Addressing Child Literacy Concerns in Windsor-Essex County Through a Place-and-Equity Based Cradle-to Career Approach

ST. CLAIR COLLEGE RESEARCH AND INNOVATION IN PARTNERSHIP WITH PROSPERUS WINDSOR-ESSEX

Final Report

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Canada

Introduction

The acquisition of literacy skills and literacy development in young children is an important education attainment aspect and precursor for successful reading and linguistic comprehension skills. Research has indicated that literacy skills are strongly related to health status of individuals in Canada with low literacy skills relating to both poor health and overuse or inappropriate use of Canadian health care facilities (Jamieson, 2013). Additionally, stronger literacy skills facilitate higher levels of education achievement which leads to increased earnings and higher social status (Jamieson, 2013). Finally, higher literacy skill levels strongly facilitate the development of specific knowledge and skills which can carry economic, social, and personal benefits in society. In addition, individuals with poor literacy skills are more likely to be out of work than those with higher literacy skills in Canada as well as other associated costs (Jamieson, 2013). Literacy skills build on language development and this development is most important in its early stages of life with strong family involvement (Jamieson, 2013).

As outlined by the International Adult Literacy Survey, published by Statistics Canada, literacy is defined as the ability to use and understand text (print-based and digital) and thereby participate in society, achieve goals, and develop one's knowledge and potential (Clermont et al., 2005). To measure literacy proficiency, a study on literacy by Statistics Canada was released, identifying five levels of reading skills among adult Canadians, with Level 3 being the "benchmark," which is considered the level required to fully participate in today's knowledge-based economy ("Building on our Competencies," 2003). Figure 1 below demonstrates these findings.

Literacy Levels, as outlined by Statistics Canada:

Level 1	0-225 points	This is the lowest level of literacy.
Level 2	226-275 points	
Level 3	276-325 points	This is the minimum level needed.
Level 4	326-375 points	
Level 5	376-500 points	This is the highest level of literacy

Figure 1: Literacy levels, as outlined by Statistics Canada.

Unfortunately, preliminary research has indicated that 1 in 6 (or 15%) of Ontarians aged 16 to 65 score at, or below, Literacy Level 1 (Statistics Canada, 2013). At this level, individuals struggle with very serious literacy challenges, including literacy skills required to read basic texts. Those who score at a Literacy Level 2 account for 32% of Ontarians; these individuals can read, however, literacy skills necessary for employment and understanding medical instructions are significantly lacking. Overall, Literacy Levels 1 and 2 are associated with decreased participation in society; individuals who score at these levels are less likely to vote, volunteer, work, or engage in community programs. This is highly correlated to poverty, as "46% of adult Canadians at the lowest literacy levels (Levels 1 and 2) live in low-income households" ("More Than Words Can Say," 2018). The literature also notes that poor reading in the primary grades is one of the most common characteristics of students who withdraw from high school prior to completion (Denti & Guerin, 1999).

Neighborhoods

Early childhood development is influenced by several factors including household income, health and physical development, English as a Second Language (ESL), and literacy environments. Kellett (2009) notes that there is a literacy achievement gap between children of low- and high- socioeconomic status (SES), which is often due to a lack of resources. Studies indicate that children from low-SES families have fewer books available at home and are read to less frequently than their high-SES counterparts (Froiland et al., 2013). Along with struggling to afford literacy support, some children may also struggle with literacy if their parents do as well. According to DeWalt et al. (2004), reading ability is related to knowledge about health and health care, hunger, hospitalization, global measures of health, and some chronic diseases; collectively termed health literacy. On average, people who read at lower levels are 1.5 to 3 times more likely to have adverse outcomes as compared to people who read at higher levels, due to a lack of health literacy (DeWalt et al., 2004). There are several conditions that can affect literacy development, including speech and language processing disorders, developmental disabilities, as well as Dyslexia and visual impairments.

For many children, learning English as a second language can pose several challenges to the learning process overall, especially in literacy. Results from the Ontario Secondary School Literacy Test (OSSLT), indicate that English as a Second Language (ESL) and English Literacy Development (ELD) students have comparatively low success and high deferral rates (Cheng et al., 2007). Children's typical environments such as their home, school, childcare center, and neighbourhood influence literacy development either directly or indirectly. This research project focused on the targeting of specific neighborhoods of the Windsor Essex region (Jaeger, 2016). In addition to influencing children's overall development, neighbourhoods have the capacity to specifically impact literacy learning. In low-income neighbourhoods, "the development and fostering of a 'scholarly culture'—one where books are numerous, esteemed and enjoyed in the household can be much more difficult to cultivate than in affluent ones" (Wilson, 2020, p. 29). Schools and libraries in low-SES neighbourhoods often struggle with low funding, long waitlists for program subsidies, as well as poor or inconvenient transit systems that limit accessibility to libraries and family reading programs (Wilson, 2020).

Identifying Neighborhoods

The correlation between the socioeconomic status (SES) of families and the developmental outcomes of their children is widely recognized; evidence suggests that children who grow up in safe, supportive neighbourhoods with abundant resources do better on average, than those who grow up in disadvantaged and resource-poor neighbourhoods. The Neighbourhood Opportunity Index (NOI) was created by ProsperUs, to determine priority neighbourhoods for the development of a Cradle to Career strategy and are therefore the areas of concentration for this research project. ProsperUs' Cradle to Career vision encompasses a neighbourhood-level, wrap-around approach to ensure equitable opportunities for all children. ProsperUs has identified West Windsor, Downtown Windsor, and Leamington as three neighbourhood clusters that are experiencing greater challenges for children and youth. These communities have been further broken down into distinct neighbourhoods, which will allow readers and community stakeholders to take a closer look at these communities in a more detailed manner.

Methodology

Early Development Instrument

Across the Cradle to Career continuum, literacy is acknowledged as a critical component to a child's academic success, as developing reading skills by grade 3 is a particularly crucial Cradle to Career milestone (Milestone number 2) that impacts future milestones throughout one's life (Fathers, 2019). Data consistently shows that disparities in literacy during the early elementary years are linked to persistent achievement gaps, and that these gaps in literacy are apparent well before formal schooling, which can thereby hinder kindergarten readiness. According to Reardon et al. (2013), on average, children from low-SES families enter high school with literacy skills five years behind their high-income counterparts. It is critical that steps be taken to support more children in developing literacy skills early, so they may be well equipped to succeed in high school and beyond. As outlined in the ProsperUS- Cradle to Career report, students who are proficient in reading by 3rd grade are more likely to graduate from high school. In order to predict these trajectories and propose data-based interventions, in the year 2000, the Early Development Instrument (EDI) was designed by The Offord Centre for Child Studies (McMaster University, Hamilton, Ontario) in Canada, which measures children's ability to meet age-appropriate developmental expectations at school entry, including those in the following five domains: physical health & well-being, social competence, emotional maturity, language & cognitive development, and communication skill & general knowledge ("EDI in Ontario", n.d.)

A research study, "Starting Early: Teaching, Learning and Assessment" was released in June 2013 and linked EDI results to Education Quality and Accountability Office (EQAO) scores in Grade 3. It was found that "Students with low EDI scores in a particular domain— those in the vulnerable or at-risk groups—are much less likely to achieve the provincial standard on all components of the Grade 3 EQAO assessment than those who were deemed ready or very ready in kindergarten" (Calman & Crawford, 2013, p. 13). Evidence suggests that such vulnerabilities at school entry are more prevalent in economically disadvantaged communities (Hertzman & Bertrand, 2007). Five cycles of EDI implementation have now been completed across Ontario. In Windsor-Essex, "the percentage of children considered at risk or vulnerable was lower than the province, with the exception of the Language & Cognitive Development domain" in all five cycles ("W.E Child Care and Early Years", 2020). Windsor-Essex children are falling behind in their literacy development and are therefore at risk of several adverse outcomes associated with reading failure, such as academic and social issues, low self-esteem, and lacking motivation, particularly those in low-SES communities. The goal of the project was to develop, implement, and evaluate literacy-centered interventions based on the community's needs and successful evidence-based literacy models.

Theoretical Framework

Psychologist, Urie Bronfenbrenner developed the Bioecological Systems theory, which explains the "layers" that make up the environment's that children engage in, including their home, school, childcare centre, and neighborhood; each of which influences a child's development. All of these environments influence literacy development either directly or indirectly. This can occur through daily interactions, such as a child being read to at home or learning to write their name at school. While

Bronfenbrenner's theory acknowledges the interactions within environments and the relationships children have within these systems directly, this theory also emphasizes relationships amongst and between these systems (Jaeger, 2016). For example, a local school may offer parent/child literacy programs; however, if a parent does not feel comfortable at the school, they may be less likely to engage in such a program. If a school program operates on weekdays during the evening hours, many low-SES children may not have the chance to participate, due to parents' work schedules. From these findings, it is important to the research to understand that families within the Windsor-Essex target neighborhoods can openly share their insights and perspectives on these topics.

Mixed Methods Methodology

The project utilized a mixed methods procedure to gather and analyze the data. Mixed methods research practices provide the project with a natural complement to traditional and separate qualitative and quantitative methods. The third research paradigm, mixed methods, helps bridge the schism between qualitative and quantitative data outcomes (Johnson & Onwuegbuzie, 2004). Both qualitative and quantitative elements were important and useful within this research project which allowed the researchers to explore a greater array of results of findings. The goal of implementing mixed methods research methodology was to successfully blend the varying results from both methods into complementing discussions, findings, and future suggestions.

The quantitative data emerged from surveys relying on numerical systems and ratings. A Pre-Test survey was administered to parents upon registration in the form of a physical printed package. Parents were asked questions related to demographics, their child's age, their own educational background, overall understanding of local literacy services, comfort in accessing services, among several other questions related to their child's literacy and development. Surveys were completed anonymously; parent's and children's names were not listed on the package. The last 4 digits of the library card were the only identifying factor of the surveys, which were unknown to the researchers and could not be traced back to participants. The libraries collected the surveys and kept them protected under lock and key for confidentiality purposes. St. Clair College student researchers then collected the packages and brought them to the college to be input into the database. Student and Adjunct Researchers from St. Clair College then reviewed the surveys and input the responses into the online database through REDCap. Data was collected and stored here for further analysis.

Semi-structured focus group interviews were transcribed and utilized to complement the quantitative data findings. The diversity of the qualitative approach landscape allowed the researchers to explore the richness of contemporary social problems through qualitative practices. The researchers were able to build on the quantitative data by providing an opportunity for participants to speak more in-depth on the content. Thematic analysis was used to identify four major themes from participant responses, which included feelings of disconnection, accessibility, parent's perceptions and attitudes towards literacy, and language. These four themes served as a basis for the understanding of major challenges that families within our priority neighborhoods were facing and their perceptions of literacy. This allowed for a richer understanding of the barriers impacting low-SES families in the priority neighborhoods, assisted in answering our research questions, and filled any potential gaps from our quantitative surveys.

Research Questions

The study sought to address the following research questions:

1. What factors influence access to literacy resources in West Windsor, Downtown Windsor, and Leamington?
2. What literacy support and community programs currently exist in these neighborhoods?
3. What services exist from a parent perspective and how can this information be used to improve literacy services?
4. In what ways have other cities approached literacy gaps faced by disadvantaged neighborhoods?
5. How can the best practices from other cites be modified and applied to meet the unique needs of West Windsor, Downtown Windsor, and Leamington?

Partners and Solutions

The correlation of literacy and poverty and the implications this has for Windsor-Essex County points to the relevancy of this project and its long-term, measurable benefits at the local level, not only as a method for interrupting educational regression, but as part of a larger poverty reduction strategy.

The goal of this project remains to develop, implement, and evaluate literacy-centered interventions based on the community's needs and successful evidence-based literacy models. The preliminary research and community partner needs led to the development of the 1000 Books Before Kindergarten program (1BBK) initiative within the Greater Essex County region. The 1BBK pilot program in the Windsor Essex region is a free literacy program for newborns, babies, toddlers, and preschoolers in which the goal is for the child to read 1,000 books before they enter kindergarten. The program partnered with United Way/ProsperUs, St. Clair College, Windsor Public Library (3 branches), and the Essex Public Library (1 branch). The Windsor Public Libraries were selected from priority neighborhoods and included Bridgeview Public Library, Central Public Library, and John Muir Public Library. The Essex library branch included the Essex Public Library Leamington Branch. Children (0-4 years old) registered at one of the partnering local libraries from September 26th, 2022, to October 26th, 2022. Progress was monitored throughout the program from October 2022 to May 2023. Children participating in the program received small incentive rewards as they accomplished different reading milestones.

300 children participated at the Windsor Public Library branches while 50 children participated at the Essex County Library branch. Registration packages for the children included: tote bags and books, 1BBK overview brochure, 1BBK log sheet, curated booklist, evaluation surveys, and local service provider brochures. In addition to reading milestones, the pilot program included weekly story times as well as monthly caregiver workshops to help support and motivate family reading strategies as well as encourage participation at the local libraries.

Results

Participation data was gathered throughout the project and analyzed through weekly monitoring of the results. Additionally, the bulk of the results were gathered from the pre- and post-survey results. These survey results were closely analyzed from two major perspectives. First, the pre-post analysis was conducted to determine if there was a difference in results before and after the 1BBK intervention. A one-group pretest-posttest design was utilized. Second, the results were described using descriptive context utilizing qualitative data interpretation or categorical analysis. This second strategy focused more on the interpretation of the questions themselves rather than just the difference between the pre and posttest. The survey itself was presented implementing a Likert scale.

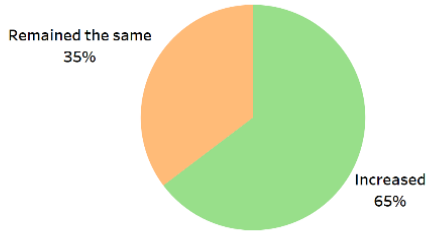

Figure 2: Excitement for reading after participating in the program.

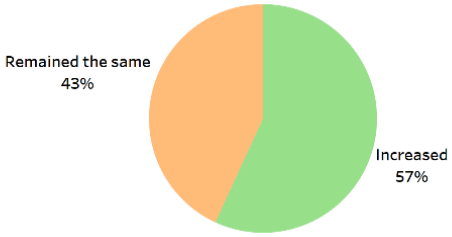

Figure 3: Enthusiasm for reading after participating in the program.

Both Figures 2 and 3 demonstrate that the respondents report a slight increase in their child's enthusiasm and excitement for reading after participating in the 1BBK program. Significant changes occurred when respondents were asked about their child's literacy skills as well as the parent's ability to notice these changes (Figure 4).

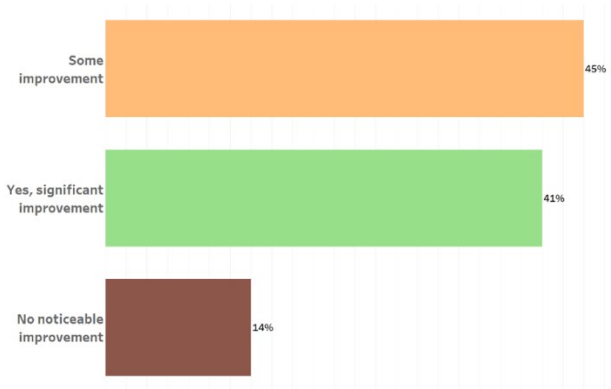

Figure 4: The child's literacy skills improved after participating in the program.

Respondents indicated that they noticed a significant change in the child's literacy skills as well as their participation in the book selection process after participating in the 1BBK program (Figure 5). This significant change also extends to the child identifying visual cues whilst reading as well as identifying letter sounds after participating in 1BBk (Figure 6).

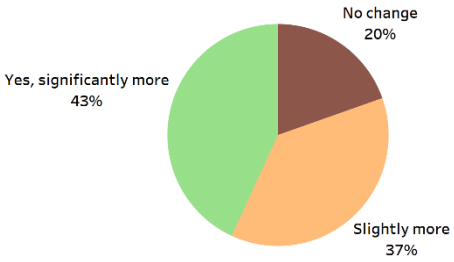

Figure 5: Child's initiative for selecting books after participating in the program.

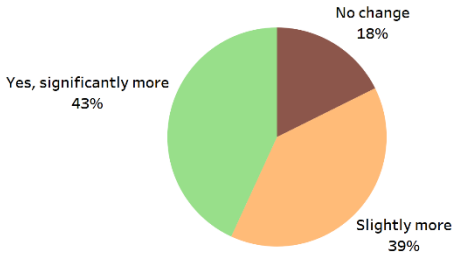

Figure 6: The child started using visual cues to identify words.

Similarly, respondents indicated that they noticed a significant change in the child's ability to remember parts of the book from memory better after participating in the 1BBK program. Respondents also identified significant changes in their own skills such as playing an active role in their child's literacy development and assisting in literacy development skills after participating in 1BBk (Figures 7 and 8).

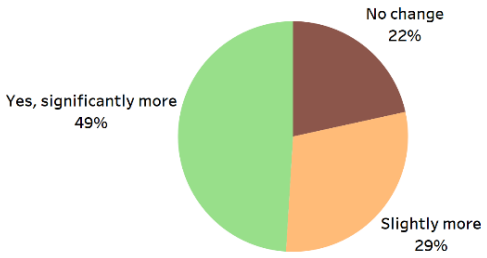

Figure 7: Comfort in playing an active role in child's literacy development.

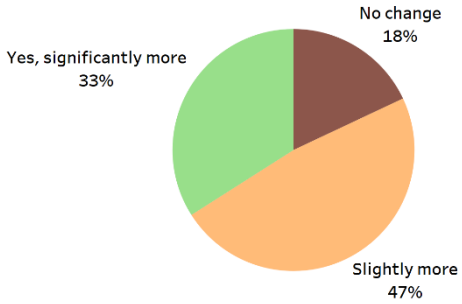

Figure 8: Parents can identify strengths and next steps in their child's literacy development.

After participating in 1BBk respondents identified significant changes in visiting the library as a priority. Specifically, nearly half of the respondents (49%) stated that visiting the library has become a

significantly higher priority for their family after participating in the program (Figure 9). However, accessing library or community resources showed only minimal improvement (Figure 10).

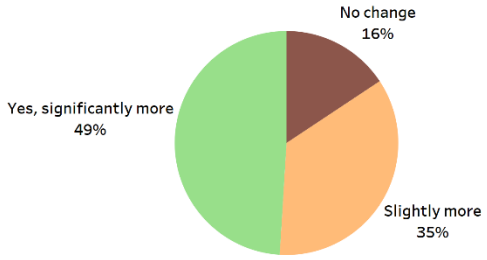

Figure 9: Visiting the library has become a higher priority in your family.

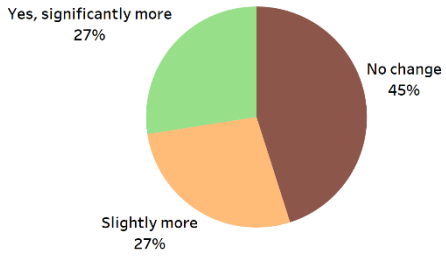

Figure 10: Accessed more community literacy resources after participating in the program.

The survey shows that most respondents (39%) visit the library on a weekly basis, indicating a strong engagement with library resources (Figure 11). Despite this, a significant percentage of respondents (57%) reported being only somewhat familiar with the literacy resources available in their community. Also, the majority of respondents (55%) did not attend library story times during the program; however, there was still a portion of participants who attended story times on a monthly or weekly basis. This suggests that while not all families engaged in this specific activity, it still had some level of participation.

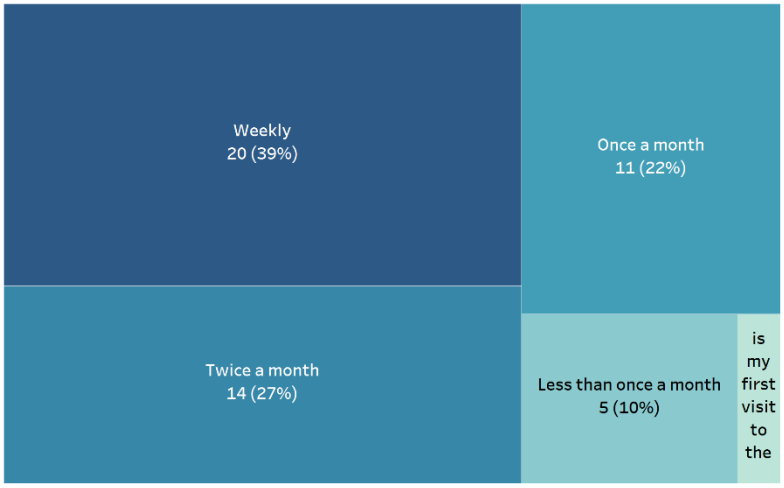

Figure 10: Frequency of visiting the library.

Figure 11: Familiarity with the literacy resources available in your community.

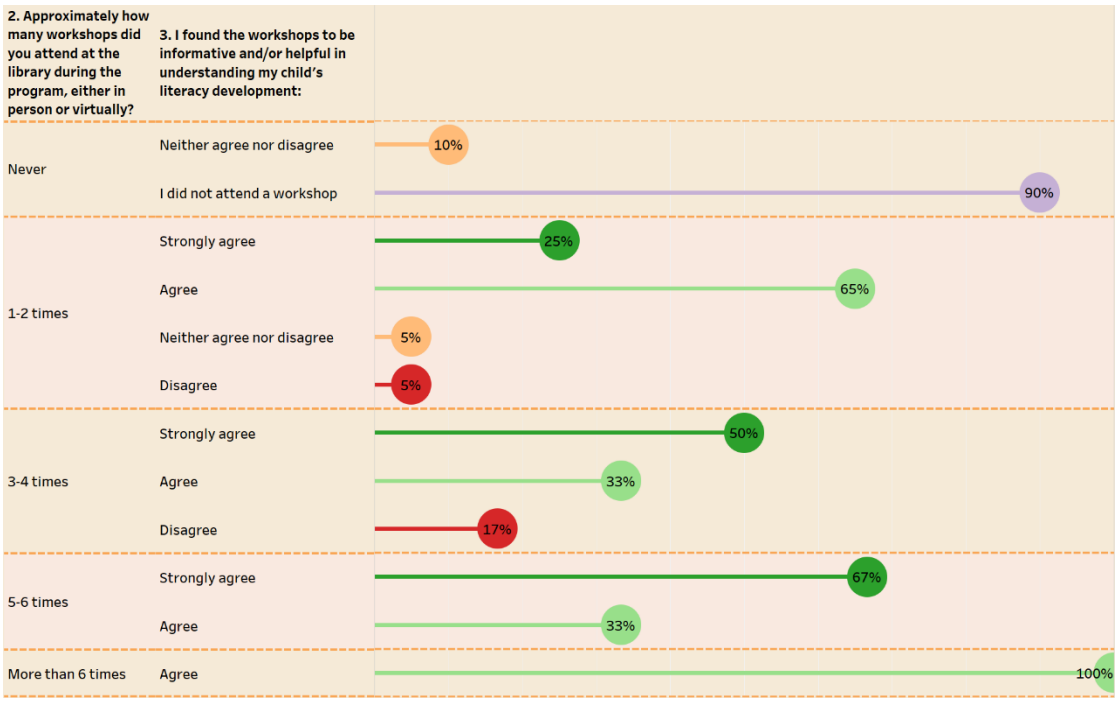

Figure 12: Number of workshops parents attended at the library during the program and how informative and/or helpful they were in increasing understanding of child's literacy development.

Figure 12 demonstrates the respondents who attended workshops; the majority found them informative and helpful in understanding their child's literacy development. The highest agreement was seen among those who attended 6 times with 100% agreeing. The responses suggest that attending multiple workshops positively influenced the understanding of their child's literacy development.

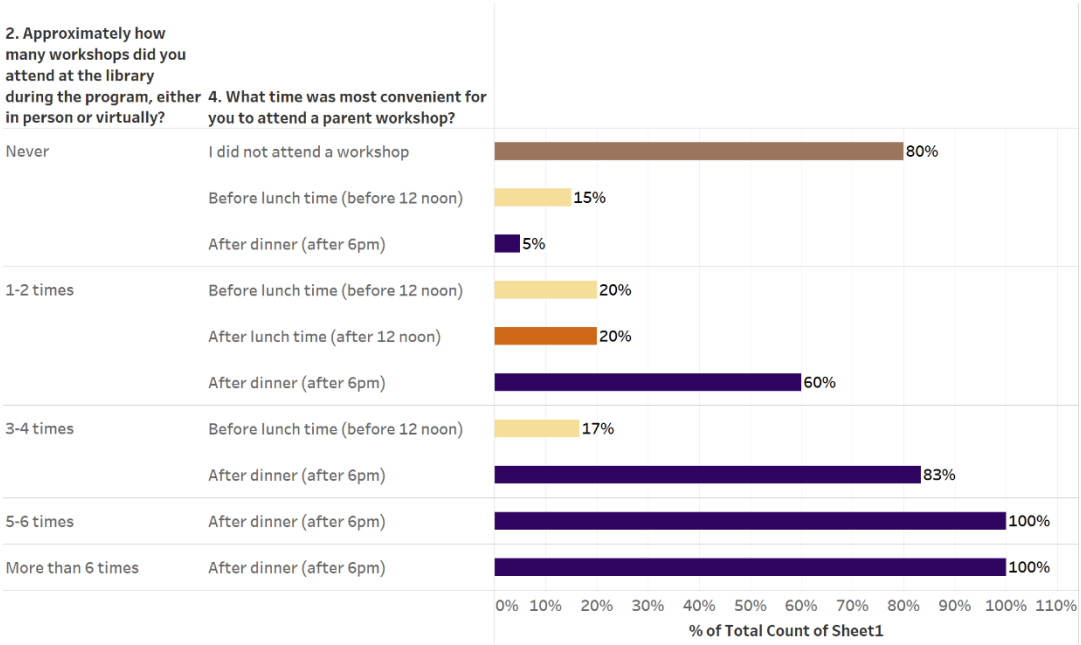

Figure 13: Attendance at the library during the program and most convenient time to attend a parent workshop.

Overall, the qualitative data interpretation observes that the motivation for reading remains mostly the same in children with only a small increase. This may indicate that children and families are consistently eager, excited, and enthusiastic to participate in reading and reading programs. This interest provides opportunity for community partners to harness this motivation with existing and exciting programs. After participating in the 1BBK program, significant changes are observed with respect to the child's literacy skills development and the parent's ability to identify and support this skill building. The results indicate that families are motivated and eager to visit local community libraries and that reading programs significantly increase this priority.

Discussions and Recommendations

A major limitation of the one-group design is the inability to draw statistically significant correlations between the 1BBK program and the demonstrated results without a control group. However, the self-formulated respondent answers still tell a story of community engagement and literacy development. The '1000 Books Before Kindergarten' program has shown significant strengths in fostering a love for reading and improving early literacy skills among participants. Parents and caregivers reported feeling more empowered and actively engaged in their child's literacy development because of the program. The program has also demonstrated success in promoting community engagement, with increased library visits and utilization of literacy resources. Collaboration between libraries and community partners such as St. Clair College and ProsperUs has also seen growth. However, there are areas that require attention for further improvement. These include encouraging workshop attendance, enhancing the effectiveness of workshops, increasing awareness of community literacy resources, and addressing specific aspects of literacy that may require more targeted strategies. By building upon its strengths and addressing these challenges, the program can continue to make a positive impact on early literacy development.

A significant proportion of participants noticed a substantial improvement in their child's literacy skills after participating in the program. Participants also expressed feeling more comfortable and confident in playing an active role in their child's literacy development after participating in the program. The program appears to have successfully fostered community engagement, with participants reporting increased visits to the library, utilization of community literacy resources, and a higher priority placed on library visits within their families. Finally, Participants reported that their children participate more in selecting books at the library, aligning more with their interests. They also noted increased use of visual cues and identification of letter sounds, indicating improved reading and word recognition abilities.

A significant number of participants reported not attending any workshops during the program which suggests a need for improvement in promoting and encouraging workshop participation among program participants. While some participants found the workshops informative and helpful in understanding their child's literacy development, a notable proportion either disagreed or expressed no opinion. This indicates the need for enhancing the quality and relevance of workshop content to meet the diverse needs of participants. Selecting a convenient time for workshops while also providing incentives are also key aspects.

Overall, the project has demonstrated a connection to children's engagement and literacy development to reading as well as parent's comfort in supporting this process. However, the project suggests that the fundamental positive outcome is the increased literacy engagement through local libraries and engaging families in literacy supportive activities. This can be achieved by aligning library

workshops to meet the needs of families as well as providing accessibility such as online options and preferential times. The 1BBK program provided families an opportunity to engage in literacy activities at home as well as within the community.

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