

Chapter 07



The effects of ECE-mediated facilitation on linguistic and social communication in children at risk for social failure

Genese Warr-Leeper, PhD [*University of Western Ontario*]

Abstract

The results of two studies will be described below. Early childhood educators (ECEs) engaged in a training program for the facilitation of linguistic and social communication skills for children in day care. The effects of the programs were measured for specific children considered by the ECEs to be at risk for social failure. In addition, ECE perceptions and evaluation of the program were examined.

Study 1: The effects of ECE-mediated facilitation on social communication skills in children at risk for social failure (Genese Warr-Leeper, Rebecca Grey, Serena Mah, & Tammy Van Reenan, August 2000)

Effective social communication skills mediate success in all social relationships. The consequences of social difficulties in childhood have been investigated in literature establishing that peer relations and later personal adjustment are strongly linked (Beitchman, Douglas, Wilson, Johnson, Young, Atkinson, Escobar, & Taback, 1999; Parker & Gottman, 1989) Children who are not accepted by their peers, either neglected or rejected, are at increased risk for low educational achievement, dropping out of school, engaging in delinquent behaviour and adult criminality, and substance abuse.

The primary means of establishing and maintaining social relationships is through the use of language. Language is the process through which information and ideas are exchanged and the use of language, or pragmatics, is regulated through social communication rules. Social communication rules are a set of linguistic or non-linguistic behaviours that can be selected, based on context, to convey information in a clear, orderly, and socially-appropriate manner. The key to peer acceptability

includes the ability to effectively initiate conversation, ask questions, contribute to conversations, and communicate intentions clearly (Gallagher, 1999).

Enhancing the development of at-risk children in day care and preschool settings has a long history. Research has demonstrated that early childhood educational intervention has positive long-term effects (Campbell & Ramey, 1994; Casto & White, 1984; St. Pierre & Layzer, 1998; Warr-Leeper, 2001; Yoshikawa, 1995). Recent studies of the impact of adult-mediated strategies in day care and preschool settings have been shown to improve communication for children with weak and disordered communication skills (Craig-Unkefer-Kaiser, 2002; Filla, Wolery, & Anthony, 1999; Guglielmo & Tyron, 2001; Hadley, Simmerman, Long, & Luna, 2000; Rice and Wilcox, 1995; Wilcox, Murphy, Bacon & Thomas, 2001).

Purpose and motivation

Our study was undertaken to investigate the short-term effects of training early childhood educators to enhance the social communication of children at risk for social failure. This study investigated the following questions:

- Is there a significant difference between the pre-training assessment and the post-training assessment in the language and social communication scores of the preschool participants?
- Is there a relationship between the targeted behaviour of each participant and the areas of improvement?

The study was motivated by the belief that strategies and technology used by speech-language pathologists to enhance language skills, particularly pragmatic skills, can be effectively applied to children with weak communication skills and/or social difficulties. By training ECEs on how to facilitate social communication, time spent in the day care setting can be maximized and naturally applied to all children.

Setting

A licensed day care, housed within a public school, with an ECE-to-child ratio of 1:8 was chosen as the training site. Thirty-six children between the ages of two years, five months and five years, six months attended the day care. The children who were eligible for kindergarten attended junior or senior kindergarten for half of the day. The day care was well-organized into centres with a regular schedule of activities. All child care providers were certified and well-experienced ECEs who were observed to be interactive with the children.

Selection of participating children

Participants were selected by the ECEs based on the following author-designed screening checklist.

Does the child have difficulty...

	No	Yes
1. Understanding others	<input type="checkbox"/>	<input type="checkbox"/>
2. Expressing himself/herself	<input type="checkbox"/>	<input type="checkbox"/>
3. Responding to communication	<input type="checkbox"/>	<input type="checkbox"/>
4. Initiating communication	<input type="checkbox"/>	<input type="checkbox"/>
5. Carrying on a conversation	<input type="checkbox"/>	<input type="checkbox"/>
6. Playing with other children	<input type="checkbox"/>	<input type="checkbox"/>

Participant characteristics

The ECEs identified 11 target children who served as the study participants, including five boys and six girls between the ages of three years, nine months and five years, eleven months. Ten out of the 11 children in the present study spent 25 to 30 hours a week in child care, and the eleventh child spent at least 40 hours a week in child care. Children spent between five and 18 months attending the day care. The social communication difficulties of the children varied from shy and withdrawn, to bossy and aggressive, to strange. Language skills were within normal limits for the total scores of the *Preschool Language Scale – 3 (PLS-3)* (Zimmerman, Steiner, & Pond, 1992) for all English speaking children and for the one English-language-learning child in his native tongue, Japanese.

Outcome measures

Both direct and indirect assessment tools were chosen as outcome measures. Two standardized, norm-referenced measures were included. The *PLS-3* was chosen as a general measure of receptive and expressive language skills and was given directly to the study participants. The socialization and communication scales of the *Vineland Adaptive Behavior Scale – Survey Form (VABS)* (Sparrow, Bella, & Cicchetti, 1984) were chosen as a general measure of personal and social sufficiency and were given by interview to the ECEs, permitting examination of ECEs' perceptions about the study participants' usual and habitual behaviour. Three criterion-referenced, questionnaire scales were included. All three of these assessment tools were given by interview to the ECEs, permitting examination of multiple, specific social and conversational behaviours in everyday interactions. The *Daily Living Questionnaire for Teaching Personnel* (Warr-Leeper, 1994); the *Pragmatic Profile of Early Communication Skills* (Dewart & Summers, 1988); and the *Assessment of Peer Relations* (Guralnick, 1992) provided different perspectives.

The *Daily Living Questionnaire for Teaching Personnel (DLQTP)* is a tool where teachers record their perceptions of a child's communication and social skills. The following areas are included in the questionnaire:

- general impressions
- life skills
- communicative status
- modes of communication
- communication functions/types
- social skills

The *description response type* entails open-ended questions regarding the child's daily routine and their communication type and functions. The *categorical response type* consists of a nominal scale with three categories from which to choose: gestural, vocal, and gestural/vocal. The ECE must report the child's most likely mode of communication in response to specified situations. The *ratio response type* consists of two seven-point Likert scales and one four-point scale. The points utilized on one scale are 'limited ability,' 'below average,' 'low average,' 'average ability,' 'good ability,' 'above average,' and 'exceptional ability' (maximum score = 7). The points utilized on the second scale are 'never,' 'rarely,' 'occasionally,' 'half of the time,' 'often,' 'most of the time,' and 'always' (maximum score = 7). The *DLQTP* has high reliability and validity for children with language skills at the preschool level (Dominy & Marshall, 1995; Welpdale & Warr-Leeper, 1995).

The *Assessment of Peer Relations (APR)* is the first of five components of a program designed to improve the peer-related social competence of children. It is a questionnaire that consists of open-ended questions and a three-point scale. The points for the scale are 'rarely,' 'often,' and 'almost always' (maximum score for each scale = 3). The questions span seven domains:

- Involvement
- Purpose of Initiations
- Success of Initiations
- Emotional Regulation
- Social Rules
- Pretend Play Complexity and Diversity
- Everyday Events

Respondents utilize the three-point scale to address the items listed in each domain. An example of an item from each domain follows: 'plays with toys or materials but does so alone' (Involvement); 'generally engages in social contact' (Purpose of Initiations); 'peers respond to efforts to gain their attention' (Success of Initiations); 'vehemently rejects social overtures by peers' (Emotional Regulation); 'appears to understand general classroom rules' (Social Rules); 'uses multiple actions in pretend play' (Pretend Play Complexity and Diversity); and 'scripts agree with others on the

main actions of the activity' (Everyday Events). The psychometric properties of this scale are not known.

The *Pragmatic Profile of Early Communication (Pragmatic Profile)* is a structured interview that provides a qualitative profile of the child's typical communicative behaviour in three areas that could be measured in the present study: communication intentions, initiations, and responsiveness during everyday interactions. The psychometric properties of this tool are not known.

ECE training program

Six ECEs were trained over a 16-week period for a total of 24 hours. Each session was 1.5 hours in length weekly. The program was developed by the speech-language pathologist (SLP) – who served as the trainer – and the research team, following the review of multiple resources (see listing of resources, attached). The program was implemented by an experienced SLP. The content of the program was jointly agreed upon by the SLP and the ECEs. Phase 1 of the program was information-based, involving didactic training. Phase 2 of the program involved collaborative problem solving regarding the target children.

Program content

Phase 1: Focused on general concepts and milestones regarding speech, language, and communication, and on general principles for encouraging receptive and expressive language skills in preschool children. Phase 1 also included general concepts and milestones for peer interactions and play supported by videotaped demonstration. Participation, initiation, responsiveness, shared understanding needed for peer entry, maintaining play, and conflict resolution were included.

Phase 2: Goals, strategies, and activities that could be used to realize these goals were collaboratively generated for each child by the SLP and the ECEs. Demonstration of the strategies by the SLP with the ECEs in the day care, and suggestions for manipulating the environment to foster skill acquisition were included.

Results

A pre-post design was used to compare outcome measures with a series of statistical and descriptive analyses. Group results were analysed utilizing Wilcoxon Signed-Rank tests of significance. Individual results were analysed for meaningful change. Meaningful change was defined as half of a standard deviation from pre-to post-training assessment based on the normative sample for the VABS and PLS-3. On the *DLQTP*, *APR*, and *Pragmatic Profile*, meaningful change was based on a calculated standard deviation for the group.

Group results

The communication and socialization domains of the VABS and all subsections, and the total *DLQTP* were non-significant, indicating that no significant group improvement occurred on these measures. Additionally, the *PLS-3* scores did not change appreciably. It should be noted, however, that all study participants were within normal limits at the outset of the study. On the *APR*, only the *emotional regulation* section exhibited significant group improvement ($p = 0.03$). The strongest evidence of group improvement came from the *Pragmatics Profile*, for which significant improvement occurred on all sections, including *communicative intentions* ($p = 0.02$); *response to communication* ($p = 0.006$); and *interaction and conversation* ($p = 0.02$).

Individual results

Individual results were analysed in relation to the goals and strategies outlined in Phase 2. Interview questions and results for the outcome measures specific to the social communicative difficulties for each child were investigated to determine if progress in goal areas was made. It was found that 10 out of 11 children improved in at least one area related to their goals.

Summary

In a short period of time, ECEs, through collaboration with an SLP, were able to put these children on the path to better social communication. However, many programs have been successful in the short term. It is the generalization to new situations and new behaviours that is the true gauge of a program's success.

Companion study

Comparison of pre-post videotaped and coded ECEs' interactions with the children revealed a significant increase in the use of the strategies developed in the collaborative problem-solving phase of this training program (Van Reenan, 2000).

Implications, recommendations, and future directions

Replication of these results and/or the development of a valid experimental control group and long-term follow-up for durability of effects are needed. In addition, expansion and improvement of the outcome measures would improve the usefulness of the study results. Finally, an increase in the amount and type of SLP instruction with the ECEs and children in the classroom could improve the quality and quantity of use by the ECEs.

Challenges

The first challenge was explaining why an SLP would do this program and what an SLP would have to offer, followed by the requirement of developing trust between the SLP and ECEs. Furthermore, the labour-intensity and expense of implementing the program, gathering the data, and analysing results were potential obstacles to the

delivery of the programs. Last, extraneous variables that may have influenced the program delivery and results (e.g., ECEs leaving the program, home problems) made interpretation difficult.

Techniques (Abbreviations)	Definition of Abbreviations
Peers	Using peer models to promote positive peer interactions
Model Emp	Modelling empathetic behaviour
Interests	Motivating peer interactions based on targeted children's interests
Redirect	Redirecting to group activity and from adults to peers
RPPI	Reducing poor peer interaction
Mpint	Modelling positive peer interaction
Enc	Encouraging peers to interact with unpopular children
VP	Providing verbal praise for positive peer interactions
ShPint	Shadowing peer interactions, interjecting to encourage positive peer behaviours and to discourage negative behaviours
Env	Changing the environment to promote increased peer interaction
T Rewards	Tangible rewards for pro-social behaviour
S – Socio/drama	Scripted socio/dramatic activities
CL	Cooperative learning strategies
Guided Play	Efforts to provide the children with more social scripts during free play and model for peer group entry
Buddy/Friend Activities	Explicit social skills training activities encouraged the children to engage with others. Pairings of children were rotated during free play sessions.
Scripts	Scripts included a shared series of activities for everyday events carried out with small groups of children
Vis/Env/Org Strategies	A visual representation of classroom rules, chores and schedules was posted in the classroom for reference.

Study 2: The effects of ECE-mediated facilitation on the linguistic and social communication skills of children at risk for social failure (Genese Warr-Leeper, Angelia Neglia, & Kristina Arnold, August 2002)

Purpose

To investigate the effects of an ECE-centred multicomponent program on a select group of at risk preschool children. Specifically, this study investigated the following questions:

- Is there a significant difference between the pre-training assessment and the post-training assessment in the language and social communication scores of the preschool participants?
- Is there a relationship between the targeted behaviour of each participant and the areas of improvement?
- Is responsiveness to the program influenced by child variables?
- purpose and motivation

This study was an extension of the first pilot study. Further expansion and enhancement of the original ECE training program to another setting seemed warranted.

Setting

A large, licensed day care housed in a church basement with a 1:8 ECE-to-child ratio was chosen as the training site. Sixty children between the ages of two years and five years, six months attended the day care. Children in this day care presented with more risk factors than the day care in the previous study. The ECEs felt that the day care required more organization, as much of their time was occupied in general management of behaviour and care in basic needs.

Selection of participating children

ECEs selected participants based on the same author-designed screening checklist used in the previous study.

Participant characteristics

The ECEs chose 20 target children originally; however, the number was reduced to 13 study participants, including nine boys and four girls between the ages of two years, 11 months and five years, one month. Each child attended the day care centre for six to 40 months. The social communication difficulties of the children varied, as in the previous study, with eight rejected/aggressive children and five isolated children. Overall, the language skills of the children were low, with seven children in the average to low-average range, five in the below-average range, and one in the far-below-average range. All children were native English speakers.

Outcome measures

A battery of tools, similar to the previous study, was chosen to include both direct and indirect measures. Two standardized, norm-referenced measures were chosen including the *Preschool Language Scale – 3 (PLS-3)* (Zimmerman, Steiner, & Pond, 1992) and the socialization and communication scales of *Vineland Adaptive Behavior Scale - Survey Form (VABS)* (Sparrow, Bella, & Cicchetti, 1984), given by interview to the ECEs. Two criterion-referenced questionnaire scales given by interview with the ECEs were chosen, including the *Daily Living Questionnaire for Teaching Personnel, (DLQPT)* (Warr-Leeper, 1994) and the *Assessment of Peer Relations (APR)* (Guralnick, 92). In addition, the *Social Interactive Coding System (SICS)* was chosen. The *SICS* is an on-line coding system completed while the individual children are in free play. The *SICS* was chosen to provide a description of children's verbal interactions with emphasis on verbal initiations and responses in a real context. The coding system also provides an opportunity to record the play activity and level, the person with whom the child is interacting, and the type of interaction. In an attempt to create a stable baseline against which to compare the *SICS* results post program, this measure was completed on each target child three times during the pre-program period.

ECE training program

Seven ECEs and the ECE director of the day care were trained over a 14-week period for a total of 28 hours. Each weekly session was two hours in duration. The program was similar to the previous program in Phases 1 and 2. However, a Phase 3 for application in the classroom was added.

Phase 1: Information-based

General concepts and milestones

- communication and social development and its relationship to cognitive development
- play and peer interaction development
- techniques for encouraging language and social development

Phase 2: Collaborative problem-solving

- goals and strategies were collaborative generated
 - classroom-wide (visual schedules & classroom rules; chore of the day)
 - individualized to each child and their needs
- hand-over-hand work with the ECEs in the classroom, including classroom visits by the members of the research team and the SLP, and demonstration of activities and technique use
- discussion of these skills and how ECEs could manipulate the environment to foster use of skills was carried out in each session and demonstrated in the classroom
- demonstrated use of guided play, friendship activities or buddy activities, and script play

Phase 3

- ECEs each scheduled one script activity and one buddy activity each week for four weeks. ECEs were encouraged to use guided play as opportunities arose in the classroom. This information and the outcomes of the planned activities for target children's goals were recorded on a large flip chart.

Results

A pre-post design was used to compare outcome measures with a series of statistical and descriptive analyses. Group results were analysed utilizing the Wilcoxon Signed Ranks test of significance. Individual results were analysed because meaningful change was observed in the previous study.

Group Results

A mixed pattern of results was found for the *VABS*, *PLS-3*, *DLQTP*, and *APR*. Statistically significant improvements were evident in *emotional regulation* ($n = 9$) and *success of initiation* ($n = 6$) on the *APR*. For the *DLQTP*, the most clinically significant gains were evident on the socialization domains as opposed to the conversational or receptive/expressive language domains. Statistically significant improvements on the auditory comprehension sub-scale of the *PLS-3* were evident. The *SICS* was not stable enough during the repeated measures at pre-program to be a useful measure.

Subgroup analysis for responsiveness to program

To determine the possible influence of child characteristics on susceptibility to the program, the sample of target children was categorized and comparisons were made. Trends were found, showing the isolated children to be more responsive than the rejected children; the older children to be more responsive than the younger children; and, for those in day care, those in day care for the shortest time to be more responsive than those in day care for the longest time. Those children with average to above-average language abilities also showed greater improvements than those with weaker language abilities. It should be noted, however, that children with weak language skills demonstrated substantial increases in the communication domain of the *VABS*. Responsiveness according to receptive vocabulary was also examined from scores on the *Peabody Picture Vocabulary Test - R* (Dunn & Dunn, 1981), taken as a descriptive measure of the target children. Receptive vocabulary level did not appear to predict responsiveness to the program.

Individual results

Individual results were analysed for changes in identified deficits in social function using all outcome measures. In addition, interview questions specific to the social communicative difficulties for each child were investigated to determine if progress in goal areas was made. Eleven out of 13 children improved in at least one identified area of social function in which the child needed improvement

Summary

These results confirm that favourable outcomes in overall language skills and social communication can be accomplished with the implementation of this training program.

With collaboration, the ECEs were able to successfully identify problem areas within the study participants' social communication, to determine appropriate goals and strategies, and to carry them out successfully. Improvements in the children illustrate the effectiveness of teaching ECEs how to facilitate language and social skills.

Companion study: Social validity of treatment

All of the ECEs returned a social validity questionnaire regarding the training program. Six out of seven ECEs reported that most of the study participants benefited from this type of training program. All of the ECEs stated that they now felt better able to manage social communication difficulties. They all agreed that they would recommend the training program to other child care professionals. Although the program was over, the ECEs reported having a better appreciation of the complexities of social communication and what they can do to aid children with their social skills (Arnold, 2002).

Implications, recommendations, and future directions

Replication and enhancement of the results of the previous study increase confidence in the potential to enhance day care facilitation of language through multi-component programs. Once again, longer-term follow-up regarding the durability of the effects, development of experimental controls, and improvement of outcome measures, as well as further expansion of the in-class demonstration component of the program are needed.

Challenges

The challenges were similar to those of the previous study.

Surprise

The potency of hand-over-hand training was one of the most significant learning from this study. This was illustrated by the director's comment that what she liked was how we demonstrated and stayed with the program until they 'got it.'

I am reminded of a Native American proverb:

Tell me and I'll forget. Show me and I may not remember.

Involve me and I'll understand.

References

- Arnold, K. (2002). *ECE evaluations of a mediated social communication training program*. Unpublished Master's project, University of Western Ontario, London, ON.
- Beitchman, J. H., Douglas, L., Wilson, B., Johnson, C., Young, A., Atkinson, L., Escobar, M., & Taback, N. (1999). Adolescent substance use disorders: Findings from a 14 year follow-up of speech/language-impaired and control children. *Journal of Clinical Child Psychology, 28*(3), 312-321.
- Casto, G. & K. White (1984). The efficacy of early intervention programs with environmentally at-risk infants. *Journal of Children in Contemporary Society, 17*, 112-131.
- Campbell, F. A., & Ramey, C. T. (1994). Effects of early intervention on intellectual and academic achievement: a follow-up study of children from low-income families. *Child Development, 65*, 684-698.
- Dunn, L. M., & Dunn, L. M. (1981). *Peabody picture vocabulary test – Revised*. Circle Pines, MN: American Guidance Services.
- Dominy, D., & Hill Marshall, K. (1995). *Psychometric properties of the communication portions of the “Daily living questionnaire for parents” and the “Daily living questionnaire for teaching personnel,” and the “Classroom behaviours questionnaire.”* Unpublished Master of Clinical Science Research Paper, University of Western Ontario, London, ON.
- Filla, A. Wolery, M. & L. Anthony (1999). Promoting children's conversations during play with adult prompts. *Journal of Early Intervention, 22*(2), 93-108.
- Gallagher, T. (1999). Interrelationships among children's language, behaviour, and emotional problems. *Topics in Language Disorders: Children's Language: Behaviour, and Emotional Problems, 19*(2), 1-15.
- Guglielmo, J. & Tyron, G. (2001). Social skill training in an integrated preschool program. *School Psychology Quarterly, 16*(2), 158-175.
- Hadley, P., Simmerman, A., Long, M., & M. Luna (2000). Facilitating language development for inner-city children: Experimental evaluation of a collaborative, classroom-based intervention. *Language, Speech, and Hearing Services in the School, 31*(3), 280-295.
- Parker, J. G., & Gottman, J. M. (1989). Social and emotional development in a relational context: friendship interaction from early childhood to adolescence. In T. J. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 95-131). New York, NY: John Wiley & Sons.
- Rice, M. & Wilcox, K. (1995). Building a language-focused curriculum for the preschool classroom: Vol. I. *A foundation for lifelong communication*. Baltimore, MD: Paul H. Brookes Publishing Co.

- St. Pierre, R.G. & Layzer, J.I. (1998). Improving the life chances of children in poverty: Assumptions and what we have learned. Social Policy Report. *Society for Research in Child Development*, VII(4), 1-20.
- Warr-Leeper, G. (2001). A review of early intervention programs and effectiveness research for environmentally disadvantaged children. *Journal of Speech-Language Pathology and Audiology*, 24 (2). 50-62.
- Whelpdale, T. & Warr-Leeper, G. (1995). *Convergence between outcome measures following computer-assisted and traditional language intervention for children with Down syndrome*. Program. Presented at the Annual Convention of the Ontario Association of Speech-Language Pathology and Audiology, October.
- Wilcox, J. Murphy, K., Bacon, D., & S. Thomas (2001). *Improving language teaching practices in preschool classroom*. Infant Child Research Programs, Arizona State University, Tempe, AZ.
- Yoshikawa, H. (1995). Long-term effects of early childhood programs on social outcomes and delinquency. *The Future of Children*, 5(3), 51-75.

Sources consulted in the development of the ECE training program

- Brown, W. H., Odom, S. L., & Conroy, M. A. (2001). An intervention hierarchy for promoting young children's peer interactions in natural environments. *Topics in Early Childhood Special Education*, 21(3), 162.
- Bunce, B. (1995). Building a language-focused curriculum for the preschool classroom: Volume II. *A planning guide*. Baltimore, MD: Paul H. Brookes Co.
- Casey - Harvey, D. (1995). *Early communication games*. San Antonio, TX: Communication Skill Builders.
- Elliott, S.N. & Gresham, F.M. (1993). Social skills interventions for children. *Behavior Modification*, 17(3), 287-313.
- Fein, G. (1981). Pretend play in childhood: An integrative review. *Child Development*, 52, 1095-1118.
- Farmer-Dougan, V., Viechtbauer, W & French, T. (1999). Peer-prompted social skills: The role of teacher consultation in student success. *Educational Psychology*, 19(2), 207-219.
- Filla, A., Wolery, M. & Anthony, L. (1999). Promoting children's conversations during play with adult prompts. *Journal of Early Intervention*, 22(2), 93-108.
- Guralnick, M. (1992). Assessment of peer relations. Seattle, WA: University of Washington Child Development and Retardation Center.

- Guralnick, M. (Ed). (1997). *The effectiveness of early intervention*. York, PA: The Maple Press Co.
- Goldstein, H., Wickstrom, S., Hoyson, M., Jamieson, B., & Odom, S. L. (1988). Effects of sociodramatic script training on social and communicative interaction. *Education and Treatment of Children*, 11(2), 97-117.
- Guglielmo, H.M. & Shick Tryon, G. (2001). Social skill training in an integrated preschool program. *School Psychology Quarterly*, 16(2), 158-175.
- Hadley, P.A. & Schuele, C.M. (1998). Facilitating peer interaction: Socially relevant objectives for preschool language intervention. *American Journal of Speech-Language Pathology*, 7(4), 25-37.
- Hart, B.M. & Rogers-Warren, A.K. (1978). A milieu approach to teaching language. In R.L. Schiefelbusch (Ed.), *Language intervention strategies Vol. 2*(pp. 192-235). Baltimore, MD: University Park Press.
- Hiralall, A.S. & Martens, B.K. (1998). Teaching classroom management skills to preschool staff: The effects of scripted instructional sequences on teacher and student behavior. *School Psychology Quarterly*, 13(2), 94-116.
- Johnson, M. & Rudy, C. (1990). Teaching children to resolve conflicts cooperatively. *Journal of Pediatric Medicine*, 4, 237-243.
- Krysiak, P. & Strader, W. (1996). The role of the speech-language pathologist in early childhood settings. *Early Childhood Development and Care*, 121, 9-23.
- Lifter, K., Sulzer-Azaroff, B., Anderson, S.R. & Edwards Cowdery, G. (1993). Teaching play activities to preschool children with disabilities: The importance of developmental considerations. *Journal of Early Intervention*, 17(2), 139-159.
- Lowenthal, B. (1996). Teaching social skills to preschoolers with special needs. *Childhood Education*, 72(3), 137-141.
- Malmkog, S. & McDonnell, A.P. (1999). Teacher-mediated facilitation of engagement by children with developmental delays in inclusive preschool. *Topics in Early Children's Special Education*, 19(4), 203-216.
- Manolson, A. (1995). *You make the difference in helping your child learn*. Toronto, ON: The Hanen Centre.
- McEvoy, M.A., Shores, R.E., Wehby, J.H., Johnson, S.M & Fox, J.J. (1990). Special education teachers' implementation of procedures to promote social interaction among children in integrated settings. *Education and Training in Mental Retardation*, Sept., 267-276.

- Martin, K. & Murray, A. (1997). *Toddler connections*. San Antonio, TX: Communication Skill Builders.
- Merrell, K.W. (1996). Social-emotional problems in early childhood: New directions in conceptualization, assessment and treatment, *Education and Treatment of Children, 19*, 458-473.
- Ostrosky, M., Kaiser, A. & Odom, S. (1993). Facilitating children's social-communicative interactions through the use of peer-mediated interventions. In A.P. Kaiser & D.B. Gray (Eds.), *Enhancing children's communication: Research foundations for intervention* (pp. 159-185). Baltimore, MD: Paul H. Brookes.
- Rice, M. & Wilcox, K. (1995). Building a language -focused curriculum for the preschool classroom, Vol. I. *A foundation for lifelong communication*. Toronto, ON: Paul H. Brookes Co.
- Strain, P., Guralnick, M. & Walker, H. (1986). *Children's social behaviour*. Toronto, ON: Academic Press.
- Stollar, S., Collins, P. & D. Barnett (1994). Structured free-play to reduce disruptive activity changes in a Hear Start classroom. *School Psychology Review, 23*(2), 310-322.
- Watson, C. (1995). *Making Hanen happen*. Toronto, ON: The Hanen Centre Publication.
- Weitzman, E. (1992). *Learning language and loving it: A guide to promoting children's social and language development in early childhood settings*. Toronto, ON: The Hanen Centre.
- Wolery, M. & McWilliam, R.A. (1998). Classroom-based practices for preschoolers with disabilities. *Intervention in School and Clinic, 34*(2), 95.
- Zoritch, B., Roberts, I. & Oakley, A. (1998). The health and welfare effects of day-care: A systematic review of randomised controlled trials. *Soc. Sci. Med, 47*(3), 317-327.