

EARLY INTERVENTION PROVIDERS' EXPERIENCES AND PERCEPTIONS OF
NATURAL ENVIRONMENTS

by

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ABSTRACT

KATHERINE MARIE STIMPSON. Early intervention providers' experiences and perceptions of natural environments. (Under the direction of DR. JANEDIANE SMITH)

The term *natural environment* has been a key component in the implementation of Part C early intervention, formerly known as Part H, since its inception in 1986; however, as Part C was reauthorized in 1997 and again in 2004, a clear definition of natural environments was still missing in federal legislation. The lack of an agreed upon definition of natural environments can create misunderstanding for early intervention providers. Misunderstanding of the term natural environment has led to early intervention providers having varied perceptions of natural environments as well as their professional role in these natural environments. Additionally, early intervention providers have varied educational backgrounds, experiences, and training that can affect their perceptions of natural environments. The purpose of of this study was to examine early intervention providers' experiences and perceptions related to natural environments. This study was used to gain an understanding of what aspects of early intervention providers' experience have the greatest effect on their perception of natural environments. Results suggested providers have concerns related to a clear definition of natural learning environments. Furthermore, the findings indicated that professionals have a desire to provide services in natural learning environments, but numerous challenges were identified within implementation of services. An overall pattern of results indicated the plausibility that collaboration between Part C agencies and provider networks has the potential to increase both the understanding of the term natural environments and the agreement related to best practices within natural learning environments.

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CHAPTER 1: INTRODUCTION

In 1986, the term *natural environment* surfaced for the first time when Public Law 99-457 was enacted and first appeared in law in the Individuals with Disabilities Education Act (IDEA) in 1991. IDEA established a program for serving children birth to three with disabilities titled Part H and is now known as Part C. Part C of IDEA sanctioned states to develop early intervention services that supported families and children birth to three with developmental delays, established conditions, or at risk. States that developed early intervention programs were required to meet specific federal requirements. One of the key regulations of Part C stated: “To the maximum extent appropriate to the needs of the child, early intervention services must be provided in natural environments, including the home, community settings in which children without disabilities participate (34 CFR 303.12(b), 1997)”. Sheldon and Rush (2001) proposed the reauthorization of IDEA not only meant a change in where services were provided but also a change in how services were delivered. According to recent literature, the term *natural environment* is not just about the setting of services but the experiences provided in the context of everyday activities of the family and community the child is a part of (Dunst, Hamby, Trivette, Raab, & Bruder, 2000).

As a federal program, states have considerable flexibility in how early intervention is implemented (Meisels & Shonkoff, 2000). The lack of a clear definition of *natural environment* within federal legislation has added to misunderstanding about the term and approaches to implementation (Dunst, et al., 2000; Dunst, Trivette, Humphries, Raab & Roper, 2001). According to Meisels and Shonkoff (2000), there are so many implementation possibilities that there could eventually be as many varied early

intervention systems as there are states. The lack of a clear definition has caused misperceptions among early intervention professionals about natural environments leading to inconsistency of implementation.

Early intervention providers looking for information about natural environments would find different definitions, differences in how children learn within natural environments, and different expectations in the role of early intervention providers in natural environments (Raab & Dunst, 2004). For the purpose of this study, early intervention providers are physical therapists, physical therapy assistants, speech and language pathologists, speech and language pathologist assistants, occupational therapists, certified occupational therapy assistants, and community based rehabilitative service (CBRS) providers. Special instruction is a support that can be offered to children and families who qualify for Part C under IDEA. CBRS is the Medicaid term for special instruction in the state used for research in this study.

Inconsistent information about natural environments results in confusion for early intervention providers about natural environments as a setting or as everyday learning activities. Stremel and Campbell (2007) indicated that providers might be located in natural environments with families and children such as the home or the community; however, providers are rarely using recommended practice related to natural environment (e.g., identification and use of locations, settings, activities/routines, child-individualized intervention strategies, generalization across new persons, settings, and routines). This is due in part to their preservice instruction. Unlike their special education counterparts in Part B, early intervention providers are trained in their field with limited specific early intervention instruction related to natural learning opportunities. They are then expected

to effectively implement their services within natural environments (Stremel & Campbell, 2007). Dunst and Bruder (2005) conducted research to identify if higher education faculty taught physical therapists, occupational therapists, speech and language pathologists, and early childhood special education teachers how to use everyday activity settings within natural environments. The researchers asked 155 university faculty members how much training was provided on natural learning environments in their respective personnel preparation programs. It was concluded that each program provided varying levels of training on natural environments. Dunst and Bruder (2005) found 20% of the faculty provided no or very little training in community activity settings. It was also found that physical therapist preparation programs provided the least amount of training in community activity settings. Working in these environments is often unnatural for early intervention providers because of their “limited experience working in natural environments and a lack of knowledge about natural environments” (Stremel & Campbell, 2007, p. 85). Raab and Dunst (2004) defined early intervention providers’ perceptions of natural environment as contemporary or traditional. Providers with contemporary perceptions implement services using current theory and research on natural environments. In contrast, providers with traditional perceptions understand natural environments within their existing belief of providing direct services to the child without considering the range of authentic learning opportunities that occur throughout a child’s typical day.

Early intervention professionals are providing services to families in the natural environment, but there is an absence of data on the number of providers working with families and if the providers are highly qualified. Every year, specific data are collected

by the Office of Special Education Programs (OSEP) to determine the number of special education teachers and paraprofessionals who are highly qualified who serve children under Part B. Even though the title “*early intervention service provider*” is defined in Part C, OSEP does not collect data on the number of highly qualified early intervention professionals working with children served under Part C. A fundamental part of what makes early intervention service providers highly qualified is their ability to conceptualize the authentic learning opportunities that natural environments provide (Chai, Zhang, & Bisberg, 2006). There is an evident gap between data, evidence based practices, and early intervention service providers’ perceptions related to natural environments.

1.1 Statement of the Problem

In 2012, 2.8% of the population birth to three in the United States and Washington, DC was served under Part C (OSEP Report to Congress, 2014). The number of infants and toddlers served under Part C of IDEA has steadily increased since 2003. The report examined early intervention service settings for children receiving supports under Part C of IDEA. In the Report to Congress, nearly all early intervention services took place within natural environments. The report considered the natural environment to be home, a community-based setting, or other-setting. Each subsection of the natural environment was explained in detail in the report. For example, community-based setting consisted of but was not limited to childcare centers (including family day care), libraries, grocery stores, parks, restaurants, and community centers. The home was the primary service setting for 87.3% of infants and toddlers being served under Part C, and community-based settings were the primary setting for 7.6% of children under Part C (OSEP Report to Congress, 2014). Although early intervention has taken significant

strides in changing where services are rendered for young children and their families, “the intent of the mandate is not being fulfilled when intervention in natural environments is conducted in noncontextual activities/routines” (Stremel & Campbell, 2007, p. 102). The data represent where services are provided and not how those services are implemented within natural environments. Furthermore, the data demonstrate that even when community-based settings are supported throughout the literature as optimal natural environments, they are being underused as service settings.

Natural environment is a term that eludes many professionals in the early intervention field. Stremel and Campbell (2007) reviewed literature on natural environments and described an implementation framework in an effort to close the gap between research related to natural environment and implementing natural environment practices. The authors suggested that if early intervention providers are to implement successful natural environment practices, it is essential that early intervention providers know what best practices related to natural environment are and how to use them with fidelity with children and families (Stremel and Campbell, 2007). Stremel and Campbell (2007) concluded research must be conducted to learn how early intervention providers become experienced in providing appropriate services within natural environments.

The purpose of this study was to examine early intervention providers’ experiences and their perceptions related to natural environments. This study was used to gain an understanding of providers’ current perceptions of natural environments and how their experiences relate to those perceptions. Additionally, the findings have the potential to guide in-service trainings for early intervention providers. A questionnaire was used to examine early intervention providers’ experiences and perceptions related to natural

environments. Looking at experience as a foundation for providers' perceptions related to natural environments, it may be possible to determine specific experiences that result in perceptions that align with current best practice in natural environments.

1.2 Research Questions

The researcher gained insight into how experience related to early intervention provider's perceptions regarding natural environments by answering the following questions: 1) What are the experiences and perceptions of early intervention service providers' related to natural environments? 2) How do their experiences relate to their perceptions related to natural environment? Data were collected from participants using a research adapted questionnaire. Early intervention experiences were defined as educational background, years in early intervention, years working at the agency used for the study, and amount of professional development specifically related to natural learning environments.

CHAPTER 2: LITERATURE REVIEW

To identify relevant literature on the perspectives of early intervention providers and evidence based practices in natural environments, the following EBSCOhost research databases were searched: PsycINFO, ERIC, JSTOR, and SAGE. The terms *early intervention, natural environment, natural learning environment, developmentally appropriate practice, early experience, developmental delays, young children, infants, providers, practitioners, allied health professionals, and perceptions* were used in the electronic search. In addition, the academic search engine Google Scholar and ancestral searches of journal articles were explored to locate further resources for the literature review.

2.1 Theoretical Framework

A Three-Dimensional Framework

Dunst et al. (2001) proposed a multidimensional framework to operationalize natural environments. Setting, type of activity, and the practitioner were the practices that produced the framework. The three practices are unique in their own right, and the combination of the practices results in the three dimensional framework (Dunst et al., 2001). Setting is viewed as contextualized or non-contextualized. Everyday experiences and natural learning opportunities that promote functional learning are considered contextual. Non-contextualized learning is learning opportunities that are isolated from the everyday experiences of the child. Non-contextualized services provided by the practitioner focus on a specific skill, not how that skill will enhance the child's interaction with the people and everyday learning opportunities readily provided in their natural environment. The framework defines type of activity as child-initiated or adult-directed. Child-initiated activities acknowledge the environment as the building block for

the child's understanding of their environment. Adult-directed activities are implemented for a child to produce a desired behavior although that behavior may not be contextually based. The practitioner dimension presents practitioner-absent and practitioner-implemented learning opportunities. When children participate in a variety of family and community activity settings, learning will occur in the absence of a practitioner leading to practitioner-absent learning opportunities. These learning opportunities are only possible if practitioners offer parents guidance and support about their child's learning in contextual activities and routines. In contrast, practitioner-implemented learning opportunities are considered instruction in the context of the natural learning environment as a setting. In the framework, the word *learning* was deliberately added to the term natural environments, and natural environment was thus referred to as natural learning environments in the article. The authors argued natural learning environment better represented the blend of theory and research that was originally used to conceptualize natural environments. By intentionally changing the term to natural learning environment, the emphasis was placed on the everyday learning opportunities that were provided to the families and children within an environment that was most natural for the child. This researcher will use natural learning environment to reflect the contemporary concept of everyday family and community activities which provide contextual natural learning opportunities for children.

2.2 Natural Learning Environment as a Setting

The setting where early intervention services are provided is a significant component of natural learning environments, but only using setting to define natural environment limits the implementation of early intervention services supported by Part C.

Campbell, Sawyer, and Muhlenhaupt (2009) used focus groups to gain an understanding of parents and providers meaning of the term natural environment. The 75 participants included parents, physical therapists, and occupational therapists, and their experience with early intervention services was also studied. The participants conceptualized natural environment in three subthemes: (a) location, (b) family activities and routines, (c) and definitions. Parents, more so than early intervention providers, named a broad range of locations as natural environments. There were locations identified by both providers and parents, but the parents' examples were more comprehensive. Locations named by parents but not providers included libraries, fairs and festivals, and the outdoors. The researchers also studied activities and routines that occurred within the locations named by providers and parents. Providers only identified three routines and activities within the natural environment. Transportation, cleaning the house, and playing with siblings were the three routines and activities identified by the providers. Campbell et al. (2009) stated parents conceptualized natural environment as the activities that took place within the natural environment and named a greater number of activities and routines than the providers. There was a difference in defining natural environments when providers and parents were asked to provide definitions. Therapists defined natural environment as a change of location from center-based services, but there was not an evident change in how services were implemented. Whereas, parents defined natural environments as activities that are not already set up for the child and emphasized the importance of using what is available in an everyday setting to promote learning. It was also found that early intervention providers' perception related to natural environments centered on the challenges of implementing early intervention services and their role as a therapist in

natural settings. The challenges identified by providers included: (a) consumption of time, (b) parents' ability to be actively and willingly involved during the implementation of services, and (c) therapists' abilities to implement services effectively in natural environments. The study demonstrated early intervention providers continue to have difficulty conceptualizing a natural environment as more than a setting for early intervention (Campbell et al., 2009).

2.3 Activity Settings

The definition of setting has expanded and not only refers to the physical location of the service but the intentional activities that take place within the setting that is most natural to the child. Bricker (2001) indicated the activity is continually more important than the location where early intervention occurs. The term activity setting is used across the literature to define everyday learning opportunities. Dunst et al. (2001) highlighted the need for intentional selection of activity settings as sources of natural learning opportunities to increase children's learning and opportunities in the natural environment. A study conducted by Dunst et al., (2000) identified sources of learning opportunities in family life and community life. Just less than 3,300 parents and caregivers of children with or at risk of developmental delays were given two different surveys. Each survey looked at a source of children's learning opportunities, family life, or community life. The researchers found 22 categories, 11 in both family life and community life, which identified learning opportunities within children's everyday activity settings that offered a rich array of experiences for children and their caregivers. Each category was considered an activity setting that constitutes a natural environment. An example of some of the activity settings in family life included child's bath time, reading/looking at books, and

caring for pets/animals. An example of activities in community life included outdoor playgrounds, children's museums/science centers, and religious activities (Dunst et al., 2000). The study indicated that natural environment must be conceptualized as activity settings that are a part of family and community life to achieve positive outcomes for children and their families served under Part C.

Dunst, Bruder, Trivette, and Hamby (2006) conducted two studies that investigated parent and child outcomes related to conceptualizing natural environments in two systems. The first was how services were provided in activity settings, and the second was "activity settings used as sources of learning opportunities" (Dunst et al., 2006, p. 4). Just over 1,600 parents and primary caregivers completed surveys that were developed by the researchers. The surveys were created using the 22 categories of activity settings found in the previous study (i.e., Dunst et al., 2000). Overall, more benefits were found when natural learning opportunities were provided within activity settings because the activity settings matched the families beliefs about how their child should participate and learn within the natural environment. The researchers found that when activity settings were viewed as a location for early intervention services, family routine was disrupted by the services provided resulting in negative outcomes in certain areas of functioning. The results demonstrated early intervention providers should use activity settings as a pathway for natural learning opportunities to obtain the most desirable benefits for children and their families.

2.4 Early Intervention Providers' Perspectives

When Part C was reauthorized in 1997, there was continued push to move services from early intervention centers to delivering supports in children's natural

environment. A radical shift was happening and early intervention professionals who were experienced in early intervention centers were providing services in an environment that felt unnatural. Racicot and Shelly-Sireci (1998) examined early intervention professionals' experiences and perceptions of natural environments. A questionnaire was used with 116 early intervention professionals (e.g., speech language pathologists, physical therapists, occupational therapists, developmental therapists). Overall, professionals felt an acceptance toward providing services in natural environments. Although, early intervention providers felt that early intervention centers were still appropriate for specific services, such as direct therapeutic services, adaptive technology, and group services (Racicot & Shelly-Sireci, 1998). The researchers found that professionals were concerned with inadequate preservice and in-service training on how to provide services within natural environments. Sixteen years later, Raab & Dunst (2004) studied early intervention providers' beliefs and understanding of natural environments. Individual interviews and focus groups were conducted with 16 experienced and novice early intervention providers. The researchers found experienced providers description of natural environments aligned with contemporary best practice; whereas, novice providers description of natural environment aligned with a traditional early intervention approach. A key finding in the study was the plausibility for a change in early intervention providers' understanding of the concept of natural environment over time. Raab and Dunst (2004) called for further examination to distinguish if an increased understanding of natural environments changes practices. Stremel and Campbell (2007) stated early intervention providers continue to question the effectiveness of services

within natural environments. What experience or knowledge gained leads to a change in perception related to natural learning environments?

CHAPTER 3: METHOD

The researcher investigated early intervention providers' experiences and their perceptions related to natural learning environments. The study was a non-experimental, descriptive, and correlational design. Early intervention providers' working with children birth to three completed a questionnaire adapted from Racicot and Shelley-Sireci's (1998) *The Natural Environment Questionnaire*. The sampling method was a convenience sample selected from an early intervention agency located in a metropolitan city in the southeast United States.

3.1 Participants and Setting

The participants were in-network, early intervention providers with a Part C agency serving children and families in a metropolitan city in southeast US. It is important to note the Part C agency emphasizes implementing best practices related to serving children and families within natural learning environments. Inclusion criteria for participants comprised of being contracted by a company in-network with the Part C agency and having at least four children enrolled in the Part C program on their current caseload. Not meeting the inclusion criteria excluded providers from the study. Early intervention providers were considered in-network when the company they were contracted with was part of the provider network of the Part C Agency used for this study. The final sample consisted of 24 early intervention providers (Refer to Table 1); all of whom were female. The sample included physical therapists ($n = 3$), speech and language pathologists ($n = 5$), occupational therapists ($n = 5$), certified occupational therapy assistants ($n = 1$), CBRS provider ($n = 9$), and one participant identified as other (i.e., social worker). Approximately 58% of the participants were 35 years of age and

older. Of the sample, 67% identified as White/Caucasian, 17% as Hispanic, 13% as African American, and 4% as other. Half of the respondents ($n = 12$) reported they had been a provider in-network within the Part C agency used for the study for under 6 years; The other half had worked for the Part C agency for 7-12 years ($n = 10$) and over 19 years ($n = 2$) respectively. Close to 35% of the participants had between 4-10 children on their caseload, 43% had between 11-19 children, and 22% had over 20 children.

Respondent's educational backgrounds and experience varied; however, all participants had been offered the same county-wide provider orientation from the Part C Agency. The orientation was two hours in length and generally took place within the first two months of joining the network. It included best practice within natural learning environments, program information, and how to document services. Within the last three years, 79% of the participants reported attending this orientation. Providers participate in the orientation upon entering the Part C agency's network and do not have the opportunity to take the initial orientation again. Therefore, providers that have been with the agency before the orientation began may have not been required to take the orientation. Participants experience working with children birth-three with or at risk for disabilities ranged from 0-6 years (29%), 7-12 years (29 %), and 13-19 plus years (42%). All of the participants except for one had at least a four-year college degree. Twelve early intervention providers had their master's degree. The majority of participants completed their highest level of education in the 2000's ($n = 13$). One participant completed their highest level of education in the 1970's, and three in the 1980's and the 1990's respectively.

Additionally, participants reported current professional licenses; the licenses/certifications included Infant-Toddler Certification ($n = 12$), Certificate of Clinical Competence-Speech Language Pathology (CCC-SLP) ($n = 4$), one Clinical Fellowship (CF), North Carolina Board of Occupational Therapy (NBCOT) ($n = 8$), one Clinical Specialty Certification (CSC) which was defined as Music Therapist-Board Certified (MT-BC). Two participants specified other licensees which included Neuro-Developmental Treatment Certificate and a Physical Therapy license.

The county in which participants were sampled from had a population of over 1,000,000. The Part C agency served all areas of the county which included rural areas and a large metropolitan city. The participants were selected using a convenience sample. The researcher had access to an email list of all in-network early intervention providers that met the inclusion criteria.

3.2 Procedure

The researcher obtained consent from Racicot and Shelley-Sireci (1998) to use and adapt their questionnaire: *The Natural Environment Questionnaire*. Starting with the original format of the questionnaire, the researcher adapted the questionnaire for the purpose of the current study. The researcher then conducted a pilot study to establish the content validity of the questionnaire adapted for the current study and final revisions were made based on the pilot study. The pilot study participants included a researcher selected speech language pathologist, physical therapist, occupational therapist, and CBRS provider in-network with the Part C agency. Each participant met the inclusion criteria of the study. Pilot study participants did not take part in the study when data were being collected. The pilot study participants completed the adapted questionnaire and

provided feedback. Participation in the pilot study was voluntary; their responses were not confidential because the researcher gathered feedback on the content of the questionnaire. Questions that were confusing or unclear were revised. The pilot study participants stated the questionnaire was an appropriate length and easy to navigate but requested more opportunity to elaborate on their concerns about providing early intervention services within natural environments. Therefore, the researcher added an open ended question adapted from Racicot and Shelley-Sireci's (1998) original questionnaire where providers could state their concerns. Also, with the intent of increasing the response rate to the open ended questions, the researcher divided the open ended section of the questionnaire by moving each open ended question to the end of its related section.

After completion of the pilot study and with the permission of the Part C agency; see Appendix A, the researcher obtained the names of all in-network early intervention providers who met the inclusion criteria. The researcher contacted 23 provider company directors via email (see Appendix B) with a letter as an attachment (see Appendix C) to request the company directors support. There were seven company directors that were also providers that were included in the convenience sample. This cluster of company directors received an email and letter requesting both their support and consideration to participate in the study; see Appendix D. Directors showed their support by sharing the emails of the providers contracted within their company that had at least four children on their caseload. The names of the providers who met the inclusion criteria were included in the body of the email. Of the 23 in-network company directors, 13 shared their support, 1 declined, and 9 did not reply; therefore, 57% of in-network company directors

were willing to provide emails for potential participants. The researcher used Qualtrics survey software which allowed the researcher to build and share the questionnaire and also store data during data collection. With the support of the provider directors, the researcher obtained 52 provider emails that met the inclusion criteria. The participant's emails were entered into the Qualtrics survey software system, and after IRB approval, the questionnaire was sent to all participants electronically. The sample ($n = 52$) received an email which contained a paragraph that explained the purpose of the study and a link to complete the questionnaire; see Appendix E. The paragraph also stated all data gathered were confidential and their participation had no adverse effects on their affiliation with the Part C agency or the company they were contracted with. Additionally, the researcher did not ask for direct identifiers.

Before beginning the questionnaire, participants read a paragraph detailing the purpose of the questionnaire. Participants had the opportunity to consent to completing the questionnaire by checking yes or no at the outset of the questionnaire. All participants who completed the survey consented to participating in the study ($n = 24$). The questionnaire was open for 24 days during April of 2016. Those who did not complete the questionnaire within the first week received four reminders in the subsequent weeks via email through Qualtrics to complete the questionnaire. The survey was opened April 7th ($n = 9$); the first reminder was sent April 12th ($n = 16$); the second reminder was sent April 20th ($n = 20$); the third reminder was sent April 26th ($n = 22$); and the final reminder was sent April 28th ($n = 27$). There were a total of 27 responses: 14 of the respondents completed 100% of the questionnaire, seven respondents completed 90%, and three completed 80%. The three respondents that completed 0% of the questionnaire were

removed from the response data. The final response rate was 46%, and the sample size was $N=24$. The data were stored in Qualtrics during the collection period and then transferred to an encrypted USB drive. The researcher had access to the raw data as well as the members of the M.Ed. committee to support the researcher in analyzing the data.

3.3 Survey. Early intervention providers completed a researcher developed adaptation of Racicot and Shelley-Sireci's (1998) questionnaire: *The Natural Environment Questionnaire*. The questionnaire was originally developed by Racicot and Shelly-Sireci (1998) based on an earlier survey conducted by the Natural Environments Subcommittee of an Interagency Coordinating Council. The subcommittee first reviewed the questionnaire. The questionnaire was then piloted, and Racicot and Shelley-Sireci (1998) revised the instrument removing confusing or unclear questions. As previously mentioned, *The Natural Environment Questionnaire Adapted* used for the current study was researcher adapted and piloted; see Appendix F. The adaptations on the questionnaire used for the purpose of this study included two Likert type questions and three open ended questions that were researcher developed. The Likert type questions were generated using the 22 family and community life activity settings identified by Dunst et al. (2000). Three experts in the early intervention/special education field independently rank ordered the 22 activity settings in family life & community. The researcher used the top five activity settings in each category to create the Likert-type questions. The professionals demonstrated overall consensus on the rank order responses for family life and community activity settings. The average standard deviation for the top five responses for family life was 1.01 and .91 for the top five community life responses. Three open-ended questions were used in the questionnaire. One of the open

ended questions, developed by the researcher, allowed participants to share what experiences had influenced their thinking related to natural learning environments. The other two, both adapted from the original questionnaire, included specific concerns about providing services in natural learning environments and what types of professional development activities would best prepare providers to deliver early intervention supports within natural learning environments. The questionnaire was used to collect information on early intervention providers' experiences as well as perceptions related to natural learning environments.

3.4 Design and Data Analysis

The researcher completed a non-experimental, descriptive, and correlational design and provided summary data to address research questions using IBM SPSS Statistics 23 (IBM, 2015). Descriptive summaries were completed for the providers' experience (i.e., educational background, years of experience in early intervention, years working at the agency used for the study, and professional development specifically related to natural learning environments) as well as their perceptions related to natural environments. A correlation analysis was conducted to determine the relationship between early intervention providers discipline and their overall perception related to natural learning environments. Pearson correlation coefficients were calculated to determine the extent specific experiences were related to providers' perceptions of natural learning environments. The provider's perceptions were the dependent variable, and the provider's experience was the independent variable. The researcher conducted a thematic analysis one member of the M. Ed committee on the responses to the three open-ended questions to enrich the data.

CHAPTER 4: RESULTS

The researcher gained insight into how experience related to early intervention provider's perceptions regarding natural learning environments and answered the following research questions: 1) What are the experiences and perceptions of early intervention service providers' related to natural environments? 2) How do their experiences relate to their perceptions related to natural environment? Early intervention experiences were defined as educational background, years in early intervention, years working at the agency used for the study, and amount of professional development specifically related to natural learning environments. The results will be separated by research question and thematic analysis of the open ended questions.

4.1 Research Question 1

Professional development trainings. When asked what specific professional development trainings they had completed within the last three years, the majority of participants stated not applicable. When professional development was broken down into specific categories, there was a low response rate across the categories. Those that did respond reported they participated in the following examples of professional developments:

- Professional Conferences ($n = 7$): The Dance of Partnership: Strengthening partnerships between professionals and families who have children with delays or disabilities, National Autism Conference, and conferences related to autism and sensory processing
- Agency Professional Development ($n = 6$): Natural Learning Environment Practices and PLAY project webinars

- Other ($n = 8$): Master Coaching Training

It is important to note the overlap across response categories (i.e., Professional Conferences, Agency Professional Development, Other); therefore, it is possible that respondents had varied interpretations of professional development training within the last three years.

Perceptions related to natural learning environments. Overall, early intervention providers agreed that early intervention in natural learning environments was well accepted by the service providers of their agency ($M = 4.46$, $SD = 0.51$). Additionally, over 90% of the providers agreed or strongly agreed that providing services in natural learning environments was more effective than an early intervention clinic. The respondents reported strong agreement of providing services to families in natural learning environments ($M = 4.54$, $SD = 0.51$). Early intervention provider's agreement of receiving training to work in natural environments varied ($M = 3.92$, $SD = 0.93$); over half agreed or strongly agreed that they received training, and 13% disagreed that they received training. An overwhelming number (96%) agreed or strongly agreed that families benefit from early intervention services in natural learning environments. Generally, early intervention providers agreed that they understood best practices ($M = 4.50$, $SD = 0.51$) and outcomes of early intervention ($M = 4.50$, $SD = 0.59$) in the natural learning environment.

Practices within natural learning environments. Early intervention providers indicated overall agreement with the natural learning environment practices identified in the questionnaire (refer to Table 2). The practices with the highest agreement were parental guidance ($M = 4.71$, $SD = .46$) and parental involvement ($M = 4.67$, $SD = 0.48$).

Extended family involvement had one of the lowest agreements ($M = 4.21$, $SD = 0.78$) with 21% of respondents stating they neither agreed nor disagreed with extended family involvement. Direct therapeutic services ($M = 4.25$, $SD = 0.90$) was the only practice with some disagreement (8%).

Concerns within natural learning environments. Table 2 shows the findings from the data analysis related to concerns when providing services in natural learning environments. For all but two statements, the standard deviation was over 1.00 demonstrating more variability in the responses within provider concerns. Access to materials/toys ($M = 2.58$, $SD = 1.28$) had the lowest mean and the largest standard deviation; over 58% of respondents reported this was often or very often a concern. Too much parent/caregiver participation was seldom a concern ($M = 4.21$, $SD = 0.93$), and too little parent/caregiver participation was often a concern ($M = 2.50$, $SD = 1.14$). Participants reported that in general they were undecided on a clear definition of early intervention services in natural learning environments ($M = 3.30$, $SD = 1.06$), accessibility to natural learning environments for children with disabilities ($M = 3.38$, $SD = 1.25$) and developmental appropriateness of the natural learning environment ($M = 3.08$, $SD = 1.21$).

Family life and community activity settings. The findings from the analyses of the questions related to family life and community activity settings within natural learning environments are shown in Table 3. Generally, providers reported more agreement with family life activity settings over community life. Physical play ($M = 4.45$, $SD = 0.72$) and family routines ($M = 4.42$, $SD = 0.78$) were the only two family life activity settings that had disagreement. Literacy activities had the strongest agreement (M

= 4.67, $SD = 0.48$), and family routines had the lowest agreement ($M = 4.42$, $SD = 0.78$). Over 60% of respondents strongly agreed that child routines, literacy activities, and physical play were suitable for early intervention services in natural learning environments. There was a greater range of responses for community activity settings. Outdoor activities had the lowest agreement ($M = 4.04$, $SD = 0.93$). Over 50% of respondents strongly agreed that play activities, family excursions, and family outings were suitable for early intervention services in natural environments. Respondents stated disagreement towards family excursions, family outings, outdoor activities ($n = 23$), and church religious activities as suitable activity settings for early intervention services in natural learning environments. No respondent strongly disagreed with any of the family life or community life activity settings.

Perceptions by discipline. When analyzing the data that focused on provider's perceptions based on their discipline, the following findings were interesting to note. The overall number of respondents were low for each discipline (see Table 1), but there was even distribution across disciplines. In regards to receiving training to work in natural learning environments, physical therapist had the lowest agreement ($M = 3.33$, $SD = 1.16$) and CBRS providers had the highest agreement ($M = 4.20$, $SD = 1.00$). Furthermore, physical therapists had the lowest agreement with understanding best practices related to natural learning environments ($M = 4.00$, $SD = .00$), and speech language pathologists had the highest level of agreement ($M = 4.80$, $SD = .45$). Although, speech language pathologists had the second lowest agreement with receiving training to work in natural learning environments ($M = 3.80$, $SD = 1.10$).

4.2 Research Question 2

The researcher conducted correlational analysis to determine the extent the following specific experiences were related to providers' perceptions related to natural learning environments: highest level of education completed, years of experience working in early intervention, years working at the agency used for this study, and professional developments specifically related to natural learning environments. The provider's perceptions were the dependent variable, and their experience was the independent variable. The correlational analysis did not yield any statistical significance. Although given the sample size and using the guidelines stating $r = .20 - .40$ as practical significance (M. Gall, Borg, & J. Gall, 1996; McMillan, 2012), the researcher found weak to moderate practical significance between certain variables using the correlational coefficients. The findings are described below.

Highest level of education. A weak negative relationship emerged between the provider's highest level of education and their agreement with understanding best practice in early intervention in natural learning environments ($r = -.22, p = .31$), parental guidance ($r = -.29, p = .18$), direct therapeutic services ($r = -.23, p = .29$), and extended family involvement ($r = -.22, p = .31$).

Years of experience working in early intervention. Years of experience working in early intervention was associated with provider's agreement of incidental learning ($r = .27, p = .21$) and direct therapeutic services ($r = .28, p = .18$) and negatively associated with provider's agreement with understanding best practice of early intervention in natural learning environments ($r = -.27, p = .21$).

Years working at the agency used for the study. Out of the six best practices within natural environments used for the correlational analysis, four were found to have practical significance:

- Incidental learning ($r = .22, p = .31$) and social interaction ($r = .23, p = .28$) were found to have practical significance.
- Extended family involvement ($r = .32, p = .12$) was found to have moderate practical significance
- While parental guidance ($r = .38, p = .07$) had practical significance, and it came close to statistical significance.

Years working at the agency used for the study had a weak association with provider agreement of receiving training to work in natural learning environments ($r = .22, p = .30$). Although, there was weak to no association between years at the agency and agreement of understanding best practices of early intervention in natural learning environments ($r = .00, p = 1.0$).

4.3 Open Ended Questions: Thematic Analysis

The researcher and an expert in the early intervention field independently conducted thematic analyses on the responses to the three open ended questions. The thematic analyses were compared and discussed to ensure reliability in themes found and frequency of the themes within the responses. Participant responses are provided to support the results.

Experiences related to natural learning environments. Three main themes were identified, and they included

- education and training (i.e., graduate school, experience in the field, practicums, internships);
- observing the effectiveness of working in natural environments (i.e., increased family participation, increased child progress towards goals); and
- observing the benefits related to natural learning environments (i.e., carry over, generalizing of skills in daily life, parental confidence).

One participant (i.e., occupational therapist) said *“I worked in a clinic setting for 8 years. I have found progress to be quicker within the natural setting environment and parent education to be much more efficient.”* Another participant (i.e., physical therapist) said *“Initially I was resistant but now feel and have seen its (natural environments) effectiveness.”*

Concerns related to natural learning environments. Two main themes were identified, and they included

- toys and materials (i.e., lack of materials in the home, concerns about not being able to bring materials into the natural environment); and
- expectations between parents and providers (i.e., understanding roles and responsibilities, lack of family participation, confidentiality in public settings)

One provider (i.e., occupational therapist) said:

“The child directs what toy or game we are going to play with and as a therapist, I have to figure out how to engage them in an activity that will work toward

achieving our goals. You have to be flexible. I am better able to do that with years of practice. But that wasn't as easy when I was a new therapist."

Another provider (i.e., CBRIS provider) stated:

"Many if not most of the families are still expecting direct involving of the therapist with the child, Latino community is not use to this concept and that represent a big challenge. although me as a professional understand the importance of the natural setting, not always can be accomplished and that bring unsatisfactory not only for the parent as well for the professional."

Recommended professional development activities. Two main themes emerged, and they included

- practical strategies/trainings (i.e., strategies to support providers when there is a lack of materials, videos modeling best practice, opportunities to shared ideas/experiences with other providers); and
- mentoring opportunities (i.e., shadowing experienced professionals, observation and coaching opportunities)

One provider (i.e., physical therapist) said *"Shadowing a therapist with experience providing therapy in natural environments. Having a mentor if a new therapist/provider in the field Taking courses specific to Early Intervention and providing therapy in natural settings."* Another provider (i.e., speech language pathologist said *"A recent graduate should not work solely by herself/himself, but the availability of the knowledge and ideas of more speech language pathologists."*

CHAPTER 5: DISCUSSION

This study was designed to examine early intervention provider's experiences and perceptions related to natural learning environments. The term natural environment is defined within IDEA, yet there is continued misunderstanding and misinterpretation of *natural learning environments*. Overall, providers reported that early intervention in natural learning environments is well accepted by the professionals within their agency. Furthermore, the majority of providers were accepting of delivering services in natural learning environments and reported that providing services in the natural learning environment was more effective than an early intervention clinic. In spite of the overwhelming support for providing services in natural learning environments, a fourth of the providers were concerned or undecided about a clear definition of early intervention services in natural learning environments. Inconsistencies within implementation of early intervention within natural environments was further highlighted when all providers agreed that they understood best practices in natural learning environments. The findings of this study demonstrated an inconsistency between providers' desire to deliver services within natural learning environments and their understanding of the term and implementation. For example, respondents agreed that families benefit from early intervention services in natural learning environment, but at least 85% were in agreement that direct therapeutic services were an appropriate practice in natural learning environment. These findings are supported by Meisels and Shonkoff (2000) and Racicot and Shelly-Sireci (1998) who found an overall acceptance towards providing services in natural learning environments, yet there were variations within the implementation of services. Although these findings should be interpreted cautiously

because direct therapeutic services were not operationalized on the questionnaire, the findings are in contrast to previous research that supported more benefits were found when natural learning opportunities were provided within an activity setting (Dunst, et al., 2006). The current study's findings are supported by Stremel and Campbell's (2007) work which found providers may be physically located in natural environments when providing early intervention services, but they are rarely using recommended practices. For example, as providers level of education and years working in early intervention increased, they were less likely to agree that they understand best practices of early intervention in natural learning environments. Providers did not report having concerns with accessibility to natural learning environments (location) for children with disabilities; however, 33% of providers were concerned with the developmental appropriateness of the natural learning environment (activity settings). One reason for this result could be that early intervention providers receive varying levels of training with limited specific early intervention and natural learning environment instruction (Dunst & Bruder, 2004; Stremel & Campbell, 2007).

Early intervention providers receive varying levels of training based on their discipline which can have an effect on their perception of the implementation of services in natural learning environments (Dunst & Bruder, 2005). The findings in this study indicate that 79% of respondents agreed that they received training to work in natural learning environments. Physical therapists indicated the least amount of agreement with receiving training to work in natural learning environments, and CBRS providers indicated the highest level of agreement. In regards to specific trainings related to natural learning environments within the last three years, it is worth emphasizing that 71% of

respondents indicated not applicable for Professional Conferences, 75% for Agency Professional Developments, and 66% for Other related to natural learning environments. From these results, we can infer that providers receive limited natural environment instruction and in-service training; although, the majority perceived to be adequately trained to work in natural learning environments. Does this perceived confidence of intention and implementation within natural learning environment practices affect providers ambition to seek training specifically related to natural learning environments? Future research must be conducted to identify preservice programs and in-service trainings that provide quality training and prepare providers of a variety of disciplines to work in natural learning environments. It is important to note that as the number of years' providers had been in network with the agency used for this study increased, their agreement with receiving training in natural learning environments was more likely to increase. Furthermore, their agreement with the appropriateness of best practices increased specially related to incidental learning, parental guidance, social, interaction, and extended family involvement. One interesting finding was as overall years of experience in early intervention increased, respondents reported less agreement with understanding best practices and greater agreement with incidental learning and direct therapeutic services. These findings contradict one another again highlighting the struggle providers face between implementing best practices within natural learning environments while relying on their formal training. Future research should be conducted on how to bridge the rift between provider discipline training and incorporating intentional best practice within natural learning environments. These findings are

supported by Campbell et al. (2009) who found providers can have difficulty conceptualizing natural learning environments.

The current study also found that the majority of providers perceived family life activities as more suitable than community life settings for early intervention services in natural learning environments. Furthermore, there was greater variability in responses related to community life. The results of the correlational analysis found weak practical significance between the number of years a provider has been working within the agency used for the study and their overall agreement with family life activity settings, but there was no significance with community life activities. These findings are supported by Dunst and Bruder (2005) who found providers received very little or no training on community activities. The findings are also consistent with Campbell et al. (2009) who found parents of children with disabilities identified a broader range of environments than providers when naming activity settings for early intervention services.

Along with a concerns around a clear definition and training related to natural environments, participants reported concerns related to providing services within the natural learning environment. Nearly 60% of the participants believed access to materials and toys was a concern when providing early intervention services in natural learning environments. Additionally, a similar number of providers (54%) perceived too little parent/caregiver participation as a concern. As previously mentioned, direct therapeutic services were perceived as appropriate by providers; therefore, is it plausible the delivery of direct services within natural environments is affecting parent involvement? These findings are similar to the challenges (e.g., parent's willingness to participate and service provider's ability to implement services effectively) identified by providers in research

conducted by Campbell et al. (2009). In the current study, there were a number of concerns related to access to toys/materials, and the following two open ended responses support this finding: One provider (i.e., occupational therapist) stated, *“it can be difficult to get therapeutic results at times without the use of therapeutic tools due to lack of materials or toys in the home.”* Another provider (i.e., certified occupational therapy assistant) said, *“I have had to perform hour long sessions with children with no appropriate toys except a ball or a few blocks.”*

When considering these findings in relation to Raab and Dunst (2004), the current study suggested the plausibility of the provider’s ability to change their perception of providing early intervention services in natural learning environments over time. The current study demonstrated that years working in the Part C agency was an indicator of increased contemporary perceptions related to natural learning environments. Conversely, higher levels of education were more likely to align with traditional approaches. There were also inconsistencies of agreement with understanding best practice, and providers reported agreement of the appropriateness of best practice. For example, overall agreement with understanding best practices was consistently lower than providers’ agreement with the appropriateness of specific best practices (i.e., incidental learning, parental guidance, social interaction). The results suggest that providers may not be aware of when or how they are using best practices within natural learning environments. Therefore, is it possible that experience in the field as well as agency provided trainings may be related to a change in provider’s perceptions of natural learning environments.

5.1 Limitations

This study had a number of limitations which are important to discuss. All participants within the study were in-network with a single Part C agency which limited the generalizability of the study; although, the participants were representative of the Part C agency used for the study. The number of children on each participant's current caseload had the potential to fluctuate weekly. The researcher could have had access to more participants but was unable to reach additional participants based on when data collection began; this could have affected the overall response rate. Furthermore, the agencies that supported the study could have offered more specific trainings related to natural environments to their providers which could have influenced the overall responses of the questionnaire. Finally, participant's overall perception of natural learning environments could have influenced their participation skewing the data towards providing services within natural learning environments.

5.2 Implications and Recommendations

There are a number of implications from the current study to guide future research and practice. Future research should be conducted to study how effectively early intervention services are provided in natural learning environments. Community settings are supported through the literature (Stremel & Campbell, 2007) as optimal natural environments, yet the results of this study found that generally community settings are less accepted as service settings compared to family life settings. Furthermore, there is less overall agreement towards community activity settings and providers identified concerns related to confidentiality (i.e., onlookers observing early interventionist) in community settings. In addition to previous concerns, policies at all levels that focus on

liability and billing could also be obstacles in regards to implementation of early intervention services in community activity settings. Future research should be conducted to determine providers' acceptance of community settings as natural learning environments as well as the benefits and barriers to providing early intervention services in community settings. Additionally, a state or nationwide study should be conducted to determine if there is a continued pattern of a desire to provide services in natural environments paired with a lack of understanding of intent and implementation.

The findings of this study have the potential to contribute to developing in-service trainings tailored to the specific gaps that may exist within providers' perceptions of contemporary natural learning environments. For example, providers identified shadowing or a mentor program as beneficial to gaining more experience related to natural learning environments. Workshops and videos were also suggested to further their understanding related to providing services in natural learning environments. It was found that providers number of years with the agency used for the study had more contemporary perceptions related to natural learning environments. An unexpected finding in the study indicated collaboration between Part C agencies and provider networks has the potential to increase both the understanding of the term natural environments and the agreement related to best practices within natural learning environments. Future research should be conducted to determine the extent that collaboration between agencies fosters an increase in providers' competence and confidence related to providing service within natural learning environments. Future research may be conducted to compare providers' experiences and perceptions with their

implementation of intervention services within natural learning environments and the natural opportunities for learning embedded in those environments.

The term *natural learning environment* can be challenging to conceptualize because it is more than a location where services are provided; it is a natural experience or activity afforded to children with disabilities and their family that promotes development within a familiar context. This study emphasized that early intervention providers perceive that they agree with and understand early intervention in natural learning environments, yet they reported concerns related to a clear definition as well as agreement with best practices. How do professionals working with families unite in a common understanding of natural learning environments to effectively implement early intervention services mandated by Part C? This study indicated that experience related to years providing early intervention services, especially at the Part C agency used for the study, was an indicator of providers changing in perception related to providing services in natural environments. If the plausibility of change is possible, it is critical that preservice and in-service trainings continue to deepen the breadth at which natural learning environments practices are taught and implemented.

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TABLE 1: PARTICIPANT DEMOGRAPHICS

	<i>n</i>	<i>%</i>
Gender		
Female	24	100
Age		
18-25	3	12.5
26-34	7	29.2
35-54	10	41.7
55-64	4	16.7
Ethnicity		
White/Caucasian	16	66.7
African American	3	12.5
Hispanic	4	16.7
Other	1	4.2
Professional Title		
Physical therapist	3	12.5
Speech and language pathologist	5	20.8
Occupational therapist	5	20.8
Certified occupational therapy assistant	1	4.2
Community based rehabilitative services provider	9	37.5
Other	1	4.2
Years in early intervention		
0-3 years	5	20.8
4-6 years	2	8.3
7-9 years	3	12.5
10-12 years	4	16.7
13-15 years	4	16.7
19+ years	6	25.0
Years as a provider for study agency		
0-3 years	9	37.5
4-6 years	3	12.5
7-9 years	7	29.2
10-12 years	3	12.5
19+ years	2	8.3

TABLE 2: EARLY INTERVENTION SERVICES IN THE NATURAL ENVIRONMENT

Agreement with Natural Environment Statements	<i>M</i>	<i>SD</i>
EI in natural learning environments is well accepted by the service providers of my agency	4.46	0.51
I am accepting of providing services to children and families in natural learning environments	4.54	0.51
Providing intervention services in natural learning environments is more effective than at an early intervention center or clinic	4.37	0.65
Early intervention providers receive training to work in natural learning environments	3.92	0.93
Families benefit from EI services in natural learning environments	4.54	0.59
I understand best practices of EI in natural learning environments	4.50	0.51
I understand outcomes of EI in the natural learning environment	4.50	0.59
Appropriateness of Best Practice		
Incidental learning	4.21	0.59
Parental guidance	4.71	0.46
Social interaction	4.29	0.75
Direct therapeutic services	4.25	0.90
Parental involvement	4.67	0.48
Extended family involvement	4.21	0.78
Concerns		
A clear definition of early intervention services in natural learning environments	3.30	1.06
Accessibility to natural learning environment for children with disabilities	3.38	1.25
Developmental appropriateness of the natural learning environment	3.08	1.21
Access to materials/toys	2.58	1.28
Confidentiality (e.g., onlookers observing early interventionist)	3.50	0.89
Too much parent/caregiver participation	4.21	0.93
Too little parent/caregiver participation	2.50	1.14

TABLE 3: FAMILY LIFE & COMMUNITY ACTIVITY SETTINGS

Family Life Activity Settings	<i>M</i>	<i>SD</i>
Child Routines (i.e., brushing teeth, washing hands/face, cleaning up room, picking up toys, toileting/going to bathroom, dressing/undressing)	4.63	0.50
Parenting Routines (i.e., child's mealtime/feeding, child's bathtime, child's bedtime/naptime, child's wake-up times, fixing/cutting child's hair)	4.58	0.50
Literacy Activities (i.e., reading/looking at books, telling a child stories, adult/child play times, taking walks/strolls, bedtime stories, people coming hellos/going goodbyes, cuddling with child)	4.67	0.50
Physical Play (i.e., riding a bike, playing ball games, water play/swimming, rough housing)	5.54	0.72
Family Routines (i.e., household chores, cooking/preparing meals, Caring for pets/animals, doing errands, food shopping)	4.42	0.78
Community Activity Settings		
Play Activities (i.e., outdoor playgrounds, indoor playgrounds, child play groups, playing arcade games, parent/child classes)	4.54	0.59
Family Excursions (i.e., family activities, weekend activities, car rides/bus rides, doing errands)	4.25	0.94
Family Outings (i.e., eating out, going shopping at the mall, visiting friends, family reunions)	4.25	1.03
Outdoor Activities (i.e., hiking, nature trail walks, boating/canoeing, camping, community gardens, rafting/tubing, hunting)	4.04	0.93
Church/Religious Activities (i.e., Religious Activities, going to church, Sunday school)	4.12	1.04

APPENDIX A: LETTER OF CONSENT



November 24, 2015
Attn: Katherine Stimpson
Candidate for Masters of Education Child & Family Studies
Department of Special Education & Child Development
College of Education
University of North Carolina, Charlotte
9201 University City Blvd.
Charlotte, NC 28223

Dear Ms. Stimpson,

On behalf of the Children's Developmental Services Agency (CDSA) of Mecklenburg County, I would like to express our support for your proposed study, *Early Intervention Providers' Experiences and Perceptions of Natural Environments*. We are very pleased to see a project that is focused on our in network providers' experiences and perceptions related to natural learning environments.

We are particularly excited about several aspects of your project: (a) it targets in network providers' experiences within early intervention; (b) it will provide the CDSA with information about providers' perceptions related to natural learning environments; and (c) it will describe the relationship between providers experience and their overall perception of implementing services that best align with natural learning environment practices.

This study provides an opportunity for collaboration with our in network providers on an issue of both importance and relevancy to the population we serve and also is aligned with the overall mission of our North Carolina Early Intervention Program. We understand that the providers with at least four children enrolled in the CDSA on their caseload will be asked to complete a questionnaire and answer two open ended questions. We further understand that a link to the questionnaire will be sent by email to the providers, and their participation in the study will be voluntary and have no adverse effects on their affiliation with the CDSA or the company they are contracted with.

We wholeheartedly support your efforts and will make our CDSA in network providers emails and resources available to you in order to implement all aspects of your study.

Sincerely,

Joey Bishop-Manton
Children's Developmental Services Agency Director



Dr. Carlton G. Watkins Center, 3500 Ellington Street, Charlotte, NC 28211
Telephone: 704-336-7100 Fax: 704-336-7112

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APPENDIX B: LETTER TO PROVIDER DIRECTORS



Department of Special Education and Child Development

9201 University City Blvd, Charlotte, NC 28223-0001
t/ 704.687.8772 f/ 704.687.2916 www.uncc.edu

DATE

Dear (PROVIDER DIRECTOR),

My name is Katherine Stimpson, and I am currently an employee of the Mecklenburg County Children's Developmental Services Agency (CDSA). I am also working towards a Master's degree in Child and Family Studies from the University of North Carolina at Charlotte. I am beginning the final phase of my graduate program, and I would like to ask for your support completing my study. The purpose of this study is to examine early intervention providers' experiences and their perceptions related to natural learning environments. This study will be used to gain an understanding of providers' current perceptions related to natural learning environments and how their experiences affect their perceptions. My goal is to gather email contact information for all CDSA in-network providers that have at least four children enrolled in the CDSA on their caseload.

The CDSA has approved this study. The names of providers who meet the inclusion criteria have also been provided to me by the CDSA based on the number of children on their caseload. I am asking for you to provide the work emails of the providers contracted by your agency that meet the inclusion criteria. Your assistance is voluntary, but I hope to provide valuable information on provider's perceptions and experiences related to the natural environment as a result of the data gathered from this study. If you choose to share and return the providers' emails, that is confirming your support for the study. If you choose not to share provider's emails, there will be no ramifications with the CDSA. The providers contracted by your company that meet the inclusion criteria can be found in the body of this email. Please respond with the provider's emails within the next week.

After gathering the emails from all in-network agency directors, I will send out a link to a questionnaire via email to the providers. The questionnaire should take less than 15 minutes to complete. Providers' participation is voluntary, and all data gathered will be confidential. Provider participation (or lack of participation) will have no adverse effects on their affiliation with the CDSA or the company they are contracted with. I am happy to share the link to the questionnaire upon request. Please feel free to contact me or Dr. JaneDiane Smith, my committee chair, if you have any questions or concerns. Thank you for your time and consideration, and I look forward to hearing from you by March 29 2016.

Sincerely,
Katherine Stimpson
M.Ed. Candidate, UNC-Charlotte
kmstimps@uncc.edu

Dr. JaneDiane Smith
Special Education & Child Development
Associate Professor, UNC-Charlotte
jdianesm@uncc.edu

APPENDIX C: EMAIL REQUESTING SUPPORT

Dear (name of provider director),

My name is Katherine Stimpson, and I am currently an employee of the Mecklenburg County Children's Developmental Services Agency (CDSA). I am also working towards a Master's degree in Child and Family Studies from the University of North Carolina at Charlotte. I am beginning the final phase of my program, and I would like to ask for your support completing my study. The CDSA has approved this study. The names of providers below who meet the inclusion criteria for this research have also been provided to me by the CDSA based on the number of children on their caseload. I am asking for you to provide the work emails of the providers contracted by your agency that meet the inclusion criteria. Your assistance is voluntary, but I hope to provide valuable information on provider's perceptions and experiences related to the natural environment as a result of the data gathered from this study.

After gathering the emails from all in-network agency directors, I will send out a link to a questionnaire via email to the providers. Provider participation (or lack of participation) will have no adverse effects on their affiliation with the CDSA or the company they are contracted with. Please see the attachment titled *Letter to Provider Directors* for detailed information. Thank you for your time and consideration, and I look forward to hearing from you by April 1, 2016.

Providers that have at least four children on their caseload enrolled in the CDSA in your agency:

(names of participants with at least four children on their caseload)

Please reply with the provider's work emails by 4/1/16. Thank you for your time and consideration, and I look forward to hearing from you!

Sincerely,
Katherine Stimpson
M.Ed. Candidate, UNC-Charlotte
kmstimps@uncc.edu

APPENDIX D: LETTER TO PROVIDER DIRECTORS/PARTICIPANTS



Department of Special Education and Child Development

9201 University City Blvd, Charlotte, NC 28223-0001
t/ 704.687.8772 f/ 704.687.2916 www.uncc.edu

DATE

Dear (PROVIDER DIRECTOR),

My name is Katherine Stimpson, and I am currently an employee of the Mecklenburg County Children's Developmental Services Agency (CDSA). I am also working towards a Master's degree in Child and Family Studies from the University of North Carolina at Charlotte. I am beginning the final phase of my graduate program, and I would like to ask for your support completing my study. The purpose of this study is to examine early intervention providers' experiences and their perceptions related to natural learning environments. This study will be used to gain an understanding of providers' current perceptions related to natural learning environments and how their experiences affect their perceptions. My goal is to gather email contact information for all CDSA in-network providers that have at least four children enrolled in the CDSA on their caseload.

The CDSA has approved this study. The names of providers who meet the inclusion criteria have also been provided to me by the CDSA based on the number of children on their caseload. I am asking for you to provide the work emails of the providers contracted by your agency that meet the inclusion criteria. Your assistance is voluntary, but I hope to provide valuable information on provider's perceptions and experiences related to the natural environment as a result of the data gathered from this study. If you choose to share and return the providers' emails, that is confirming your support for the study. If you choose not to share provider's emails, there will be no ramifications with the CDSA. The providers contracted by your company that meet the inclusion criteria can be found in the body of this email. Notice that you are also a potential participant, and I hope you consider partaking in the study. If you choose to complete the questionnaire, you will have the same confidentiality as all other participants. Please respond with the provider's emails within the next week.

After gathering the emails from all in-network agency directors, I will send out a link to a questionnaire via email to the providers. The questionnaire should take less than 15 minutes to complete. Providers' participation is voluntary, and all data gathered will be confidential. Provider participation (or lack of participation) will have no adverse effects on their affiliation with the CDSA or the company they are contracted with. I am happy to share the link to the questionnaire upon request. Please feel free to contact me or Dr. JaneDiane Smith, my committee chair, if you have any questions or concerns. Thank you for your time and consideration, and I look forward to hearing from you by March 29, 2016.

Sincerely,
Katherine Stimpson
M.Ed. Candidate, UNC-Charlotte
kmstimps@uncc.edu

Dr. JaneDiane Smith
Special Education & Child Development
Associate Professor, UNC-Charlotte
jdianesm@uncc.edu

APPENDIX E: EMAIL TO PARTICIPANTS VIA QUALTRICS

To whom it may concern,

My name is Katherine Stimpson, and I am currently working towards a Master's in Child and Family Studies from the University of North Carolina at Charlotte. I am beginning the final phase of my program, and I need your support completing my study. The purpose of this study is to examine early intervention providers' experiences and their perceptions related to natural learning environments. Part C states: "To the maximum extent appropriate to the needs of the child, early intervention services must be provided in natural environments, including the home, community settings in which children without disabilities participate (34 CFR 303.12(b), 1997)". Recent literature describes natural learning environments as not only a setting but a concept too. The "where" of natural environments is as important as the "how" or what takes place in the natural environment. Part C mandates that early intervention services take place in natural environments, and it is necessary to understand not only service providers experience with natural environments but also their perceptions related to natural environments.

Your participation in the questionnaire is voluntary and confidential, and there will be no ramifications personally, with your agency, or with the Children's Developmental Service Agency (CDSA) of Mecklenburg County for participating in the study. The purpose of the questionnaire is for you to reflect on your practices as a provider and contribute to the future of providing quality early intervention within natural learning environments. The questionnaire should take less than 15 minutes to complete and is mobile friendly. Your impressions are important!

Thank you in advance for you time and participation! Please contact me or Dr. JaneDiane Smith, my committee chair, if you have any questions or concerns, or you may contact the UNC-Charlotte Compliance Office, 704-687-1871 or uncc-irb@uncc.edu. Please click on the link below to complete the questionnaire.

Sincerely,

Katherine Stimpson

Candidate for Master's of Education Child and Family Studies

UNC-Charlotte

kmstimps@uncc.edu

Dr. JaneDiane Smith

Ph.D. Special Education & Child Development

Associate Professor, UNC-Charlotte

jdianesm@uncc.edu

Follow this link to the Survey:

[\\${I://SurveyLink?d=Take the Survey}](#)

Or copy and paste the URL below into your internet browser:

[\\${I://SurveyURL}](#)

Follow the link to opt out of future emails:

[\\${I://OptOutLink?d=Click here to unsubscribe}](#)

APPENDIX F: NATURAL ENVIRONMENT QUESTIONNAIRE ADAPTED

Natural Learning Environments: Experience and Perception Questionnaire Adapted

Q1 Introduction: Part C states: “To the maximum extent appropriate to the needs of the child, early intervention services must be provided in natural environments, including the home, community settings in which children without disabilities participate (34 CFR 303.12(b), 1997).” Recent literature describes natural learning environments as not only a setting but a concept too. The “where” of natural environments is as important as the “how” or what takes place in the natural environment. Part C mandates that early intervention services take place in natural environments, and it is necessary to understand not only service providers experience with natural environments but also their perceptions related to natural environments. Your participation in the questionnaire is voluntary. Your response will be anonymous, and there will be no ramifications personally, with your agency, or with the Children’s Developmental Services Agency (CDSA) of Mecklenburg County for participating in the study. The purpose of the questionnaire is for you to reflect on your practices as a provider and contribute to the future of providing quality early intervention within natural learning environments! Your impressions are important!

Q37 Use the green arrow buttons at the bottom of the screen to move between pages

Q2 By clicking yes you will be giving consent to complete the questionnaire:

☐ Yes (1)

☐ No (2)

If No Is Selected, Then Skip To End of Survey

Q3 INSTRUCTIONS:

1. When completing the questionnaire, please only focus on the children on your caseload that are enrolled through the Children’s Developmental Service (CDSA) of Mecklenburg County.
2. Please answer the following questions about your experience and perceptions of natural environments. We encourage you to provide additional comments throughout the questionnaire.

Q6 BACKGROUND EXPERIENCE RELATED TO NATURAL LEARNING ENVIRONMENTS:

Q28 What is your gender?

- ☐ Male (1)
- ☐ Female (2)
- ☐ Prefer not to answer (3)

Q26 How old are you?

- ☐ 18-25 (1)
- ☐ 26-34 (2)
- ☐ 35-54 (3)
- ☐ 55-64 (4)
- ☐ 65 or over (5) _____
- ☐ Prefer not to answer (6)

Q30 What is your ethnicity?

- ☐ White/Caucasian (1)
- ☐ African American (2)
- ☐ Hispanic (3)
- ☐ Asian (4)
- ☐ Native American (5)
- ☐ Other (6)
- ☐ Prefer not to answer (7)

Q7 What is the highest level of education you have completed?

- ☐ Less than High School (1)
- ☐ High School / GED (2)
- ☐ Some College (3)
- ☐ 2-year College Degree (4)
- ☐ 4-year College Degree (5)
- ☐ Masters Degree (6)
- ☐ Doctoral Degree (7)

Q35 What year did you complete your highest level of education?

Q4 What is your professional title?

- ☐ Physical therapist (1)
- ☐ Physical therapy assistant (2)
- ☐ Speech and language pathologist (3)
- ☐ Speech and language pathologist assistant (4)
- ☐ Occupational therapist (5)
- ☐ Certified occupational therapy assistant (6)

- ☐ Community based rehabilitative services provider (7)
- ☐ Other, please specify (8) _____

Q32 What professional licenses/certifications do you currently hold? Check all that apply.

- ☐ Infant-Toddler Certification (1)
- ☐ Certificate of Clinical Competence-Audiology (CCC-A) (2)
- ☐ Certificate of Clinical Competence- Speech-Language Pathology (CCC-SLP) (3)
- ☐ Clinical Fellowship (CF) (4)
- ☐ Clinical Years Fellowship (CYF) (5)
- ☐ Clinical Specialty Certification (CSC), please specify (6) _____
- ☐ National Board for Certification in Occupation Therapy (NBCOT) (7)
- ☐ Other, please specify (8) _____

Q8 How many years have you been working with children birth-three with or at risk for disabilities and their families?

- ☐ 0-3 years (1)
- ☐ 4-6 years (2)
- ☐ 7-9 years (3)
- ☐ 10-12 years (4)
- ☐ 13-15 years (5)
- ☐ 16-18 years (6)
- ☐ 19+ years (7)

Q9 How many years have you been a provider within the CDSA network?

- ☐ 0-3 years (1)
- ☐ 4-6 years (2)
- ☐ 7-9 years (3)
- ☐ 10-12 years (4)
- ☐ 13-15 years (5)
- ☐ 16-18 years (6)
- ☐ 19+ years (7)

Q10 How many children on your caseload are enrolled in the CDSA?

- ☐ 4-6 children (1)
- ☐ 7-10 children (2)
- ☐ 11-13 children (3)
- ☐ 14-16 children (4)
- ☐ 17-19 children (5)
- ☐ 20+ children (6)

Q11 What specific professional development trainings have you completed on natural learning environments within the last 3 years? Check all the apply.

- ☐ New Provider Orientation Mecklenburg CDSA (1)
- ☐ The Family, Infant, and Preschool Program Trip (FIPP Trip) (2)
- ☐ Professional Conferences, please specify (3) _____
- ☐ Agency Professional Development, please specify (4) _____
- ☐ Other, please specify (5) _____

environments (6)					
I understand outcomes of EI in the natural learning environment (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q14 2. Please indicate the degree to which you personally feel the practices below are appropriate within natural learning environments.

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Incidental learning (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parental guidance (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social interaction (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct therapeutic services (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parental involvement (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Extended family involvement (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q25 What experiences have influenced your thinking related to natural learning environments?

Please answer openly and truthfully.

Q15 CONCERNS WITH EI SERVICES IN THE NATURAL LEARNING ENVIRONMENT:

Q16 4. Please indicate the degree to which you believe the following factors have been concerns when providing early intervention in natural learning environments.

	Very Often a Concern (1)	Often a Concern (2)	Undecided (3)	Seldom a Concern (4)	Very Seldom a Concern (5)
A clear definition of early intervention services in natural learning environments (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accessibility to natural learning environment for children with disabilities (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developmental appropriateness of the natural learning environment (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to materials/toys (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confidentiality (e.g., onlookers observing early interventionist) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Too much parent/caregiver participation (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Too little parent/caregiver participation (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q38 Do you have any specific concerns about providing early intervention services in natural learning environments that were not addressed in the question above?

Please answer openly and truthfully.

Q17 FAMILY LIFE & COMMUNITY ACTIVITY SETTINGS WITHIN NATURAL LEARNING ENVIRONMENTS:

Q18 5. Please indicate the degree to which the following family life activity settings are suitable for early intervention services in natural learning environments.

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Child Routines (i.e., brushing teeth, washing hands/face, cleaning up room, picking up toys, toileting/going to bathroom, dressing/undressing) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parenting Routines (i.e., child's mealtime/feeding, child's bathtime, child's bedtime/naptime, child's wake-up times, fixing/cutting child's hair) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Literacy Activities (i.e., reading/looking at books, telling a child stories, adult/child play times, taking walks/strolls, bedtime stories, people coming hellos/going goodbyes, cuddling with child) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical Play (i.e., riding a bike, playing ball games, water play/swimming, rough housing) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family Routines (i.e., household chores, cooking/preparing meals, Caring for pets/animals, doing errands, food shopping) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q19 6. Please indicate the degree to which the following community activity settings are suitable for early intervention services in natural learning environments.

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Play Activities (i.e., outdoor playgrounds, indoor playgrounds, child play groups, playing arcade games, parent/child classes) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family Excursions (i.e., family activities, weekend activities, car rides/bus rides, doing errands) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family Outings (i.e., eating out, going shopping at the mall, visiting friends, family reunions) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outdoor Activities (i.e., hiking, nature trail walks, boating/canoeing, camping, community gardens, rafting/tubing, hunting) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Church/Religious Activities (i.e., Religious Activities, going to church, Sunday school) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q24 FINAL THOUGHT: What type of professional development activities would you recommend to prepare early intervention professionals to provide services in natural learning environments?

Please answer openly and truthfully

Q36 STOP AND REVIEW When you use the bottom right next button to click off this screen, you will be exiting the survey. Please take a moment to review your answer