

Sixpence Annual Evaluation Report 2009–­­2010

Submitted by

University of Nebraska Medical Center’s Munroe-Meyer Institute

A University Center of Excellence for Developmental Disabilities

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**PROGRAM DESCRIPTION**

**What is the purpose of the Sixpence Program?**

The Sixpence Early Learning Fund is a public-private partnership that is used primarily for grants to school districts to provide programs and services for infants and toddlers who are most at risk of school failure. The purpose of the Sixpence Programs is to help promote children’s opportunities to experience positive environments that provide for their healthy growth and development during their earliest years. The Sixpence Programs are available to promote community level partnerships that focus on meeting the developmental needs of very young children and to support parents as their child’s first and most important teacher, helping to ensure their child’s success in school and later in life.

**Who are the Sixpence Programs?**

In the 2009-2010 program year, the Sixpence Early Learning Fund funded 13 programs across 11 school districts in Nebraska to provide evidence-based services to young children (birth through age three) and their families. One of three primary models adopted was family engagement services, center-based infant/toddler care, or a combination of family engagement and centered-based services. Programs were funded by a combination of sources including Sixpence funds and federal and local sources. This was the second year of funding programs.

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|  | * 13 programs (2 in Thurston County, Douglas and Lancaster) were funded across 11 school districts.   **Programs adopted one or more of the following components:**   * Center-based care (7). * Family engagement services (7). * Combination of components (center/family engagement) (2). |

**What were the services provided?**

Each of the Sixpence Programs was created as part of a community partnership and included an advisory board consisting of representatives from community stakeholders, who participated in the planning and implementation of the program. Each program identified evidence-based practices that were implemented as part of the services delivered. The majority of the family engagement services included individualized sessions that were delivered on a weekly basis in the families’ home. For some families, the individualized services were provided in a community location. Many of the family engagement services also included group socializations, which were opportunities for children and families to gather together in learning activities. The majority of the seven center-based programs provided full-day services. All of the center-based programs included strategies to engage parents in their child’s education program and included family engagement sessions with the family.

**A Program Snapshot: An Integrated Array of Supports**

The Crete Young Families program has a unique blend of services that are integrated to best address the needs of the families they serve. The program has an interdisciplinary team that includes teachers, family educators, nurses and mental health counselors. To maximize an integrated approach, team members meet on at least a monthly basis to complete joint planning. Joni’s story highlights the benefits of this team approach:

“Evian was born on August 26, 2008, and at the first visit, the family educator knew there was a problem. Joni was not bonding with her baby. She didn’t know how to hold Evian and there seemed to be little interaction between the baby and herself. The family educator modeled for Joni, answered questions, and invited her to support groups. Joni knew she had much to learn in caring for her daughter and she definitely needed someone she could talk with and of whom she could ask questions. Joni was learning how to interact with her daughter from both the family educator and the infant teachers in the child care. The visiting nurse and the behavioral health counselor were also helping Joni adjust to motherhood, deal with relationships, set goals, and follow through.”

**Program-Defined Risk Factors:**

* Children (birth to age three) whose family income would qualify them for **participation in the federal free or reduced lunch program**;
* Children (birth to age three) who were born **prematurely or at low birth weight** as verified by a physician;
* Children (birth to age three) who reside in a home where a **language other than spoken English** is used as the primary means of communication;
* Children (birth to age three) whose **parents are younger than eighteen** or
* Children (birth to age three) whose **parents have not completed high school**.

**Who were the children and families served?**

The targeted population for the Sixpence Program is infants and toddlers (birth to age three) who are most at risk of failure in school. Although there are many factors that may cause infants and toddlers to be considered “at risk”, the Sixpence Program must serve infants and toddlers who have, at a minimum, one of the identified risk factors. Parents can be served during the mother’s prenatal period.

In addition to the five program-defined eligibility risk factors, three additional risk factors were tracked: single parents, children enrolled in early intervention, and children with low health rating.

**% of Children/Families with Multiple Risk Factors**

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|  | **% of Child/Family associated with Specific Risk Factors:**   * 79% qualified for **Free and Reduced Lunch (**FRL). * 63% were **single parents**. * 67% were **teen parents**. * 45% of the parents did **not have a high school diploma**. * 22% had **English as a Second Language**. * 0% had a **fair or poor health rating.** * 10% of the infants were **premature or low birth weight**. * 8% were enrolled in the **Early Development Network.** |

* 61% of the children and their families were associated with three or more risk factors.
* The categories of single parent, teen parent and eligible for FRL represented the largest percentages of families.

The demographic description of the population is described in the following:

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| * **A total of 360 children and 320 families were served by the program in 2009-2010. A total of 116 have exited the program.**   ***Child Data:***   * **60% of the children were under 1 at the time of intake.** * **There were slightly more males (51%) than females (49%) served by the program.** * **63% of the children served represented minority backgrounds.**   ***Parent Data:***   * **78% of the families had English as their primary language.** * **63% of the parents were single.** * **45% of the parents did not have a high school diploma.** * **17% of the parents served were pregnant.** * **3% of the families had a CPS referral.**   **Ethnicity Distribution** | | | I:\BJACKSON\Endowment Grant\Data 2009\Success Stories\henry times two.jpg | |
|  | **Age Distribution** | |

**EVALUATION FINDINGS**

**What was the evaluation process?**

A comprehensive evaluation process was conducted to monitor the implementation of the Sixpence Programs and progress towards identified program outcomes. A standardized evaluation process was developed to collect and report information uniformly across programs. A continuous improvement process was incorporated as part of the evaluation process. The following is a summary of the evaluation results of the implementation of the second year of Sixpence Programs.

**What was the quality of the center-based services?**

***Infant/Toddler Environment Rating Scale-Revised (ITER-RS)***

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| The *ITER-RS* was used to evaluate the overall quality of the classrooms. The ITERS is an observational assessment of 39 items across seven subscales designed to assess group programs for children from birth to 2½ years of age. At least one classroom was observed for each of the seven center-based programs for a total of 16 classrooms. |

**Summary of 2009-2010 ITERS Scores**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **n** | **Space & Furnishings** | **Personal Care Routines** | **Listening & Talking** | **Learning Activities** | **Interaction** | **Program Structure** | **Parents & Staff** | **Overall Rating** |
| 2008-2009 | 9 | 5.47 | 4.32 | 6.37 | 5.67 | 6.42 | 6.42 | 6.35 | 5.96 |
| Score Ranges | 3.6-6.2 | 3.17-6.17 | 4.33-7.0 | 4.78-6.22 | 5.75-7.0 | 4.33-7.0 | 5.29-7.0 | 4.70-6.67 |
| 2009-2010 | 16 | **6.13\*** | **4.77\*** | **6.54\*** | 5.55 | **6.5\*** | **6.55\*** | 6.17 | **6.03\*** |
| Score Ranges | 4.8-6.8 | 2.33-6.0 | 4.67-7.0 | 3.30-6.56 | 4.75-7.0 | 4.33-7.0 | 4.14-7.0 | 4.67-6.6 |
| *1= inadequate 3 = minimal 5 = good 7 = excellent*  *\*Areas that were Improved over 2008-2009 scores* | | | | | | | | | |

* The majority of the 16 classrooms (93%) met the state overall rating for quality (a rating of 5 or higher) on the *ITERS-R.* Only 38% met the criteria cross all seven areas.
* This year, 50% of the classrooms met the state standard in personal care routines (e.g., health practices, diapering, etc.). This was an improvement from 2008-2009, when only 22% of classrooms met the state standard in personal care routines.
* The highest scores across classrooms (average ratings of six or greater) were in the areas of space and furnishing, listening and talking, interaction, program structure and parents and staff.

***Teacher Interaction and Language Rating Scale***

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| The Teacher Interaction and Language Rating Scale evaluated teachers’ interaction that supported children’s development of language skills. It is an observational assessment with 11 items designed to rate the teacher’s interaction with the children in the classroom. Fourteen classrooms were observed across the seven center-based programs. |

**% of Teachers in Each Rating Category on Teacher Rating Scale**

* 50% of the teachers optimally used interaction strategies that encouraged and supported young children’s language development.
* Fewer classrooms received a satisfactory rating. This may be the result of a new rater who may have scored the classrooms more stringently. An additional year with the same rater will provide a better picture of the trend.
* No programs in 2009-2010 scored in the “needs improvement” area.

**What was the quality of the family engagement services?**

***Home Visitor Observation Rating Scale (HoVRS)***

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| The *Home Visit Rating Scales-A* (HoVRS-A) is designed to assess the quality of family engagement sessions from a video of a direct observation. The measure includes seven rating scales that are collapsed into two: *Scales of Home Visit* *Instruction and Scales of* *Parent and Child Engagement.* The scale is based on a 5 point Likert scale. |

The HoVRS ratings were completed on 14 family educators across seven programs. The seven items on the HoVRS were collapsed into two scores. *The Home Visit Instruction* score is based on the family educator’s interactions with the family. It examines the extent to which the family educator facilitates parent-child interaction, builds relationships with the family, is responsive to their needs and interests and uses non-intrusive approaches. The *Parent and Child Engagement* score is based on the outcomes of the family engagement session, measuring the extent to which the child and parent are engaged in the session and the overall quality of the parent-child interaction. The results of the individual items and the collapsed scores are summarized in the following two figures.

**Average Scores by Item on the HoVRS**

**Cross Year Comparison: Summary of HoVRS Results**

Cross Year Comparison: Summary of HoVRS Results

* The quality of the home visit instruction improved over the previous year. The results indicated that the family educators are effective in their practice as evidenced by the parent’s and child’s engagement in the session and their interaction together.
* The strengths of the family educators’ instruction were their skills in establishing positive relationships with the family and the strategies they used to guide the parent-child interaction.
* The area most improved over the previous year was the family educators’ support of parent-child interactions. Family educators’ increased their strategies that supported parent’s understanding of their child’s development and coaching parents on strategies to enhance their interaction with their child.
* The family educator ratings on responsivity were the lowest area. This area had a lower rating as many parents had limited involvement in planning the agenda for future sessions. This is an important area because joint planning facilitates parental involvement and empowerment in the interaction.

**What were the language outcomes of the children?**

***MacArthur-Bates Communicative Development Inventories (CDI- Short Form))***

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| The MacArthur-Bates CDI – Short Form is a standardized assessment using parent report to measure language and communication skills of infants and young children (ages 12 – 30 months). A total of 135 MacArthur-Bates CDI were completed and 62 children had both Fall and Spring data. The mean age of the children was 24 months with an average time in the program of 16 months. |

N=62

N=266

N=366

**MacArthur Mean Percentile Rank Comparison of Fall and Spring Scores**

N=366

N=266

N=62262

**MacArthur Total Vocabulary Production Comparison of Fall and Spring Scores**

**What were the language outcomes based on the MacArthur CDI?**

* Language skills were maintained across time. There were no significant differences between the Fall and Spring percentile rank scores (n=62, p= .166, two-tailed test).
* Although not statistically significant, mean scores for infants decreased over time. This may be attributed to a number of factors including:
* The MacArthur-CDI Scale may impact this finding as the infant Fall and Spring assessments crossed over test forms.
* The intervention over the short term may not be sufficient to ameliorate the effects of poverty on language.
* Although there were not significant changes in the percentile ranks of children across time, the toddlers who were 16 months and older made significant increases in the number of words they were saying (n=36, p=.000, two tailed test).
* There was not a significant relationship between time in program and outcome on the MacArthur CDI (n=93, -.114, P=.276, two tailed test).
* Programs may want to review their intervention practices to determine ways to enhance opportunities to enrich communication.

***Peabody Picture Vocabulary Test, 4th Edition (PPVT-4T)***

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| The PPVT-4 is a standardized assessment that was designed to measure receptive language (for children 30 months or older). A total of 46 assessments were completed in the Spring. There were 16 children who had PPVTs completed in both the Fall and the Spring. The average time in the program was 15 months. The average age at assessment was 40 months. |

**% of Children by Classification based on Spring PPVT-4 Scores**

N=46

* Children with IFSP\*\*
* Children with no IFSP

N=46

**\*\*Individualized Family Service Plan-22% of the children assessed with the PPVT were receiving Early Development Network services**

**Fall/Spring Comparisons of Children’s Average PPVT-4 Scores**

n=16

**What were the language outcomes based on the PPVT?**

* Predictably, the majority (85%) of the children scored within the low average to average or above range (80+) at the time of the spring assessment.
* Language skills were maintained across time. There were no significant gains in scores across the Fall/Spring assessments.

**What were the social-emotional outcomes of the children?**

***Devereux Early Childhood Assessment for Infants and Toddlers (DECA-IT)***

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| The DECA-IT is a standardized assessment of young children’s protective factors associated with child characteristics. These child characteristics include: initiative, attachment/relationships and self-regulation. A total of 223 children had DECA-IT or DECA-P completed. A total of 115 children had Fall-Spring assessments completed. The mean age of the children was 16 months in the Spring with an average time in the program of 13 months. |

**% of Children Scoring in Each Assessment Category on the Total Protective Factor Dimension on the DECA-IT**

***Impact on Social-Emotional Development***

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| --- | --- | --- | --- |
| Outcome Area | Number | Fall Mean Score | Spring Mean Score |
| Attachment | **115** | **49.21** | **51.07\*** |
| Initiative | **115** | **49.67** | **51.97\*\*** |
| Self-Regulation | **46** | **48.30** | **53.85\*\*\*** |
| Total Protective Score | **115** | **49.71** | **51.95\*** |

\*Significantly different from zero at the .05 level, two-tailed test

\*\*Significantly different from zero at the .01 level, two-tailed test.

\*\*\*Significantly different from zero at the .001 level, two-tailed test.

**What were the social-emotional outcomes based on the DECA-IT or DECA-P?**

* Children gained social-emotional skills, with an increasing percentage of children scoring within the range of “strength” for the Total Protective Factor dimension by Spring.
* The results of the statistical analysis indicate the children made significant gains across all protective factor outcome areas. The most gain was in the area of Self-Regulation and Initiative.

***Summary of Results Matter Data***

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| *Results Matter in Nebraska* includes a child outcome system designed and implemented to improve programs and supports for all young children birth to age five, served by school districts, the Early Development Network, and their partners. It was initiated as part of the federal Office of Special Education Programs (OSEP) requirement for reporting child outcomes. Each program chose one of three state approved assessments: High/Scope Child Observations Record, Creative Curriculum Developmental Continuum, or Assessment, Evaluation, and Programming System. |

*Creative Curriculum Developmental Continuum (CCDC).* CCDC outcome data provided scores for children based on a sequence of four steps, with each step on the continuum representing a more difficult developmental concept. Seven programs used CCDC, assessing 123 children. A total of 98 children had both Fall and Spring data. 11% were children with an IFSP. The CCDC ratings are based on a six point scale with a range from zero to five. Gain was determined by the difference from Fall to Spring ratings across six domains. The results indicated there were consistent gains across all six areas with slightly higher gains occurring in the area of communication.

**Creative Curriculum Gains Summary Based on Means Data**

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|  | |  | |  |  |
| **N=103** | **Fall 2009**  **Mean Score** | | **Spring 2010**  **Mean Score** | **Gains**  **(Spring 2010 Mean Score -** | **%**  **Gain** |
| **Fall 2009 Mean Score)** |  |
| **To Learn About Self and Others** | 2.75 | | 3.56 | .81 | 29 |
| **To Learn About Moving** | 2.91 | | 3.74 | .83 | 29 |
| **To Learn About the World** | 2.59 | | 3.38 | .79 | 31 |
| **To Learn About Communicating** | 2.50 | | 3.29 | .79 | 32 |

***High/Scope Child Observation Record (COR).*** Progress data from the COR provided scores for children on a five-point scale, with five being the most advanced. Three programs provided Fall and Spring observational data for a total of 49 children. The COR ratings ranged from one to five on each domain. Gain was determined by the difference from Fall to Spring ratings across six domains. The results indicated the highest gains were in social relations and creative representation.

**High/Scope COR Gains Summary Based on Means Data**

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| --- | --- | --- | --- | --- | --- |
|  | |  | |  |  |
| **N=49** | **Fall 2009**  **Mean Score** | | **Spring 2010 Mean Score** | **Gains**  **(Spring 2010 Mean Score -** | **%**  **Gain** |
| **Fall 2009 Mean Score)** |  |
| **Sense of Self** | 2.62 | | 3.57 | .95 | 36 |
| **Social Relations** | 2.42 | | 3.49 | 1.06 | 44 |
| **Creative Representation0’** | 2.16 | | 3.19 | 1.03 | 48 |
| **Movement** | 2.40 | | 3.38 | .98 | 41 |
| **Communication and Language** | 2.41 | | 3.29 | .88 | 37 |
| **Exploration and Logic** | 2.38 | | 3.27 | .90 | 38 |

***Assessment, Evaluation, and Programming System (AEPS).*** AEPS outcome data provided scores for children based on a sequence of items with increasing difficulty. Analysis was completed by calculating the AEPS ratings on the number of items completed. One program provided Fall and Spring observational data for a total of 12 children. As a result, this outcome data is reported differently from the CCDC or COR. The gain scores are based on the change in raw score across time. The gain scores were reported across domains and are summarized in the following table. The results found that children made the most gains in the areas of cognitive, social, and social-communication development. Less gain was made in the areas of gross and fine motor skills.

**AEP Gains summary Based on Means Data**

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| --- | --- | --- | --- | --- | --- |
|  | |  | |  |  |
| **N=12** | **Fall 2009**  **Mean Raw Score** | | **Spring 2010**  **Mean Raw Score** | **Gains**  **(Spring 2010 Mean Score -**  **Fall 2009 Mean Score)** | **%**  **Gain** |
|  |
| **Gross Motor** | 80.58 | | 92.50 | 11.92 | 15 |
| **Fine Motor** | 47.48 | | 56.00 | 8.42 | 18 |
| **Adaptive** | 46.92 | | 58.75 | 11.83 | 25 |
| **Cognitive** | 72.17 | | 98.42 | 26.25 | 36 |
| **Social/Communication** | 65.00 | | 83.50 | 18.50 | 28 |
| **Social** | 41.50 | | 53.00 | 11.50 | 28 |

**What are the health outcomes of the children?**

***Health Survey***

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| In the Spring, providers completed the health survey for each of the families they served to assess the children’s health status. Surveys were completed on 221 families. These results were compared to state health indicators (based on Nebraska 2010 Goals and Objectives -2002) and Nebraska findings (Kids Count 2007). In addition, health data was also completed for those 30 mothers who were pregnant. |

**% of Children Meeting the Child Health Indicators**

n=221

* Children served in Sixpence Programs had a higher number of children who were immunized than Nebraska children as a whole and were above the criteria set in the Nebraska 2010 Goals and Objectives.
* High percentages of children had a medical home and were up to date on well check exams.
* Overall, the majority of the children’s health was rated as good or higher.
* There is a need to increase the number of parents who place their babies on their back to sleep .

**% of Pregnant Mothers Meeting the Maternal Health Indicators**

n=30

* Mothers participating in Sixpence received consistent prenatal care. This percentage was higher than mothers reported in Nebraska.
* Mothers in Sixpence had a higher rate of premature babies and had less who abstained from smoking.

**Does participation in Sixpence Programs improve the home environment?**

***Home Inventory –Short Form (SF): Birth to Three (Teacher and Family Survey)***

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| The HOME-SF is a standardized assessment of the home environment and maternal-child interaction. It consists of 18 items, 8 based on maternal report and 10 items based on provider observation. The scale measures both cognitive stimulation and emotional support. A total of 115 Fall/Spring surveys were completed.  **% of Families that Score within the Average Range on the Home Inventory Inventory – Change of Total Score Over Time** |

**n=115**

**Does Sixpence result in positive changes in the home environment?**

* The majority of the families are scoring within the average range, suggesting that their homes provide positive cognitive stimulation and emotional support.
* Families who scored in the mid to high average range in the Fall maintained their skills so there were not significant gains in skills by Spring (n=115, p=.547, two tailed test).

**Program promotes self-confidence and Success in School………..**

At 16, Carrie had her daughter, Sarema who is now 11 months.  Carrie graduated with honors from North High School this May, 2010.  She will begin her post-secondary education at College of St. Mary, where she will major in Biology.  She hopes to one day become a pediatric dentist.  She has also elected to live in the Mothers Living and Learning dorms, where she will be able to live with her daughter on campus.  We have high hopes for Carrie, as her level of maturity and perseverance will be excellent tools for her as she begins her college journey. !......a family educator from a family engagement program

* Families who scored in the low average area or below in the Fall, achieved significant positive gains by Spring (n=24, p=.000, two-tailed test).

***Keys to Interactive Parenting (KIPS) - Preliminary Results***

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| The KIPS assesses 12 key parenting behaviors across three primary areas including: building relationships, promoting language, and supporting confidence. Families participating in home visitation services were videotaped as they interacted with their child. Interactions were scored to evaluate the quality of their interactions. A total of 26 parents had Fall and Spring assessments. The mean age of the children was 26 months and they were in the program for an average of 17 months. |

**KIPS Spring Average Scores**

n=26

* Fall
* Spring

**% of Parents Scoring above the Mid-Point\* on the KIPS**

n=26

\*Scores of 4 or higher on a 5 point LIkert Scale

**What was the impact on parent-child interaction skills?**

* The majority of the parents demonstrated positive interactions with their children. Strengths were in the areas of supporting learning and building relationships.
* Parents who scored in the high range (scores higher than four) in the Fall maintained their skill so there were not significant gains in skills by Spring (n=13, p=.514, two tailed test).
* Families who scored in the low average area or below in the Fall, achieved significant positive gains by Spring (n=13, p=.059, two-tailed test).

**Summary**

**Program Description**. During the second year of implementation, Sixpence Programs served 360 infants and toddlers and pregnant mothers who were at high risk of school failure. Thirteen programs across Nebraska implemented family engagement services and/or center-based infant care which utilized evidence-based practices.

**Quality of Services**. The majority of the center-based infant care programs were of high quality, meeting the state identified standard for quality. Continuous improvement activities could be targeted in the areas of personal care routines and enhancing teachers’ support of children’s language skills.

**Health Outcomes**. Children in the Sixpence Programs met the state indicator for being up to date on immunizations. The majority had a medical home and were up to date on their routine well check appointments. Overall, providers rated the children’s health positively (good or higher).

**Child Outcomes**. Overall, children maintained their language skills across the year with no significant gains noted. Participation in Sixpence positively impacted social-emotional skills . The majority of the children demonstrated social-emotional skills within the average range and demonstrated significant increase of skills over the year.

**Family Outcomes**. Participation in Sixpence positively impacted families. Families that had low scores in the Fall, either in how well the home environment promotes emotional support and cognitive stimulation or in their interaction with their child, demonstrated significant increases in skills. Families that scored high on these measures, maintained high quality environments and interaction skills.

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|  | **A Success in Parenting……..**  Shauna is amazing to work with. She is on the floor and actively engaged in every visit. She takes the ideas that we present and runs with them. It is not unusual for us to go back the next week and hear about how she has been working with the girls on the lesson learned on the previous visit, often adapting and expanding on the activity. When she talks to her girls about the visits she refers to it as "school" time. Because the girls have so much fun during our visits, I have no doubt that they are developing a positive attitude about school…. A family educator in the family engagement services |

**Evaluation Report prepared by Barbara Jackson\*, Ph.D.**

**Lisa Alvarez, B.S**

**Rosie Zweiback, M.A.**

**The University of Nebraska Medical Center’s Munroe-Meyer Institute**

**A University Center of Excellence for Developmental Disabilities**

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