

Pathways to Literacy 2016-2017 Program

Process and Outcome Evaluation Report



Background

Grant funding was awarded to Detroit Parent Network (DPN) for the fourth year of the Pathways to Literacy (PTL) program. The fifth program year began in January 2017 and ended in September 2017 with the overall goal of reaching 400 children (birth through age 5) and their parents / caregivers. Pathways to Literacy is an early childhood parent education program that serves families with children ages 0-5. PTL prepares parents to be their child's first teacher by giving them the tools, skills and support that they need to ensure their child is ready for school. Pathways to Literacy offers families parent education, early literacy coaching, and family support through:

- Group Parent workshops and trainings at schools
- Reading modeling for parent and child interaction
- Play groups and programs for your family
- Free books at weekly workshop for 9 weeks

This report focuses specifically on the *literacy in the home* program service activity, although there are other activities that participants were serviced through such as parenting classes, family fun day events, and preparing children for daycare. One of the major goals of the Pathways to Literacy program, specifically related to literacy in the home, is to have a systemic impact by influencing the social norms that are creating the targeted problem by bringing the "preparation gap" by helping families challenged by poverty, limited education, language and literacy barriers, and other obstacles to school success prepare their children to enter school ready to be in the classroom. To achieve this goal, the major components for *literacy in the home* program service activity were implemented: 1) Reading 101, reading readiness, book knowledge; 2) a vocabulary, language development; and 3) interactive reading, growth. There was a total of 32 planned group training sessions held weekly at the school.

Evaluation Purpose

This evaluation determined whether the Pathways to Literacy modified program improved parent-child reading interaction and children's language and cognitive development as measured by comparison of parent and child scores before and after the program.

Evaluation Methods

External evaluator, Mission Lift, was contracted to conduct the data analysis, statistical testing, and reporting of results. Detroit Parent Network's internal staff delivered the modified program content, and conducted the data collection by doing home visits. There were five standardized assessment tools utilized. The evidence-based BRIGANCE® Early Childhood Screens III for toddlers, two-year-old, three-year old, and four year old child core assessments were utilized to screen children for potential developmental delays and giftedness as well as language and academic / cognitive skills specifically. Detroit Parent Network assessed one domain on the toddler tool. While the tool has a total possible score of 100 when all components are completed, the modified version for evaluating Pathways to Literacy had a total possible score of 59. This included seven assessments focusing on language development. Detroit Parent Network assessed two domains on the two-year-old tool. While the tool has a total possible score of 100 when all components are completed, the modified version for evaluating Pathways to Literacy had a total possible score of 65. This included six assessments focusing on language development and academic skills / cognitive development. Detroit Parent Network assessed two domains on the three-year-old tool. While the tool has a total possible score of 100 when all components are completed, the modified version for evaluating Pathways to Literacy had a total possible score of 69. This included eight assessments focusing on language development and academic skills / cognitive development. Detroit Parent Network assessed two domains on the four-year-old tool. While the tool has a total possible score of 100 when all components are completed, the modified version for evaluating Pathways to Literacy had a total possible score of 85. This included nine assessments focusing on language development and academic skills / cognitive development.

The fifth standardized evidence-based tool, the Adult-Child Interactive Reading Inventory (aciri), was utilized to measure literacy outcomes by having the Pathways to Literacy coach observe the interaction and behaviors of the adult and child while they read together in their home. Parents and children were assessed on 12 observable behaviors related to literacy and interaction (12 total measures for the parent and 12 for the child). These specific observation measures fall under three broad categories: 1) enhancing attention to text, 2) promoting interactive reading and supporting comprehension, and 3) using literacy strategies. During the reading interaction observation, parents and children were scored on a three-point scale from 1 (infrequently showed behavior – 1 time) to 3 (showed behavior most of the time – 4 or more times). If there was no evidence, the score was a zero. Both assessments were conducted at two different points in time by the Pathways to Literacy coach in the participants' homes – the pretest in January 2017 and posttest in May 2017. For some participants they were observed and assessed at all 6 home visits.

Participants

For the overall Pathways to Literacy program (including all program service activities), Detroit Parent Network serviced a total of 424 children and their parents / caregivers (24 over the goal). Those 424 children and parents / caregivers were also reached with the literacy in the home program service activity (all participant output numbers are self-reported by Detroit Parent Network and were not collected by the external evaluator). Of these participants, 140 children and their parents / caregivers were evaluated (n=140).

Findings - Language & Cognitive Development

Toddlers

There were Language and Cognitive Development gains between pre and posttest. The evidence-based BRIGANCE® Early Childhood Screens III was utilized to assess youth on their cognitive and language development. There were 26 youth assessed (25 pre and 5 post), with 4 having both a pretest and posttest score for comparison (n=4). There were not enough participants to run a statistical analysis.

Toddler Scores for Language & Cognitive Development			
Total Possible Score	Average Pretest Score	Average Posttest Score	Average Gain
59	24.22	51.1	26.9

2 Years Old

There were Language and Cognitive Development gains between pre and posttest. The evidence-based BRIGANCE® Early Childhood Screens III was utilized to assess youth on their cognitive and language development. There were 19 youth assessed (18 pre and 4 post), with 3 having both a pretest and posttest score for comparison (n=3). There were not enough participants to run a statistical analysis.

2 Year Old Scores for Language & Cognitive Development			
Total Possible Score	Average Pretest Score	Average Posttest Score	Average Gain
65	44.1	52.3	11.1

3 Years Old

There were Language and Cognitive Development gains between pre and posttest, at statistically significant levels. The evidence-based BRIGANCE® Early Childhood Screens III was utilized to assess youth on their cognitive and language development. There were 38 youth assessed (32 pre and 11 post), with 6 having both a pretest and posttest score for comparison (n=6).

3 Year Old Scores for Language & Cognitive Development			
Total Possible Score	Average Pretest Score	Average Posttest Score	Average Gain
69	44.9	54	9.1

To determine if the average change was statistically significant, a Wilcoxon Signed-Rank Test was conducted. Findings indicate there is a statistically significant change among pretest and posttest scores, $W=5.09$, $p \leq 0.05$.

4 Years Old

There were Language and Cognitive Development gains between pre and posttest, at statistically significant levels. The evidence-based BRIGANCE® Early Childhood Screens III was utilized to assess youth on their cognitive and language development. There were 57 youth assessed (52 pre and 18 post), with 13 having both a pretest and posttest score for comparison (n=13).

4 Year Old Scores for Language & Cognitive Development			
Total Possible Score	Average Pretest Score	Average Posttest Score	Average Gain
85	69.8	73.7	3.85

To determine if the average change was statistically significant, a Wilcoxon Signed-Rank Test was conducted. Findings indicate there is a statistically significant change among pretest and posttest scores, $W=2.45$, $p \leq 0.05$.

Findings - Literacy Enhancement & Strategies

There were statistical significant gains in adult-child interactions. The evidence-based Adult-Child Interactive Reading Inventory (aciri) was utilized to assess the interactive reading behaviors of parents / guardians with their children in the home setting at two different points in time. While there were 75 sets of child-parent participants evaluated, 38 had both a pretest and posttest (n=38). On the pretest, scores ranged from 0.63 to 2.6 and on the posttest scores ranged from 1.08 to 2.8.

Parent-Child Interactive Reading & Comprehension Scores			
Total Possible Score	Average Pretest Score	Average Posttest Score	Average Gain
3	1.13	1.45	0.31

To determine if change was statistically significant, a paired sample T-test was conducted. Findings indicate the change from pretest to posttest scores is statistically significant, $t=4.9$, $p \leq 0.05$.

Agency Self-Reported Outputs for Goal and Activities

Goal	Program Service Activities	Outcome	
<p>Goal I - The priority outcome for Pathways to Literacy is to prepare low-income parents of children 0-5 with proven parent teaching strategies, support, and modeling focused on Language, Cognitive and Communication Skills through peer-to-peer early literacy activities to ensure their children are ready for school.</p>	<p>Healthy snacks Hygiene and learning</p> <ul style="list-style-type: none"> ○ How to introduce foods to children that promotes learning during story time ○ Introduction to books that encourages good personal hygiene <p>Parenting classes</p> <ul style="list-style-type: none"> ○ Abuse awareness, how to raise responsible children, teaching children to listen <p>Communication and early stages of bullying</p> <ul style="list-style-type: none"> ○ Communication with teachers and child care provider to ensure children are safe in school <p>Preparing children for daycare and kindergarten</p> <ul style="list-style-type: none"> ○ Parents as the first teachers- Learning starts at home ○ Is your child ready for school? (reading, writing and learning) 	Children Served	Parents Served
		127	307
<p>Goal II - The Pathways to Literacy program will have a systemic impact by influencing the social norms that are creating the targeted problem by bridging the "preparation gap" by helping families challenged by poverty, limited education, language and literacy barriers, and other obstacles to school success prepare their children to enter school ready to be in the classroom.</p>	<p>Literacy and lead poisoning</p> <ul style="list-style-type: none"> ○ Connecting learning and developmental problems to lead poisoning, how to get children tested and protect them against lead poisoning <p>Literacy in the home</p> <ul style="list-style-type: none"> ○ Reading 101, Reading readiness, Book knowledge ○ A Vocabulary, language development ○ Interactive reading, growth <p>Family Fun Day Events</p> <ul style="list-style-type: none"> ○ Comprehension strategies, story comprehension ○ Raising a reader ○ Exploring five senses ○ Abc's and 123's 	Children Served	Parents Served
		370	229
<p>Goal III - PTL will train a core group of Parent Coaches in the implementation of a peer-to-peer delivery model. The effectiveness of peer-to-peer parenting interventions is evidenced in "Innovations in Practice: Empowering Parents, Empowering Communities: A pilot evaluation of a peer-led parenting program." In this study, training outcomes, clinical effectiveness and acceptability of this type of delivery method were evaluated using a pre-post cohort design. In this pilot evaluation, newly trained peer facilitators demonstrated significantly increased knowledge and self-efficacy while parents attending peer-led groups reported significant improvements in child behavior.</p>	<p>Training ensured parents are delivering the Pathway to Literacy with fidelity. All components of the curriculum are covered including appropriate parent interaction. The principles, parent handbook and assessment tools are a key component of the trainings.</p> <ul style="list-style-type: none"> ○ Parents providing trainings in the community and in schools 	Trained 8 parent coaches to implement peer-to-peer	

Total Served: 497 Children and 536 Parents / Caregivers

Conclusion

There were statistical change for language and cognitive development among three- and four-year olds. Three-year-olds scored 9.1 points higher at the end of the program compared to the beginning of the program. Four-year-olds scored on 3.85 points higher at the end of the program compared to the beginning of the program. Although there were not enough participants who completed a pre- and post-test to run a statistical test on Toddlers (n=4) and 2 year olds (n=3), there were still improvements made. Toddlers scored 26.9 points higher at the end of the program compared to the beginning of the program. Two-year-olds scored 11.1 points higher at the end of the program compared to the beginning of the program.

In regards to the parent-child reading interactions, interactive behaviors among parents and children during these reading sessions statistically significantly improved, indicating that literacy outcomes are likely to improve among children. The families scored 0.31 points higher at the end of the program compared to the beginning of the program.

Limitations to Evaluation

The modification of the evidence-based assessment tools limits the evaluation to compare with other research findings and comparison groups. For example, the Brigance assessment did not utilize all domain areas so the total score could not be compared with the designated score ranges to determine at-risk status. However, the pretest and the posttest could be compared. Another point to note is that some children may have improved their scores simply because of maturation – they aged six months from the pretest to the posttest and the results could potentially be related to learning as a result of getting older and not because of the program. Moreover, results are not able to be generalized to the population due to nonrandomized assignment methods. In the future, this can concern can be addressed by adding a randomized control group. However, the feasibility and ethics of denying or delaying service to families in need is a major reason many nonprofits choose to invite all participants / families into the program without a comparison or control group. Also, having a small number of participants (less than 20) results in lower statistical power, influencing whether the gains achieved are due to change, maturation, or actually caused by the program. Having a greater number of participants will address this issue. While there may be a large number of participants on the assessment, there were fewer people who completed a pre- and post- survey which is needed to complete a statistical test. Finally, some families were assessed at the first home visit (pre) and final home visit (post). Some families were also assessed at every home visit (6). It is recommended the PTL program implement the program according to the evidence based program, i.e., assessments conducted at every home visit or just at the first (pre) and last (post).