

# Innovative Inclusion Program for Early Learners with Visual Impairments Offered by Miami Lighthouse Learning Center for Children

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## Keywords

inclusion, specialized instruction, early childhood, best practice, empathy, visually impaired, blind

Based on 13 years of experience and solid understanding of the needs of families of young children with visual impairments, the Blind Babies Home Visitation team of the Miami Lighthouse for the Blind and Visually Impaired designed an innovative center-based inclusion program for early learners. This program aligns with the natural environment provisions of Individuals with Disabilities Education Act (IDEA, 2004) and best practices described by the Division for Early Childhood and the National Association for the Education of Young Children (DEC/NAEYC, 2009). In this report, the authors share information about this innovative program.

## Foundation of services to families and young children

IDEA, Part C, defines *natural environments* as “settings that are natural or typical for a same-aged infant or toddler without a disability [that] may include the home or community settings” (Sec. 303.26). Advocating

for inclusion in early childhood programs funded under IDEA’s Part B, professional organizations concerned with healthy development (DEC/NAEYC, 2009) have identified key elements of successful programs for children with disabilities. These elements emphasize the need for both inclusion and specialized instruction to support student

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learning. In 2015, the U.S. Department of Health and Human Services and the U.S. Department of Education issued a policy statement regarding the importance of inclusion in the education of young children with disabilities. They concluded that “meaningful inclusion can support children with disabilities in reaching their full potential, resulting in broad societal benefits, including higher productivity in adulthood and fewer resources spent on interventions and public assistance later in life” (p. 2).

### **Miami Lighthouse Learning Center for Children program**

As determined by the parent and the Individualized Family Service Plan (IFSP) team, when early intervention requires a center-based model, the Miami Lighthouse Learning Center for Children offers an early intervention center-based option, and services are provided as outlined in the child’s IFSP. Through an inclusion model, toddlers from 12 months to 36 months of age, both with and without vision impairment, are supported in the center’s inclusive learning environment.

An onsite Early Steps Service coordinator is available to support all families through targeted case management and to assist with the transition from Part C to Part B. At transition, preschool children eligible under Part B and those without vision impairments are able to remain at the center’s prekindergarten inclusion program.

Defining an inclusion classroom as one that has equal numbers of children with and without visual impairments, the Lighthouse Learning Center 2017–2018 program featured one inclusion classroom for toddlers aged 12–36 months and two prekindergarten inclusion classrooms for children aged 36–72 months. A literature review suggests that a center-based program for children

1–3 years of age is an unusual model. Miami Lighthouse subcontracted with faculty and research assistants from the University of Miami (UM) to (a) commence a study to confirm lessons learned and (b) to demonstrate the efficacy of inclusion utilizing specialized support.

### **PARTICIPANTS**

**Children.** During the 2017–2018 school year, the program enrolled 40 children and pre- and postintervention data were collected for the 35 children who were present for both data collection points. Gender was split evenly; 54.3% ( $n = 19$ ) of children were female. Children ranged in age from 14 to 68 months ( $M = 40$  months). Children identified as approximately 74% ( $n = 26$ ) Hispanic, 11% ( $n = 4$ ) African American, 9% Caucasian ( $n = 3$ ), and 6% ( $n = 2$ ) Other.

Of the 40 children who participated in the first year, 18 children were identified as having visual impairments (four were children who are blind and 14 had a low vision). Of these 18 children, five (27%) had at least one secondary disability including developmental delay, orthopedic impairment, or traumatic brain injury.

The typically developing children were either siblings of the children with visual impairments, children enrolled in the state’s voluntary prekindergarten program, economically disadvantaged children living in the surrounding community, or children of employees. The location of the Miami Lighthouse has been identified by the U.S. Census American Community Survey (2007–2011) as an area where 62% or more of the children live at or below 150% of the poverty threshold; the program primarily served an at-risk population of children from economically disadvantaged homes.

**Teaching team.** Eight teachers comprised the Learning Center’s instructional team:

three lead teachers with certification in early childhood, two teachers of students with visual impairments, and three paraeducators. Teachers were 100% female, 25% ( $n = 2$ ) African American, 50% ( $n = 4$ ) Caucasian, and 25% ( $n = 2$ ) identified as Other. Four teachers (50%) were Hispanic. All lead teachers had a bachelor's degree, the certified teachers of students with visual impairments held master's degrees, and paraeducators had either an associate's degree ( $n = 1$ ), a Child Development Associate credential ( $n = 1$ ), or a high school diploma ( $n = 1$ ). Certified-related service professionals provided services in orientation and mobility, occupational therapy, speech and language, and physical therapy, as appropriate. Related service staff members collaborated with the instructional team, but they did not participate in data collection for the evaluation. Orientation and mobility services were offered daily, either through direct or collaborative consultation, to all children with visual impairments based on their individual needs.

## CURRICULUM

The curriculum implemented was the HighScope (2019a) Infant-Toddler Curriculum and the HighScope (2019b) Preschool Curriculum. Based on a literature review, this project was one of the first to incorporate this curriculum to educate children who are blind and was recognized in the HighScope journal for early educators, *The Active Learner*. HighScope facilitates learning by offering many opportunities for play and a framework for large and small groups. The curriculum was selected because of its active learning approach, hands-on emphasis, and the sequential structure that supports learning in an intentional and individualized way.

Using Nesta's (2011) Theory of Change tool, a three-pronged approach was developed focusing on (a) inclusion utilizing specialized intervention strategies, (b) instructional team training, and (c) parent engagement activities to show change over time. Parent–community–school partnerships, following Epstein's Framework on Involvement (Epstein et al., 2002), included a daily communication log, family workshops, home visits, parent volunteer opportunities, parent committees, and coordinating community partner resources to meet families' needs. Instructional team training and activities included completing the Hadley (2005) online module, "Blindness Basics," Foundations of Inclusion and Embedded Interventions training modules from Frank Porter Graham Institute's CON-NECT, *Child Observation Record (COR)-Advantage* assessment training, and a 4-week HighScope curriculum training for prekindergarten students, infants, and toddlers.

Drawing on the knowledge of each child's unique developmental and vision needs, a co-teaching approach was implemented, whereby the teacher of students with visual impairments and early childhood teacher shared responsibility for creating a developmentally appropriate safe space for children to learn and grow. Through daily instructional planning, teachers and specialists considered the learning environment in conjunction with individual needs to develop activities and provide open-ended materials to create a predictable and active learning environment. The co-teaching team collected, recorded, and reviewed anecdotal data to support their *COR-Advantage* assessment of students' development. To guide instruction, teachers of students with visual impairments conducted the *Oregon Project's Skills Inventory*, designed for young children with visual impairments, upon children's entry into the program, and every 6 months.

## First-year outcomes

UM researchers partnered with Miami Lighthouse to measure aspects of the learning center inclusion model. Four primary research questions focused on (a) fidelity of implementation of high-quality classroom practices and the inclusion model, (b) teacher professional development, (c) child developmental outcomes, and (d) parent outcomes. First-year outcomes are based on three 2017–2018 classes.

### FIDELITY OF IMPLEMENTATION

The teaching team showed a consistent implementation of adaptations provided within the classroom and outdoor spaces throughout the year. Teachers ensured access to materials through the use of braille in addition to visual stimuli, large-print books, and tactile schedules for the children with vision impairments. Student schedules followed the Miami-Dade County Public School calendar. Academic hours were from 8:20 a.m. to 1:50 p.m., Monday through Friday, for a total of 180 school days.

The *Inclusive Classroom Profile (ICP; Soukakou, 2012)*, an observation rating scale designed to assess the quality of daily classroom practices that support the developmental needs of children with disabilities aged 2–5 years, was used to assess inclusive practices and was adapted as needed. During the first year of the program, researchers focused on two elements from this tool: support for communication and feedback. Adults actively facilitated social communication in their interactions with children using strategies such as modeling or prompting, imitating, restricting access to materials, and incorporating alternative means of communication into activities and interactions. Adults used oral language strategies with the children throughout the day and across a variety of contexts. Positive

feedback was used to support the children's development and learning. Feedback used to correct or redirect undesired responses was provided in supportive ways through individualized strategies that promoted understanding and skill acquisition.

Two versions of the *Classroom Assessment Scoring System (CLASS)*, one for classrooms with toddlers (*CLASS-Toddler; La Paro et al., 2012*) and one for classrooms with preschoolers (*CLASS-Pre-K; Pianta et al., 2008*), were used to observe the quality of teacher–child interactions. In both the fall and spring semesters, the toddler *CLASS* score of 5.80 in the emotional and behavioral support (EBS) domain exceeded that of the national average of 4.62. It should be noted that there are currently no national averages for the Engaged Support for Learning domain, so this comparison cannot be made. Most *Pre-K CLASS* scores exceeded the national average in all three domains of emotional support, classroom organization, and instructional support. All three domains increased from fall to spring, with the greatest changes observed in instructional support.

### PROFESSIONAL DEVELOPMENT OF TEACHERS

In a focus group held in February 2018 that was facilitated by UM, teachers indicated that they had gained many skills through instructional team training. Teachers reported that daily instructional planning practices helped them reflect on their teaching practices for the purposes of improving teacher–child interactions. Teachers shared that they felt a growing collaboration with families and noted an increase in families' comfort and openness in communication, both important indicators in Epstein's framework (Epstein et al., 2002).

**Table 1.** Child Observation Record–Advantage scores by domain and classroom group (Year 1).

Domain	Toddlers (24–36 months; $n = 10$ )		Pre-K students (36–69 months; $n = 24$ )	
	Time 1	Time 2	Time 1	Time 2
Approaches to learning	0.70	1.46*	3.25	4.11*
Social and emotional development	0.98	1.14	3.61	4.31*
Physical development and health	2.04	1.74	3.82	4.53*
Language, literacy, and communication	0.94	1.52*	2.84	4.10*
Mathematics	0.42	1.43*	2.94	3.91*
Creative arts	1.28	1.31	3.32	4.66*
Science and technology	0.64	1.22	2.70	3.78*
Social studies	0.96	1.44*	3.04	4.20*
English-language learning	3.33	4.63	4.67	6.04*

\* $p < .05$  indicates a significant change from fall to spring.

### DEVELOPMENTAL OUTCOMES OF CHILDREN

To examine changes over time in children's developmental outcomes, a comprehensive set of social-emotional, cognitive, and daily living skills important to school readiness were assessed through validated teacher rating scales, teacher observations, direct observations, and parent rating scales. These skills included peer interactions, friendships, empathy, social-emotional skills, language or literacy, daily living, and self-help skills. The following tools were used: *COR-Advantage* (HighScope, Inc., 2014), *Penn Interactive Peer Play Scale (PIPPS-Teacher report; Fantuzzo, Collahan, et al., 1998; PIPPS-Parent report; Fantuzzo, Mendez, & Tighe, 1998)*, the *Empathy Scale of My Child* (Kochanska et al., 1994), and the *Individualized Classroom Assessment Scoring System (inCLASS; Downer et al., 2010)*.

**COR advantage.** Mean changes over time in children's COR developmental skills are included in Table 1 and are disaggregated by the toddler and preschool-aged students. Toddlers showed gains in approaches to learning, language, mathematics, and social

studies domains from fall to spring. Prekindergarten children also demonstrated significant gains in most domains from fall to spring (see Table 1).

**PIPPS.** Both toddlers and prekindergarten children were observed demonstrating higher interactive peer play skills from fall to spring in both school and home contexts. Significant increases from fall to spring were found in the teacher report of interactive peer play skills in the school context (*PIPPS-T*). Interestingly, based on the *PIPPS-P*, overall ratings of children's disconnection and disruptive behavior (aggressive and antisocial behaviors that interfere with peer interaction) also significantly increased (see Table 2).

Children with visual impairment entered the learning center in the fall, scoring a standard deviation below the mean for preschool children ( $M = 37.00$ ) in their interactive peer play skills as rated by teachers. These children made significant gains (10 point gains) from fall to spring, with spring scores approaching the average level of interactive play based on preschool samples.

**Table 2.** Social-emotional skills scores by domain and classroom group (Year 1).

Domain	Toddlers (24–36 months; <i>n</i> = 10)		Pre-K students (36–69 months; <i>n</i> = 24)	
	Time 1	Time 2	Time 1	Time 2
Peer play interaction—teacher report	30.50	41.78*	49.83	57.64*
Peer play disruption—teacher report	40.00	44.78	49.79	51.16
Peer play disconnection—teacher report	40.33	40.89	47.79	49.28
Peer play interaction—parent report	32.50	45.78	45.85	47.18
Peer play disruption—parent report	44.20	46.11	45.80	48.73
Peer play disconnection—parent report	44.10	47.56	45.95	47.41
Empathy—teacher report	33.40	35.56	31.67	40.60*
Empathy—parent report	31.86	39.13	38.00	39.78
Positive peer engagement ( <i>inCLASS</i> )			35.12	36.36*
Positive teacher engagement ( <i>inCLASS</i> )			43.00	41.20*
Positive task engagement ( <i>inCLASS</i> )			36.52	37.32
Conflict engagement ( <i>inCLASS</i> )			39.92	37.96

Note. The *inCLASS* was only administered to Pre-K students as it is normed for preschool-aged children. *inCLASS* = Individualized Classroom Assessment Scoring System.

\* $p < .05$  indicates a significant change from fall to spring.

**Empathy Scale of my child.** Across all classrooms (toddler and prekindergarten), teacher- and parent-rated empathy for children significantly increased from fall to spring. Children with visual impairments made significant gains in empathy from fall ( $M = 29.50$ ) to spring ( $M = 37.00$ ) as rated by teachers. Examples included more empathic helping behavior when a peer showed distress or was crying or more empathic concern for a character in a book or story.

**InCLASS.** For the prekindergarten classrooms, *inCLASS* positive engagement with peers and teachers domain scores increased significantly from fall to spring. The conflict domain score decreased from fall to spring.

## OUTCOMES OF FAMILIES

Families had the opportunity to participate in two-parent workshops per year as well as attend parent playgroups during school

hours. In a spring focus group led by UM, families shared their gratitude for the opportunity for their children to attend the new program. All felt the program provided learning for children with and without disabilities in a high-quality, inclusive, nurturing environment. Families indicated how much they felt their children learned academically and socially, especially in terms of empathic behavior toward others. One parent stated,

This is the most beautiful experience I have had. My child feels at home. She wants to be with her teachers. School is her other family. It is great to know that my daughter is at a center with such special people. It is such a unique experience.

## Second-year outcomes

In the second year of the program, which took place during the 2018–2019 school years, the Miami Lighthouse for the Blind

**Table 3.** Child Observation Record–Advantage scores by domain and classroom group (Year 2).

Domain	Toddlers (24–36 months; <i>n</i> = 18)		Pre–K students (36–69 months; <i>n</i> = 30)	
	Time 1	Time 2	Time 1	Time 2
Approaches to learning	0.70	1.88*	3.20	3.59*
Social and emotional development	1.06	2.28*	3.33	3.77*
Physical development and health	1.79	2.81*	3.79	3.45
Language, literacy, and communication	1.35	2.06*	2.87	3.44*
Mathematics	0.58	1.87*	2.61	3.27*
Creative arts	1.46	2.60*	3.10	4.12*
Science and technology	1.06	2.20*	2.99	4.11*
Social studies	1.29	2.62*	2.79	3.83*
English-language learning	4.50	5.00	4.93	5.08

\* $p < .05$  indicates a significant change from fall to spring.

and Visually Impaired expanded services by adding one toddler and one prekindergarten classroom, enrolling 54 children. Of those children, 48 participated in the second year of the study: 18 toddlers and 30 preschool-aged students. Of the 48 children who participated in the second year, 22 children were identified as having visual impairments (four were blind and 18 had a low vision). Similar to Year 1, outcomes demonstrated high-quality classroom practices and positive gains by children.

Overall, in terms of the quality of daily classroom practices that support the needs of children with disabilities (as measured by the *ICP*), teachers were observed continuing to provide high levels of support for communication, increased positive feedback, and very high provision of adaptations in group settings. *CLASS-Toddler* observations remained stable and above national averages (EBS domain = 5.68 fall and 5.80 spring; ELS domain = 3.8 fall and 3.5 spring). *CLASS-PK* observations remained stable and above national averages as well (emotional support = 5.84 in the fall and 6.0 in the spring; classroom support = 4.75 in the fall and 5.47 in

the spring; and instructional support = 2.36 in the fall and 3.69 in the spring).

Both toddlers and preschool children showed gains in several developmental domains as recorded by their classroom teachers on the *COR-Advantage* (see Table 3). In addition, social–emotional measures showed similar changes (see Table 4). Toddler and preschool children were rated by teachers with increased peer play interaction skills in spring and preschool children rated by teachers with increased empathy in spring. Observations of preschool children’s positive engagement with peers and conflict engagement significantly increased from fall to spring.

## Conclusion

Although this initial descriptive study provides encouraging findings to share about the children, classroom, and families participating in the Miami Lighthouse Learning Center for Children, we acknowledge the limitations of the evaluation design. There is no comparison group with which to compare children’s developmental change over time; therefore, gains made by children and families may have

**Table 4.** Social-emotional skills scores by domain and classroom group (Year 2).

Domain	Toddlers (24–36 months; <i>n</i> = 18)		Pre-K students (36–69 months; <i>n</i> = 30)	
	Time 1	Time 2	Time 1	Time 2
Peer play interaction—teacher report	35.41	42.00*	47.52	52.48*
Peer play disruption—teacher report	41.12	48.11*	53.48	52.28
Peer play disconnection—teacher report	41.88	48.11*	50.66	48.28
Peer play interaction—parent report	43.47	44.31	48.11	49.74
Peer play disruption—parent report	49.07	44.38*	44.56	45.17
Peer play disconnection—parent report	47.20	46.00	47.67	46.74
Empathy—teacher report	28.00	30.31	33.38	39.76*
Empathy—parent report	34.71	36.36	39.83	40.04
Positive peer engagement ( <i>inCLASS</i> )			33.07	37.07*
Positive teacher engagement ( <i>inCLASS</i> )			47.19	52.00
Positive task engagement ( <i>inCLASS</i> )			41.52	41.74
Conflict engagement ( <i>inCLASS</i> )			35.44	43.93*

Note. The *inCLASS* was only administered to pre-K students as it is normed for preschool-aged children. *inCLASS* = Individualized Classroom Assessment Scoring System.

\* $p < .05$  indicates a significant change from fall to spring.

naturally occurred without participation in center activities. Further research is necessary.

Overall, the learning center demonstrated high levels of fidelity of implementation of their early childhood inclusion model as well as observed high-quality instructional practices above the national average. Both teachers and families reported observing positive changes in children's social and cognitive school readiness skills, noting particular changes in children's peer relationships and empathic behavior toward one another. Children demonstrated significant gains in observed positive peer and teacher engagement, teacher- and parent-reported interactive peer play, and empathy. Families reported gratitude toward the learning center's inclusive approach and felt that the center was a unique place for them and their children where "differences do not define who we are."

Successful inclusion means all students are actively engaged in cognitive thinking and cooperative social interactions. The Miami Lighthouse Learning Center for Children is

committed to fostering growth in these areas and anticipates that future outcome data will support the innovative practices with which they are experimenting.—

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### References

- Division for Early Childhood/ National Association for the Education of Young Children. (2009). *Early childhood inclusion: A joint position statement of the Division for Early Childhood (DEC) and the National Association for the Education of Young Children (NAEYC)*. The University of North Carolina, FPG Child Development Institute. <http://fpg.org>.

- unc.edu/resources/early-childhood-inclusion-joint-position-statement-division-early-childhood-dec-and-nation
- Downer, J. T., Booren, L. M., Lima, O. K., Luckner, A. E., & Pianta, R. C. (2010). The Individualized Classroom Assessment Scoring System (*inCLASS*): Preliminary reliability and validity of a system for observing preschoolers' competence in classroom interactions. *Early Childhood Research Quarterly, 25*(1), 1–16.
- Epstein, J. L., Sanders, M. G., Simon, B. S., Salinas Clark, K., Jansorn, N. R., & Van Voorhis, F. L. (2002). *School, family, and community partnerships: Your handbook for action* (2nd ed.). Ergodebooks.
- Fantuzzo, J. W., Collahan, K., Mendez, J., McDermonnt, P., & Sutton-Smith, B. (1998). Special focus section play, talk and learning: Contextually-related validation of peer play constructs with African American head start children: Peen Interactive Peer Play Scale. *Early Childhood Research Quarterly, 13*(3), 411–431.
- Fantuzzo, J. W., Mendez, J., & Tighe, E. (1998). Parental assessment of peer play: Development and validation of the parent version of the Peen Interactive Play Scale. *Early Childhood Research Quarterly, 13*(4), 659–676.
- Hadley. (2005). Blindness basics. <http://hadley.edu/showcoursedetail.asp?courseid=DPF-261>
- HighScope, Inc. (2014). *Child observation record–Advantage*. <http://coradvantage.org/>
- HighScope, Inc. (2019a). *Infant-toddler curriculum*. <https://highscope.org/our-practice/infant-toddler-curriculum/>
- HighScope, Inc. (2019b). *Preschool curriculum*. <https://highscope.org/our-practice/preschool-curriculum/>
- Individuals with Disabilities Education Act. (2004). Individuals with Disabilities Education Act, 20 U.S.C. § 1400.
- Kochanska, G., DeVet, K., Goldman, M., Murray, K., & Putnam, S. P. (1994). Maternal reports of conscience development and temperament in young children. *Child Development, 65*(3), 852–868.
- LaParo, K. M., Hamre, B. K., & Pianta, R. C. (2012). *Classroom Assessment Scoring System (CLASS) manual, pre-K*. Brookes Publishing.
- Nesta (2011). <https://www.nesta.org.uk/toolkit/theory-change/>
- Pianta, R. C., LaParo, K. M., & Hamre, B. K. (2007). *Classroom Assessment Scoring System (CLASS) manual, pre-K*. Brookes Publishing. <https://www.census.gov/programs-surveys/acs/technical-documentation/table-and-geography-changes/2011/5-year.html>
- Soukakou, E. P. (2012). Measuring quality in inclusive preschool classrooms: Development and validation of the Inclusive Classroom Profile (ICP). *Early Childhood Research Quarterly, 27*(3), 478–488.
- U.S. Census American Community Survey (2007–2011). <https://www.census.gov>
- U. S. Department of Health and Human Services and the U.S. Department of Education. (2015). *Policy statement on inclusion of children with disabilities in early childhood programs*. <https://ed.gov/policy/spced/guid/earlylearning/joint-statement-full-text.pdf>