RESEARCH ARTICLE

Milieu Language Strategies on English Language Growth in Children Who Are English Language Learners

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It was aim of this study to examine how two distinct perspectives, bilingual education and special education, can be used to inform each other to provide preschool teachers with effective language strategies to use with children learning English as a second language. The researchers found milieu language strategies can encourage English growth and can be implemented with fidelity by the teachers into regular, daily interactions and teaching with the children. Language-based teaching strategies are helpful in facilitating verbal interactions between children and with the teachers while promoting language growth in children who are native English speakers and those who are learning English as a second language.

Searching for methods and strategies to assist children who are English language learners (ELL) is not a new phenomenon, given the long history of bilingual individuals in the United States and the research conducted on the outcomes and developmental progression of second language acquisition of bilingual individuals and children. There are critical challenges and concerns for children and teachers given the rapid increase of children who are ELLs in schools across the nation (Garcia & Jensen, 2009; NCES, 2010; Migration Policy Institute, 2010). How to best teach children from non-English speaking families challenges many teachers due to the language barrier between the children and the English-speaking teachers. When teachers do not know how to best teach children from homes that do not speak English, the children tend to have lower levels of achievement than their English speaking peers and higher school drop-out rates (Bruna, Vann, & Escudero, 2007; Ruiz-de-Velasco & Fix, 2000; Waggoner, 1999). As a result, it is imperative that effective and appropriate teaching strategies be identified that teachers of all grades, but especially preschool, can implement to foster the English language growth and development of children who are ELLs. Effective teaching strategies for preschool teachers are especially important because many children who are ELLs first encounter an English-dominant environment in preschool (Jones, 1993).

The issue of bilingual education can be a sensitive topic, especially as children who are ELLs have been too often mistaken as requiring special education and their first language regarded as damaging to their English acquisition and use (National Head Start Association, 2014; Valdes & Figueroa, 1994). According to National Center of Education Statistics (NCES; as cited by Proctor, Dalton, & Grisham, 2007), children of Spanish-speaking Hispanic decent, compared to all other ethnic and minority groups in the U.S., have the lowest rates of achievement and attainment in school. Another issue that further compounds the school achievement and performance rates of children who are ELLs is teacher preparedness and training in teaching children who are ELLs. In a national study, 54% of teachers educate children who are ELLs; yet, only 17% of the teachers felt prepared to meet the educational needs of these children (NCES, 2002). Another study found that teachers reported not having adequate training in effective teaching practices they could use with children who are ELLs (NCES, 2001). In a recent study of Head Start teachers, many teachers reported they had a limited number of effective strategies they could use for communicating with children who are ELLs (Worthington, et al., 2011). Research has linked teacher preparedness and training to children's language and literacy skills both for children who are acquiring their native language or another language (Burgess, Lundgren, Lloyd, & Pianta, 2001; Weigel, Martin, & Bennett, 2005; Zepeda, Castro, & Cronin, 2011).

It is aim of this study to examine how two distinct perspectives, bilingual education and special education, can be used to inform each other. This study examined how instructional strategies created and implemented from a special education perspective based on multiple developmental and recommended teaching practices, milieu language strategies, can be used with children who are ELLs as a means of providing teachers with developmentally appropriate strategies and providing children who are ELLs with consistent comprehensible input to acquire English.

This study recognizes that children with special needs, children who are ELLs, and native English speakers do not necessarily have similar abilities and learning needs. These groups of children are similar in that they need to be able to communicate with those around them, teachers, adults, and peers; and may benefit from systematic instruction in learning language. Children who are ELLs are able to draw on their knowledge and understanding regarding the function of language from their first language to transfer to the second language to make meaning of the second language input they are receiving (Baker, 2006; Cummins, 1984; Ellis, 2008; Valdes & Figueroa, 1994). Children will transfer skills from whatever language stage they are in or have skills previously acquired in their first language to the second language, such as vocabulary, phonological processing skills, alphabet or print similarities, decoding skills, and other skills (Baker, 2006; Ellis, 2008). The milieu language strategies enable the teacher to provide the children who are ELLs comprehensible input and the opportunity to draw upon and transfer their underlying language knowledge from their first language to English. The milieu strategies provide the teachers a systematic approach to helping the children acquire and use the surface features of English that may not directly transfer from the children's first language to English. The strategies provide a framework for the teachers to help the children acquire language skills and transfer language knowledge the children may only have in their first language.

MILIEU LANGUAGE STRATEGIES AND RESEARCH

There are four milieu language strategies: model, mand-model, time delay, and incidental teaching. The strategies are based on environmental arrangements and joint attention which provide the foundation for teacher-child interactions. These strategies were originally developed by Hart and Rogers-Warren (1978) and have been further defined and conceptualized by others, including Kaiser, Hendrickson, and Alpert (1991), Warren, Yoder, and Leew (2002), and Hancock and Kaiser (2006). The environmental arrangement is based on two ideas: there are interesting materials in the classroom which the child is interested in and that some of the interesting materials are out of reach of the child.

The first milieu strategy, model, occurs when a teacher focuses on the interesting object the child has. The teacher provides a simple verbal model, a statement, regarding the object. When the child provides a correct response to the teacher's model, the child is praised and the utterance is expanded; if the object was out of reach, the object is given to the child. If an incorrect or no response is given to the teacher, the teacher repeats the model, up to three times while giving the child time to respond each time, and is given the object after the third model.

The second strategy, mand-model, is used when the child is highly interested in an object and in obtaining it and the teacher feels the child is likely to be able to respond correctly to the teacher. The teacher provides a mand, either a complex question or statement, to the child regarding the object. If the child responds correctly, the object is given, if not, the teacher repeats the mand up to three times unless the child is losing interest and then the teacher provides a model, which is less complex and gives the child the object.

The third milieu strategy is time delay and occurs when the teacher is deliberately not responding immediately to the child's request or typical utterance in order to encourage the child to communicate with the teacher. There are eight ways in which a teacher can create a time delay situation: the first two are model and mand-model, previously described, sabotage in which the child is directed to a task requiring materials that are not within reach, violation of expectations occurs when the teacher deviates from the typical routine to do something silly instead, protestation is when the teacher does something the child does not like to encourage the child to protest about it, difficult materials occurs when the child is presented with a task that requires assistance from the teacher and the child is encouraged to request assistance, multiple parts occurs when a child is presented with a multi-step task but does not receive all the necessary materials to complete the task, and finally, choice making is when a child is non-verbally presented a choice between two options and the child has to indicate a choice. All of these situations are designed to encourage the child to ask for assistance.

The fourth milieu strategy is incidental teaching and is the most linguistically demanding for the child. This strategy is used to teach the child a complex language skill, such as conversational turn taking about the interesting object, or to improve the child's speech intelligibility. Any of the above described situations is used as a starting point for this strategy.

Several studies have examined the use of milieu language strategies with children who have language delays. The studies examining the outcomes of milieu language strategy use have consistently found that the use of these strategies is effective for facilitating language use and growth in children with language delays (Hancock & Kaiser, 2002; Kaiser & Hester, 1994; Warren, et al., 2008; Yoder, et al., 1995). More recently, research conducted with children who have Autism has found milieu strategies to be effective in increasing their social communication skills. Considerable research has focused on the use of these strategies with much younger

children, usually ranging in age from 9 to 15 months (Fey, et al., 2006; Warren, et al., 2006; Warren, et al., 2008; Warren, et al., 2002; Yoder & Warren, 2002). None of the research conducted with young toddlers or preschoolers has followed the use of milieu strategies over the course of a school year or with children who are ELLs.

These studies illustrate the benefits arising from the use of milieu language strategies (Fey, et al., 2006; Hancock & Kaiser, 2002; Kaiser & Hester, 1994; Warren, et al., 2006; Warren, et al., 2008; Warren, et al., 2002; Yoder, et al., 1995; Yoder & Warren, 2002). The children in the above studies demonstrated increases in their overall communication by increases in the length and number of utterances, the number of different words used, the number of spontaneous utterances, and turn taking behaviors. All the studies involved training teachers to implement milieu strategies, monitoring teacher implementation of the strategies, as well as assessing children's language use before, during, and after completion of the interventions. As a result, all the studies had small sample sizes. While this study configuration is typical of intervention studies, it does limit generalization of the results to children with other language skill and learning needs. None of the studies examined if the use of milieu language strategies may be used as effectively with children who are ELLs and this is potentially the first study to examine the effectiveness of using milieu language strategies with children who are ELLs. It is important to point out that children who are ELLs do not necessarily have a language delay or deficit, rather unique and varying levels of proficiency in two languages, which provides a wonderful opportunity to examine how the milieu strategies can be used to positively influence their second language acquisition.

RESEARCH QUESTIONS

Three research questions were addressed in the current study:

Research Question 1: What will teacher implementation fidelity of milieu language strategies look like in the classroom when given ongoing feedback and coaching?
Research Question 2: Do milieu language strategies have a positive impact on language growth for children who are ELLs?
Research Question 3: What are Head Start teachers' perceptions of using milieu language strategies to increase language growth in children who are ELLs?

MEASURES

Milieu Language Strategy Intervention Implementation Checklist

During the observations, a milieu language strategy intervention implementation fidelity checklist was completed weekly, which was created for this study. The 20 items on the checklist were designed to be interrelated with each other and to reflect basic similarities and prerequisites for effective interactions between the teacher and the child. Items included: teacher identified child's preferred routines/activities, teacher uses materials to encourage communication, teacher physically engages in child's activity, and teacher models language at the child's ability level.

For coaching purposes, the teachers had to achieve a weekly minimum fidelity score of 80% of the checklist or they received coaching during the next strategy implementation session. Feedback and coaching were provided weekly or as needed to maintain fidelity of strategy implementation.

Bracken Basic Concepts Scales

The Bracken Basic Concept Scales, Third Edition (BBCS III; Bracken, 2006) were administered in the fall and in the spring in English to determine English language growth of the study children during the school year. The BBCS III is an assessment of basic concepts that are related to school readiness along with an assessment of expressive language for children ages 3-0 to 7-0 that has an overall internal consistency of r=.94 and correlates at moderate to high levels with other assessments used with young children, such as PPVT, PLS-4 and Binet IV (Bracken n.d.).

Picture Naming Individual Growth and Development Indicator

The Picture Naming Individual Growth and Development Indicator (IGDI; University of Minnesota, 2006) is a minute-long assessment used with children ages 3-5 that has been shown to be a valid and reliable measure of the children's expressive language skills (Nitsiou, 2006). It was administered to each child individually weekly by showing the child a series of pictures of objects found in their natural environments, such as ball, train, fish, belt, banana, and orange (Missall, McConnell, & Cadigan, 2006). The number of correctly named pictures in English within the one minute was the child's score (Missall, et al., 2006).

PARTICIPANTS

Three teachers and their classes at a Head Start program in Iowa participated in the study during the 2009-2010 school year. At the beginning of the study, teachers and the parents of all the children in the three participating classes signed a consent form.

The Head Start program had 7 classrooms that served 107 children during the previous school year, 2008-2009. Of those children from the previous school year, 79% were from families who were below the poverty line. None of the teachers spoke a language other than English, all of them were Euro-American females, and each had at least an A.A. degree.

Three teachers at this Head Start location participated in the study. They taught between 11 and 16 years at Head Start. There were 18 children in the three classrooms, 16 of the 18 children in all of the classrooms were ELLs and were eligible to enter kindergarten the following school year. Other languages spoken by the children included: English, Spanish, Lao, Vietnamese, Hmong, Micronesian, Sudanese, and German. In all three classrooms there were either 2 or 3 children who had minimal to no English exposure at home prior to the study.

Three children in each of the three teachers' classrooms were the target children for the milieu language strategy intervention for a total of 9 children. Children were selected to participate in the study based on English exposure and fluency. One native English speaker was chosen in each classroom to be the comparison child and two children who had minimal to no

English exposure at home prior to the study to be the intervention group. No preference was given to the first language of the children who were ELLs; however, all of the children who were ELLs and participated spoke Spanish as their first language.

PROCEDURES

Teacher Training

Teachers received weekly trainings of 45 minutes for five weeks near the beginning of the study at the Head Start research site. Each training session focused on a different milieu strategy, starting with the foundational strategies and building up to the more complex strategies, such as the incidental teaching strategies. At the end of each training session, the teachers brainstormed ideas about how and when they could implement the strategies with the participating children during the upcoming week. Following the first training session, the teachers began receiving weekly coaching and feedback regarding their strategy implementation with the participating children to ensure the fidelity of strategy implementation. Strategy implementation was staggered across the three participating children. Center time, a time when children could choose what learning center to be at, such as dramatic play, reading books, sand table, was chosen for the weekly observations as the teacher and the participating children had several opportunities to interact and for the teacher to implement milieu strategies with these children.

METHODS

A mixed-methods design using both quantitative and qualitative data was used to best examine and analyze the research questions. A checklist was used weekly to assess the teachers' fidelity of implementation and was tallied each day. One quantitative method, multiple baseline single case design, was used to analyze the relationship between the teachers' use of the milieu language strategies and the children's language growth over time and compared to the scores on the Bracken Basic Concept Scales, Third Edition (BBCS III; Bracken, 2006). A qualitative method, case study, was used to examine and understand the teachers' perceptions of the effectiveness of the milieu language strategies as beneficial teaching strategies they could use with children who are ELLs in the future.

Multiple Baseline Single Case Design

A multiple baseline single case design was selected for this study as the most effective method to examine closely the relationship between changes in an independent variable (teacher use of milieu strategies compared to typical instruction) and dependent variables (child expressive communication as measured with the Picture Naming IGDI; University of Minnesota, 2006).

Once three baseline data points were collected, the teachers began receiving training on the milieu strategies and implementing the strategies with one of the three participating children in their classrooms. One child out of the three from each classroom was randomly selected to be

the first child to receive the milieu strategy intervention after the baseline phase. The other two children in the classroom who had met the selection criteria continued to be assessed weekly but did not immediately receive the milieu language strategy. The three children received the intervention serially at different points in time during the school year.

Two different analyses were conducted on the multiple baseline single case data, visual analysis and percentage of non-overlapping data points. In visual analysis, the plotted data are examined for evidence of a pattern, an increase, a decrease, or a stable line (Riley-Tillman & Burns, 2009). In the current study, an increase over the plotted data was desirable as it was hypothesized that the children's language would grow over time. The second analysis conducted on the multiple baseline single case data was the percentage of non-overlapping data, which is used when an increase in the target behavior is expected. The percentage of non-overlapping data was used because it corresponds to effect sizes typical in quantitative methodology to determine the effectiveness of a treatment on an outcome. Scruggs and Mastropieri (1998) have identified effect sizes based on the percentage of non-overlapping data with below 50% as an ineffective intervention, 50-70% a slight or questionable intervention effect, 70-90% as an effective intervention, and above 90% as a highly effective intervention.

Thirty percent of the Picture Naming IGDI (University of Minnesota, 2006) and the BBCS III (Bracken, 2006) assessments were video-recorded to check administration reliability. Reliability ranged from 72% to 100% with an average reliability of 98% on the Picture Naming IGDI. Reliability on the Bracken Basic Concept Scales ranged from 82% to 100% with an average reliability of 96%.

Case Study

A qualitative case study methodology was used to evaluate the teachers' perceptions about the implementation of the milieu strategies, as well as their perceptions of the impact of the strategies on the participating children's language growth. The three Head Start teachers participated in one focus group and two individual interviews that were audio recorded and later transcribed for analysis. The focus group occurred at the beginning of the school year explored what instructional strategies the teachers were currently using, the number of children in the classroom, and which children met the selection criteria. The individual teachers participated in two individual interviews during the last half of the school year. Each teacher was asked to discuss her perceptions regarding the progress of each of the three participating children's language growth to date and then was presented graphs of the children's Picture Naming IGDI data and then asked to discuss how these data correspond to her personal perceptions of the participating children's language growth. In the final interview, teachers were asked the above questions and if they intended to use the strategies again in the future with other children.

Within the case study design, data from the focus groups and individual interviews were analyzed and coded for themes using within-case and cross-case analyses. Themes, important concepts from individual data (Lichtman, 2006) and common across all interviews (Creswell, 2007), were extracted from each case, each teacher in this study, that related to the research questions. Themes pertaining to the teachers' perceptions of the milieu strategy intervention and the impact of the strategies on the children's language growth were the focus. As data analysis progressed, other themes and sub-themes emerged from the data that related to the teachers' perceptions were examined and incorporated, as applicable, into the overall themes relating to

the research questions. For this study, the multiple sources and data collection methods were used to provide trustworthiness and rigor to the analysis: multiple baseline single case data, a focus group, individual interviews, member checks, and prolonged involvement in the data collection process.

RESULTS

Fidelity of Teachers' Strategy Implementation

In response to the first research question, the weekly coaching fidelity sheets were examined as well as field notes taken about each observation of center time and the teachers' comments each week. Two different patterns of implementation occurred among the three teachers which resulted in two different coaching and feedback responses.

Two teachers consistently implemented the milieu language strategies with the children and only with the children who should be receiving the language strategies. These two teachers actively participated in the training sessions and at the end of each training session were able to identify through the discussion time at the end of the sessions different opportunities during which they could implement the strategies with the participating children. During the training phase, Teacher 1 implemented the strategies and the prerequisite aspects of the strategies correctly 88.6% of the time and Teacher 2 97% of the time. During the weekly observations following the training sessions, these two teachers needed little to no coaching and feedback about their strategy implementation. These two teachers were able to flexibly use the strategies during their interactions with the participating children. Over the entire school year, Teacher 1 implemented the strategies correctly 91% of the time and Teacher 2 implemented the strategies 92.3% correctly of the time.

The third teacher, did not consistently implement the strategies with the participating children. She participated in the training sessions, but struggled to implement what was presented and discussed during the training sessions. She received additional coaching and feedback weekly, but even with this additional coaching, she implemented the strategies correctly 62.6% of the time during the training phase. After the training sessions, she continued to receiving weekly coaching and feedback about different activities and interactions during which she could use the strategies with the participating children. Overall, Teacher 3 was able to correctly implement the strategies 56.5% of the time during the entire school year.

Impact on Language Growth

To answer the second research question, the children's fall and spring scores on the BBCS III assessments and the weekly Picture Naming IGDI scores were examined. At the beginning of the school year, all six of the children who were ELLs were considered below the age equivalent approximations on the BBCS III in both receptive and expressive communication skills. The three children who spoke English as their first language were at or above the age equivalent approximations on both communication measures of the BBCS III. At the end of the school year, the four of the six children who were ELLs showed increases in their receptive language scores

of at least one year based on the age equivalent approximations, while the other two children showed increases of less than one year in the age equivalent approximations. On the expressive measure of the BBCS III, four of the six children who were ELLs showed increases of at least 6 months or more based on the age equivalent approximations, while one of the other children showed no change and one child a small increase in expressive language skills. The three children who spoke English as their first language showed increases on the expressive language measure of about one year based on the age equivalent approximations.

The BBCS III scores do not reflect the linguistic proficiency of the children who were ELLs because their Spanish language knowledge and skills were not assessed. The children's scores are presented as if they were monolingual English speakers rather than their linguistic proficiency and understanding of the function and use of language. The scores are presented in this way to indicate English language growth during the school year these children demonstrated and the potential language "gap" their teachers might perceive them as having. Their scores are also not a reflection of their cognitive functioning or ability.

The results of the Picture Naming IGDI displayed two patterns of responses to the milieu language strategy intervention during the school year. The three children who spoke English as their first language did not show any noticeable changes in their language use when correctly identifying pictures during the Picture Naming IGDI assessments (See Figures 1, 2, and 3). Following the implementation of the intervention, their assessment results showed a stable pattern of vocabulary and expressive language knowledge based on the percentage of non-overlapping data.

The children who were ELLs demonstrated gains in their expressive language skills and vocabulary knowledge based on the Picture Naming IGDI results. The children, following the implementation of the intervention, demonstrated slight to high effect sizes based on the percentage of non-overlapping data for correctly identified pictures, which can be considered an indicator of an effective intervention or treatment (Scruggs & Mastropieri, 1998).
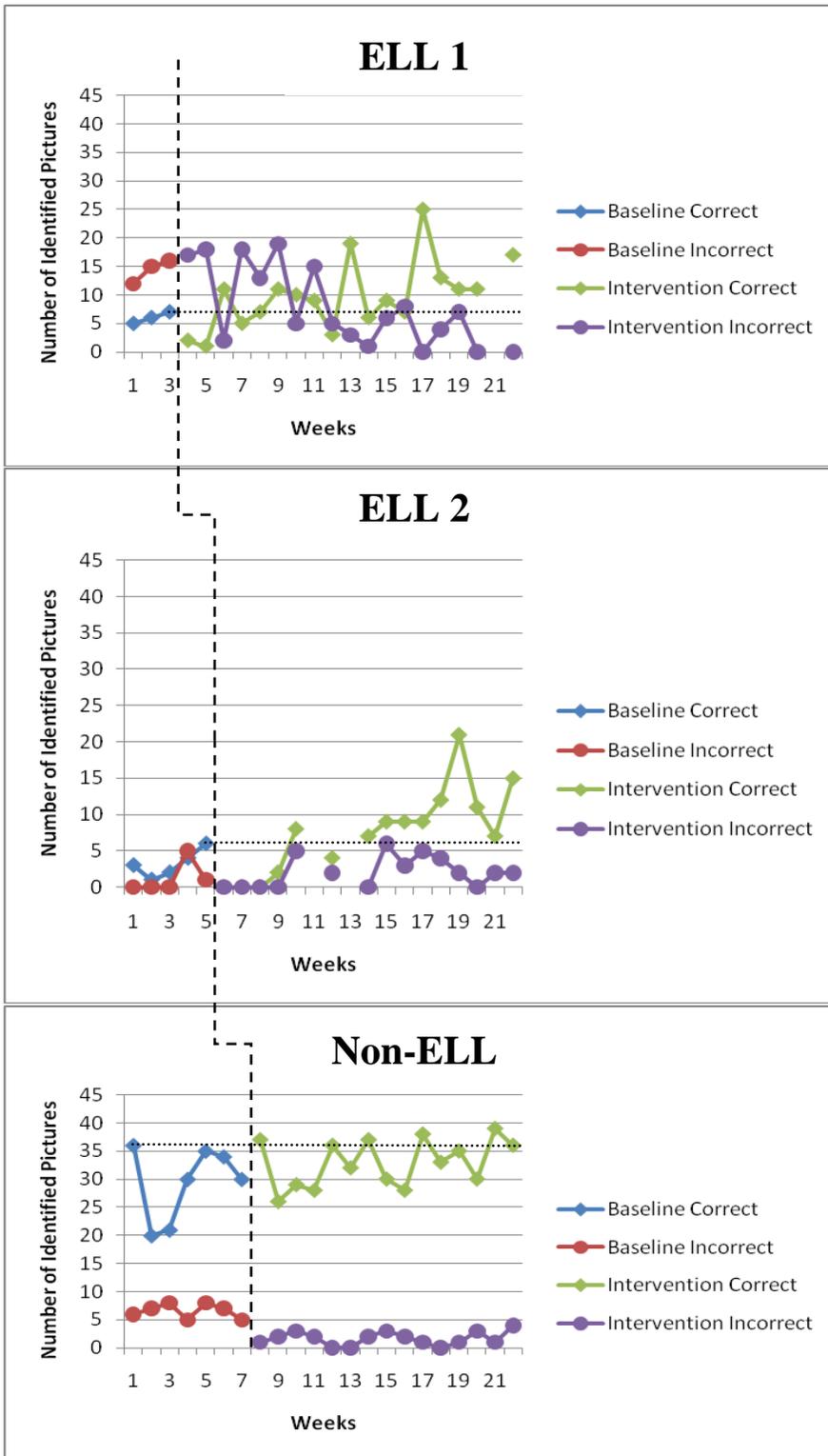
Figure 1. Weekly Picture Naming Individual Growth and Development Indicator assessment results in Teacher 1's classroom. The dotted horizontal line indicates percent of non-overlapping data and the dotted vertical line indicates the staggered baseline across the children.
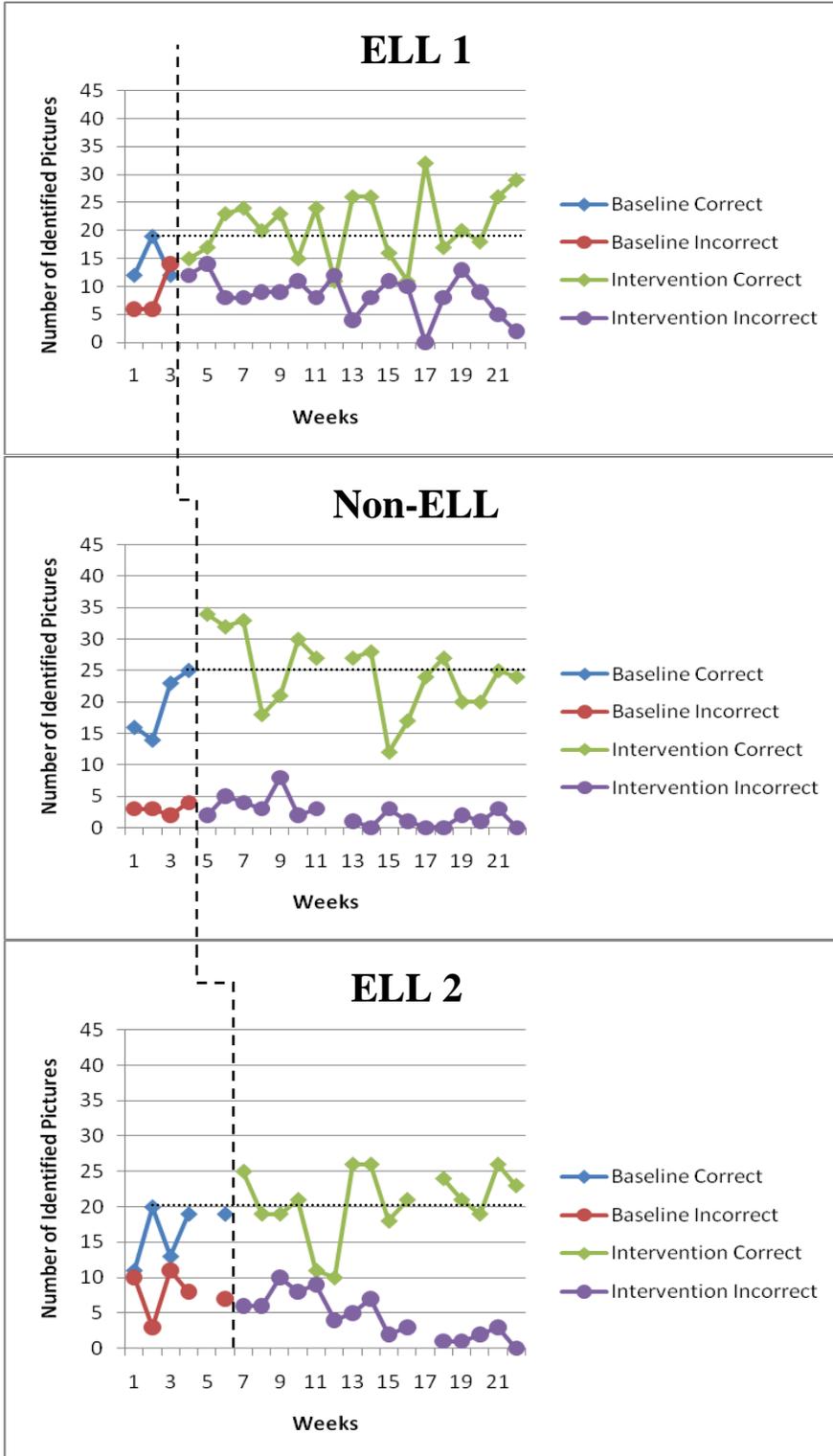
Figure 2. Weekly Picture Naming Individual Growth and Development Indicator assessment results in Teacher 2's classroom. The dotted horizontal line indicates the percent of non-overlapping data and the vertical line indicates the staggered baseline across the children.
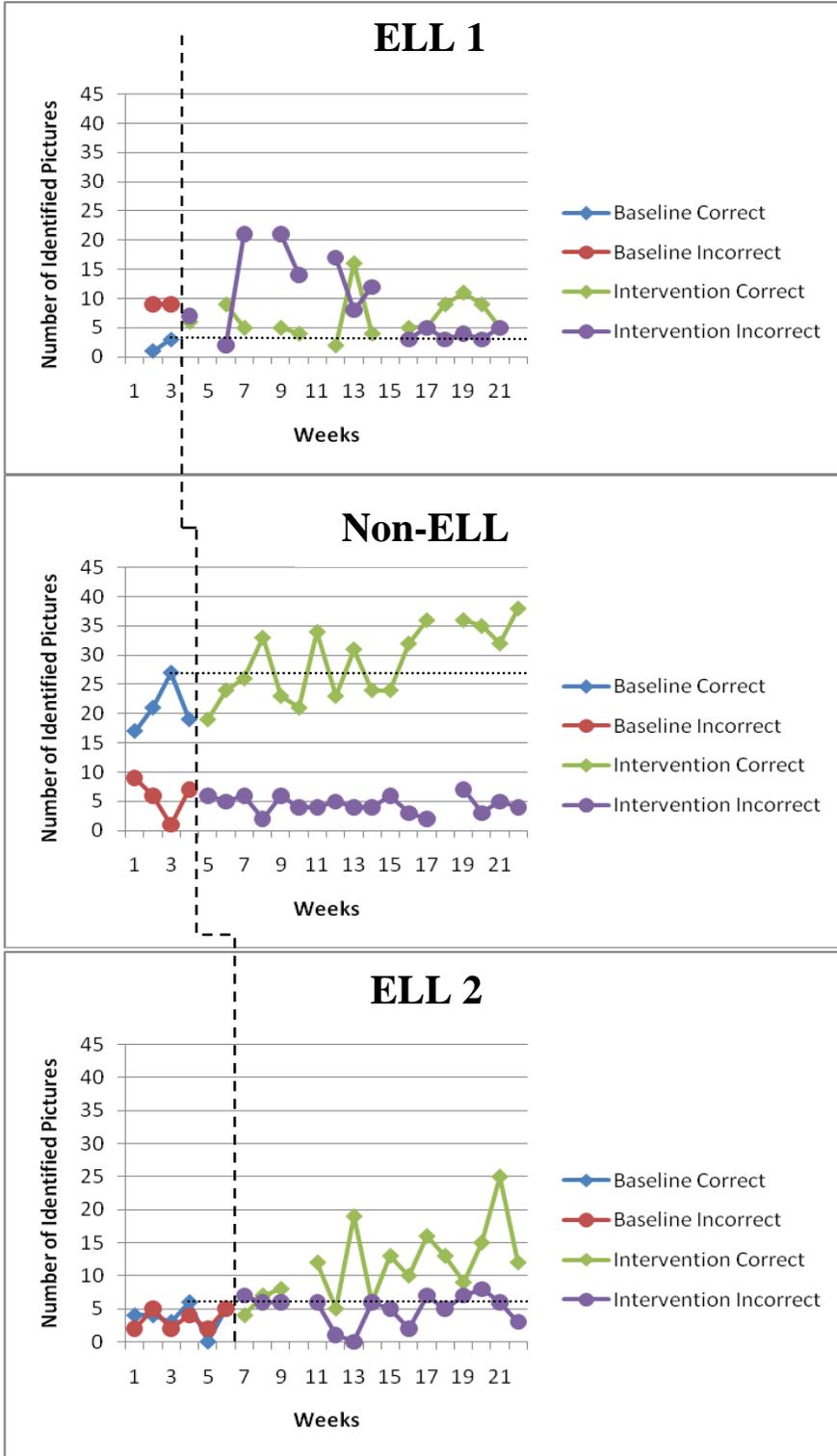
Figure 3. Weekly Picture Naming Individual Growth and Development Indicator assessment results for Teacher 3's classroom. The dotted horizontal line indicates percent of non-overlapping data and the vertical dotted line indicates the staggered baseline across the children.

TEACHER'S PERCEPTIONS OF THE STRATEGIES

To answer the third and final research question, the transcripts of the focus group and the individual teacher interviews were examined. Four major themes were identified from the transcripts: perceptions of teaching strategies, perceptions about language acquisition, observations about the milieu strategies, and the impact and endorsement of the milieu strategies on the children's language use in the classroom.

Within the strategies theme, the teachers referred to the Positive Behavioral Support (PBS; renamed Positive Behavioral Interventions and Supports, PBIS; www.pbis.org) as a source of some of the strategies they used with the children in their classrooms. Teacher 3 felt that with PBIS, she had more strategies she could use than what she would have had otherwise if she were not a pilot classroom for PBIS. She also felt that because she was familiar with and using the PBIS strategies she had a better understanding of how to adjust and be flexible in her strategy use with the children.

While the other two teachers, Teachers 1 and 2, had not been trained on PBIS, they had other strategies to contribute to the discussion about the usefulness of strategies when interacting and teaching young children. They mentioned using open-ended questions, using picture cues, repetition, and saying things for the children who were ELL in their classrooms. All three of the teachers struggled to identify specific strategies they use with children and specifically with children who were ELLs. Teacher 2 commented that it was difficult for her to identify strategies because strategies are something you "just do and you don't have to think about it and spit it out what it is". All the teachers stated that strategies were an important aspect of teaching young children, regardless of the children's first language. Despite any frustrations they had at the beginning of a school year trying to determine which strategies were going to work well with that particular class of children and the individual children, the teachers recognized the benefits and value they gained by utilizing different strategies with the children. "I think the strategies overall do work throughout the year because you'll see such big growth in their learning and not just learning English but other things the other academic skills we're working on (Teacher 3)."

The second main theme was the teachers' perceptions of children's second language acquisition. Underlying this theme was the idea that "young children learn so quickly", which created an interesting analysis of the teachers' responses because the teachers would acknowledge the importance of adjusting the strategies used with the individual children to conveying a belief that strategy use was not overly effective teaching the children since they would learn the content and the language easily through exposure to English.

The teachers felt that it was important to try to use Spanish with the native Spanish speaking children in their classrooms but they also expressed the need to help the children acquire English at the same time. All of the teachers agreed that they would often start off the school year using phrases or sentences in Spanish to help guide and interact with the children who were native Spanish speakers, but as the school year progressed, the teachers reduced the frequency with which they used Spanish as a method of communication with the children. All of the teachers stated they felt the children acquired English more quickly when they used less Spanish during their interactions with the children. "They seem to pick up English more quickly

when I just kind of slowly drop out the Spanish (Teacher 3)" and "they pick up the English pretty quickly even though you don't use Spanish a lot with them (Teacher 3)." Consequently, the teachers believed that they did not need to completely adjust their strategy use and interaction patterns with the children learning English since the children would acquire English and be able to function in the classroom with minimal input through their first language. However, even though the native Spanish speaking children were often the greater majority of the children in their classrooms, the teachers did not use as many basic words in the other non-English speaking children's first language, such as German, Lao, or Sudanese. Instead, the teachers used English with a few words to short sentences in Spanish to communicate with all of the children in their classrooms.

The third theme was the teachers felt that the milieu language strategies were similar to the strategies they had been using before the study. When Teacher 3 was asked about the effectiveness of the milieu strategies, she replied, "I think they're similar to what we have always done and I think they were successful." If this teacher's response is taken on face-value, it is obvious she believes that using strategies to help children understand and learn is important. However, if her response is looked at more closely, it becomes apparent that she does not stop and reflect on the impact that strategies, when thoughtfully, appropriately, and intentionally used, can have on children's learning and development. Teacher 1 mentioned how learning about the milieu language strategies made her stop and think about when to use specific strategies and what her intended outcome for using a specific strategy was because using strategies for her had become a routine, automatic behavior. One outcome of this teacher stopping to reflect and recognize her strategy use with three participating children was she thought about how these strategies function and different ways she could change how she used them and being able to adjust her use of strategies to each child's level of language ability and production.

There were two aspects of the strategies that the teachers kept hinting at throughout their discussion of the milieu strategies. The first was the idea of automaticity when using strategies in general because the teachers did not think about what strategies they were using, or even if they were using appropriate strategies with the children. The second idea was a desire to not need strategies after the child had acquired the skill or knowledge that was the focus of the lesson or activity. This idea of the disposability of teaching strategies is frightening when one considers the flexibility, purpose, and potential longevity of teaching strategies, to allow teachers to mold their teaching and scaffolding to promote continual learning and development in children, not just in preschool but into later grades.

The final main theme was the perceived impact of the milieu strategies on language use, which, upon analysis, was in opposition to the teachers' endorsement about the effectiveness of the milieu strategies on the participating children's language growth and use over the course of the school year. All of the teachers were able to provide many great examples of how the participating children's language use and social interaction patterns had changed, especially of the participating children who were ELLs. The teachers' comments provide an important context for understanding the complete reversal of their comments regarding their endorsement of the strategies. Each of the following examples provides behavioral evidence of the benefits the teachers saw from using the strategies with the children, such as the children using new words while interacting with a teacher, the children taking more initiative with peers, and a greater willingness to continue talking despite having an incomplete vocabulary to express his or her thoughts.

> He [ELL 1] doesn't have the high language but he is using sentences now, and comparable with some of the other children, and he does try and use a whole sentence but occasionally he leaves a word out because he is not sure what the word is. She [ELL 2] does that once in awhile but her sentences have gotten longer and more detailed (Teacher 2).

> She [ELL 1] is definitely talking more and using more words. I think from the beginning of the school year to now, she [ELL 2] is talking way more and isn't as hesitant to talk. She seems more sure of herself and will say something even though sometimes it isn't grammatically correct (Teacher 1).

> I think actually they're doing better [the participating children] than the other kids [non-participating children] because I think 'oh I should've used that with them too. They would've gained more language'(Teacher 3).

In these quotes, all three of the teachers refer to the behavioral evidence they have seen in these participating children's language growth, especially the children learning English. Each quote indicates differences each child exhibited in their own personal growth and acquisition of English and their willingness to use their emerging English skills to interact with others.

One aspect in these findings is the complete juxtaposition of the innumerable examples of how the children have grown in their English knowledge and use to the teachers' tentative endorsement of the milieu strategies. The following statements from all three of the teachers appear to be positive and supportive of the milieu strategies, but upon closer examination of the wording and the references they make to other strategies they have used, the interpretation of their statements as supportive becomes more doubtful and whether the teachers will actually use them in the future with other children.

> I think they're a lot similar to what we have always done and I think they were successful. I mean, she [ELL 1] has picked up more language than I ever expected her to (Teacher 3).

> I will probably continue because I have always used those [strategies]. I will probably do more of the joking teasing thing [sabotage] on children who are having more difficulty than in the past. I think that promoted me to use it more than I have been (Teacher 2).

> When you come back and say, 'wow', I think 'oh it is working'. I keep doing it [using the strategies] without thinking about how it is working (Teacher 3).

> I think sticking with it [the strategies] over time you can tell the growth of the two girls (Teacher 1).

Based on the teachers' statements in the focus group and the individual interviews, a mixture of beliefs about strategies in general and the milieu strategies emerged. All of the teachers acknowledged the benefits and value in using milieu language strategies with young children, but also expressed doubt about the necessity of using strategies once the children had

acquired the skills and knowledge targeted by the strategies. It was intriguing that the teachers were able to describe how each of the participating children who were ELLs had progressed in their English acquisition, but yet all of the teachers were tentative in their endorsement regarding the effectiveness of milieu strategies, much less strategies in general that they had used for years.

DISCUSSION

Several conclusions can be drawn from the results of this exploratory study. Based on the results on the teachers' fidelity of strategy implementation, on-going coaching and feedback was helpful for two teachers. Two of the teachers were able to reach high levels of fidelity during the training phase and maintain those for the rest of the school year. These two teachers did not require regular on-going feedback and coaching. The third teacher was not able to reach high levels of fidelity either during or after the training phase. She received weekly on-going coaching and feedback, but did not improve in her fidelity of strategy implementation with the participating children.

Overall, the children showed signs of language growth during the language intervention. Children who were ELLs showed gains in expressive and receptive language skills on the Bracken Basic Skills Measure as well as the Picture Naming IGDI. Most of these children had moderate to high effect sizes for the amount of language acquired during the study. The children who were native English speakers also increased in their language skills during the study. Their language growth was not as dramatic as the language growth of the children who were ELLs because their language skills were already at typical monolingual age levels. However, the results indicate that the strategies were successful with the children who were ELLs as they had the steepest language growth trajectories. The children who were ELLs still lagged behind their native English speaking monolingual peers, but they made gains in their English skills. Even though the assessment scores placed the children who were ELLs behind their monolingual English speaking peers, the assessments did not measure the children's linguistic knowledge and proficiency in both Spanish and English, which would have provided a better understanding and representation of the children's language skills. These results indicate that language-based teaching strategies are helpful in reducing the language achievement gap that exists between young children who are native English speakers and those who are ELLs. Being able to reduce the language gap between children who are ELLs is one way of reducing the academic achievement gap between native English speakers and children who are ELLs (Xu & Drame, 2008). However, it is important that through the process of acquiring English as a second language children do not lose their language skills in their first language (Baker, 2006; Valdes & Figueroa, 1994).

Finally, based on the teachers' statements in the focus group and the individual interviews, they were supportive of milieu language strategies but were tentative about the effectiveness of the strategies on language growth. All three of the teachers acknowledged there were benefits and value in using teaching strategies with young children, but they were doubtful how much they would use the milieu strategies again in the future with other children acquiring language skills. Therefore it is important to provide training and learning opportunities to teachers about the evidence supporting the use of developmentally appropriate and effective teaching strategies, such as milieu language strategies. It is important that teachers receive on-

going training and learning opportunities about effective teaching strategies since most teachers will at some point have children who are ELLs in their classroom (Gray & Fleischman, 2004-05; NCES, 2010; NSDC, 2001; USDE, 2007). However, for teachers to receive the maximum benefit from trainings and learning opportunities about teaching strategies, the trainings need to be on-going over several days or weeks (NSDC, 2001; USDE, 2007) and present ways teachers can implement new knowledge and skills into their teaching practices through self-reflection and coaching (Crandall, 2001; Hsieh, et al., 2009). The ability to implement a new skill into daily routines requires self-evaluation and self-reflection regarding performance (Bailey, 2001; Murphy, 2001).

CONCLUSION

These results indicate that milieu strategies can be used with fidelity by teachers in their daily routines and teaching and can positively impact children's language growth and acquisition. The results support other research regarding the effectiveness of milieu language strategies on children's language growth when the child is acquiring language skills (Kaiser, et al., 1993; Yoder, et al., 1995). While these studies focused on children with language delays, there are some parallels with children who are ELLs. One parallel is that with scaffolded language through intentional use of language-based teaching strategies, children acquire language and social skills they previously did not have. Another parallel between the research and the current findings is these strategies can be embedded easily into daily routines and activities with children, which promotes engagement and learning (Kaiser, et al., 2000).

LIMITATIONS

By measuring language use and growth over the course of a school year, there are several limitations to the results of the study. The first limitation is that while there were language gains in all of the children participating in the study, their language gains could be partly due to natural language acquisition processes. Even though a multiple baseline single subject research design was used to provide greater strength to the results, it is impossible to remove language input from children to determine the absolute effectiveness of an intervention. A second limitation of the study was that only Spanish speaking children were used as the participating children to receive the language-based intervention and language data was collected only in English. Thus, the results cannot be generalized to other languages and do not fully measure the children's language knowledge and capabilities. However, it is likely there would be similar results with other languages. Another limitation of the study was that it was conducted in a single Head Start program and therefore, the results cannot be generalized to other preschool programs or to in-home care options for young children, especially as Head Start enrolls children from lower socio-economic homes than may be typical for most preschool programs or in-home care. A fourth limitation was the small sample size, which also affects the ability to generalize the results to other preschool programs and young children who are ELLs. Another limitation was that insufficient information was gathered regarding all three teachers' practices of self-evaluation and self-reflection to see if these processes affect one's ability to implement a new skill with fidelity over time.

IMPLICATIONS FOR FUTURE RESEARCH

Additional research is needed to determine the effectiveness and benefits of using milieu language strategies with preschool-aged children who are ELLs. More research is needed to examine if shorter interventions that do not span an entire school year would result in similar levels of effectiveness. As most of the research on milieu language strategies to date has been with children with a language delay, it is important to determine if the strategies provide a unique influence on children's language acquisition who are learning ELLs. Also, more research is needed with milieu language strategies when used in the child's first language to determine if the strategies can positively influence the child's first language maintenance. It is possible that using the strategies in this way would promote the children's continued use and growth in their first language rather than abandon it over the course of the school year. It is important to find and utilize methods of teaching English to young children but not at the expense of their first language. Finally, additional research is needed that examines the use of milieu strategies across activities and throughout the day rather than focusing only on one activity, center time. It is possible that different patterns of strategy use by the teachers would emerge as well as different patterns in the children's language use and acquisition would emerge.

IMPLICATIONS FOR PRACTICE

There are several implications for practice emerged from the results of the study. The first implication for practice is recognizing that research from other fields regarding teaching strategies can be applied to new contexts and settings. However, it is important to recognize that each child has unique characteristics that will influence the outcome of teaching strategies and that not all children are alike, thus, similar results cannot be expected. While milieu language strategies originated from research with children with a language delay, children who are ELLs are not the same as children with a language delay. However, both groups of children have a similar need, to be able to communicate with those around them. Milieu language strategies provide a systematic framework for increasing the language expectations of children's language use in a positive interactive manner.

A second implication of the study for practice is the usefulness of on-going training and coaching. On-going training and coaching assisted two of the preschool teachers in their implementation of the language strategies. It is important to note that each person may need a different type of coaching than what is being offered, modeling, feedback, and mentoring have also been shown to facilitate the acquisition and use of new skills into daily routines and activities (Baily, 2001; Hanft, et al., 2004; Murphy, 2001). However, within the context of coaching and feedback, each person needs to be actively involved in self-evaluation and self-reflection practices to obtain the greatest benefit from the coaching and feedback.

Another implication for practice based on the study is the challenges that preschool teachers face teaching young children who are ELLs. It can be difficult to juggle the learning needs of all the children in the classroom; however, this will become a challenge that will face more and more teachers will face in the coming years as the number of children who are ELLs continues to increase. It is important for teachers to know the "why" behind the recommended use of teaching strategies and to be able to see how the strategies affect the children's learning.

Yet, it is also important for teachers to be able to flexibly use the strategies they have when they encounter new challenges and be able to purposefully choose which strategies to use with a child based on the known and desired outcome afforded with specific strategies. Consequently, teaching young children requires on-going learning and self-reflection to be able to meet all the needs of all the children in the classroom.

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