
Title Reading with MOLLY: Evaluating reading gain from a mobile library
intervention in a low-income neighbourhood
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READING WITH MOLLY

Evaluating Reading Gain from a Mobile Library
Intervention in a Low-Income Neighbourhood

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Executive Summary

Background

In a constantly information-saturated, technologically-mediated global world, a strong foundation for reading is essential for lifelong learning. At the same time, with widening income and educational gaps between students from different socioeconomic backgrounds, there are concerns with how to better ensure equitable access to reading resources and opportunities.

Internationally and in Singapore, children from low-income homes tend to perform below their advantaged peers due to a combination of factors, including a lack of access to literacy-rich environments and role models. Community efforts to close the reading gap may include book gifting and weekly or holiday reading programmes. Within Singapore, one such initiative is MOLLY, a mobile library bus which serves various Singapore neighbourhoods.

Aims

In collaboration with the National Library Board (NLB) and supported by the Lee Kuan Yew School of Public Policy (LKYSPP) Social Mobility Foundation (SMF) Grant, the research team at the National Institute of Education (NIE) embarked on a three-stage ethnographically-oriented study. The aims of the study were:

1. To understand the reading resources and needs of families living in two rental blocks in one Singapore neighbourhood;
2. To examine how they utilise MOLLY, a mobile library service offered by the National Library Board, over six months; and
3. To evaluate MOLLY's impact on children's reading gains (i.e. improvements in reading enjoyment, frequency and proficiency).

Method

This study utilises a mixed-methods case study approach to document the impact of the mobile library bus intervention on children aged 5-9 years old residing in a low-income neighbourhood. In the first phase, the team conducted door-to-door surveys with 37 families living in two blocks of rental flats to gather information about their reading resources and their use of the MOLLY bus that had been visiting the neighbourhood.

11 children from 8 families agreed to participate in Phase 2 of the study, which involved a commitment to visit the MOLLY bus regularly for six months ("the intervention"). A vocabulary test and a Title Recognition Test, designed to measure print exposure, were administered to the children before and after the intervention. The children completed a mini reading enjoyment survey and were interviewed about their reading enjoyment after the intervention.

The team also interviewed their parents regarding their child(ren)'s reading preferences before and after the intervention. Finally, the team interviewed a smaller number of parents once more, four months after the intervention.

Findings

In summary, the study found that a majority of the children living in the neighbourhood had limited access to print and digital reading resources at home. Although parents recognised the benefits of reading, they did not know about public and community resources available to support their child(ren)'s reading.

Specifically, the survey revealed that some families lacked awareness about the mobile library bus services, had limited knowledge about library procedures (such as loan rates or how to use the NLB digital app), worried about borrowing books because of their fear of their children damaging library books, or were unable to visit the library or MOLLY bus.

The findings also revealed that families who committed to the MOLLY intervention and visited the mobile library regularly with their children reported an increase in their children's reading enjoyment and frequency. Significantly, parents reported that learning how to use the NLB app to extend book loans was crucial to helping them navigate the library system. These families continued to visit MOLLY and the public library even after the intervention concluded, indicating a sustained impact of the programme.

Conclusion

The report concludes that equitable access to opportunities is essential to closing the reading and learning gap. Initiatives such as MOLLY, which brings books and reading opportunities physically closer to children in need, play a crucial role. The findings also indicate that beyond proximity of library services, psychological and social barriers must also be addressed for more effective outreach.

Practical implications include:

- **Awareness:** creating awareness about the MOLLY bus through posters and targeted outreach
- **Education:** educating families about library facilities, rules and technologies
- **Programming:** integrating MOLLY with other community and library programmes
- **Collaboration:** collaborating with other community partners such as schools to reach out to low-income families

The report concludes that investment into systematic evaluation might be helpful to document and improve the utility of such projects.



SINGAPORE'S MOBILE LIBRARY BUS

Mobile libraries, which come in the form of buses, vans, and other types of automobiles, bring reading materials and ICT services to underserved communities that face barriers in accessing traditional brick-and-mortar library services.¹ They also serve as community hubs, particularly in disaster and war zones.² A key objective of mobile libraries, whether in urban or rural contexts, is to ensure that marginalised communities have access to reading and learning resources.

In Singapore, mobile libraries were initially introduced by the National Library in 1960 to enable rural residents to access books and avoid overcrowding at the National Library Building at Stamford Road.³ Sponsored by UNESCO (United Nations Educational, Scientific and Cultural Organisation), the van visited primary schools and encouraged children to join as library members.⁴



Mobile Library, 1965⁵

Affectionally known as ‘MOLLY’, the mobile library bus has been bringing books and library services to neighbourhoods since 2008. Operated by the National Library Board (NLB), MOLLY travels to various neighbourhoods all over Singapore, bringing library materials and services to neighbourhoods with relatively lesser access to public libraries. In 2014 and 2016, NLB introduced two custom-built mini-MOLLY buses and one Big MOLLY bus with the support of and donations from the Kwan Im Thong Hood Cho Temple.⁶

Designed to be child- and elderly-friendly, the MOLLY bus travels to childcare centres, kindergartens, Housing Development Board (HDB) neighbourhoods, schools, special schools, and old age homes to provide young children from disadvantaged families, senior citizens, and individuals with special needs or disabilities with library resources and an immersive library experience. The MOLLY bus is equipped with borrowing and returning stations that are easy for children

and senior citizens to use. Features such as the hydraulic lift also allow wheelchair users to enter the bus with convenience. From time to time, the MOLLY bus hosts fun and educational programmes such as reading, singing, and storytelling activities to enhance the library experience for young users.⁷

Prior to the start of the study, the Big MOLLY bus visited the target neighbourhood once a month. As part of the intervention to encourage regular visits by children from low-income homes, the frequency was increased to twice a month from January to June 2024. Post-intervention, the bus continued to visit the neighbourhood twice a month until end-2024.

Introduction

Access to rich literacy environments and early reading habits are crucial for children's reading proficiency,⁸ impact adolescent digital literacy,⁹ and adult literacy.¹⁰ Furthermore, reading can enhance children's wellbeing,¹¹ sense of empathy,¹² and civic participation.¹³ In a constantly changing information-saturated, technologically-mediated global world, a strong foundation for reading is vital for lifelong learning.

There is global concern about increasing learning gaps between children from varying socioeconomic backgrounds.¹⁴ Children from low-income homes may fall behind in developing reading skills due to factors such as the lack of access to literacy-rich environments and inadequate parental support.¹⁵ Studies have also indicated that low-income children may visit public libraries less frequently or struggle to optimise their resources due to the lack of parental knowledge or support.¹⁶

Within Singapore, studies conducted during the first year of the COVID-19 pandemic suggest that children from low-income

homes are more likely to experience learning loss when away from school. These children have fewer books at home, reduced opportunities for enriching home learning experiences, and fewer opportunities to access external resources for literacy learning.¹⁷ While there have been efforts to support these children through schooling (e.g., through the Uplifting Pupils in Life and Inspiring Families Taskforce initiative [UPLIFT]), community efforts remain vital for bridging reading and learning gaps.¹⁸

Given the extensive international research documenting reading loss, this study shifts the focus to reading gain, to better understand the circumstances under which disadvantaged children can thrive.

This study defines **reading gain as an increase in reading enjoyment, frequency and/or proficiency during the period of an intervention.** Recognising the importance of early exposure to books as a key strategy for developing reading habits, the study focuses on families with young children aged 5 to 9 years old.



MOLLY the Mobile Library¹⁹

The key research questions that guided the study were:

1. What are the reading resources of children living in two blocks of rental flats in one Singapore neighbourhood?
2. What is the impact of the intervention on the children's vocabulary, print exposure and reading enjoyment?
3. How do the participating families utilise the twice-monthly mobile library services ("the intervention")?
4. How do the families continue to utilise MOLLY after the intervention?

Context of the Study

The majority of Singapore residents live in public housing, with 73.4% of the population living in purchased flats.²⁰ Low-income families, who are unable to afford a unit in purchased flats, are eligible for rental housing, which are typically studio or smaller apartments. These families

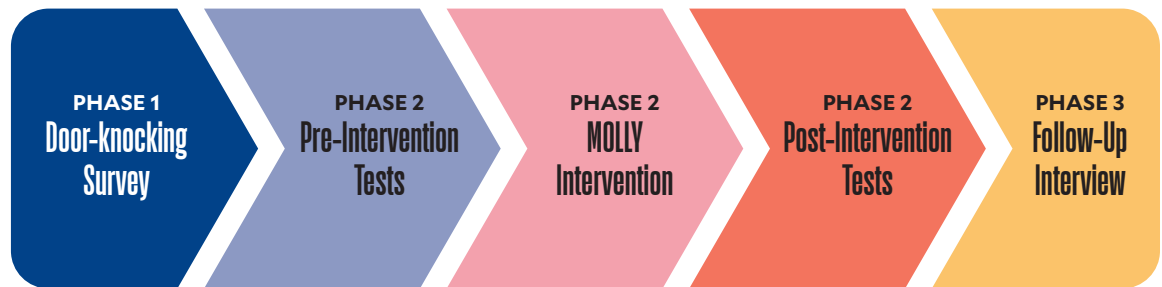
generally have a monthly household income of S\$1,500 or less.²¹

The study focused on families living in two rental flats in Peace (pseudonym used) neighbourhood. The two rental blocks are part of a cluster of six, with the other four blocks being purchase flats.

The integration of rental and purchase flats in Peace neighbourhood encourages interaction among families from different flats, as they share common amenities such as the nearby pavilion and playground. Additionally, the flats are located next to a primary school, preschool, and infant care centre. These amenities and facilities indicate that children in this neighbourhood have access to resources for play, care, and education.

Study Design

FIG 1.
MOLLY Study Phases



A mixed methods approach was employed to examine and evaluate the impact and effectiveness of the mobile library bus intervention on providing educational equity to children from low social economic status (low-SES) backgrounds. The study is divided into three phases.

In the first phase, a door-knocking survey was conducted to understand the reading resources of the families in the two rental flats. In the second phase (“intervention phase”), families with children aged 5 to 9 years old were invited to visit MOLLY and participate in pre- and post-intervention tests. In the third phase, a researcher revisited the families and interviewed them on their use of MOLLY since the end of the post-intervention tests.

Phase 1: Door-knocking survey

In Phase 1 of the study, a quantitative door-knocking survey was administered in end-2023 to find out about (1) home reading resources (i.e. print or digital material, parent-child interactions), (2) access to reading programmes, and (3) usage of public libraries, including MOLLY, NLB’s mobile library bus, which visited the neighbourhood monthly prior to the study.

The survey questions were piloted with three to five parents who had enrolled their

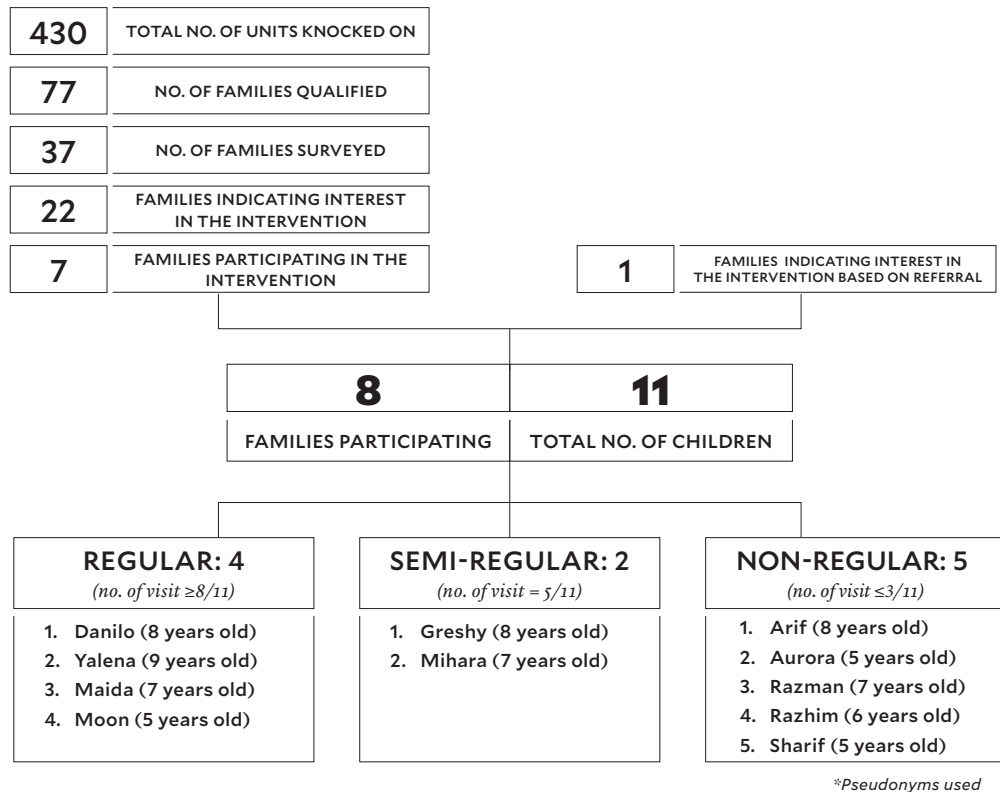
child(ren) in a separate reading programme and amendments were made based on feedback.

The research team prepared surveys in English, Malay, Chinese and Tamil, anticipating that participants might prefer to complete the survey in a language other than English. However, all families opted to complete the survey in English.

A pair of researchers visited all units, scheduling up to three visits per unit. Only families with children were asked to participate in the survey. The questions were read out to the participants and the responses were documented by the research assistants. A \$20 NTUC voucher was given as a token of appreciation. Out of 430 units, 77 families qualified, and 37 families participated in the survey.

At the end of the survey, the researcher asked the parents if they were interested to participate in Phase 2 of the study. 22 families indicated interest and were contacted via mobile phone in December 2024. Of the contacted families, seven families consented to participate in Phase 2. One family who learnt about the study via word of mouth was invited to participate, resulting in a total of 8 families and 11 children for Phase 2.

FIG 2.
Total number of participating children



Phase 2: The “MOLLY” Intervention

In Phase 2, participating families were asked to visit MOLLY regularly (8 out of 11 visits) from January to June 2024. Before the visits, the children completed a Reading Enjoyment survey, the Singapore Multilingual Assessment of Receptive Vocabulary (SMARV)²² and Title Recognition Test (TRT) for measuring print recognition. After the intervention, the SMARV and TRT were re-administered, and a short interview about their reading enjoyment was conducted with the children. Pre- and post-intervention interviews were conducted with parents to assess changes in their children’s reading enjoyment and habits after the intervention, as well as their use of the MOLLY bus and other NLB resources.

Based on feedback from the parents during the survey, monthly storytelling sessions were organised. Attendance was tracked using sticker sheets to motivate the children, who received a book at the

end of the intervention. Some children who were not participating in the study also requested for sticker sheets and were allowed to track their attendance in the same way as the participating children.

Field observations were also conducted during the study by at least one researcher during each MOLLY visit. These observations focused on engagement with reading materials on the MOLLY bus, parent-child interactions during reading sessions on the bus, children’s preferred book genres, and issues related to borrowing, returning, and fines.

Phase 3: Follow-up Interview

To determine if the families would continue utilising the MOLLY bus after the intervention, the research team requested permission to conduct follow-up interviews with the regular and semi-regular families at the end of the year. These interviews were conducted between October to November 2024.



FINDINGS



Phase 1: *Family resources for reading*

1. Background Information

Language Use

The Mother Tongue languages of the children in the 37 families were Malay (18), Chinese (9), Tamil (7), and Others (1). Two families used both Malay and Chinese. To better understand home language background, we asked families for their language use among family members, i.e. between adults, adults towards children, and between children.

As shown in Figure 3, most families used either English or a mix of English and their Mother Tongue languages. This underscores the importance of English as the primary language for communication.

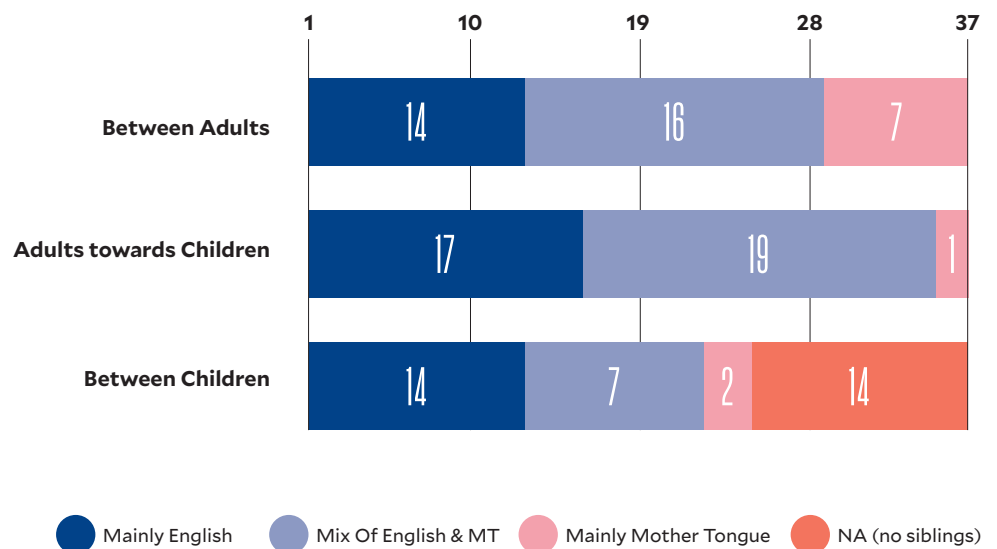


FIG 3.
Main Language Spoken within Families: Between Adults, Adults Towards Children, and Between Children (%)

English Language Confidence

Of the 37 families, 27 families had a second caregiver. Caregivers were asked to rate their level of confidence in speaking and reading in English. The results, as depicted in Table 1, indicate that about 73.0% of main caregivers and 74.0% of second caregivers rated their confidence in speaking English as either 'Confident' or 'Very Confident'. Similarly, high confidence levels were reported for reading English, with 70.3% of main caregivers and 70.3% of second caregivers indicating they were 'Confident' or 'Very Confident'.

TABLE 1.
Caregivers' English
Language Confidence
(Reading and Speaking):
Percentage of 37 Families (%)

* 27 families had a second caregiver, whereas 10 families only had one main caregiver

Confidence in Speaking English	Main Caregivers (%)	Second Caregivers* (%)
No Confidence	2.7	7.4
Low Confidence	2.7	3.7
Somewhat Confident	21.6	14.8
Confident	27.0	37.0
Very Confident	46.0	37.0
Confidence in Reading English	Main Caregivers (%)	Second Caregivers* (%)
No Confidence	5.4	7.4
Low Confidence	5.4	3.7
Somewhat Confident	19.0	18.5
Confident	24.3	29.6
Very Confident	46.0	40.7

Caregivers' Reading Beliefs

Caregivers' reading beliefs can influence the resources dedicated to reading. We asked about their belief in the importance of reading for their children's academic learning, how important it is for their children to read for enjoyment, and their own personal belief in the importance of reading.

Table 2 illustrates that a substantial proportion of caregivers recognise the essential role of reading: 73.0% regard it as extremely important for their children's academic success; 59.5% considered it crucial for enjoyment; and 51.4% believe it is crucial for their own personal development. These figures underscore the wide-ranging importance attributed to reading across educational, personal, and recreational contexts.

TABLE 2.
Caregivers' Reading Beliefs:
Responses to Three Questions,
Percentage of 37 Families (%)

Caregivers' Reading Beliefs	How important do you think reading is for your child(ren)'s learning in school? (%)	How important do you think it is that your children should read for enjoyment? (%)	How important do you personally believe reading is for yourself? (%)
Not at all important	0	0	5.4
Slightly important	2.7	0	0
Moderately important	8.1	18.9	24.3
Very important	16.2	21.6	18.9
Extremely important	73.0	59.5	51.4



Families in the two rental blocks had limited access to physical books and electronic books in either language at home.

2. Books at home

Physical Books

Children raised in literacy-rich environments are more likely to enjoy reading and become more proficient readers.²³ Access to reading materials at home is one critical aspect of such an environment. Participants were asked to estimate the number of English and Mother Tongue print and e-books owned.

Regarding English book ownership, 25 out of the 37 surveyed families owned fewer than 20 books, 11 families possessed between 21 and 50 books, and only one family owned between 51 to 100 books. The availability of Mother Tongue books was even lower: 32 families possessed fewer than 10 books, four owned between 11 and 20, and only one owned 21 to 50 books, with none exceeding this range (Figure 4).

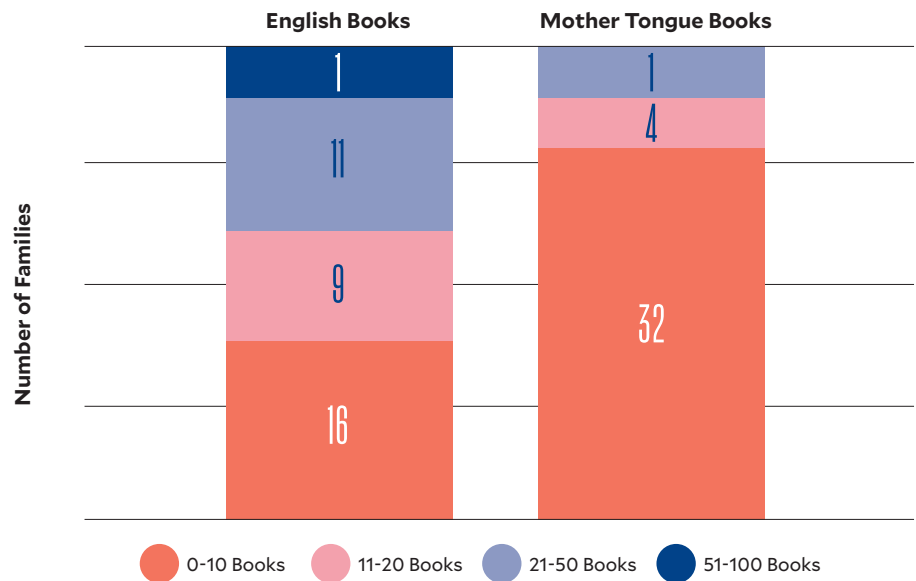


FIG 4.
Number of English & Mother Tongue Children's Books Owned at Home

E-Books

Only 10 out of 37 families had children who read electronic books. When asked to elaborate, they mentioned three e-reading activities - "Library app[-lication]", "Manga", and "Kindle".

Families in the two rental blocks had limited access to physical books and electronic books in either language at home.

3. Public Library Access

Since having access to public libraries (i.e. being able to visit and borrow) could supplement the lack of books at home, caregivers were asked about their library visits with their children (Figure 5). 57% of the families (21) visit public libraries with their children, with 11% going at least weekly and 30% going monthly, totalling 41% who visit the libraries monthly or more. Additionally, 13% visit every 2-3 months, and 3% visit only twice or thrice a year. Conversely, 43% of the families do not visit the public library at all.

Out of 28 public libraries available in Singapore, most residents visited the Peace and Serene (pseudonyms) public libraries.²⁴ They were the two closest libraries within the Peace neighbourhood. Peace public library was 4 LRT (Light Rapid Transit) train stations away, which took approximately 15 minutes, and Serene public library was a 20 to 25-minute train ride away. Walking to the nearest library took around 20 minutes. This suggested that distance and convenience influenced the families' selection of library to visit.

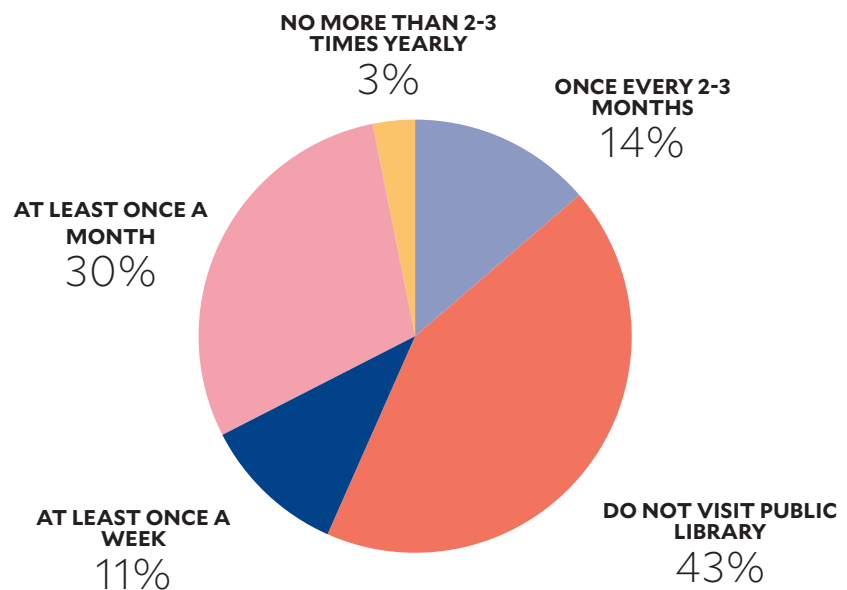
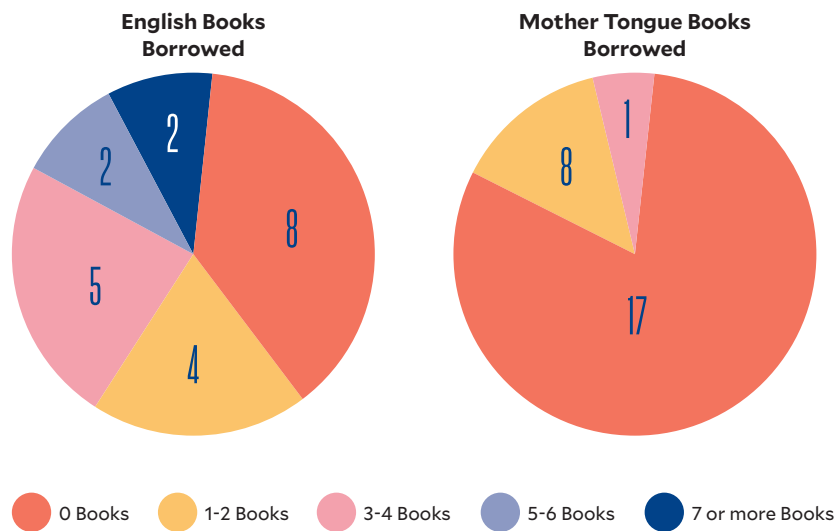


FIG 5.
Public Library Access: Whether Caregivers Visit the Library with Their Children & How Frequent They Do So

Number of books borrowed

Among the 21 families who visited the public library, borrowing patterns for English books varied (Figure 6): 8 families did not borrow any books, 4 borrowed 1-2 books, 5 borrowed 3-4 books, and 4 families borrowed more than 5 books per visit. In contrast, the borrowing of Mother Tongue books was significantly lower; 17 families did not borrow any, 8 families borrowed 1-2 books, and only 1 family borrowed 3-4 books.

FIG 6.
*Number of English & Mother
 Tongue Children's Books Borrowed
 Each Visit*



Reasons for not borrowing

Open-ended responses collected revealed four primary reasons for not borrowing books:

LANGUAGE PROFICIENCY

This mainly related to the borrowing of Mother Tongue books. If caregivers believed that they were weak in their Mother Tongue language, they preferred not to borrow Mother Tongue books. One family elaborated that “it is better to not teach it wrongly”.

NO BORROWING HABIT

Some families had the habit of visiting public libraries to browse and read instead of borrowing. Respondents explained that “[we will] just read there” and “[we are] just there to explore”.

BOOK DAMAGE

Two families stated they would only read in the public libraries and not borrow books to bring home due to concerns that their children might damage the books. One family reasoned that their child “might misunderstand that books borrowed are bought... and can do anything they want with it”. This suggested concerns about possible fines for book damage.

TIME CONSTRAINTS

Caregivers frequently mentioned that they had “no time” to visit libraries or borrow books. This could be due to work commitments, caring for multiple children, or health issues.



Distance and convenience influenced the families' selection of libraries to visit.

4. Shared Reading

Shared book reading has been shown to positively contribute to children's reading engagement.²⁵ On average, caregivers read to children in English about once or twice a week. However, reading to children in their Mother Tongue occurs less frequently.

Four families reported significantly higher frequencies of shared reading with their children, engaging in this activity every day of the week, compared to the average of once or twice a week. Upon closer analysis, one family also had the highest number of reported English physical books at home (51-100 books). However, these four families did not visit the library frequently with their children, and as a result did not borrow many books from the libraries. It may be that they have a sufficiently large home library to meet their reading needs.

5. Access to Reading Programmes

Most families (65.0%) lacked access to reading programmes for their children. Only nine (24.0%) families had access to an English reading programme, and four (11.0%) had access to both English and Mother Tongue reading programmes. There were three types of reading programmes mentioned: school-enrolled programmes (free), community reading programmes (free), and tuition reading programmes (paid). Eight families (21.0%) were in school-enrolled programmes, four (11.0%) were in community reading programmes, and two families (5.0%) were in tuition reading programmes.

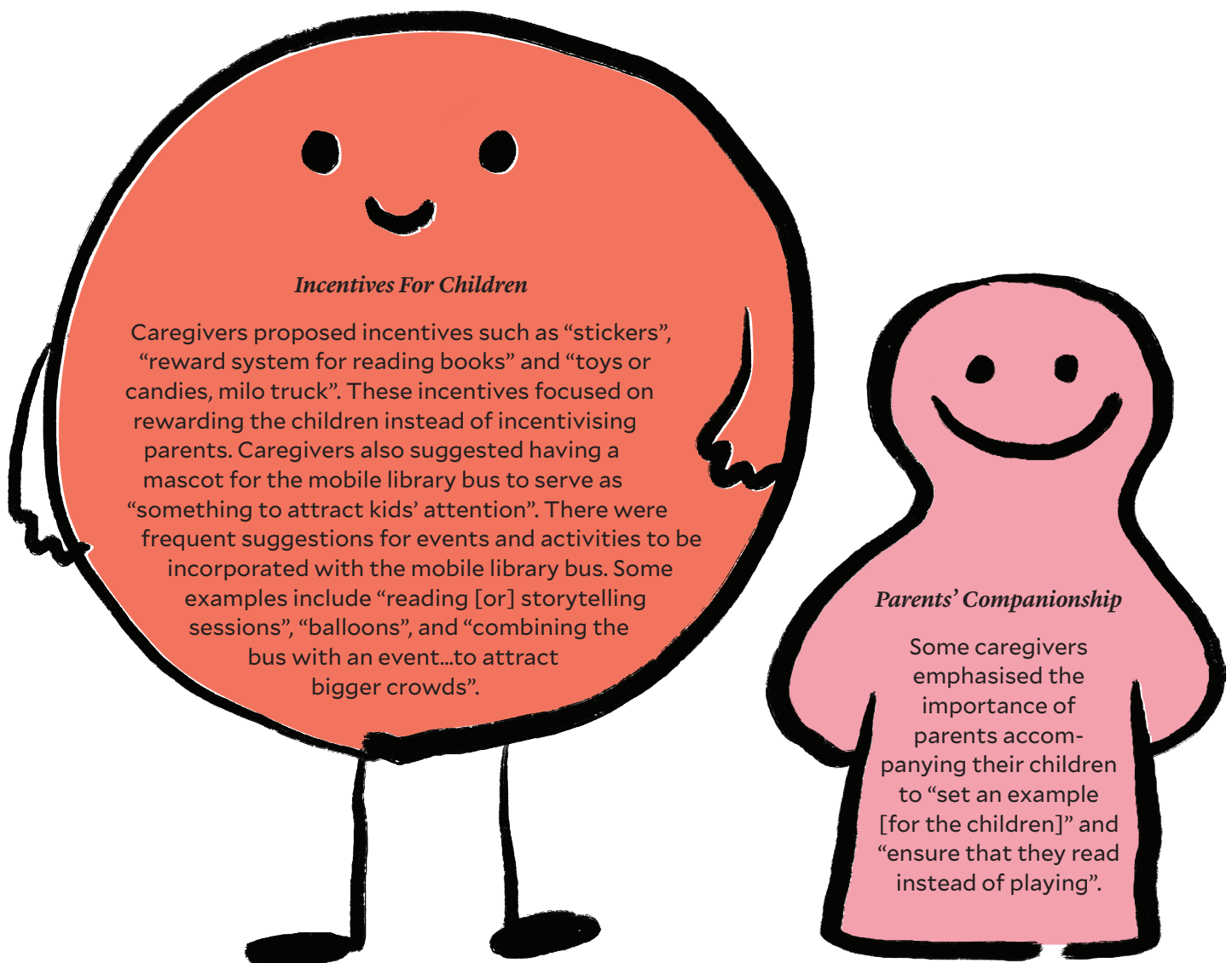
Families enrolled in either community or tuition reading programmes indicated an active search for reading resources as they placed strong importance on their child's reading habits. To underscore this value, one family stressed that "reading [is] an essential skillset to have for a job [in the future]".

SUGGESTIONS FOR MOBILE LIBRARY IMPROVEMENTS

6. Mobile Bus Library Feedback

Towards the end of the survey, caregivers were shown pictures of MOLLY, the mobile library bus that visited their neighbourhood once every month. MOLLY was typically parked a short 2-minute walk away from their flats. While caregivers were not specifically asked if they had visited the

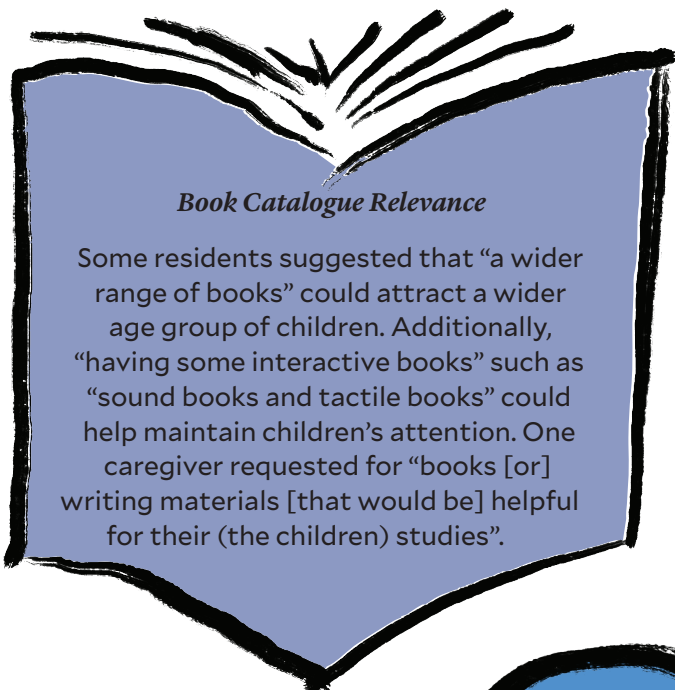
mobile library bus before, many mentioned that they had not seen the bus before or were unaware of its existence (personal communication). This lack of awareness also was evident when respondents were invited to share suggestions for improving the mobile library bus services.





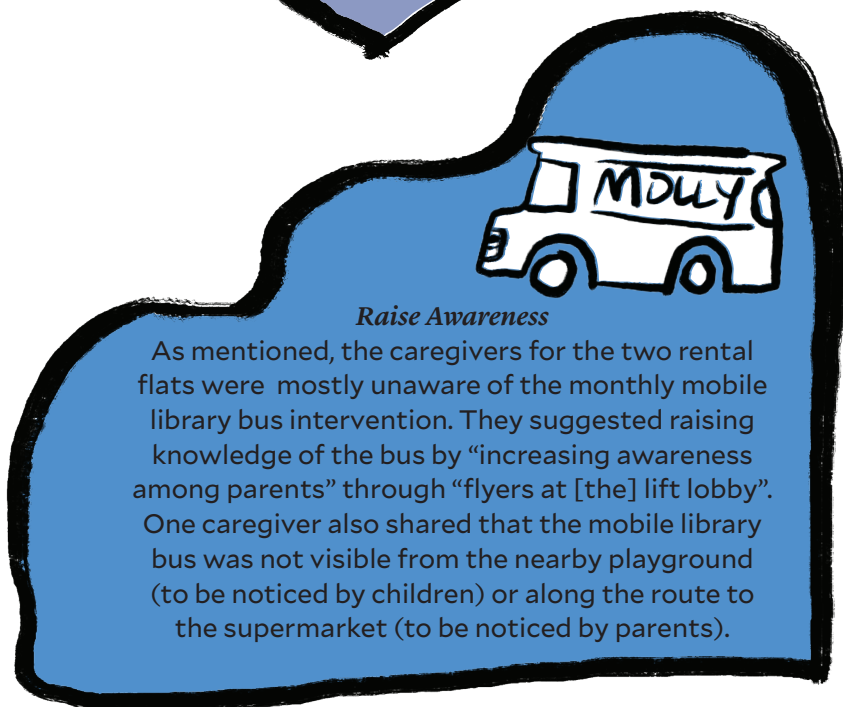
Novelty

Respondents appreciated the mobile library bus as a novel experience which provided children and their parents unique opportunities to “experience something new”.



Book Catalogue Relevance

Some residents suggested that “a wider range of books” could attract a wider age group of children. Additionally, “having some interactive books” such as “sound books and tactile books” could help maintain children’s attention. One caregiver requested for “books [or] writing materials [that would be] helpful for their (the children) studies”.



Raise Awareness

As mentioned, the caregivers for the two rental flats were mostly unaware of the monthly mobile library bus intervention. They suggested raising knowledge of the bus by “increasing awareness among parents” through “flyers at [the] lift lobby”. One caregiver also shared that the mobile library bus was not visible from the nearby playground (to be noticed by children) or along the route to the supermarket (to be noticed by parents).

Changes made to the MOLLY Intervention based on feedback

To address feedback raised by residents and participants during the door-knocking survey sessions, the research team introduced several modifications as part of the intervention.

- Posters with dates of the visits were created by the MOLLY team and physical copies were placed at ground level and given to the participants.
- Text reminders were sent to parent participants every Friday before a MOLLY visit to inform them about upcoming MOLLY bus visits.
- An attendance sticker sheet was introduced to track child participants’ attendance throughout the study and encourage attendance. Each child was given a book at the end of the study.
- Storytellers were invited to hold storytelling sessions in the MOLLY bus once a month. Participating families were informed of the dates for the storytelling and encouraged to join these sessions with their child(ren).
- Where possible, the MOLLY team was informed of children’s favourite titles and tried to provide more copies of popular books on the bus.

Through these changes, the research team aimed to promote continuous and consistent visits and engagement.

Phase 2: *Families' usage of MOLLY during intervention period*

The first part of this section provides an overview of the impact of the intervention on their print exposure, proficiency and enjoyment. The second part presents case studies as examples of reading gain.

2.1. Impact of intervention on reading enjoyment and reading proficiency

As part of the study, we administered TRT for print exposure and the SMARV vocabulary test before and after the intervention. The results are shown in Table 3.

Our findings suggest that the intervention has a positive impact on children's reading enjoyment, with all six regular and semi-regular attendees reporting increased enjoyment in reading activities. Specifically, five out of six children indicated that reading had become easier for them following the intervention.

Child	Age	School	TRT		Vocabulary		
			LEVEL	PRE-MOLLY	POST-MOLLY	PRE-MOLLY	POST-MOLLY
Aurora	5	K1		18	-	87	-
Moon†	5	K1		31	25	63	62
Sharif	5	K1		-8	-	47	-
Razhim	6	K2		29	6	73	88
Maida†	7	P1		24	40	83	98
Mihira†	7	P1		16	20	80	85
Razman	7	P1		-32	-12	67	82
Arif	7	P1		12	-	73	-
Danilo†	8	P2		8	-12	72	70
Greshy†	9	P3		32	40	84	83
Yalena†	9	P3		36	44	86	91

*Negative scores for TRT are obtained when participants check more foils than actual book titles.

†Regular and semi-regular children

However, while some children showed improvements in print recognition and vocabulary, the changes in language skills were less consistent and generally more modest. This pattern underscores the need for extended timeframes to effectuate significant changes in language skills, aligning with existing literature that suggests language acquisition is a gradual process which requires sustained engagement and intervention.

“Before I discovered MOLLY bus, I didn't read much before bed. I didn't read at all before bed. And now I read before bed all the time. I will ask my mommy if there is the library bus. I'm pretty disappointed if she says no.”

— YALENA

TABLE 3.
*Pre- and Post-MOLLY results of 8
children who completed pre- and
post- intervention tests*



This suggests the need for more awareness raising among rental flat families about the timing, availability and function of MOLLY.

One 5-year-old child, Moon, shared that reading was more difficult, perhaps because she was reading more than before. Additionally, one 9-year-old, Yalena, did not answer the question as to whether she enjoyed reading more but shared that she was reading more books than before.

2.2. Impact of Intervention on Families

The families that benefitted the most from the intervention were regular visitors.

Four families visited the MOLLY bus almost every time it was in the neighbourhood. Post-intervention interviews were conducted with four regular, two semi-regular and one irregular family, which provided insights into the benefits and challenges of visiting MOLLY. We were unable to contact the other irregular families who stopped visiting after the first session.

“I think I have seen it one time. Never visited before. I didn’t recognise there is something inside.”

— DANILO’S MOTHER

MOLLY Awareness

As mentioned earlier, the research team discovered during the interviews that parents were unaware of the existence or function of the MOLLY bus. This same lack of awareness was expressed by the parents in the pre-intervention interview.

Although the bus was positioned a short 2-minute walk away from the rental flats, some parents may not walk in its general direction. One parent explained that “we don’t usually walk there” and another parent shared that her apartment faced the playground rather than the bay where the bus is usually parked.

Other parents had seen the bus but did not realise that it was a library bus that could be accessed by members of the public.

This suggests the need for more awareness raising among rental flat families about the timing, availability and function of MOLLY.

Learning about library rules and technology

As part of the study, the research team played an educational role in assisting some parents with navigating the system. As experienced library users, the research team was surprised to discover that some families were unaware of the loan period for books. This indicates the importance of not assuming common knowledge of library rules and regulations.



In this case, teaching the parents how to renew books at the time of loan provided an opportunity for them to immediately perceive the benefits of extending the loan period.

“I tried the app before already in library. Before the MOLLY bus, they tell me that before, but I don’t know how to renew books because they never teach me.”

— YANELA’S MOTHER

During the research, team members assisted families in using the library system. For example, two participating families had overdue fines as they were unaware of the due dates of borrowed books. The team assisted them with writing to the library for a waiver. Unpaid fines may deter families from borrowing books for extended periods.

Throughout the intervention period, the researchers also instructed parents on how to use the NLB app. Understanding the rules and technology was empowering for parents. One parent was able to renew the book using her mobile phone when her daughter was unwell, which made her more willing to borrow books because “I can extend [the loan] without any worries of being fined.”

“I think last time it’s very difficult to borrow because we have to go all the way to the library to return the book. With the app, it’s easy to renew, easy to return, easy to borrow.”

— MOON’S MOTHER

Although Danilo’s mother had downloaded the NLB app during a library visit, she was unfamiliar with the renewal process using the app. A team member taught her how to renew her loans to avoid overdue books. She was particularly diligent about keeping track of the books’ due dates, having incurred a large fine once when she failed to return books before an overseas family trip.

Learning how to use the NLB app for different functions is a process that may require repetition. Learning is likely to be most effective if the parent has an immediate need for the app function. In this case, teaching the parents how to renew books at the time of loan provided an opportunity for them to immediately perceive the benefits of extending the loan period.

While the librarian was on-site to help all visitors, high traffic periods may limit the amount of time a single librarian can spend with a parent or child.



Yalena

Yalena's mother, an avid reader, introduced books to her two girls, aged 9 and 3, since they were young. She frequently reads to them and encourages them to read. She recognises the importance of reading, and consciously limits her children's screen time. While buying books can be expensive, she has a collection of books at home, inherited from a friend. She also makes use of MOLLY to extend her children's reading possibilities. Yalena also borrows books from the school library.

“It's like a routine for her like before bed... After school, I give her 20mins or 15 mins to read before she falls asleep.”

One benefit of visiting MOLLY is the constant supply of new titles that Yalena has. Both mother and daughter noticed a significant increase in Yalena's reading frequency since they started visiting MOLLY. Yalena also now enjoys reading before bedtime.

Access to engaging books is a powerful motivator for children to read. By utilising her school library and the MOLLY bus, Yalena is able to explore a wider range of reading materials. These increased reading opportunities will enhance her reading comprehension and can also serve as a relaxing bedtime routine.

Moon

Self-efficacy, the belief in one's reading abilities, is a key aspect of reading motivation. Before the intervention, Moon's mother expressed concerns that she was "starting to panic that [Moon] doesn't know how to read" except for "very simple words". Regular visits to the bus became a positive experience for Moon, who would look forward to the storytelling and "borrow books for herself and her 3-year-old sister". She especially "loves" the storytelling sessions.

"Usually, she will ask what day is it today...On Friday, she will ask me, is it Friday today? So tomorrow we will go to the MOLLY bus? I think we only missed one session... because she had influenza. Other than that, I think we're here every time."

Borrowing "baby books" provided Moon with opportunities to practice reading to her sister even though "she's not really good at it yet".

Through the MOLLY bus visits, Moon also learnt about library rules and taught her younger sister that she "cannot draw, cannot tear" library books, "otherwise [their mother would] need to pay money."

Overall, visiting MOLLY resulted in Moon showing "more interest in reading".



Visiting MOLLY as routine

For families who visited the bus regularly, they appreciated being able to incorporate MOLLY visits into their Saturday routine. Because of the bus's proximity, there was "no need to travel" and was thus convenient. For those with young children, the storytelling sessions were something their children looked forward to.

**"It's part of our activity...it's a good routine, rather than doing something else on the phone. I will be sad [if the bus comes less often]. Because my children are used to this and it's part of our activity. If we don't know where to go, we can go to library. Then, after that we can plan other things."
— YALENA'S MOTHER**

Developing a reading identity

The regular access to books through visits to the MOLLY bus helped some of the children to develop positive reading identities. Moon's mother noticed an increase in her daughter's reading interest. Before the interview, she said Moon was not a confident reader. However, the regular visits allowed Moon to borrow more books and "she showed more interest in reading" and even enjoyed reading these borrowed books to her younger sister.

Availability of new titles also ensured that older children had access to more books to sustain their reading habits. Yalena shared that since the MOLLY intervention, she developed a bedtime reading routine as she had new titles to read after each visit.

**"Most of the nights, shall I say...since we have the books that we borrowed from MOLLY bus, we have different stories. Because the books we have at home, we read already. So when they have new books, every night we will read."
— YALENA'S MOTHER**

Parents of older primary school children reported that their children also borrow books from the school library. As primary schools allocated specific reading times, having a wide range of books to read was beneficial for children.

Both schools and public libraries work together to ensure that children have access to interesting and relevant materials as they become more proficient readers.

Time and childcare as a challenge

Many parents had concerns about bringing their younger children to the library. They did not "like to disturb other people" or disrupt the "conducive reading" environment for others with their children running around the library. They did not borrow books because they were either unaware the books could be borrowed or worried that the books would be "destroyed" by their children.

“On the particular days when the MOLLY bus is coming, I’m working. My wife does shift-work. So, for the times she’s bringing the kids down, she’s making an effort. You know, she needs to rest. The only reason [we don’t visit so often] is our work schedules.”

— GRESHY AND MIHIRA’S FATHER

Semi-regular and irregular parents explained that irregular work hours or competing activities deterred them from visiting regularly.

Childcare on the MOLLY bus posed an additional challenge for those with younger children. For example, Razman and Razhim’s mother struggled to manage their four boys aged 4, 5, 6, and 7. During the first visit, while the two older boys were engaged looking for books to read, the younger ones would run up and down the staircase of the bus. She was unable to concentrate on helping her older boys with their book selections, as she was busy trying to keep the younger boys on the bus. In contrast, at least two other families who visited the bus regularly were able to do so because they had alternative childcare for their younger child at home.

When asked about challenges, Danilo’s mother suggested receiving phone notifications would be helpful. Although the researchers had helped her to set up email notifications for her NLB library membership account, she believed that receiving WhatsApp messages would be more effective for monitoring loans and due dates. This seemingly minor change could be a time saver for a busy working mother.

“Only they give me the email the time you helped me [with getting a fine waiver] right? So now I get the message if I borrow the books. Message better. Yeah, because email...I don’t know which one because so many notifications are coming also in my email, so I don’t know which one are for the books I’m borrowing.”

— DANILO’S MOTHER

We sometimes witnessed Danilo’s mother having to run back up to her flat to locate a missing book, highlighting the challenges of keeping track of book loans.

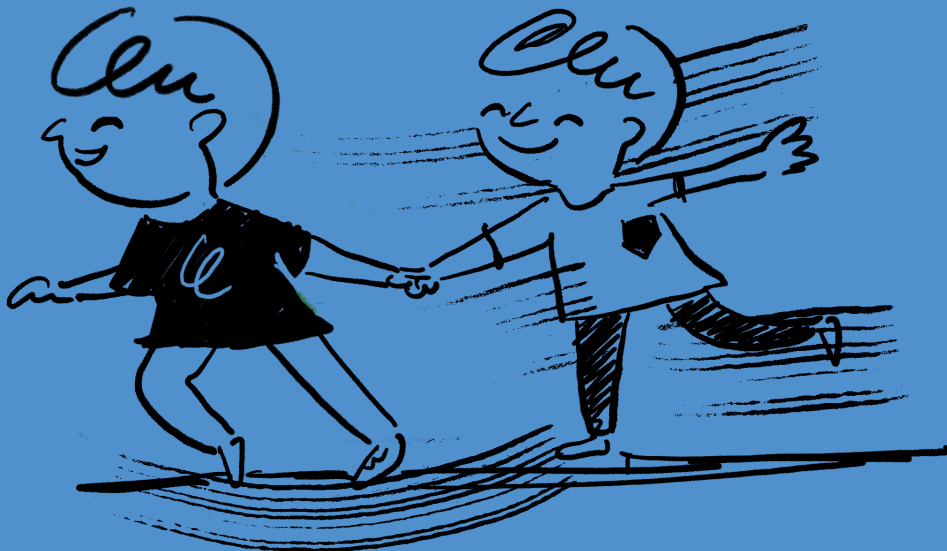
Razman & Razhim

Razman and Razhim are two of four boys, aged between 4 to 7-years-old. They are friendly but can at times be rowdy, and managing four boys can be challenging for their mother.

While she wants to bring them to the public library, it is sometimes difficult to do so with four active boys.

She visited the library one time when the boys' grandmother was available to accompany her. She borrowed some books then, but did not return them on time as she misunderstood the loan periods. One of the research team's first tasks was to assist her in waiving late fees. The team also explained there is a 3-week loan period.

“Experience-wise...the kids actually quite enjoyed themselves... it's a mini library and they love to go to the library...and it's convenient. We went once only. After that the kids were sick, then we had parent-teacher meeting, and it was also Hari Raya week, so they're not able to come down. It's easy because its nearby, convenient. But difficult because it's mostly like weekends. And then sometimes on weekends, we do have plans...”



Despite her best efforts, the boys could only visit MOLLY once at the beginning of the study. It was exhausting for her to manage all

four boys on a tiny bus. For families with younger children and with limited childcare support, visiting MOLLY can be a significant challenge.

Phase 3: *Continuity in the use of MOLLY resources*

In November 2024, the research team returned to interview 4 regular and 1 semi-regular families to find out more about their use of the MOLLY bus and its resources after the intervention. Between the end of the intervention in May and the follow-up interview in November, the frequency of bus visits to the Peace neighbourhood remained bimonthly on alternate weekends.

Out of the 3 regular families, one continued to visit the MOLLY bus consistently every month. One family stopped visiting but developed the habit of visiting the public library and one family visited once a month rather than twice a month. Both semi-regular families continued to visit the library although challenges remained.

Danilo

Some families keep visiting MOLLY now that they're familiar with the resource.

Danilo's mother, Delila, was the only family who was able to maintain her visits to the MOLLY bus with her child despite her busy work schedule. She reiterated during the follow-up interview that she believed that visiting the MOLLY bus would be beneficial to her child's academics and encouraged him to continue reading.

**"We're happy that the MOLLY bus [came] because [it is] convenient to [borrow] and return the book."
— DELILA, DANILO'S MOTHER**

Yalena

The intervention directed one family to the public library.

Yalena's family stopped visiting the MOLLY bus after the intervention. Instead, they started to visit the public library more often. Yalena's mother mixed up the MOLLY schedule as she did not receive weekly reminder texts which were sent out by the researcher during the intervention. They also found the family were unable to visit MOLLY as often as she had to focus on her studies during the examination period.

Yalena's mother found that the public library offered more resources and indoor facilities for children's play activities, which made it more appealing for her children. As the public library can be visited anytime, the trips could be arranged around her children's schedule. Yalena's mother explained that the text reminders sent out by the researchers were helpful in maintaining her regular MOLLY visits during the intervention.

**"I bring them there [Public Library] because they have...it's indoors... they also have toys..."
— JALENA, YALENA'S MOTHER**



Despite not visiting the MOLLY bus as often as before, Sheyda's children developed a love for reading during the intervention.

Moon

Regular MOLLY visits help one family to become familiar with library procedures.

Moon's family was one of the families that visited MOLLY bus consistently for almost every session during the intervention. However, Yue Liang could not bring her and her siblings to the MOLLY bus so regularly after the intervention period due to reasons such as doctor appointments and other children and childcare commitments, resulting in a decrease in the frequency of visits to the MOLLY bus from twice a month to once a month.

Moon still enjoys visiting the MOLLY bus as she can borrow books for her younger sister. Through the conversation, we also found that Yue Liang and her child now leave the bus as soon as they're done picking and borrowing their books, showing a significant decrease in duration spent on the bus now and a shift in visiting habits from the intervention period, where Yue Liang and her child stayed for approximately 30 minutes to 1 hour on the bus to flip through books together.

"It's the same, we just go there and borrow books, borrow books for her sister... For younger sister, baby books...After that we just go there and pick and go already."

— YUE LIANG, MOON'S MOTHER

This suggests that they are now familiar with the bus and are able to maximise their use of library resources through borrowing.

Greshy & Mihira

MOLLY, together with school and family resources, offers an ecosystem to encourage children to read.

Greshy and Mihira remained consistent in their visits and even increased the frequency of their visits to the public library. Despite not being involved in bringing his children to the MOLLY bus, their father noted during the interview that his wife still brings their children to the MOLLY bus as much as they could, at the same frequency as before during the intervention period. Interestingly, this family started to visit the nearby public library a little more frequently. Rakesh notes that the children draw their reading materials from other resources as well, including online resources and points to complementary school support for their reading.

"I would say that their reading has improved...they are interested in reading books...so they also borrow some books from the school, and they're also books from the library...which this MOLLY bus could be the source for them to start?"

— RAKESH, GRESHY & MIHIRA'S FATHER



The lack of shelter also posed logistical obstacles for the families to visit the MOLLY bus during bad weather days.

Maida

By providing interesting books, MOLLY encouraged one child to like reading more than before.

Maida's family only managed to visit the MOLLY bus once or twice since post-intervention due to weekend plans. Despite not visiting the MOLLY bus as often as before, her mother reported that her children developed a love for reading during the intervention. This is partly due to the fact that their father also purchased books for them to support their reading.

“Most significant [benefit of visiting MOLLY] is of course the...love for books, especially for Maisha (Maida's sibling), because started off she don't really like to read ...it improved gradually, and then now I think she's more into reading. I don't have to tell her to pick up a book, she will just go there and just pick up a book and read.”

— SHEYDA, MAIDA'S MOTHER

Benefits of MOLLY intervention

Overall, regular and semi-regular families mostly reported continuing to visit MOLLY, now that they were familiar with the bus as well as the borrowing system. Some families, especially those with primary school aged children, visited the public library more often. All families reported that their children enjoyed reading more or read more frequently than before.

Challenges for continuing visits

Three key challenges were cited by parents as hindering continued visits.

1. Lack of constant reminder messages
2. Lack of shelter on rainy days
3. Clashing schedules with work and family commitments

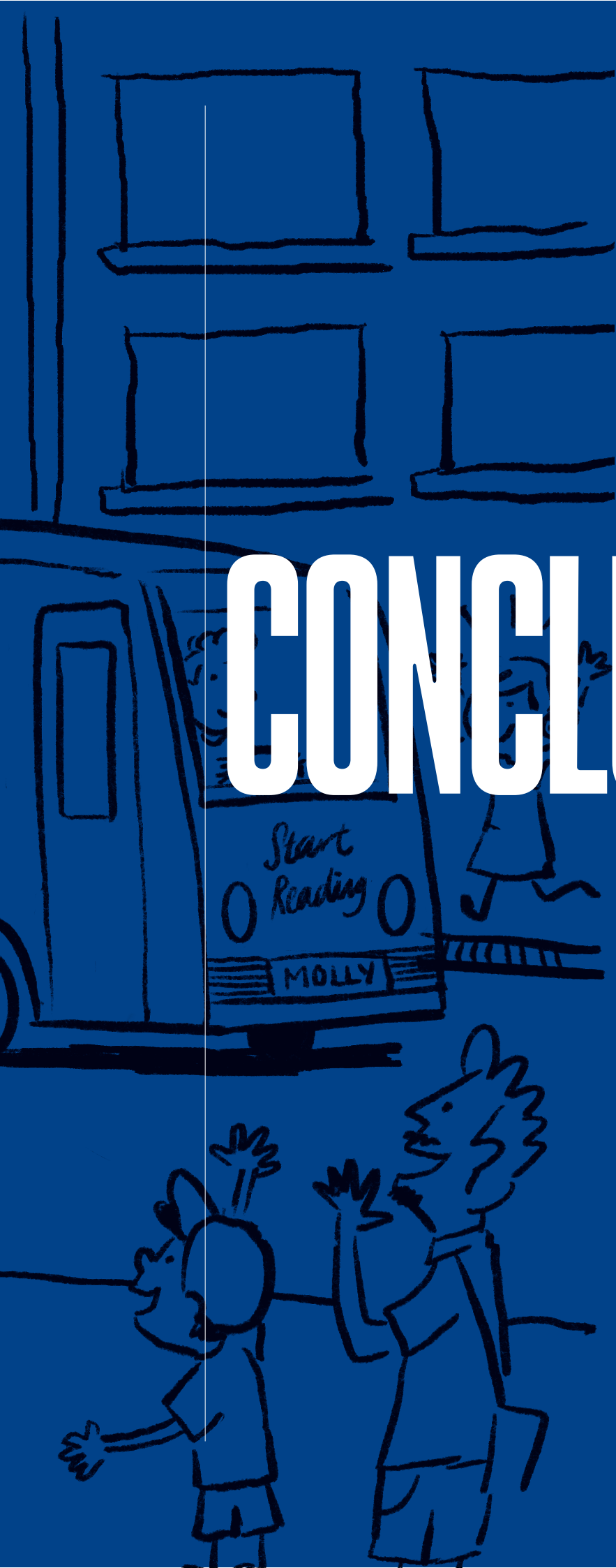
The lack of constant reminder messages was the main challenge faced by families in sustaining their regular visits to the MOLLY bus. As part of the intervention in the first half of 2024, researchers had sent constant weekly reminders the day before the MOLLY visit to remind the families, with details such as time, location, and activities for the day. Despite knowing the MOLLY visit schedule beforehand, most families relied on these reminders to know if they should bring their children to the MOLLY bus on specific weekends. The lack of constant reminders made it inconvenient and difficult for them to find out when the bus will arrive in their neighbourhood, increasing the tendency of missing visits.

The lack of shelter also posed logistical obstacles for the families to visit the MOLLY bus during bad weather days. Although the bus is located just a few minutes' walk from their housing blocks, the route to the MOLLY bus requires crossing an unsheltered road, which could expose the families to the rain. This issue made it more inconvenient for parents accompanying multiple children, as navigating the route in rainy conditions became increasingly difficult. As such, families are less likely to visit the MOLLY bus on rainy days.

Some families also faced issues with clashing work and family schedules on the weekends, which made it difficult for them to visit the MOLLY bus at the specific time from 2PM to 5PM on alternate Saturdays.



CONCLUSION



Discussion

The study aimed to examine the reading resources of low-income families living in two rental blocks and evaluate whether children who visited MOLLY, a mobile library bus service, over six months (“the intervention”), achieved reading gain (i.e., increased reading enjoyment, frequency and proficiency). Another objective was to better understand how families utilised the mobile bus services during the intervention.

Key Findings

Overall, caregivers of children living in rental flats recognised the importance of reading in English.

However, most families had limited home resources, with fewer than 20 English books and even fewer Mother Tongue books. Exposure to e-books was less than print books. Approximately half of the families had visited the public library. However, these families reported that they often refrained from borrowing books due to a preference for browsing and reading at the library itself, concerns about potential book damage, or a lack of proficiency in their Mother Tongue. The primary reason cited for not visiting the library was a lack of time.

Despite the MOLLY bus bringing library services closer to the families, many families were unaware of its existence, or if they had seen it, did not realise they could visit and borrow books from the bus. **Thus, increasing awareness of these services is crucial** to engaging rental flat families with such services in their neighbourhood.

For the families who took part in the intervention, regular visitors experienced the most benefits. They had increased access to books and reading activities such as storytelling and reported increased reading enjoyment and reading frequency. Regular visitors used the bus as part of their Saturday routine for their children to find new books, which helped familiarise their children with book borrowing.

In contrast, families who were semi-regular cited time and childcare primary issues. Since their children were young, parental accompaniment was necessary.

A key finding from the study was the necessity for continual parental education about library administration and technologies. The lack of knowledge about due dates, renewal procedures, and fine payments resulted in negative experiences and apprehension towards borrowing.

However, once parents became familiar with these administrative and technological aspects (through repeated interactions with and assistance from the researchers), they navigated the system more confidently and were more comfortable borrowing books for their children. Additionally, increasing awareness is also crucial to increase their attendance. Providing information physically at lift lobbies, distributing printed bus visit schedules, and sending WhatsApp reminders are some ways to reach out to the parents.

Compared to the public library, parents preferred the convenience of MOLLY. Parents with younger children expressed

concerns about their children potentially disrupting public library patrons by running around. Parents considered the bus collection sufficiently stocked for children aged 5 to 9-years-old and appreciated having the mobile library service in their neighbourhood.

However, after visiting the bus regularly for six months, some parents decided to bring their children to the public library so they could access the wider range of resources.

This study highlighted the ecological factors required to encourage families to fully utilise reading resources available in their neighbourhood. It is hoped that evidence from the study can assist in refining the work of various stakeholders working together to promote reading.

Equitable access to opportunities is essential for closing the reading and learning gap. Initiatives such as MOLLY play a crucial role by bringing books and reading opportunities physically closer to children in need. However, the findings also show that beyond proximity of library services, families also experience psychological and social barriers when it comes to utilising easily available public resources. Such barriers also need to be addressed for more effective outreach.

Low-income caregivers, like other families, recognised the importance of reading but had fewer home resources in terms of print and e-books. Although public library services are easily accessible and provide a viable source of interesting and relevant books, one psychological barrier is lack of

familiarity with library services. Low-income families may be less familiar with how to utilise library services and thus experience unnecessary stress when visiting a library.

Social barriers such as concerns about their children making too much noise and damaging borrowed books, and fears of incurring fines, were legitimate, given their financial constraints. In the principal investigator's work with secondary school students, it has been observed that library fines incurred in early childhood or primary years may deter students from visiting public libraries if the fines remain unsettled.

MOLLY offers a less intimidating experience with its cosy size and curated collection. In addition to the ease of physical access, it provides a novel and interesting experience for both children and their parents, if utilised effectively. It narrows the psychological and social distances for families intimidated by a larger library setting. **Closing the psychological and social distances between low-income families and public library services is crucial for increasing engagement.**

Finally, the study demonstrates that targeted evaluation can yield insights to improve an already successful reading initiative. More intentional evaluation of other community reading initiatives can lead to systematic improvements. (See Appendix)

Closing The Gap

Raising awareness, educating parents, designing programmes and creating bridging collaborations are some suggestions for amplifying the impact of MOLLY.

Awareness

Announce MOLLY bus functions and visits through printed posters and flyers. Children can remind their parents to bring them to the bus if the information is readily available to them, whether in lift wells or in their homes.

Inform families about MOLLY's services. Although we reached a small number of families through our door-knocking survey, we were able to raise awareness of MOLLY during the survey.

Education

Educate parents about (library) membership privileges, terms and conditions and how to use library-related technology. While mobile library programming often focuses on the child (e.g., with organisation of storytelling sessions), it is possible to have a more explicit parental education outreach.

Programming

Schedule this outreach to coincide with other exciting NLB programmes such as the Book Bugs Reading Promotion initiative to incentivise older children to visit the bus and borrow more books.

Partner with neighbourhood volunteers and service providers to deliver storytelling sessions, which are very popular with younger children.

Collaboration

Collaborate with the student community, including Library CCA students, Reading Ambassadors, student interest groups or groups/classes of students as part of their Values-in-Action (VIA) programmes, to promote MOLLY bus initiatives through sessions and book recommendations for families in the neighbourhood. Reaching out to families in the neighbourhood at the beginning of the year can lead to increase in usage of the MOLLY bus.

Collaborate with UPLIFT, ComLink and other stakeholders to ensure monitoring of NLB membership and loans are included in family discussions. Offer guidelines and instruction booklets to help organisations encourage usage of library resources.

Organise learning journeys to the public library to familiarise children with the space and use it independently.

Appendix: *Design a systematic evaluation of a reading programme*

To ensure quality and guide the improvement of a mobile reading programme, a clear and systematic evaluation plan is essential. The evaluation plan should define the evaluation purpose(s), focuses/priorities, key questions, involved stakeholders, and feasible data collection methods.

It should be tailored to the programme's maturity, the resources available, and the social/ political context. Below, we offer some guidelines and a checklist to scaffold the process of designing and conducting an internal, systematic evaluation.

Step 1: Describe the Programme Stage and Structure

The first step of designing a programme evaluation plan is to construct a clear picture of how a programme is supposed to work – a programme theory or programme logic model. A programme logic model explicitly specifies the resources needed for activities to be carried out according to the plan and connects those activities to the intended outputs and outcomes.

A programme logic model articulates the rationale (and assumptions) underlying the programme design and activities and can provide a shared understanding of the programme structure among stakeholders, who often have different perspectives and are busy implementing activities.

Step 2: Specify the Evaluation Purpose(s)

Evaluation plans serve formative and/or summative purposes. A formative evaluation provides timely information for programme planners, implementers, and/or managers to improve programme quality and optimise the programme's effectiveness.

A summative evaluation assesses whether the programme meets its expectations, helping decision-makers to determine funding and programme continuation. Part of the task of specifying the evaluation purpose lies in the understanding of programme history and maturity (i.e., whether it is a new/pilot programme or an established/stable programme).

For a pilot or ongoing programme, such as the MOLLY intervention, a formative evaluation is often needed and appropriate, as evaluation findings can serve to inform programme improvement and provide evidence for a future external summative evaluation.

Step 3: Identify the Evaluation Focuses and Questions

Evaluations can focus on the needs, design and implementation plan, fidelity, and/or outcomes of the programme.¹ While evaluations are often associated with making judgments on the "outcomes" of the programme-i.e., whether and the extent to which the "intervention" is effective in producing the desirable outcomes in programme participants, attending to other evaluation focuses is equally valuable.

For a new/pilot programme like MOLLY, it may be more fruitful to consider these design- and fidelity-oriented evaluation questions, as the evaluation findings can inform the revisions and scaling up of the programme.

For instance, a design-focused evaluation question could be: To what extent does the design of the reading intervention and the resources allocated address and respond to the reading-related needs of children, particularly those from low-income families?

Focusing on the fidelity of implementation, the question could be: To what extent is the reading intervention carried out according to the plan, what challenges are encountered, and what variations/modifications are made to address those challenges?

Step 4: Design Evaluation Data Collection with Feasibility and Validity

To enhance the feasibility and validity of evaluation findings, internal evaluators are recommended to engage stakeholders in determining the data collection methods and timelines— specifically, what indicators are considered important, what methods are used to capture evidence, who is involved in collecting data from whom, when data will be collected, and how findings can be interpreted and used. Involving programme beneficiaries, especially those from marginalised communities, ensures that the evaluation reflects their lived experiences and voices, enhancing its multicultural validity.²

1 Stufflebeam, D. L., & Shinkfield, A. J. (2007). *Evaluation, theory, models, & application*. Jossey-Bass.

2 Kirkhart, K. (2005). Through a cultural lens: Reflections on validity and theory in evaluation. In S. Hood, R. Hopson, & H. Frierson (Eds.), *The role of culture and cultural context in evaluation* (pp. 21!39). Information Age Publishing.

Design a systematic evaluation of a reading programme

STEP 1. DESCRIBE THE PROGRAMME STAGE AND STRUCTURE	
PRIMARY TASKS	CHALLENGES
Develop a programme logic model that explicitly specifies and connects resources, activities, intended output, outcomes, and underlying assumptions that support the connections.	Lack of programme documentation. Lack of agreement among stakeholders.
Circulate the logic model among stakeholders who manage and implement the programme for clarification and confirmation.	
Describe the programme stage (i.e., the needs/challenges that call for the initiation of the programme), evolution (i.e., changes/modifications of the programme since its inception), and maturity (i.e., new/pilot or stable/ established).	
STEP 2. SPECIFY THE EVALUATION PURPOSE(S)	
PRIMARY TASKS	CHALLENGES
Specify the evaluation purpose that would take precedence considering the programme stage and needs <ul style="list-style-type: none"> Formative Evaluation: To provide information to programme funders, managers, and/or implementers to improve programme quality and to optimise programme effectiveness. Summative Evaluation: To provide information to decision-makers (e.g., funders, and board members) to determine the programme’s continuation, allocation of resources, restructuring, or legal actions. 	Recognise “pseudo evaluation” purposes — e.g., only looking for positive outcomes, having predetermined evaluation findings regardless of evaluation questions.
STEP 3. IDENTIFY THE EVALUATION FOCUSES AND QUESTIONS	
PRIMARY TASKS	CHALLENGES
Discuss among stakeholders that manage and implement the programme to identify evaluation focuses and associated questions. An evaluation can focus on the programme’s needs, design, fidelity, and/or outcomes. <ul style="list-style-type: none"> ➤ A “design” focused evaluation assesses the relevance of the programme approach. Questions can include: (1) Is the programme approach (i.e., its change theory, and activities) relevant to address the assessed needs? (2) Why is the current programme approach chosen over alternatives? ➤ A “fidelity” focused evaluation assesses the extent to which the programme is implemented according to the plan. Questions can include: (1) Whether and to what extent are the activities carried out as planned and budgeted? (2) What are the problems that occur during the implementation and how are they addressed? (3) How can the delivery procedure and ways of budgeting be improved if any? ➤ An “outcome” focused evaluation assesses the achievement of the programme. Questions can include: (1) What are the intended outcomes of the programme? (2) What might be the unintended, positive, and negative, outcomes from the implementation? ➤ An “outcome” focused evaluation assesses the achievement of the programme. Questions can include: (1) What are the intended outcomes of the programme? (2) What might be the unintended, positive, and negative, outcomes from the implementation? 	Prioritise evaluation focus and specify a set of evaluation questions that can be empirically answered and address the information needs of stakeholders.
STEP 4. DESIGN EVALUATION DATA COLLECTION WITH FEASIBILITY AND VALIDITY	
PRIMARY TASKS	CHALLENGES
Identify appropriate data collection methods (quantitative and/or qualitative) to address the prioritised evaluation questions	Engage programme staff to see the importance of evaluation and include additional efforts in their daily work to support the evaluation endeavor.
Identify pre-existing data collection efforts conducted by programme staff regularly during the programme implementation	
Identify existing administrative records and documentation	
Identify additional data collection needs (how, by who, from whom), frequency, and timeline	Balance the feasibility of data collection and accommodation needed to include the voices of hard-to-reach participants.
Develop or modify research instruments (e.g., survey, interview protocol) that are accessible to and appropriate for participants considering their cultural and linguistic backgrounds	
Engage programme staff and beneficiaries in determining the evaluation’s data collection efforts and include their inputs to strengthen the validity of evaluation findings	

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