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Research Analysis on Parent-implemented Language Intervention for Children With or At-Risk for Language Delays

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《 Abstract 》

The purpose of this study is to analyze studies that examined the effectiveness of parent-implemented language interventions to improve expressive language and communication skills for young children with disabilities. By describing and comparing the specific characteristics of parent training and language intervention across studies and the findings obtained, this study examines the critical features that may influence the effectiveness of these strategies. A total of 11 studies were identified that met the criteria established for inclusion in this review and each of these studies were analyzed in terms of the characteristics of participants, the features of parent-implemented language strategies, parent training, research designs, and major findings. Of the 11 studies, 6 studies conducted Dialogic Reading (DR) interventions and 5 studies implemented Milieu Language Teaching (MLT) interventions. Results of this analysis indicated that parent-implemented language interventions generally increased parent's use of effective language strategies and the expressive language skills for children with language delays. Also, results reported that some language strategies such as expanding, repeating, waiting for responses were used more frequently than other strategies. In the procedure of teaching language strategies, results indicated that individual training sessions were more effective than group training sessions.

Analysis results also showed that strong fidelity of implementation was conducted in studies that used fidelity checklist or encoded the frequency of the parent use of language strategies during the language intervention. In the studies that used strong types of fidelity implementation, children improved their expressive language outcomes. Limitations and implications are also discussed in terms of examining fidelity of implementation to determine the effect of the parent-implemented language interventions on children's language outcomes.

Key Words : Language synthesis, parent-implemented language intervention, parent language training, fidelity of implementation, preschoolers with or at risk for language delays

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Ⅰ. Introduction

Delays in language acquisition are regarded as one of the most prevalent disabilities in young children (Dale, Crain-Thoreson, Notari-Syverson, & Cole, 1996; Fey, 1986; Wetherby & Prizant, 1992). Language delays in early childhood persist into the school years and are highly associated with low academic performance and behavior problems (Hancock, Kaiser, & Delaney, 2002; Hart & Risley, 1995). Moreover, children with language delays are less likely to be socially accepted than their peers (Alpert & Kaiser, 1992; Gertner, 1994). Thus, children experiencing slower than typical growth in language need more opportunities to be engaged in frequent and rich language interactions with their teachers and peers at school as well as with their parents and siblings at home.

To promote language skills for young children with language delays, researchers have engaged parents as implementers of specific strategies. (Hemmeter & Kaiser, 1994; Kaiser, 1993; Lonigan & Whitehurst, 1998; Taverne & Sheridan, 1995). Parents are considered their children's first and the most influential teachers, especially during the early years (Hemmeter & Kaiser, 1994; Lonigan & Whitehurst, 1998). A number of studies have demonstrated the effectiveness of teaching parents language strategies for improving the communication and language skills of children with disabilities (Alpert & Kaiser, 1992; Crain-Thoreson & Dale, 1999; Hemmeter & Kaiser, 1994; Kaiser, Hemmeter, Ostrosky, Alpert, & Hancock, 1995; Lonigan & Whitehurst, 1998; Taverne & Sheridan, 1995; Valdez-Menchaca & Whitehurst, 1992). In these studies, a variety of strategies have been demonstrated to promote parents' interactions with their children and these enhanced interactions have resulted in improvements of their children's expressive and receptive language development.

Parent training focused on specific caregiving interventions includes the expectation that parents will acquire knowledge and skills that allow them to conduct the intervention with their child (Mahoney, Kaiser, Girolametto, MacDonald, Robinson, Safford, & Spiker, 1999). In language intervention studies, parent training has been conducted for the purpose of teaching parents to use language facilitation strategies and to enhance communication

or expressive language skills for children with disabilities or at-risk for language delays. Regardless of whether the language training and intervention are conducted in the naturalistic setting or clinical settings, the language strategies are intended to improve parent responsiveness and promote communicative interactions through daily conversations and activities. When parents acquire language strategies that have not been part of their typical repertoire of interactive behaviors, they begin to incorporate them into their daily activities (Kaiser, 1993). Training that is targeted towards parents of young children who are at risk for language delays gives parents strategies for increasing their communicative interactions and conversations with their children in naturalistic settings (Kaiser, 1993; Taverne & Sheridan, 1995). As parents begin to use those language strategies (e.g. expanding a child's utterances, giving feedback to the child for attempts to communicate, and waiting for responses), children receive more opportunities to develop their communicative skills throughout their daily routines. Well-planned instruction increases parents' mastery of specific language strategies and should be emphasized to maximize the effectiveness of using those strategies in the naturalistic setting.

Parent training in language interventions has generally focused on teaching parents specific language strategies to enhance their responsiveness and communicative interactions with their children as a means of increasing children's communication and expressive language development. Specifically, enhancing the quality and frequency of mother-child interactions has improved children's social communication skills (Snow, 1984). Primary examples of parent-implemented language interventions are milieu language teaching procedures and dialogic reading intervention. These two types of parent-implemented interventions include training sessions to teach specific language strategies to parents so that they can implement the interventions for their children in their home setting. The language strategies common to both of these interventions include: expanding children's verbalization, asking wh-questions, slowing down to give a child adequate time to respond, following a child's lead, and encouraging a child's verbalization. By promoting parental use of those language strategies within fun and interactive activities, interventions such as these have been found to improve children's language and communications skills (Kaiser, Hemmeter, Ostrosky, Fischer, Yoder, &

Keefer, 1996; Lonigan & Whitehurst, 1998; Peterson, Carta, & Greenwood, 2005; Whitehurst, Falco, Lonigan, Fischel, DeBaryshe, Valdez-Menchca, & Caulfield, 1988).

Yet, although research has demonstrated that parent-implemented language intervention can improve children's outcomes, little is known about how well these strategies have been implemented because the fidelity of their implementation is rarely mentioned in published studies. In order to determine whether parent-implemented language interventions are effective, it is critical to know how well the strategies were implemented or the degree of the fidelity of implementation. Fixsen and his colleagues (2005) indicated the meaning of implementation as conducting a set of intervention activities into practice. Elaborating further, this group reflected on the fact that the quality of implementation depends on the presence and strength of the activity that is purposeful and is described in sufficient detail (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). From the activity being implemented, the noticeable differences between intervention group and non-intervention group are determined. To identify the strength or fidelity of implementation of an intervention, measuring the critical components of the intervention is necessary.

Fidelity of implementation typically is defined as the degree to which implementers such as teachers or parents conduct an intervention as it was planned (Mowbray, Holter, Teague, & Bybee, 2003). Measuring whether or not a language intervention was conducted as planned is important information for examining the link between intervention and its corresponding outcomes (Fixsen et al., 2005; Mowbray, et al., 2003). For example, in a study of preschool teachers' fidelity in implementing a language-based curriculum, Pence, Justice, and Wiggins (2008) noted the need for fidelity measurement to determine if children's learning outcomes actually resulted from the implementation of interventions. When fidelity data indicate that an intervention was implemented as intended, it provides the evidence that the intervention directly affects the growth of children's outcomes. Thus, in the parent-implemented language intervention studies, the fidelity data indicates whether parents have carried out the critical language intervention strategies planned to produce improved child outcomes.

Therefore, the purpose of this study is to analyze studies that investigated

the effect of parent training and parent-implemented language intervention on improving expressive language and communicative skills for young children with or at-risk for language delays. By exploring and comparing the specific characteristics of parent training and intervention across studies, results in this paper will contribute to illuminate the critical features that improve generalization of the language intervention across different settings. In addition, this study will look closely at how fidelity of implementation was measured across studies, and will examine the relationship between fidelity and child outcomes to determine strong factors in conducting parent training and language intervention.

Ⅱ. Research Questions

The methods used to quantify fidelity or to measure the extent of adherence to intervention typically include rating scales that are conducted through interview, observations, surveys, and/or videotape sessions and are completed by researchers, interventionists, or participants (Dusenbury, Brannigan, Falco, & Hansen, 2003; Fixsen, et al., 2005; Mowbray et al., 2003). The fidelity of parent-implemented language intervention has been measured by assessing parents' accurate use of specific strategies that have been targeted during training. Whether the language intervention is implemented through book reading or free play sessions, parents are required to conduct language intervention by using strategies that they learned from parent training. Thus, implementation of fidelity can be used to measure how well the selected language strategies are delivered by parents and thereby produce positive child communication outcomes. However, to date, there is no research analysis that has specifically examined the relationship between fidelity of implementation and child outcomes obtained in studies of parent-implemented language interventions. Identifying the types of fidelity that have been collected in these studies and examining their relationship with outcomes will strengthen what is known about critical features of these interventions. By examining studies that have investigated the effect of parent-implemented language intervention on children's expressive language

and communicative skills, this synthesis will explore and compare the specific characteristics and critical features of parent-implemented language intervention. As a strong focus of this analysis, fidelity measures across studies will be closely examined to identify whether the language strategies were implemented as prescribed by their developers and whether there was a relationship between levels of fidelity implementation and child outcomes. While identifying peer-reviewed studies in available literatures that examined the effect of parent training and parent-implemented language interventions, we sought to address three research questions:

(1) What were the specific contexts for the parent training procedures and the primary characteristics of parent-implemented language interventions?
(2) What types of designs were used and what proportion of studies found significant effects in parent outcomes and child language outcomes?
(3) What approaches were used in measuring fidelity among studies reported fidelity of implementation? What relationship was found between levels of fidelity and child outcomes?

Ⅲ. Search Methods

1. Search Terms

An extensive literature search was conducted to identify relevant studies by using search terms *parent-implemented language intervention, parent language teaching, parent language training, milieu language teaching, responsive interaction, dialogic reading, interactive reading, shared book reading, and joint-book reading*. With those keywords, participants were limited to preschoolers with or at risk for language delays. A computerized search was conducted by using primary databases which included Psychological Abstracts online, the Educational Resources Information Center database, and Google Scholar. A secondary search was conducted through using top-rated early intervention journals such as *Topics in Early Childhood Special Education, Journal of Early Intervention, Journal of Speech and Hearing*

Research, Early Childhood Research Quarterly, Journal of Educational Psychology, and Early Education and Development. Also, additional studies were identified through manual searches in references of identified articles.

2. Selection Criteria

Studies were included in the synthesis if they met all of the following criteria: (1)the study focused on the effectiveness of an intervention implemented by parents to promote young children's language skills; (2)the employed intervention focused on promoting the language or communication of children between 3 and 5 years old with or at risk for language delays; (3)the study included some measurement of young children's language development and/or parents' use of language strategies; (4)the study included either single-case design or group design; (5)the research was published in a peer-reviewed journal after 1990. To determine and compare the critical features of parent training and parent-implemented language intervention, articles in peer-reviewed journal which conducted effective language strategies with planned parent training were selected. Studies were excluded if the parent-implemented language intervention was primarily focused on the children's social and emotional development.

3. Definition of Terms

General explanation of Terms, which frequently used in this study related to the parent training procedure and parent-implemented language intervention, is described as below.

1) Milieu Language Teaching (MLT)

Milieu teaching is defined as "a naturalistic, conversation-based teaching procedure to increase reciprocal interactions between parents and children" (Alpert & Kaiser, 1992). A naturalistic procedure, milieu teaching consists of several techniques such as mand-modeling, time delay, and incidental teaching that are embedded within a child's ongoing activities and interactions during

daily routines (Kaiser, 1993). MLT is one of the most common type of parent-implemented language intervention which include a suite of language and communication strategies.

2) Dialogic Reading (DR)

DR is a method of shared book reading wherein adults use simple language facilitation strategies to promote conversations with their children while they look at picture books together (Whitehurst et al., 1988). The DR intervention primarily focused on encouraging children to play an active role during the storybook reading by providing language facilitation techniques and positive feedback in the expectation of gradual change.

3) Fidelity of Implementation

Fidelity of implementation is associated with the degree to which interventionists (e.g. teachers, parents, or researchers) implement the intervention as planned by its original developers (Dusenbery et al., 2003; Mowbray et al., 2003). Assessing fidelity of implementation in language intervention helps to identify whether interventionists carry out the language intervention as planned.

IV. Results

A total of 11 studies were located meeting the inclusionary criteria stated above. Based on the Trivette & Dunst (2007)'s research synthesis of DR studies, which analyzed the parent and child outcomes of DR studies, this study categorized each selected articles' features by its participants, parent training and parent-implemented language intervention, research design and outcomes, and fidelity of implementation. Across 11 studies, participated researchers ranged from 2 to 6 researchers in both MLT and DR studies. It is noticed that a researcher who is well-known for the MLT procedure was participated in 4 out of 5 MLT studies, which shows the level of the consistency in implementing parent training and the parent-

implemented language intervention. In DR studies, two studies were conducted by the researchers who initially developed the dialogic reading procedure in detail.

As child characteristics, a total of 304 children participated across the eleven studies and sample sizes ranged from 6 to 91. Children's ages ranged from 28 to 64 months at the time of the initial assessment. Nine of the eleven studies reported children's gender. Approximately 53% of children were male. Five of the 11 studies reported children's ethnicity. Of these 204 children, 63% of children were African American, and 23% of children were Caucasian. Only 12% of children were Hispanic. All 11 studies included children with some degree of risk for language delay defined as performing below average level in the receptive and expressive language skills (Whitehurst & Fischel, 1994). According to this definition, three studies included children who were at risk for language delays and the remaining eight studies targeted children who had receptive or expressive language delays that ranged from mild to severe. Among the eight studies that included children with language delays, three out of the eight studies included children with autism and one study included children with Down Syndrome.

Family characteristics represent that a total of 161 primary caregivers participated in the parent-implemented language intervention across the eleven studies. Considerable variability existed in of the characteristics reported for these families across the studies. Sample sizes ranged between 3 and 33 parent/caregivers and the mean sample size was 14. Across eleven studies, mothers were identified as the targeted intervention agent in seven (81%) of the studies and primary caregivers were specified in the remaining four (36%) studies. Age of the caregiver targeted for the intervention was specified in only four (36%) studies and these ranged from 20 to 48 years old. In 6 out of the 7 studies, majority of families were identified in the low income level. In addition, only one study provided information about the parents' ethnicity. <Table 1> presents detailed information about selected characteristics of child and family participants.

<Table 1> Child and Family Characteristics

Study	Child Characteristics					Family Characteristics			
	Sample Size	Age	Female	Ethnicity	Child Language Level	SES	Sample Size	Age	Ethnicity
Crain-Thoreson & Dale (1999)	32	39-66	10	NR	Mild to moderate language delays	Low	10	NR	NR
Crowe, Norris, & Hoffman (2004)	6	38-41	4	NR	Mild language delays	Low-Middle	6	22-43	NR
Dale et al. (1996)	33	36-72	9	Caucasian-22 African American-6 Other-6	Mild to moderate language delays	NR	33	NR	NR
Hancock, Kaiser, & Delaney (2002)	5	38-46	2	Caucasian-1 African American-4	At risk or mild language delays	Low	5	20-48	Caucasian-1 African American-4
Hargrave & Senechal (2000)	36	30-64	21	NR	Moderate to severe language delays	Low	27	NR	NR
Hemmeter & Kaiser (1994)	4	25-49	1	NR	Severe language delays	Low-Middle	4	NR	NR
Kaiser et al. (1995)	5	23-46	NR	NR	Moderate to severe language delays	Low-Middle	5	25-34	NR
Kaiser et al. (1996)	12	28-56	NR	Caucasian-11 African American-1	Mild to moderate language delays	Low-Middle	12	27-41	NR
Lonigan & Whitehurst (1998)	91	33-60	49	African American-83 Other-8	Mild to moderate language delays	Low	31	NR	NR
Peterson, Carta, & Greenwood (2005)	3	24-43	2	NR	Mild to moderate language delays	Low	3	NR	NR
Whitehurst et al. (1994)	73	M= 3.46	33	African American-40 Hispanic-17 Caucasian-16	At risk or mild language delays	Low	21	NR	NR

NR-Not Reported

1. Parent Training and Parent-Implemented Language Intervention: What were the specific contexts for the parent training procedures and the primary characteristics of parent-implemented language interventions?

1) Milieu Language Teaching (MLT) Training

Regarding parent training procedures, five studies out of eleven studies conducted parent training and language intervention using Milieu Language Teaching (MLT) procedures. All parent training and the intervention sessions were conducted individually considering each parent's unique needs to enhance their language interactions. Across these five studies, the mean length of time included both individual parent training and the language intervention was 45 minutes. The first 15 minutes of each session focused on teaching new language strategies, providing feedback, and reviewing data and videotapes from previous sessions. Role playing and modeling were used to provide feedback. For the next 15 minutes, language interactions between a parent and a child were videotaped while the parent was implementing language intervention. Then, minimal prompts and coaching were provided to facilitate the parent to use language strategies that he or she had learned. Data on parent implementation and child language measures were coded from the videotapes of the second 15-minutes practice session. During the last 15 minutes, the trainer provided immediate feedback about the practice session to determine what the parent should work on at home. Suggestions for homework or practice activities were typically discussed.

To teach parents different language strategies during the first 15 minutes, MLT largely included strategies such as model, mand-model, time delay, and incidental teaching strategies. Two studies added elements about environmental arrangement which included strategies such as identifying interesting toys, providing appropriate materials, and creating comfortable situations. Generally, responsive interaction techniques such as facilitating turn-taking, making descriptive statements, and following the child's lead including nonverbal interaction strategies were taught first and then milieu language strategies such as model, mand-model and time delay were introduced. Each strategy was taught to a specific criterion before a new

strategy was introduced. While teaching parents the language strategies, verbal descriptions of the procedures were given to the parents first, and then written materials and videotaped examples were reviewed.

2) Dialogic Reading (DR) Training

Five out of six studies that tested the Dialogic Reading (DR) intervention conducted parent training sessions in a similar way. These five DR studies implemented two parent training sessions carried out in groups that occurred approximately 2-3 weeks apart. Each training session lasted between 45 and 60 minutes and was conducted in children's child care or early education setting. Unlike the MLT studies which primarily trained parents on an individual basis, five DR studies implemented parent training as group sessions in their child care settings. The group parent trainings were conducted through a combination of one-to-one training, video, modeling, role-play, and/or practice sessions with corrective feedback. The first training sessions focused on introducing eight primary characteristics of DR that included: (1) asking "wh-" questions, (2) following the child's answers with questions, (3) repeating what the child says, (4) helping the child as needed, (5) praising and encouraging, (6) following the child's interests, (7) slowing down and allowing the child time to respond, and (8) having fun (Crain-Thoreson & Dale, 1999). During the second session, three additional characteristics of the practice were introduced: (1) asking open-ended questions, (2) expanding what the child says, and (3) encouraging continued interest in reading. The role of the adult was described as prompting the child with questions, expanding the child's verbalizations, praising the child (Arnold, Lonigan, Whitehurst, & Epstein, 1994), and allowing sufficient time for the child to respond (Dale et al., 1996). Books that were selected for DR could be any picture book but those that were described as well-suited had clear illustrations, relatively little text, and an engaging story.

3) Milieu Language Intervention

Considering the primary characteristics of parent-implemented language intervention, in five studies that conducted MLT procedure, the total

number of the intervention sessions ranged from 10 to 20 sessions during 5-12 weeks. The parent training and language intervention sessions were conducted in clinic settings for three studies, and in home settings for two studies. Since all of the five studies used single subject design, the number of intervention sessions in each study varied depending on the time needed for each participant to reach mastery of the language strategies. Each intervention session lasted for 15 minutes and the language interactions between a parent and a child were recorded to observe the child's verbal/ nonverbal responses and the parent's use of the language skill acquired through parent training.

4) DR Intervention

One of the noticeable characteristics of the 6 parent-implemented DR intervention studies was that the intervention was conducted at home while the group parent training sessions were primarily conducted in the child care setting. Across six studies, a total of 161 primary caregivers participated in the parent-implemented DR intervention in their home settings after they were trained to use the DR program with their children. The length of the intervention ranged from 4-8 weeks with a mean across studies of 6 weeks. After parents had learned about dialogic reading strategies, they began to implement DR intervention in their homes. Parents were asked to read to their child at least once per day for 5-15 minutes at home using the skills they had learned during the group training sessions. In four out of the six studies, the intervention occurred in both childcare and home settings, and the remaining two interventions were conducted in the home setting alone. When studies included the childcare setting, teachers or staff members read to small groups or individual children using the skills they had learned for a minimum of 10-15 minutes, for a minimum of three times per week.

<Table 2> Characteristics of Parent training and Interventions

Study	Length of Intervention (weeks)	Number of sessions	Characteristics of parent training	Parent training & Intervention Procedures	Treatment Location
Crain-Thoreson & Dale (1999)	8	32	10 Dialogic Reading (DR) strategies: What questions, follow-up questions, repetition, helping when necessary, praising and encouraging, following child's interests, slow down to give child adequate time to respond, creating a fun atmosphere, asking open-ended questions, expanding on responses	Group training: Hour and half instructional session for two times, watching video tapes, role playing Intervention: Individual, picture book dialogic reading session by a parent at least 4 times per week for 10 min	Daycare & Home
Crowe, Norris, & Hoffman (2004)	5	8-10	4 components of Complete Reading Cycle (CRC): Attentional vocative (initiation), query (requesting information), response, and feedback (extending and clarifying the response)	30-40 min parent training session: CRC instruction (teaching strategies), reading probe (caregiver-child storybook reading), review, and coaching	Home
Dale et al. (1996)	6-8	NR	9 DR strategies: What questions, follow-up questions repetition, helping when necessary, praising and encouraging, following child's interests, asking open-ended questions, expanding on responses	Group training: Two instructional session Intervention: Individual, dialogic reading session by a parent	Home
Hancock, Kaiser, & Delaney (2002)	15	30	ML training: Encouraging child -initiated utterances, providing simple clear instructions, positive responses and corrective responses, decreasing parent negative verbal responses	30 to 45 min parent training session - New information and feedback, specific instruction and modeling to encourage to use the strategies for interacting with their children	Clinic
Hargrave & Senechal (2000)	4	20	9 DR strategies: What questions, follow-up questions repetition, helping when necessary, praising and encouraging, following child's interests, asking open-ended questions, expanding on responses	Group training: 5 different sessions per 1 hour Intervention: Individual picture book DR sessions by a parent at least 5 times per week	Daycare & Home
Hemmeter & Kaiser (1994)	20	35-40	ML training: Environmental arrangement strategies, responsive interaction (feedback and modeling of the child's targets), incidental teaching strategies	45min parent training session - New information with written and videotaped examples, feedback, and specific instructions for practice session	Clinic

Study	Length of Intervention (weeks)	Number of sessions	Characteristics of parent training	Parent training & Intervention Procedures	Treatment Location
Kaiser et al. (1995)	15	28-30	ML training: Model, mand-model, time delay, incidental teaching strategies Environmental arrangement strategies	Group training: 8 sessions to learn environmental strategies Intensive home feedback sessions to learn milieu teaching procedures	Home
Kaiser et al. (1996)	10	20	ML training Responsive interaction techniques -nonverbal interaction strategies (following the child's lead, silence, observation, under standing, listening, pause, and nonverbal mirroring) Semantically contingent feedback strategies (descriptive talk, expansion, requests for clarification), linguistic modeling at the child's target model	Parent training - 45 min per session First 15 min, teaching new information, feedback, reviewing data Second 15 min, parent and child interactions were videotaped, practiced responsive interactions techniques with minimal prompting and coaching Last 15 min, discussion of the practice session, what parents do at home	Clinic
Lonigan & Whitehurst (1998)	6	30	9 DR strategies: What questions, follow-up question, repetition, helping when necessary, praising and encouraging, following child's interests, asking open-ended questions, expanding on responses	Group(no more than 5) training: Two instructional sessions Intervention: Picture book dialogic reading session by a parent for 10 min, 5 times per week	Daycare & Home
Peterson, Carta, & Greenwood (2005)	25	21-25	ML training: Responsive interaction skills (making descriptive statements, imitation, and expansions), Incidental teaching strategies (mand-model, model, mand, time-delay)	Parent training - 60 min per session Observation of parent-child interactions, practice to learn new skill and acquired skill, specific instruction and modeling to encourage to use the strategies for interacting with their children	Home
Whitehurst et al (1994)	6	30	9 DR strategies: What questions, follow-up questions, repetition, helping when necessary, praising and encouraging, following child's interests, asking open-ended questions, expanding on responses	Parent group training - videotape training, one-on-one role play Intervention - Picture book dialogic reading session by a parent for 10 min 5 times per week	Daycare & Home

2. Research Design and Outcomes: What types of designs were used and what proportion of studies found significant effects in parent outcomes and child language outcomes?

1) Reaserch Design

Of the 11 studies, six studies conducted DR intervention (Crain-Thoreson & Dale, 1999; Crow, Norris, & Hoffman, 2004; Dale, et al., 1996; Hargrave & Senechal, 2000; Lonigan & Whitehourst, 1998; Whitehurst, Arnold, Epstein, Angell, Smith, & Fischel, 1994) and five studies implemented MLT (Hancock, Kaiser, & Delaney, 2002; Hemmeter & Kaiser, 1994; Kaiser, et al., 1995; Kaiser, et al., 1996; Peterson, Carta, & Greenwood, 2005). All of the five MLT studies implemented multiple baseline designs across participants or intervention strategies. Among the six studies conducting DR interventions, five studies used experimental group designs and only one study (Crowe, Norris, & Hoffman, 2004) implemented a single-subject design. In those five group-design studies which used DR interventions, three studies (Crain-Thoreson & Dale, 1999; Lonigan & Whitehurst, 1998; Whitehurst, et al., 1994) carried out the DR interventions in both home and school settings and two studies (Dale, et al., 1996; Hargrave & Senechal, 2000) implemented the experimental intervention in the home setting alone. In both types of experimental studies, groups receiving the DR interventions at either home or school were compared with the control group that only received regular reading at school and had neither access to DR intervention nor any parent training. None of studies included regular reading sessions in the home setting as compared with DR intervention in the same setting.

6 out of 11 studies included maintenance or generalization period after intervention. Whereas most of MLT studies conducted follow-up and generalization sessions to observe whether parents maintain their use of language strategies, 2 DR studies only included 1 or 2 follow-up sessions. Since all of MLT studies used single subject design, those studies conducted follow-up and generalization period to enhance the effectiveness of the language intervention. It also explains that MLT studies focus on maintaining the use of language strategies in natural setting acquired from the parent training which conducted in the clinic setting. Moreover, all of MLT studies

implemented single subject design, so those studies included generalization sessions. <Table 3> shows the detailed information of research design conducted in each study.

2) Child Language Outcomes

Across the 11 studies, all reported positive outcomes in children's expressive language development as the result of parent-implemented language intervention. Positive gains in the children's expressive and receptive language skills were measured in 8 out of 11 studies which used both standardized tests and language sample of parent-child language interactions. <Table 3> describes the number of measures that were utilized to determine children's outcomes for each study. Some studies used three measures in common: MLU (Mean Length Utterance), EOWPVT-R (Expressive One-word Picture Vocabulary Test-Revised), and PPVT-Ⅲ (Peabody Picture Vocabulary Test - the third version). 7 out of 11 studies reported children's significant improvement in using longer words through measuring their MLU that were obtained from language samples. For example, Dale et al (1996) conducted experimental group design for the dialogic reading training group and the conversational language training group and reported that MLU in both groups increased from pretest to posttest during book-reading sessions (from 2.52 to 2.45 for the dialogic reading training group, from 2.45 to 2.75 for the conversational language training group), but the statistical significance was found only in the dialogic reading training group. One MLT study, Hancock, Kaiser, and Delaney (2002) measured children's MLU by using the single-subject design and reported that five children's average MLU increased from 2.25 during the baseline to 3.00 at the end of the intervention sessions. A child who had the greatest improvement in MLU showed an increase of 1.07 from baseline to the end of the intervention.

4 out of 11 studies measured children's expressive language using EOWPVT-R, reporting significant positive gains in their vocabulary scores. Some studies showed better improvement in the mean scores of the test than others and all studies showed that the home DR intervention had greater increases in the test scores than other settings. Crain-Thoreson and Dale (1999) reported that the means of EOWPVT-R scores of the

children who received DR intervention in the home setting showed greater improvement (from 70.8 to 75.6) than control group (from 70 to 71) that did not implement DR intervention. Hargrave and Senechal (2000) also reported that the DR intervention group had higher scores (from 80.8 to 85.5) in the EOWPVT-R test than the scores of the control group (from 82.4 to 83.6) that received regular reading in the school setting. In all of 5 DR studies that conducted group designs, the parent-implemented DR intervention group showed more scores in the expressive vocabulary test scores than the other group condition that did not have DR intervention in the home setting. Even though the DR intervention in home setting was conducted in a short period of time compared with that of other setting, the parent-implemented DR intervention showed the greatest gains of the children's language development. Thus, the improvement in children's language skills through the intervention indicates positive changes in their communication style and in the use of different words.

3) Parent Outcomes

The effectiveness of parent-implemented language intervention to produce parent outcomes was apparent across eight studies. Across the eight studies that reported parent outcomes, the improvement in parents' use of language strategies was assessed by recording the language intervention sessions and coding parents' frequency of using language techniques obtained from the samples of videotaped parent-child language interactions. Across six studies, all of which included low SES parents, parents demonstrated significant increases in their responsiveness to the child's verbal language and behavior during the language interventions.

Though both MLT and DR intervention showed an effect on enhancing parent outcomes and children's language development, MLT procedures have focused on increasing the frequency of parents' interactions with their children and their responsiveness to their children's language and communication skills. On the other hand, DR interventions have focused on increasing the children's language development more than improving parental responsiveness. Three out of six DR studies failed to report any changes in parents' reading behaviors during DR intervention (Hargrave & Senechal, 2000; Lonigan &

Whitehurst, 1998; Whitehurst, et al., 1994). The other three studies recorded parent-child language interactions during interventions and reported the positive gains in parent' use of language strategies (Crain-Thoreson & Dale 1999; Crowe, Norris, & Hoffman, 2004; Dale, et al., 1996).

Crain-Thoreson and Dale (1999) conducted the experimental group design by training parents DR strategies and measuring the parents' reading behaviors during DR intervention. Results of the study reported that parents showed an increase in 9 out of 12 language strategies such as acknowledging child utterances, modeling appropriate answers, and expanding child responses. Among those 9 language strategies, some of them showed greater increases from pre-to post-test in the mean frequencies than others: acknowledging child utterances (from 6.3 to12.9), expanding child responses (from 0.8 to 2.4), and asking wh-questions (from 3.4 to 9.2) and open-ended questions (from 1 to 6.1).

Dale, et al (1996) compared the parents' use of DR strategies in the DR training group with the parents who received conversational language training, which focused on facilitating children's utterances without teaching DR behaviors. Results showed that parents in the DR training group had more increases in their use of the 9 DR strategies from pre-to post-test during book reading sessions than the parents in the conversational language training group. Parents in the DR training group had greater increases in expanding child responses (from 1.1 to 4.1), and asking wh-questions (from 14.1 to 18.5) and open-ended questions (from 3.7 to 5.9). However, parents in the conversational language training group showed decreases in the mean frequencies of some language strategies. Moreover, parents in the DR training group showed greater improvements in their use of those language strategies during the book-reading sessions than their use of those strategies during regular play sessions.

MLT studies also reported that parents used some language strategies more than others (Hancock, Kaiser, & Delaney, 2002; Kaiser, et, al, 1996). Hancock, et al (2002) reported that parents showed greater increases in expanding child utterances, one of the responsive interaction strategies, by improving up to three times of their baseline levels (above the criterion of 40%) during intervention sessions. Kaiser et al (1996) also stated that all parents showed higher increases in their mean of using semantic feedback

strategies (e.g. expansions, repeats, and requests for clarification) than the mean of times for modeling children's target skills during the 3 month and 6 month follow-up period. Data also showed that parents generalized using semantic feedback strategies (from 18.9 ~ to 44.1) better than modeling children's target skills (from 12.4 ~ to 30.2) in their home setting. Hemmeter and Kaiser (1994) also reported that during generalization period at home, parents showed higher increases in their mean percentages of providing feedback (70%) than modeling children's target skills (30%).

In sum, although MLT and DR studies measured different strategies, the purpose of using those strategies was to enhance parents' language interaction and to increase children's comments and their responsiveness to be engaged in the interaction. DR studies stated that parents showed better increases in their use of expanding and asking open-ended questions on children's responses during reading intervention. MLT studies also reported that parents used some responsive interaction strategies to provide feedback on children's responses (e.g. expansions, repetition, and descriptive statements) more frequently than some incidental teaching strategies (e.g. modeling or manding children's target behaviors). Therefore, parents often provided immediate feedback by expanding and repeating children's responses during parent-implemented language intervention.

<Table 3> Characteristics of Research Designs, Outcomes Measures, and Fidelity

Study	Research Design	Outcome Measures		Maintenance & Generalization	Measurement of Fidelity
		Child	Parent		
Crain-Thoreson & Dale (1999)	Randomized experimental design: dialogic reading/home, dialogic reading /daycare, vs. control/daycare	MLU, number of different words, total number of utterances, PPVT-R, EOWPVT-R	Parent Language Coding, mean Frequencies of adult reading behaviors (wh-questions, expansions, praise, verbatim reading)	NR	Activity logs by parents Frequency of intervention was recorded
Crowe, Norris, & Hoffman (2004)	Single-subject, multiple baseline across subjects design	Number of communicative turns, different words, story-related initiations, total number of words	Parent Language Sample: verbal/non verbal initiation, requesting information, response, and feedback	2 follow-up sessions	Fidelity checklist was used Two researchers critiqued video recordings of training sessions with 14 items' fidelity checklist

<Table 3> Characteristics of Research Designs, Outcomes Measures, and Fidelity (Continue)

Study	Research Design	Outcome Measures		Maintenance & Generalization	Measurement of Fidelity
		Child	Parent		
Dale et al. (1996)	Randomized quasi-experimental design: dialogic reading vs conversational program	MLU, verbal engagement, different words, total number of utterances, GCI PLAI	Frequency of use of each DR strategy: yes/no question, open-ended question, expansions, imitations, information talk	NR	Parents completed logs Frequency of intervention was reported
Hancock, Kaiser, & Delaney (2002)	Single-subject, multiple baseline across subjects design	MLU, PLS-3 PPVT-3, EVT	Parent use of each strategy: Percentage of responsive feedback, number of expansions, pause errors, praise	Follow-up: once each month for 6 times at clinic Generalization: four sessions at home	Sessions were Videotaped, and frequency of intervention & quality of intervention were analyzed
Hargrave & Senechal (2000)	Randomized experimental design: dialogic reading vs. regular reading	PPVT-R, BV EOWPVT-R	Frequency of correctly identifying books (NR)	NR	NR
Hemmeter & Kaiser (1994)	Multiple baseline design across intervention strategies within parents	MLU, frequency of utterances, total use of targets, affect rating scale, SICD	Percentage correct use of environmental arrangement & feedback, frequency of modeling, and correct use of incidental teaching	Generalization: Three sessions after baseline, Three sessions after intervention at home	Sessions were videotaped, and frequency & quality of intervention were analyzed
Kaiser et al. (1995)	Multiple baseline design across subjects	SICD, total child communication attempts, child use of communication targets	Frequency of use of the environmental arrangement strategies, correct milieu teaching episodes, and target teaching episodes	NR	Evaluation questionnaires and videotaped sessions were reviewed to address quality and frequency of intervention
Kaiser et al. (1996)	Multiple baseline design across subjects	MLU, SICD, frequency of child-initiated utterances and frequency of using target words	Frequency of modeling the child's targets and correct use of semantic feedback, and frequency of not following the child's lead	Follow-up: 3 and 6 months after intervention at clinic Generalization: 2 times after baselines, 2 times after intervention at home	Interactions were Videotaped, and frequency & quality of intervention were analyzed

<Table 3> Characteristics of Research Designs, Outcomes Measures, and Fidelity (Continue)

Study	Research Design	Outcome Measures		Maintenance & Generalization	Measurement of Fidelity
		Child	Parent		
Lonigan & Whitehurst (1998)	Randomized experimental design : DR/school vs. DR/home vs. DR/school & home vs. control	MLU, PPVT-R, EOWPVT-R, ITPA-VE, Measure of Verbal production	Frequency of parents' book reading sessions (NR)	NR	Activity log completed by parents to check compliance with the intervention Only 60% of parents returned reading logs
Peterson, Carta, & Greenwood (2005)	Multiple baseline design across subjects	SICD , MLU, Child verbal behavior (child comments, correct responses)	The rate of parent use of responsive interactions skills (descriptive statement, imitation, expansion), incidental teaching strategies (mand, model, mand-model, time-delay)	Follow-up : 3 and 6 months later after the last session	Homework assignment & audio-recording sessions Only 10% of homework sheets and recordings were returned
Whitehurst et al. (1994)	Randomized experimental design: DR/home & daycare vs. DR/daycare vs. control/daycare	PPVT-R, EOWPVT-R , ITPA-VE, Our word	NR	Follow-up: 6 months after post-testing	Daily log sheet completed by parents Frequency of intervention was recorded

MLU : Mean Length of Utterances
PPVT-R : Peabody Picture Vocabulary Test-Revised
EOWPVT-R : Expressive One-Word Picture Vocabulary Test-Revised
GCI : General Cognitive Index
PLAI : Preschool Language Assessment Instrument
PLS-3 : Preschool Language Scale
EVT : Expressive Vocabulary Test
BV : Book Vocabulary
SICD : Sequenced Inventory of Communication Development
IPTA-VE : Verbal expression subtest of the Illinois Test of Psycholinguistic Abilities
Our Word: An expressive vocabulary test

3. Fidelity: What approaches were used in measuring fidelity among studies reported fidelity of implementation? What relationship was found between levels of fidelity and child outcomes?

In this study, some type of fidelity information was reported in 10 of the 11 studies. Largely, three different types of fidelity were reported measuring various aspects of the implementation of the parenting intervention. These were (1)parents' self report of the extent of their use of the intervention being studied, (2)application of a certain level of benchmark on the mastery of the language strategies during the intervention, (3)independent ratings of parents' implementation of the language intervention. With the first type of fidelity, parents completed some type of self-report form about the extent of their implementation procedure during the course of the language intervention. The four studies examining the DR intervention had parents complete a log describing their use of DR at home (Crain-Thoreson & Dale, 1999; Dale et al., 1996; Lonigan & Whitehurst, 1998; Whitehurst, et al., 1994). Parents were asked to provide information such as the name of the book that was used, duration and frequency of the intervention, and strategies employed. However, these studies that used parent log as a measure of fidelity reported the difficulty of collecting the parental logs and the insufficient amount of information. Moreover, three of six DR studies did not examine the relationship between the amount of parental use of DR strategies and growth in a child's expressive language (Hargrave & Senechal, 2000; Lonigan & Whitehurst, 1998; Whitehurst, et al., 1994). All DR studies failed to demonstrate whether the parent-implemented language intervention actually increased children's expressive language outcomes. Thus, using self-report form of fidelity measurement does not efficiently determine how well parents conduct the intervention as planned.

The second type of fidelity focused on encoding how well parents used each language strategy during the intervention. Five MLT studies provided specific criteria to increase parents' use of language strategies during the parent-child language intervention (Hancock, et al., 1994; Hemmeter & Kaiser, 1994; Kaiser, et al., 1995; Kaiser, et al., 1996; Peterson, Carta, & Greenwood, 2005). During 15 minute parent-implemented language intervention

sessions, researchers videotaped all of the language interactions between parent and the child to identify whether the parents accurately and frequently used language strategies. In addition, these studies had fidelity criteria to encode the frequency of parents' use of each language strategy.

By encoding the parent's use of language strategies, researchers could determine whether parents reached on a certain criterion level of using each language strategy such as providing responsive feedback on 80% or above of child's verbalizations, and modeling the child's targets 15 times in two consecutive sessions (Hancock, Kaiser, & Delaney, 2002; Hemmeter & Kaiser, 1994). Based on the degree of parents' use of each language strategy during the intervention, parent training continued to help parents improve the use of specific language strategies that they need to use more. That is, encoding parents' use of language strategies during the each intervention session allowed the researchers in these studies to determine whether parent training resulted in parents' implementation of the language strategies. Because all MLT studies utilized the multiple baseline design that usually focused on the language interactions between a parent and a child during the intervention sessions, the frequency of a parent's use of each language strategy as well as the number of a child's utterances during the intervention were both recorded. Thus, MLT studies could examine the improvement of the children's expressive language outcomes in response to the parents' use of language strategies during the intervention.

A third type of fidelity data collected in these studies was the use of independent ratings of parents' implementation of the strategies based on video recording or in vivo observation. Only one study used a form of checklist that was created to check the implementation of intervention fidelity (Crowe, Norris, & Hoffman, 2004). In this study, researchers employed a fidelity checklist that consisted of 14 items that rated how well parents implemented the DR intervention as originally planned.

In short, in the examination of different types of fidelity information, it is found that ten studies reported using some types of fidelity measurement in the language intervention. Among ten studies, six studies provided specific information about the intervention fidelity by using a checklist or encoding the interactions between parent and child during the parent-implemented language intervention. The results of these studies provided

the evidence that the studies reported fidelity data were more likely to report significant child and parent outcomes than those without fidelity implementation. However, the other four studies, which are all DR intervention studies, failed to provide the evidence of measuring the frequency of parent's use of language strategies. Without the fidelity measurement that included the record of important elements or criteria, it is hard to tell the extent to which parents used the language strategies in the way that they were taught.

<Table 4> Major Findings and Threats to Validity

Study	Synthesis Findings (Results)	Social Validity	Threats to Validity
Crain-Thoreson & Dale (1999)	Improvements in parents' shared book -reading styles Correlation between children's linguistic performance and frequency of adult responsiveness of children's utterances	NR	Small sample size, maturation issue related to similar growth in all groups, limited fidelity data, testing effects, statistical regression, differential attrition
Crowe, Norris, & Hoffman (2004)	Better improvement in children's use of communicative turns, different words than number of story initiations	NR	No detail description about parents' outcome of intervention
Dale et al. (1996)	Positive relationships between allowing children more time for response and higher frequency of children's verbal engagement Increasement of verbal engagement and vocabulary acquisition of children with lower functioning More effects on the parents' use of language than on the children's language	NR	Selection bias (no random assignment), no information on attrition, small sample size, failure of measuring intervention fidelity, no generalization, no report of generalization
Hancock, Kaiser, & Delaney (2002)	Positive changes in parents' use of strategies - responsive feedback, expansions, pause errors, praise, utterances including four or more words Improvement in percentage of child utterances of three words or longer, self-initiated utterances, and number of total utterances	Parents completed a 10-item with interview about parent satisfaction They reported satisfaction overall training sessions	No measurement of fidelity for intervention training (such as use of fidelity checklist or logs)
Hargrave & Senechal (2000)	Significant gains in language skills for DR condition in 4 weeks Large effect size for expressive vocabulary scores in DR condition	NR	No data of parents' behavior change, no report of fidelity data, no generalization process, and lack of information on reliability and social validity

<Table 4> Major Findings and Threats to Validity (Continue)

Study	Synthesis Findings (Results)	Social Validity	Threats to Validity
Hemmeter & Kaiser (1994)	Positive effects on children's spontaneous communication, use of target words Improvements in parent use of feedback, modeling, and incidental teaching strategies in the home generalization setting	More child enjoyment reported than the parent enjoyment after intervention	Low reliability measures (instrumentation effects), no record of measurement of fidelity for intervention training
Kaiser et al. (1995)	Great improvement in children's responsiveness to parent teaching attempts across group and individual interventions Better positive effects on individual training sessions than group training sessions in promoting parents' use of milieu teaching strategies	NR	No generalization report, no data for social validity, interactions among selection and other threats
Kaiser et al. (1996)	All parents decreased their use of not following the child's lead Ten parents increased their use of child's language targets during follow-up period Eleven out of twelve children showed increases with the average number of child utterances	Parent satisfaction survey shows that they were highly satisfied with training	Weakness of combined group and single-subject design (testing effects), low reliability measures
Lonigan & Whitehurst (1998)	Children in both home & daycare conditions had higher expressive vocabulary scores than control children Home-based DR conditions showed more effects in the use of descriptive language than center-based group conditions	NR	Lack of fidelity data, no report on parents' behavior change, no report of social validity
Peterson, Carta, & Greenwood (2005)	Mand-model procedures were more readily acquired than other skills during follow-up Greatest increase in child comments occurred during the responsive interaction phase, and the greatest increase in correct responses occurred during the incidental teaching phase	All parents reported that the interventions were very helpful, and expressed positive feelings about their participation in the study	Failure of measuring intervention fidelity, history effects, and interactions among selective attrition and other threats
Whitehurst et al. (1994)	Family reading survey report positive correlations between number of books in the home and the child's enjoyment of shared reading Children in the school plus home condition showed better scores in word test than children in the school condition only	NR	Lack of fidelity data, no data for parents' behavior change, participant selection bias, no report of social validity

V. Conclusion

One of the most notable findings from this study was the relationship between parents' use of language strategies and positive changes in their children's language use. Six DR studies reported that when parents implemented language intervention at home, children increased their communicative and expressive language skills greater than other children in the classroom setting. This DR finding was also reported in a meta-analysis study (Mol, Bus, De Jong, & Smeets, 2008) and in a DR research synthesis with preschool children (Trivette & Dunst, 2007). Although eight studies reported improvement in both parent outcomes and child outcomes, there were differences in the extent of increases in the parents' use of language strategies and in the children's language skills. From those eight studies, MLT intervention was slightly more effective in increasing the use of language strategies in parents than in enhancing children's expressive language skills. Also, two studies (Hancock, et al., 2002; Hemmeter & Kaiser, 1994) which reported the level of satisfaction about the intervention procedure indicated that the extent of parents' satisfaction was higher than that of children's satisfaction.

The other appealing feature in the parent-implemented language intervention is that some language strategies (e.g. expanding, repeating, and imitating children's responses) were used more frequently than modeling children's target words to increase children's verbal communications during language interaction. For children with language delays, the specific strategies, which are to expand children's responses, to ask different types of questions, and to provide enough time to get response, have shown their effect to increase children's expressive language development from MLT and DR intervention procedures (Crain-Thoreson & Dale, 1999; Crow, Norris, & Hoffman, 2004; Dale, et al., 1996; Hancock, Kaiser, & Delaney, 2002; Kaiser et al., 1995; Kaiser, et al., 1996; Peterson, Carte, & Greenwood, 2005).

Another finding also suggests the pivotal importance of individual training in teaching language strategies and individual language intervention implemented by parents. Results of MLT studies, which conducted both individual training and group training, indicated that the individual training

sessions were more effective than group training sessions (Hancock, Kaiser, & Delaney, 2002; Hemmeter & Kaiser, 1994; Kaiser, et al., 1995). Also, DR intervention studies reported that the individual reading condition resulted in producing more positive outcomes than group reading sessions (Crain-Thoreson & Dale, 1999; Whitehurst, et al., 1994). Cutspec (2006)'s synthesis also indicated that one-to-one reading produced more positive outcomes than small group sessions, especially with children who were at risk for language delays.

1. Limitations

This study is limited by the selection of the studies that were only published in peer-reviewed journals. Other resources such as unpublished article, dissertation, a paper presented at a conference might have reported studies that conducted parent-implemented language intervention. Studies that published in peer-reviewed journals mostly report positive outcomes that determine the effectiveness of the intervention, so the findings in this synthesis are limited by those results of the selected studies. This limitation makes it hard to find the weakness of intervention or method procedure and the elements that are missed in the selected study. Thus, the findings of studies collected from different resources should be analyzed to provide strong conclusions from the selected studies in this synthesis. Although the selection of studies is limited, the findings in this study provides the useful resources for the effective use of language strategies in the parent-implemented language intervention and the importance of implementing the fidelity in the intervention procedure.

2. Implications

Based on the findings in analysis, several implications can be drawn for further research in the area of parent-implemented language intervention. First, future studies need to develop an efficient way to collect strong types of fidelity data that can demonstrate how well parents implement the intervention as planned. In this analysis, there was difficulty in establishing

whether each study actually implemented fidelity of the parent-implemented language intervention because most studies did not develop a certain protocol to measure fidelity. The fidelity implementation needs to be conducted with scientifically reliable and valid measures so that the implementation practice is facilitated in a functional way (Fixen, Naoom, Blase, Friedman, & Wallace, 2005). Research, which includes sufficient fidelity data that measure parent's use of language strategies, will effectively examine the effect of the parent-implemented language intervention on the improvement of children's language outcomes. In addition, parent-implemented language intervention studies that provide parent training need to use fidelity measurement protocols for the training procedures to determine whether researchers implement the training sessions as planned. Examining the fidelity of parent-training sessions will provide strong evidence of determining the extent of parents' acquisition of language strategies.

Second, studies of parent-implemented language intervention need to include different characteristics about the family's culturally and linguistically diverse backgrounds. In this synthesis, only one study (Hancock, Kaiser, & Delaney, 2002) reported primary caregivers' demographics such as the parents' education level, age, socioeconomic level, and ethnicity. Future research should examine the effect of the intervention implemented by parents who have different cultural and language backgrounds on increasing children's learning outcomes. Also, more studies need to examine the relationship between the different backgrounds of those parents and the implementation of the intervention strategies. Moreover, parents' priorities and needs should be reflected during the parent training and intervention procedures.

Third, studies should focus on maintaining and generalizing the effects of parent training and the language intervention across different settings. The language delays in preschool-aged children affect their early literacy and other academic skills during later school years. However, few studies examined the effect of the parent-implemented language intervention on their later success. More longitudinal studies need to demonstrate the effect of the parent-implemented language intervention on parents' generalized use of language strategies and the maintenance of parents' implementation of these strategies over time. Future studies that consider these suggestions will demonstrate the significant effectiveness of parent-training and parent

-implemented language intervention for young children with or at risk for language delays.

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언어 지연 아동을 위한 부모-실행 언어 중재에 관한 연구 분석

이 연 우
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<요 약>

본 연구는 부모-실행 언어 중재가 언어 지연 유아의 의사소통과 표현 언어 향상에 미치는 정도를 1990년 이후 실행된 연구들의 분석을 통해 알아봄으로서 효율적인 부모-실행 언어중재 방법에 대해 제안하고 있다. 부모 훈련과 언어 중재에 관한 구체적인 특성들이 비교 분석되었으며, 중재 전략의 효과성에 영향을 주는 중요한 특성들을 조사하였다. 총 11개의 연구가 선정되었으며, 각 논문별로 대상자의 특성, 부모 훈련과 언어중재의 주요 특성, 연구 설계와 결과, 주요 결과와 중재 충실도와의 관계 등을 비교 분석하였다. 본 연구 분석을 통해, 부모실행 언어 중재는 아동과 부모의 언어 전략 사용의 정도에서 차이를 나타내었으며, 부모실행 언어 중재 전략 중 아동의 반응을 기다리고, 여러 종류의 질문을 던지거나, 충분한 반응시간을 주는 것과 같은 전략들은 다른 전략들보다 아동들의 표현 언어 향상에 도움이 되었음을 기술하였다. 언어 중재에 관한 충실도에 대해 구체적인 정보를 기술한 연구는 11개 중 6개로서, 부모의 언어 전략사용에 대한 빈도수를 기록하거나, 실행 체크리스트를 사용하였음을 보고하였다. 특히, 언어 중재에 대한 충실도를 잘 수행한 연구에서, 대상아동들의 표현 언어가 다른 연구보다 더 많이 향상되었음을 기술하였다. 본 연구는 또한 부모 훈련과 언어 중재에 있어서 부모의 전략적인 언어 기술의 사용과 아동의 의사소통 능력 향상을 실증적으로 뒷받침하기 위해, 보다 효과적인 중재 충실도 실행의 필요성과 중요성에 대한 시사점을 제공한다.

주제어 : 언어 분석, 부모-실행 언어 중재, 부모 언어 훈련, 중재 충실도 실행, 언어 지연/언어 장애 유아

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