)
   "Sheep eating" (Oh, the sheep is eating)
   "It him coat" (It is his coat)
   "The car crashded" (The car crashed)

2. Expansion - Expand the length of the phrases by adding words to embellish the message.
   - Using the results from the assessment, we now have a profile of the child’s language strengths and needs.
   - Go over the examples in booklet.
   - Demonstrate with play doh -

   Child: "I making cat."
   Parent: "I am making a big kitty cat."
3. **Expatiation** - Adding more information to what child says after already correcting through a correct version/model. Additional phrases or sentences are provided by the parent.

  - Go over examples in booklet.
  - Demonstrate with a stuffed animal -

    Child: "Her a cow."
    Parent: "She is a cow. She can go moo."

  - Demonstrate with dinosaur stickers -

    Child: "Is living here."
    Parent: "It is living here. This dinosaur is very big."

**The Don't's:**

1. **Interrupt:**

   This breaks flow of thought and conversation and lessens opportunities for sentences to get more complex.

2. **Finish your child's sentences:**

   The same reasons listed above apply. Also, this sends a message that the child is not adequate.

3. **Correct your child:**

   This lowers the child's self-esteem.

4. **Use close-ended questions:**

   Refer to the specific examples in the blue booklet which is number 2. Questions are important to gather information; however, some question types can stop communication.

   For instance:

   - Yes/No questions require a one word response. Communication may not go beyond the short response.
   - Open-ended questions require a more detailed and descriptive response; thus, communication is enhanced.
5. **Summary**

- Refer back to chart which is posted visibly.
- Redefine each specific technique.
- Have parents use each technique as the Speech-Language Pathologists give language errors.

**HOMEWORK**

- Read booklets 2 and 3.
- Try these techniques at home for 10 to 15 minutes each day.
Materials Required:

Prepare a chart with the third night's activities highlighted.

1. Greetings/Introduction/Purpose/Format.
2. Feedback of night 2's homework.
3. Questions and Concerns.
4. Describe the chart. Review the specific language facilitation techniques discussed the week before. This leads into tonight's focus: Creating opportunities for language learning.
5. Distribute the green booklet which is number 4 and the collection of language activities and games.

Opportunities To Use The Language Facilitation Techniques

1. **Play**
   - Play is critical for children who seldom initiate, have difficulty concentrating, need help with vocabulary and grammar, require more opportunities for turn-taking, and have short attention spans.
   - Play is the best time for language learning because it is social and fun, encourages turn-taking, involves non-verbal communication, involves repetition, and integrates many of the senses.

2. **Music**
   - Music enhances physical contact, repetition, turn-taking, non-verbal responses, vocal play, and uses actions as well as speech.

3. **Reading**
   - Reading encourages communication because it develops concentration and attention span, sequencing events, following directions, vocabulary and syntax development, memory and retelling, knowledge, rhythm, predicting, recalling facts to answer questions, rhyming and creativity.
4. **Art**
   - Art encourages language because creating images and objects often helps structure and organize the child's thoughts and gives him/her reasons for talking.

5. **Specific Games**
   - Familiar games (e.g., I Spy, Simon Says, Fish, Concentration, Snakes and Ladders, etc.) facilitates following directions, memory, recalling words, new words, rhyming, and asking questions.
   - Go through white supplementary booklet and discuss examples.

6. **Household chores/activities**
   - Setting the table, making the bed, dressing, baking, etc. develops sequencing, following directions, concepts such as "first," and "next," vocabulary, counting, matching, sorting, colours, attitudes and feelings, and taking responsibility.
   - Go through white booklet for examples.

7. **Summary**
   - Refer back to chart.
   - Request questions and discussions.
   - Set up individual meeting times with each family.
1. "Simon Says"
   This targets:
   (a) following directions;
   (b) using and understanding prepositions;
   (c) listening skills.

2. Playing "Hide and Seek" with toys or objects
   Your child could say, "Is it behind/under the ______?"
   This targets:
   (a) using and understanding prepositions;
   (b) asking questions.

3. Reading "pictures" in a book
   Instead of the adult reading the words, have your child describe the
   pictures and predict what will occur.
   This targets:
   (a) developing better grammar (e.g., he/she is ______, it is ______,
       he/she has ______, etc.).

4. "I spy with my little eye"
   Adults can give a colour, first sound or size of object to find.
   Your child can ask, "Is it the ______?"
   This targets: ______
   (a) learning colours;
   (b) if sounds are used, pre-reading and sound awareness skills are
       enhanced.

5. Reading rhyming books.
   Have your child fill in rhymes.
   Make more rhymes to patterns in book (e.g., cat, bat, fat, sat, ______).
   This targets:
   (a) pre-reading skills;
   (b) sound awareness skills.

6. Talking about letters.
   Pick one letter a day. Describe what sound it makes.
   Find objects in whatever you do that day that start with the sound, (e.g.,
   the letter "B" makes "bu" sound. Your child can list "breakfast, boy,
   broccoli, bed," etc.).
   This targets:
   (a) pre-reading skills;
   (b) sound awareness skills.
7. Describing what happened at the end of each day.  
At bedtime, ask your child to describe the events that occurred.  
Help them organize their thoughts (e.g., first we ______, then  
we ______, next we ______, and finally ______).  
This targets:  
(a) sequencing events;  
(b) past tenses.

8. Make a list of "summer" words and discuss them.  
(e.g., hot, swimming, beach, lemonade, sun, tan, burn, bathing suit,  
baseball, etc.).  
This targets:  
(a) vocabulary;  
(b) developing relationships between words.

9. Have your child plan his/her day or evening.  
Choose three things you can do.  
Have your child say, "We are going to ______" or "We will do ______."  
This targets:  
(a) time concepts;  
(b) future tense;  
(c) sequencing.

10. Plan and go on a picnic (even if it is in the backyard).  
Have them decide on food to bring.  
Make a list of things to buy (e.g., "We will need ______").  
Go shopping (with the list).  
Pack up and go picnic-ing.  
Talk about what you are eating (e.g., I am eating ______  
You are eating ______, He/she is eating ______).  
This targets:  
(a) grammar;  
(b) pre-reading;  
(c) future tense;  
(d) vocabulary.

11. Have your child choose his/her clothes for the day.  
Have them give you the order or sequence of what goes on (e.g., "I want  
to wear ______").  
This targets:  
(a) sequencing (e.g., "First I'll put on ______, then I'll put on ______);  
(b) grammar.
12. Have your child choose what they want for a meal.
   Make up a recipe with your child.
   Follow it through.
   Have the child set the table, telling the adult everything that is needed (e.g., “I will need _______).
   After the meal, have your child say what they made and how they made it.
   This targets:
   (a) pre-reading skills;
   (b) sequencing;
   (c) grammar;
   (d) past and future tenses.
MORE ACTIVITIES TO HELP LANGUAGE DEVELOP

SETTING THE TABLE

- sequencing an activity;
- following directions
- vocabulary development;
- counting;
- matching;
- sorting;
- learning colours;
- attitudes/feelings.

READING A STORY

- sequencing events;
- memory/retelling;
- vocabulary development;
- knowledge;
- oral cloze;
- rhythm, intonation, stress;
- predicting;
- recalling facts to answer questions;
- grammar, sentence structure;
- attention;
- rhyming;
- creativity - alternate ending
  - alternate solutions
  - role playing
  - make up own stories

GAMES

- following directions;
- memory:
- recalling words:
- teaching new words;
- rhyming;
- articulation;
- asking questions;

Examples:
- I spy
- Fish
- Concentration
- Snakes & Ladders
- Crazy Eights
- Old Maid
- Simon Says
MAKING LUNCH/BAKING

- sequencing an activity;
- using words like "first, "second," etc.;
- teaching new words;
- following directions;
- retelling an event;
- asking questions;
- comparing "softer, "sweeter," salty," etc.
- counting;
- learning colours;
- taking responsibility

HAVE FUN!
DOES YOUR CHILD

- Hear a dog barking, siren, fans in a room, but doesn't hear you calling her/him.
- Forget names of friends, her address, her telephone number, but can remember ads on T.V.
- Repeat part of what is said to her/him.
- Have trouble following directions at home, but can skate or play baseball without difficulty.
- Seem frustrated for no reason.

• Give up easily or say "I don't want to" or "I don't care" but means "I can't.
• Look right at you and appear to be listening, but doesn't know what you said to her/him.
• Need everything repeated.
• Refuse to sing.
• Have trouble carrying on a conversation.

LANGUAGE DIFFICULTIES

POOR LISTENER

- inattentive/fidgety
- impulsive
- cannot follow directions
- trouble processing language
- limited understanding of words
- cannot follow a story
- cannot remember names/words
- trouble understanding grammar

POOR TALKER

• trouble saying sounds
• uses gestures
• words get stuck; word retrieval
• omits part of a word e.g., "tend" for "pretend"
• uses short simple sentences
• makes grammatical errors, e.g., "him" for "he"
• trouble expressing needs
ATTENTION AND LISTENING

Listening is half of communication. When you help a child to listen effectively, you are providing the foundation for successful communication and learning.

Some children, despite adequate comprehension for vocabulary and sentence structure, may experience difficulty processing considerable amounts of oral information quickly and accurately.

It's not easy to listen! Here are some suggestions to help:

A. **Focusing Cues:**

   1. Get your child's attention before you speak to him/her (call the child's name and wait for eye contact before instructing). This will help your child develop a listening habit.

   2. Whenever possible use **concrete** and **visual** support; gestures are also useful as an aid to "listening."

   3. Try to eliminate distractions. Distractions, including a radio, T.V., or others talking, make it harder for your child to listen to you.

B. **Specific Techniques To Ensure Good Listening:**

   1. Select words at your child's level of difficulty. Use words that your child consistently understands when giving directions. Use **short**, simple sentences.

   2. Stress key words in your sentences. (e.g., Bring me your **boots** and your **red** hat.)

   3. Speak clearly and not too rapidly. Children who have trouble learning language often have difficulty understanding fast speech. Speaking slowly will make it easier for your child to understand you. This does not mean that you have to talk like a record at the wrong speed! Even a small change in your speech rate can improve your child's understanding of language.

   4. Use chunking when possible. Chunking is useful when you are giving your child two or more directions at one time. Chunking means saying related directions in one breath. It may seem easier to remember a string of directions if you pause between each one. Actually, it is easier to recall information if it is chunked according to similarities. For example:
"Wash your face and brush your teeth. (chunk #1);

Then get your book and I'll read it to you." (chunk #2).

Give your child directions with only the number of chunks the child can understand.

5. Watch your use of "before" and "after". These are difficult time words. (e.g., Before you eat your lunch, go and hang up your coat.)

This direction is difficult because the logical response would be to eat your lunch first. However, children can often understand these words in a familiar context. (e.g., Before you go to bed brush your teeth.)

6. If you get no response or child has not understood, paraphrase (re-word) your sentence. You may need to give longer times to respond. You may teach them to delay responding, since it is frequently an effective method for getting them to process more deeply what you have said.

7. Give your child clear feedback. When your child completes your directions, let the child know exactly what was done correctly. You may want to tell your child the directions the child just completed. If your child did not complete your directions, show or tell exactly what needed to be done. If an attempt is partially successful, praise whatever your child did correctly.
UNDERSTANDING LANGUAGE

Once you are sure that your child is a good listener, you can then help the child work on comprehension or understanding. Listening comprehension involves two abilities:

- To hear a question and mentally organize information to give an appropriate response.
- To hear and understand directions well enough to move the body to make the correct response.

Here are some activities to develop understand.

What Would You Bring?

During a long car ride, ask your child questions like the following:

- What would you bring on a camping trip?
- What would you bring to school on the first day?
- What would you bring to a surprise birthday party?

Your child must answer the questions telling as many items as possible for each question. Encourage your child to think of numerous possibilities. This activity will help to develop your child’s reasoning and classification skills.

Other questions:

- What would you bring on a fishing trip?
- What would you bring on a visit to Santa’s house?
- What would you bring on a picnic?
- What would you bring on a long plan trip?
- What would you bring to a football game?
- What would you bring to the beach?
- What would you bring to work in a garage as a mechanic?
- What would you bring on a jungle safari?
- What would you bring to the Land of Oz?
- What would you bring to the hospital if you were having your tonsils out?

Modifications:
I Spy

Have your child roll up a piece of paper so that it looks like a spy glass to look through. Your child must close his/her eyes while you look through the paper and describe something in the room. For example, you might say, "I spy something big and white. It's made out of metal and it has two doors." Your child must open his/her eyes and guess what you were describing (the refrigerator). Then your child does the spying and describes something for you to guess. Continue taking turns.

Modifications:

Sink/Float

Collect a variety of objects from around the house — some that will sink and some that will float. Fill a container with water. Have your child guess whether each object will sink or float before he/she puts it in the water. Then let your child put each object in the water to see if the guess was correct. Continue with the other objects. Encourage your child to use the words sink and float. You might also help your child to notice the types of materials that float (plastic, wood) and the types of materials that sink (metal, glass).

Modifications:

What Is it?

There are many objects around your house which your child may not know the names of. Collect a group of objects (e.g., vice grips, exxtension cord, thimble, tongs, scouring pad). Talk with your child about these objects teaching him/her the names that he/she does not know. Later in the week, you can check to see if your child remembers these new words by saying, "Karen, get me the thimble, please." or "Ned, pass me the scouring pad." By doing this activity, you will help your child to develop a better vocabulary; you might do it another week with five different objects.

Modifications:
Sweet-Sour

Gather together at least two sour foods and two sweet foods. Have your child taste each of the foods and tell how it tastes. Continue with the other foods. Encourage your child to say the words "sweet" and "sour."

Possible foods to use:

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Modifications:

Pitch a Penny

You will need an empty plastic bowl and five to ten pennies. Your child must stand five feet away from the bowl and try to throw the pennies in, one at a time. Before your child can throw a penny, he/she must name a part of a car, such as a steering wheel. Then your child must name another part of a car (e.g., hood, seat belt, fender, motor), and throw a penny in the bowl. Continue with the remainder of the pennies and your child must name a part of a car each time he/she throws one. Let your child count to see how many pennies landed in the bowl. Then continue with a new category (for example, things in the kitchen, parts of a playground, kinds of fruit) and see how many pennies your child can get in the bowl this time. This activity will help to develop your child's naming skills, categorization, and motor abilities.

Modifications:
Vocabulary Simon Says

Play "Simon Says" with your child. Explain the rules if he/she doesn't know how to play. Tell him/her to listen carefully whether "Simon Says" to do something or not, so that he/she doesn't get "caught." Throughout the game, use new vocabulary words. For example, "Simon Says touch your laces." "Simon Says touch something purple." "Simon Says point to a female." Encourage your child to ask the meaning of words that he/she doesn't know. This activity will help to develop your child's vocabulary as well as listening skills.

Possible new words to include in the game:

- plaid
- calf (on leg)
- scooch
- sip
- flex (a muscle)
- male
- corduroy
- heel
- turtleneck
- lace
- flexible
- metallic
- transparent
- appliance
- container

Modifications:

Distributed by:
Melinda Hinch
speech-Language Pathologist
The Windsor Board of Education
### RECEPTIVE LANGUAGE TESTS' RAW SCORES

**Direct Intervention Group**

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## RECEPTIVE LANGUAGE TESTS' RAW SCORES

### Indirect Intervention Group

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EXPRESSIVE LANGUAGE TESTS' RAW SCORES

Direct Intervention Group

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EXPRESSIVE LANGUAGE TESTS' RAW SCORES

Indirect Intervention Group

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# READING READINESS TESTS' RAW SCORES

Direct Intervention Group

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READING READINESS TESTS' RAW SCORES

Indirect Intervention Group

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## APPENDIX 24

**STORY TELLING TEST RAW SCORES**  
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**INDIRECT INTERVENTION GROUP**

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APPENDIX 26

TEACHER QUESTIONNAIRE RAW DATA
5 point scale

**Direct Intervention Group**

1 = limited ability
2 = below average ability
3 = average ability
4 = above average ability
5 = exceptional ability

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APPENDIX 27

TEACHER QUESTIONNAIRE RAW DATA
5 point scale

**Indirect Intervention Group**

1 = limited ability  
2 = below average ability  
3 = average ability  
4 = above average ability  
5 = exceptional ability

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<th>Subject</th>
<th>How well student starts conversation</th>
<th>How well student carries on conversation once it is started</th>
<th>How well student tells about his/her activities/experiences</th>
<th>How well student engages in conversation</th>
<th>How likely student asks questions if he/she doesn't understand speaker</th>
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APPENDIX 28

TEACHER QUESTIONNAIRE RAW DATA
Yes/No Questions

Direct Intervention Group

Y = Yes
N = No

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<th>Subject</th>
<th>Regular contact with family</th>
<th>Child frustrated by speech/language difficulties</th>
<th>Child talks about people, activities, objects present in environment</th>
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APPENDIX 29

TEACHER QUESTIONNAIRE RAW DATA
Yes/No Questions

Indirect Intervention Group

\[ Y = \text{Yes} \]
\[ N = \text{No} \]

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CURRICULUM VITA

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Citizenship: Canadian

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April 1996 to present

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1993-1996

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