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The profound effect of parental engagement in the Reading Seed Programme (RSP) on toddlers' early literacy development

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ABSTRACT

The Reading Seed Programme (RSP) by PUSTAKA Negeri Sarawak has the potential to be the core nationwide literacy programme, especially to instil a reading culture. For instance, the RSP was invented to foster parent engagement with their children in an early intervention of childhood literacy and reading programmes since the mother started the programme during pregnancy. Therefore, this study seeks to gather empirical data to measure the extent to which this RSP met its objective of enhancing parents' engagement in toddlers' reading journeys. Purposive sampling was employed to collect the data among the RSP participants (parents who enrolled in the RSP). 385 completed online questionnaires, which yielded a 92.33% response rate. This research demonstrates that the RSP significantly enhances parents' engagement with their toddlers, particularly in reading. However, the programme needs to address individual learning capabilities, incorporate updates or monitoring systems, strengthen the training, establish a strategic roadmap for the RSP outcomes, and clarify the programme's attitudinal components with respect to the targeted outcomes. The RSP needs to continuously empower programme implementation to become a global brand of early childhood reading programmes.

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1. INTRODUCTION

UNESCO's Institute of Statistics reported that 5.36% of Malaysians, or 1.6 million out of 30.27 million in 2015, are illiterate. According to Macrotrends on Malaysia's Literacy Rate, 1980–2020, Malaysia had a literacy rate of 94.85% in 2020, while ourworldindata.org/literacy reported that the global literacy rate in 2018 was 86.30%. Malaysia continues to work to improve reading habits for people from all walks of life, despite the national adult literacy rate being higher than the global average in 2018. To achieve the desired level of literacy in the country, we must create creative and efficient reading development programmes that support children's learning to read, pinpoint obstacles to that progress, and define the roles and responsibilities of the family, library, and society as support networks. Cultural differences, poverty, language acquisition, special needs, and the implications for struggling readers are the factors that influence literacy learning (Braunger & Lewis, 1997). Precisely, the literacy rate in Sarawak's rural areas is much lower than in the state's urban areas when comparing urban-rural disparities, as the Ministry of Education Malaysia pointed out in 2015. This imbalance is accompanied by an average of 35,626 infant births per year in Sarawak, according to data from the Sarawak Department of Health. The key question to consider is whether current reading development programmes run by public libraries cultivate children's interest in reading. Thus, the objective of this paper is to assess the impact of parental engagement elements of the PUSTAKA Negeri Sarawak's reading seed programme in nurturing toddlers' early literacy development.

2. BACKGROUND OF THE STUDY

The Reading Seed Programme (RSP) was invented and established by Sarawak's State Library (PUSTAKA Negeri Sarawak) in three phases: Born to Read (2001–2011), Every Child Ready to Read (2012–2015), and Reading Seeds (2015–present). Initially, Born to Read was an American-born reading development programme founded to provide the spark that would ignite a love of books, libraries, and learning from an early age. Learning from the Born to Read program, the Reading Seeds Programme (RSP) was invented and kicked off in 2016 (version 1.0) in Sarawak. Version 1.0 of the RSP was initially developed for the reading awareness programme in 2016. Child growth elements were added to version 2.0 of the RSP (2017), which incorporated medical experts. In 2018, version 3.0 of RSP was further enhanced with panels of early childhood education experts and tested with a series of focus group sessions (toddlers, children, and parents). The contents of the RSP encompass five specific areas, including physical growth and nutritional status, developmental growth (gross motor skills, fine motor skills, language and hearing skills, social and cognitive skills), literacy development, immunisation, and screen time. RSP is an ongoing early literacy programme that has evolved based on public opinion and feedback. From pregnancy until the child turns three, the RSP seeks to develop literacy (reading and writing), especially among children at as early an age as possible. This effort is vital in enculturating reading habits in children as preparatory interventions in early childhood literacy programmes for later benefits at their school age. The data from PUSTAKA Negeri Sarawak's RSP showed that as of December 2023, they have produced 13,000 sets of RSP kits, of which approximately 12,000 have been distributed to the targeted participants (parents). However, PUSTAKA Negeri Sarawak (PNS) only managed to successfully recruit 1,027 participants for its RSP activities, which include workshops, open learning, physical sessions, and training.

Currently, the RSP has been expanded to several states in Malaysia under the umbrella of *Perpustakaan Negara Malaysia* (PNM). The Sarawak State Library has also gained partnerships with the state and federal governments, namely the Ministry of Women, Early Childhood and Community Wellbeing Development; the Ministry of Local Government; the Sarawak Ministry of Health; the Ministry of Tourism and Culture of Malaysia; and the National Library of Malaysia. Tailored to Malaysian contents, the RSP promotes early literacy where parents play imperative supporting roles and provide efforts to develop a reading culture within their family nest. The RSP also aims to create sustainable community-based early literacy programmes that offer opportunities for all children in Sarawak, particularly those living in lower socio-economic communities in the rural areas.

3. LITERATURE REVIEW

Reading to babies will promote optimal cortical development patterns during crucial and sensitive stages of early child development. Learning that occurs during prenatal and postnatal neurodevelopment has a long-term impact on neural circuits and brain function. According to Hutton et al. (2015), kids who read more at home exhibited higher levels of neural activation in the left-sided parietal-temporal-occipital association cortex, which is involved in mental imagery. This period includes critical and narrative comprehension. Similarly, reading to kids in the years prior to kindergarten entry is linked to better health literacy and fewer health risks, as well as increased school readiness and interest in reading. Reading aloud to their children can also encourage parental involvement in their toddler's cognitive development process. When infants and young children witness adults reading books, periodicals, and newspapers for themselves as well as hear adults read stories to them, they will start to comprehend written language. Children will be better prepared to read and write as adults if they have these early exposures to spoken and written language (Armbruster et al., 2006). A strong bond between the child and his or her parent(s) will develop when they read together because it will allow them to spend more time together. Williams (2021) asserts that rituals like reading aloud will strengthen family ties by offering special experiences that the family may have together.

Although cognitive abilities are not fixed, they can be influenced by preschool instruction, academic pursuits, and, most importantly, parental involvement (Kalb & Van Ours, 2014) and other demographic compositions (Rozaimie, 2024). Parents can most effectively invest in cognitive skills during the early stages of a child's life (Cunha et al., 2006). According to Kalb and Van Ours (2014), children in Australia who have had their parents read to them more frequently between the ages of 4 and 5 have scored higher on the National Assessment Programme in Literacy and Numeracy. This finding may inspire parents and other family members to effectively support their children's early reading development.

Joyce (2017) said that reading to kids is one of the best things a parent can do for them, after keeping them safe. In the study by Ledger and Merga (2018), mothers were more often associated with promoting reading at home (62.8%) compared to fathers (45.4%), who were less inclined to encourage reading at home. Parents were mentioned as having a significant role in reading aloud to respondents, along with siblings and grandparents. Read-aloud interventions have been shown to have significant, positive effects on children's language, phonological awareness, print concepts, comprehension, and vocabulary outcomes, according to a review of 29 studies by Swanson et al. (2011). These findings suggest that read-aloud interventions will result in better literacy outcomes for children at risk of reading difficulties than for children who do not receive such early reading interventions.

Furthermore, previous studies have demonstrated the value of story sharing with young children; the more often parents read to their young child, the better their literacy results will be (Cline & Edwards, 2017; Law et al., 2011). According to Formby's 2014 study, the majority of parents say they help their child read by encouraging their child to notice pictures (80.8%) or by having conversations with them about the story (81.3%). Of the parents surveyed, 76.6 percent say they talk to their children about the characters, but only 4 percent say they engage in other story-related activities (such as drawing, building models, acting out scenes, or singing songs). Children generally exhibit positive attitudes towards reading aloud, receiving readings, and engaging in independent reading. Traditionally, people viewed reading aloud as a luxury or reward, a break from "real schoolwork" or other curriculum areas (Ledger & Merga, 2018).

Several studies (Sylva et al., 2010; Melhuish et al., 2015) have shown that good-quality early childhood education and care (ECEC) can have a positive effect on the educational, cognitive, behavioural, and social outcomes of children in both the short- and long-term, including those who are most deprived in terms of household income. Melhuish et al. (2017) perceived that ECEC interventions also enhanced the children's confidence levels and social skills, which provided a better foundation for success at school (and subsequently in the workplace).

When children struggle with reading, it can quickly lead to a lack of confidence and low self-esteem (Hisken, 2011). Hence, children should be exposed as early as possible so that they can strengthen their reading skills at an earlier stage and achieve success in school. Allowing children to choose what they want to read will turn reading from being a chore into a pleasure, where finding a series of books that this can lead to a child enjoying reading can provide the motivation to continue reading about the characters and stories that the child has become invested in. When children enjoy reading, they can enrich their vocabulary and strengthen the language skills that are required to be successful students, which in turn will increase their confidence levels.

A study by Tomopoulos et al. (2006) investigated the relationship between books, toys, parent-child interaction, and literacy development in young Latino children. The study found that reading aloud by parents four days a week was associated with decreased early intervention (EI) eligibility. Parent support and engagement play a crucial role in developing their child's reading confidence. Additionally, in measuring reading comprehension, reading motivation, and reading strategies, researchers (Guthrie et al., 2004) indicated an instructional framework combining motivation support and strategy instruction that influenced reading outcomes based on an engagement perspective of reading development.

Parents are undeniably children's lifelong teachers, while other educators or caretakers have a significant impact on children aged 0 to 5 in terms of childcare and early education. The role of parents in early learning and development is particularly essential in today's digital age. Scholars (Sunarso et al., 2024) believe that social media has improved how parents participate in their children's development. Consequently, the quality of early childhood education and programmes requires parental guidance regarding the diverse educational resources accessible on social media. Researchers (Coppie & Bredekamp, 2009; Morrison et al., 2011; Weiss et al., 2006) assert that parental involvement and family engagement are the most critical elements of developmentally appropriate practices in early childhood care and education, promoting cognitive, social, and emotional development.

Parental and familial involvement enhances young children's literacy and communication skills (Korosidou et al., 2021), anticipates behavioural problems, and fosters social skills (El Nokali et al., 2010). It also sets the stage for how children will grow and learn throughout their school years (Sheridan et al., 2012). El Nokali et al. (2010) discovered that children with highly involved parents had better social functioning and fewer behavioural issues. A home-based learning environment is the foundation for children's literacy skill development, so parents must provide engaging and accessible workshops to assist them in creating a strong home learning environment. Thus, the RSP was created to encourage parents to start their children's literacy programmes as soon as possible, even if their mothers are still pregnant. Weiss et al. (2006) discovered a link between family involvement in early childhood and positive outcomes, as well as programmes to prepare young children for school. Figure 1 shows that the parents' and family's active role and participation in the early childhood literacy programme is the most significant indicator of its feasibility.

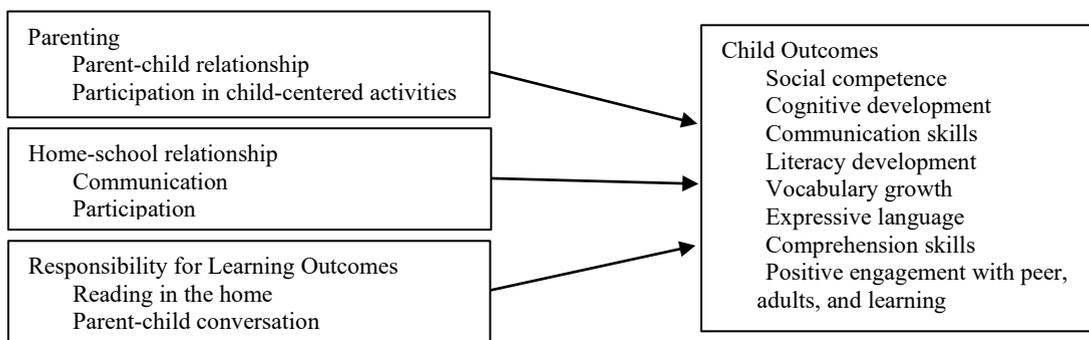


Fig. 1. Processes of family involvement and young children's outcomes. Source: Weiss et al. (2006)

4. METHODS

The study presented in this paper utilised a quantitative approach, specifically a cross-sectional survey method. A purposive sampling strategy is used to identify appropriate respondents for the online survey questionnaire. Respondents are selected among individuals who have enrolled (registered) in the RSP. According to data released by PUSTAKA Negeri Sarawak's Reading Seed scheme team, 1027 participants have signed up for the RSP scheme, which covers the Kuching Division. Only the Kuching Division was chosen for this pilot assessment, since it is home to PUSTAKA Negeri Sarawak and has easy access to the programme's organiser. It is noted that only 590 people have completed the RSP course and received the RSP gear. As a result, the minimum desirable and usable sample size for the current study is 234 individuals (with a 95% confidence level) for a population of 600 (Krejcie & Morgan, 1970). Given the participants' commitment to completing the RSP, a sample size of 300 is assumed sufficient to administer the questionnaire. 417 individuals were reached; however, only 385 completed responses were located, resulting in a 92.33% response rate. The survey questionnaire items were adapted from four major RSP and reading-related programme sources: PUSTAKA's Reading Seed feedback form, RSP's Module for Parents, RSP's kit, and Children's Early Literacy Practices at Home and in Early Year Settings: The Second Annual Survey of Parents and Practitioners (Formby, 2014).

The survey questionnaire used in this paper includes a demographic section that asks for age, gender, the source of the RSP kit, the date/year of receiving the RSP kit, ethnicity, highest qualification, employment, household income, and information about the respondents' child who participates in the RSP. A confidence development item was used to assess the impact of RSP on the child's developing psychomotor skills. The RSP survey items help assess the programme's knowledge and usefulness. Both confidence development and programme perception (about the RSP) are assessed using a 10-point Likert scale ranging from 0 (not applicable or strongly disagreeing) to 10 (completely applicable or strongly agreeing).

5. FINDINGS

First, a face validity protocol is conducted to verify the extent to which a measurement (questionnaire) appears 'on its face value' to measure the construct of interest. 10 RSP users and teams of enumerators were invited to verify the survey questionnaire. Participants are required to provide their feedback on the questionnaire regarding their understanding of the contents, intensity (coverage), language, length (total survey items), sections, dimensions, item (statement) arrangement, measurement scale, overall questionnaire design, and any other related issues. Minimal changes were made to the questionnaire based on the comments and suggestions received.

Second, a content validity check is required to ensure that the survey covers the construction of interest. Three experts who have been involved in the invention of RSP have verified the content of the survey questionnaire. Referring to the face and content validity feedback, the team of researchers in this study has revised and fine-tuned the survey instrument comprehensively and thoroughly to ensure that all the items (statements) and the scale cover the constructs as conceptualised.

Third, criterion validity is a protocol that ensures the extent to which the targeted respondents' scores on a measure correlate with other variables (known as criteria) that are expected to be related to the convergent element of criterion validity, thereby demonstrating the feasibility of the survey instrument. When the average loading value of a variable is greater than the cut-off value of 0.7, convergent validity is established. Additionally, discriminant elements of the criterion validity of the survey questionnaire are assumed, which indicates that the scores on the measure among the variables are not correlated to each other (supposedly, the variables are conceptually distinct). In particular, the variance extracted from the survey questionnaire was found to be greater than the correlation square. In particular, the Kaiser-Meyer-Olkin (KMO) value of the independent variable (confidence development) is 0.921, and the dependent

variable (RSP) is 0.915, which indicates an established KMO value greater than 0.8. Additionally, the Bartlett's Test of Sphericity marked a significantly lower than 0.05 value, which statistically indicated that there is no certain redundancy between the variables. The inspection of the communality extraction has shown that all items accounted for more than the cut-off point of 0.5. Communality is estimated based on the variance of each item accounted for by the components. Further criterion validity is analysed, where the pattern matrix table of all the items' variance loading values is inspected, and it is found that the average loading value for all variables is greater than 0.7. Thus, this analysis indicates the criterion (convergent and discriminant) validity of the survey questionnaire is established.

Fourth, the scale's reliability is an assessment of the internal consistency of the items (statements), which reflects the conceptual construct of the study. Assessing the correlations between multiple items within a construct is important to ensure they accurately measure the same concept. The reliability coefficient (Cronbach's alpha value) of the scale is marked as greater than 0.70 (RSP (12 items) $\alpha = 0.967$, parents' engagement (12 items) $\alpha = 0.960$). It is indicated that the instrument's reliability has been established and is highly reliable for further statistical analysis (Cronbach, 1951; Tavakol & Dennick, 2011).

As shown in Table 1, the majority of the respondents, i.e., 66.2% (255 out of 385), were between 31 and 40 years old, 84.7% were female, 50.9% were Malay, 47.5% were university graduates, 43.9% had household income between RM1001 and RM3999, 48.3% were working in the public sector, joined the RSP, and received their RSP kit between 2020 and 2022, and 88.6% received their RSP kits directly from PUSTAKA Negeri Sarawak. Apart from that, 64.2% of respondents claimed that their children who have been exposed to the RSP kits are between 0 (newborn) and 3 years old; 79.8% were born in government hospitals; and 52.2% are male.

Table 1: Respondents' Demographic Profiles

<i>Demographic</i>	<i>n</i>	<i>%</i>	<i>Demographic</i>	<i>n</i>	<i>%</i>
(Respondents)					
Age			Household Income		
20-30	82	21.3	Less than RM1000	40	10.4
31-40	255	66.2	RM1001-RM3999	169	43.9
41-50	32	8.3	RM4000-RM8500	136	35.3
Not specified	16	4.2	Above RM8500	40	10.4
<i>Total</i>	<i>385</i>	<i>100.0</i>	<i>Total</i>	<i>385</i>	<i>100.0</i>
Gender			Employment		
Female	326	84.7	Public Sector	186	48.3
Male	59	15.3	Private Sector	87	22.6
<i>Total</i>	<i>385</i>	<i>100.0</i>	Self-employed/small business	28	7.3
Ethnicity			Unemployed / housewife	82	21.3
Bidayuh	36	9.4	Not specified	2	0.5
Chinese	116	30.1	<i>Total</i>	<i>385</i>	<i>100.0</i>
Iban	15	3.9	Year received the RSP kit		
Orang Ulu	4	1.0	2017–2019	69	17.9
Malay	196	50.9	2020–2022	313	81.3
Melanau	16	4.2	Not Specified	3	0.8
Not Specified	2	5.0	<i>Total</i>	<i>385</i>	<i>100.0</i>
<i>Total</i>	<i>385</i>	<i>100.0</i>	The RSP kit obtained from:		
Highest Qualification			Health Clinic/Polyclinic	26	6.8
University Degree	183	47.5	PUSTAKA Negeri Sarawak	341	88.6
Diploma	85	22.1	Others: <i>Can't remember, Event booth, KEMAS, Local Council, PERKIM, Pusat Internet 1Malaysia.</i>	18	4.6
Certificate	31	8.1	<i>Total</i>	<i>385</i>	<i>00.0</i>
Secondary School	81	21.0			
Primary School	5	1.3			
<i>Total</i>	<i>385</i>	<i>100.0</i>			

(Child)			Child's Place of Birth		
Age					
0-3 yrs old (born 2019-2022)	247	64.2	Government Hospital	307	79.8
4-6 yrs old (born 2016-2018)	122	31.7	Private Hospital	76	19.7
≥ 7 yrs old (born in ≤ 2015)	10	2.6	Others	2	0.5
Not Specified	6	1.6	<i>Total</i>	385	100.0
<i>Total</i>	385	100.0			
Child's Gender					
Female	184	47.8			
Male	201	52.2			
<i>Total</i>	385	100.0			

Table 2 shows that the Reading Seed Programme (RSP) is generally found to be statistically significant in predicting parents' engagement in the programme with their child [$t(1,383) = 11.240, p < 0.001$ ($p < 0.05$)]. This result reveals a positive effect of the RSP on flourishing parents' engagement in their child's early childhood literacy programme. Moreover, the $R^2 = 0.248$ indicates that the model (RSP) explains 15% of the variance in examining the effect of demographic factors on the RSP and parents' engagement in the RSP. Out of sixteen demographic factors examined, the statistical analyses have found that the mode of joining the programme and the number of siblings who use the RSP significantly predicts parent's engagement in the programme.

Table 2: Regression analyses on the RSP and vocabulary ability based on demographic characteristics.

	R^2	f^2	df	β	t	Sig
RSP ► Parents' engagement	0.248	0.330	1,383	0.498	11.240	0.000
RSP ► Parents' engagement	0.294	0.416	17,367	0.510	11.291	0.000
► Respondents' Age				-0.018	-0.396	0.692
► Child's age				0.025	0.532	0.595
► Respondents' gender				-0.010	-0.210	0.834
► Child's gender				0.029	0.644	0.520
► Ethnicity				-0.072	-1.557	0.120
► Socio-economic Status				0.023	0.397	0.692
► Current Location				0.046	0.989	0.323
► Respondents' Place of Birth				0.042	0.900	0.369
► Child's Place of Birth				0.027	0.565	0.572
► Marital Status				0.040	0.883	0.378
► Employment				0.007	0.133	0.895
► Highest Qualification				-0.103	-1.796	0.073
► Date/year received kits				-0.016	-0.321	0.748
► RSP kits obtained from?				0.072	1.611	0.108
► RSP Joining				0.090	1.850	0.045
► Siblings used the RSP kits				0.095	2.102	0.036

Note:

** R^2 : <0.02 (very weak), $0.02 \leq R^2 < 0.13$ (weak), $0.13 \leq R^2 < 0.26$ (moderate), ≥ 0.26 (substantial)

** f^2 : ≥ 0.02 (small), ≥ 0.15 (medium), ≥ 0.35 (large)

First, it was found that the RSP's participant (parent) who was selected joining the programme (RSP) is statistically significant [$t(1,26) = 5.110, p < 0.001 (p < 0.05), \beta = 0.708, f^2 = 1.004, R^2 = 0.501$] and predict their (parent) engagement in using the RSP's kits and module with their children. The β coefficient indicates it was followed by those (parent) who are voluntarily joining the programme (RSP) [$t(1,272) = 10.663, p < 0.001 (p < 0.05), \beta = 0.543, f^2 = 0.418, R^2 = 0.295$] and those (parent) who are invited [$t(1,75) = 4.261, p < 0.001 (p < 0.05), \beta = 0.441, f^2 = 0.242, R^2 = 0.195$] joining the programme (RSP) are found to statistically significant to predict parents' engagement with their children by the RSP based on demographic factors.

Second, the regression analyses have shown that children who are exposed to the RSP and have more than one sibling been statistically significant [$t(1,143) = 11.850, p < 0.001 (p < 0.05), \beta = 0.704, f^2 = 0.980, R^2 = 0.495$] in predicting the parents' engagement in the programme (RSP). The β coefficient indicates that children who have no sibling also been found to be statistically significant [$t(1,238) = 6.149, p < 0.001 (p < 0.05), \beta = 0.370, f^2 = 0.159, R^2 = 0.137$] in predicting parents' engagement with their child in this early childhood literacy programme of RSP.

6. DISCUSSION

This paper succinctly reemphasised that parental engagement signifies the proactive and pivotal role that parents play in instilling a means for parents to establish effective communication with their child, impart parenting skills, and facilitate precise oral communication skills in their offspring. Consequently, parents are expected to engage confidently in supportive activities, such as reading aloud to their child regularly, discussing characters and lessons derived from stories, prompting their child to identify pictures, and engaging in follow-up activities related to the narratives.

The statistical evidence found in this study is compatible with prior studies that confirmed that the RSPs are a beneficial programme for developing children's confidence in reading. Studies have shown that the Reading Seeds initiatives and an online reading programme designed for children aged 3–8 have led to significant improvements in children's reading skills and confidence (Borman & Yang, 2025; Copple & Bredekamp, 2009; McGowan et al., 2020; Morrison et al., 2011; Sunarso et al., 2024; Weiss et al., 2006). Furthermore, McGowan et al. (2020) has demonstrated that children who use Reading Seeds have reported a feeling of confidence in their reading abilities and have shown increased engagement and enjoyment in reading. The RSP is a valuable tool for promoting children's confidence and motivation in reading.

From a broader perspective, the research findings indicate the presence of statistical evidence affirming the effectiveness of the RSP as a valuable programme and moderately predicting parental engagement with a medium effect. The RSP was found to account for a positive explanation concerning the encouragement of parental engagement. The statistical evidence remains consistent when considering demographic factors, showcasing the efficacy of the programme (RSP) in predicting parental engagement with a substantial impact statistically. The statistical evidence found demonstrates that the study showcased in this paper is compatible with prior studies that confirmed that the RSPs are a beneficial programme and innovative concept of engaging parents in their children's cognitive development from the earliest phases. Participants who have participated in the programme (RSP) are confident in receiving comprehensive guidance on utilising the RSP kits. In essence, this result signifies the pivotal roles of encouragement and support as influential factors in instilling reading habits, particularly in the context of toddlers. Scholars such as Knoche et al. (2020) and Sénéchal and LeFevre (2014; 2002) resonate with those insights that emphasise the potential of parental interventions in furnishing supplementary resources and support to families, thereby enhancing parental engagement and their child's literacy skills. Besides, prior studies (Cline & Edwards, 2017; Korosidou et al., 2021) have demonstrated that reading programmes like the RSP, which include coaching sessions and resources to bolster a child's literacy development through parental involvement, effectively enhance children's literacy skills and elevate parent participation in reading activities. Notably, Mol and Bus (2011) highlight reading programmes geared towards enhancing parent-

child interactions during reading and language activities, including shared book reading and storytelling, which showcase a positive influence on children's reading outcomes, especially in aspects like vocabulary expansion and reading comprehension.

7. LIMITATION AND DELIMITATION

This study identified a limitation of the RSP programme where there was a breach, especially to achieve 100% impact of the RSP on fostering parental engagement with their children participating in the programme. One of the identified limitations of the RSP programme is that it was assumed that the participants who enrolled in the programme understood the instructions on how to use the RSP kits. There is a possibility that the objective of the RSP, which is to encourage parent engagement, is not clearly explained without proper monitoring and records. Working parents may lack ample time to fully utilise RSP with their kids. The RSP tends to be used during the parents' spare time over the weekend. Due to this reason, the statistical result shows that the number of siblings who use the RSP significantly predicts the parents' engagement. This scenario shows the parent may expect the child's siblings to use the RSP kits to accompany the targeted child, compared to being guided by the parent themselves.

This study recommends that the programme's organiser (PUSTAKA Negeri Sarawak) revamp their physical training strategically for the RSP participants. The findings of this study show that the physical training (conducted in the period of 2017 to 2019) was superior to the online training (conducted in the period of 2020 to 2022 during the COVID-19 pandemic lockdown). Besides, the RSP needs an instructional revision to ensure the participants (parents) understand the roadmap and the expected outcomes from the RSP. According to Feldman and Case (1997), self-directed learning (self-instructional audio-visual childcare materials) has proven to help teach children basic care, health, and safety skills, especially among parents who have problems with intellectual disabilities (ID). Therefore, in addition to the conventional training given to the RSP participants, attractive audio-visual instructional material helps to improve the programme's effectiveness.

Additionally, to ensure the full impact of RSP in fostering parental engagement in the programme, the participants' feedback and monitoring mechanisms need to be added for the programme's enhancement efforts. After-the-training evaluation helps the programme's organiser (PUSTAKA Negeri Sarawak) ensure the participants understand the objectives of the RSP, especially to gain full parental engagement and commitment (not only targeting reading ability at an early age). Furthermore, an attractive reward system could encourage the participants to fully use RSP for their children. To conclude, the RSP by PUSTAKA Negeri Sarawak has had a positive impact on children's confidence development in reading and has instilled reading habits. The findings of this research provide positive evidence that the RSP is potentially mainstreaming early childhood literacy tools and supporting the world's agenda of high literacy nations.

8. CONCLUSION

The parental involvement discussed in this paper underscores the proactive and vital role parents have in cultivating reading habits in their children. The engagement of parents and their active participation in the RSP are essential for guaranteeing the programme's efficacy as a preparatory intervention for the child's subsequent school age. Furthermore, the RSP functions as a significant resource for parenting, encompassing the supply of educational toys and the promotion of meaningful parent-child connections. In essence, these findings underscore the efficacy of RSP in fostering a child's reading habits and promoting parental engagement, aligning with existing literature that emphasises the crucial role of parental involvement in enhancing children's literacy skills and overall reading outcomes. In line with prior studies (Tomopoulos et al., 2006; Guthrie et al., 2004), it was stated that important notes in developing a child's reading confidence and measures of reading comprehension, reading motivation, and reading strategies are enhanced through parental involvement and early programme intervention (Sheridan et al.,

2012). Precisely, reading aloud and the provision of toys are found to be associated with better child cognitive and language development as a result of parent-child interaction (Tomopoulos et al., 2006). In addition, the engagement perspective of reading development resulted from an instructional framework (combining motivational support and strategy instruction) (Guthrie et al., 2004). Additionally, aligned with the reading trajectory proposed by scholars (El Nokali et al., 2010; Korosidou et al., 2021; Weiss et al., 2006), the findings of this study strongly suggest that parent engagement is a critical factor in fostering the success of early childhood literacy programmes. Thus, the RSP is a significantly beneficial programme that provides tools to foster children's confidence and motivation for reading, which may be especially important for children who are just beginning to learn to read. Encouragement and parental support are important motivators for establishing early childhood literacy, particularly in developing reading confidence among toddlers.

9. CONTRIBUTION OF AUTHORS

Dr. Awang Rozaimie, the principal investigator, conceptualised and designed the study. He also prepared the draft of the manuscript and reviewed the manuscript. Ismail, A., Johari, A., and Unin, N. are the co-investigators, and they helped to conceptualise and design the study and reviewed the manuscript.

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11. CONFLICT OF INTEREST STATEMENT

The authors agree that this research was performed in the absence of any self-benefits, commercial or financial conflicts, and declare the absence of conflicting interests among authors and third parties.

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13. REFERENCES

- Armbruster, B. B., Lehr, F., & Osborn, I. J. (2006). Birth to preschool. *National Institute for Literacy*. <https://www.nichd.nih.gov/>
- Borman, G. D., & Yang, H. (2025). A Quasi-Experimental Study of the Achievement Impacts of a Replicable Summer Reading Programme. *Education Sciences*, 15(11), 1422. <https://doi.org/10.3390/educsci15111422>
- Braunger, J., & Lewis, J. P. (1997). *Building a Knowledge Base in Reading* (2nd ed.). Newark, DE: International Reading Association. <https://files.eric.ed.gov/fulltext/ED412524.pdf>
- Cline, K. D., & Edwards, C. P. (2017). Parent-child book-reading styles, emotional quality, and changes in early head start children's cognitive scores. *Early Educ Dev*, 28(1), 41-58. <http://dx.doi.org/10.1080/10409289.2016.1177392>

- Copple, C., & Bredekamp, S. (2009). *Developmentally appropriate practice in early childhood programmes serving children from birth through age 8*. Washington DC: National Association for the Education of Young Children. <https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/position-statements/PSDAP.pdf>
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334. <http://dx.doi.org/10.1007/BF02310555>
- Cunha, F., Heckman, J. J., Lochner, L., & Masterov, D. V. (2006). Interpreting the evidence on life cycle skill formation. *Handbook of the Economics of Education*, 1, 697-812. <http://dx.doi.org/10.2139/ssrn.766744>
- El Nokali, N. E., Bachman, H. J., & Votruba-Drzal, E. (2010). Parent involvement and children's academic and social development in elementary school. *Child development*, 81(3), 988-1005. <http://dx.doi.org/10.1111/j.1467-8624.2010.01447.x>
- Feldman, M. A., & Case, L. (1997). The effectiveness of audiovisual self-instructional materials in teaching child-care skills to parents with intellectual disabilities. *Journal of Behavioural Education*, 7, 235-257. <https://doi.org/10.1023/A:1022897226255>
- Formby, S. (2014). *Children's Early Literacy Practices at Home and In Early Years Settings: Second Annual Survey of Parents and Practitioners*. National Literacy Trust. <https://files.eric.ed.gov/fulltext/ED560665.pdf>
- Guthrie, J. T., Wigfield, A., Barbosa, P., Perencevich, K. C., Taboada, A., Davis, M. H., Scaffidi, N. T., & Tonks, S. (2004). Increasing Reading Comprehension and Engagement Through Concept-Oriented Reading Instruction. *Journal of Educational Psychology*, 96(3), 403-423. <https://psycnet.apa.org/doi/10.1037/0022-0663.96.3.403>
- Hisken, L. J. (2011). *The correlation between self-esteem and student reading ability, reading level, and academic achievement*. [Unpublished master thesis]. University of Central Missouri. https://www.academia.edu/25643689/THE_CORRELATION_BETWEEN_SELF_ESTEEM_AND_STUDENT_READING_ABILITY_READING_LEVEL_AND_ACADEMIC_ACHIEVEMENT
- Hutton, J. S., Horowitz-Kraus, T., Mendelsohn, A. L., DeWitt, T. & Holland, S.K. (2015). Home Reading Environment and Brain Activation in Preschool Children Listening to Stories. *Paediatrics*, 136(3), 466-478. <http://dx.doi.org/10.1542/peds.2015-0359>
- Joyce, A. (2017, February 16). *Why it's important to read alone with your kids, and how to make it count*. The Washington Post. <https://www.washingtonpost.com/news/parenting/wp/2017/02/16/>
- Kalb, G., & Van Ours, J. (2014). Reading to young children: A head-start in life. *Economic of Education Review*, 40, 1-24. <http://dx.doi.org/10.1016/j.econedurev.2014.01.002>
- Knoche, L., Cook, G. & Sheridan, S. (2020). The impact of a family literacy programme on children's early literacy skills: A randomised controlled trial. *Early Childhood Research Quarterly*, 50, 300-313. <https://doi.org/10.1016/j.ecresq.2019.09.005>
- Korosidou, E., Griva, E., & Pavlenko, O. (2021). Parental Involvement in a Programme for Preschoolers Learning a Foreign Language. *International Journal of Research in Education and Science*, 7(1), 112-124. <http://dx.doi.org/10.46328/ijres.1219>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610. <http://dx.doi.org/10.1177/001316447003000308>
- Law, S. R. J., Rush, R., Clegg, J., & Peters, T. (2011). *Investigating the role of language in children's early years educational outcomes*. Department for Education. <https://assets.publishing.service.gov.uk/media/5a7b67a5e5274a319e77f135/DFE-RR134.pdf>

- Ledger, S. & Merga, M. K. (2018). Reading Aloud: Children's Attitudes towards Being Read to at Home and at School. *Australian Journal of Teacher Education*, 43(3), 124-139. <http://dx.doi.org/10.14221/ajte.2018v43n3.8>
- McGowan, J., Charlesworth, Z., & White, H. (2020). Supporting reading engagement and confidence in children: Findings from an evaluation of Reading Seeds. *Journal of Children and Media*, 14(4), 513-527. <https://dx.doi.org/10.2139/ssrn.5195889>
- Melhuish, E., Ereky-Stevens, K., Petrogiannis, K., Ariescu, A., Penderi, E., Rentzou, K., Tawell, A., Slot, P., Broekhuizen, M., & Leseman, P. (2015). A review of research on the effects of early childhood Education and Care (ECEC) upon child development. *CARE project; Curriculum Quality Analysis and Impact Review of European Early Childhood Education and Care (ECEC)*. <http://eccc-care.org/resources/publications/>
- Melhuish, E., Gardiner, J. & Morris, S. (2017). Study of Early Education and Development (SEED): Impact Study on Early Education Use and Child Outcomes up to Age Three: Research Report. *Study of Early Education and Development*. https://assets.publishing.service.gov.uk/media/61964e22e90e07043c35f311/SEED-Age_4_RESEARCH_REPORT.pdf
- Mol, S. E., & Bus, A. G. (2011). To read or not to read: a meta-analysis of print exposure from infancy to early adulthood. *Psychological Bulletin*, 137(2), 267–296. <https://doi.org/10.1037/a0021890>
- Morrison, J. W., Storey, P., & Zhang, C. (2011). Accessible family involvement in early childhood programmes. *Dimensions of early childhood*, 39(3), 21-26. <https://northernlightscv.org/wp-content/uploads/2018/11/FECP-M9-Accessible-Family-Involvement-in-EC-Programs.pdf>
- Rozaime, A. (2024). The Dynamics of Demographic Characters on the Reading Seed Programme of Pustaka Negeri Sarawak. *Southeast Asia Early Childhood Journal*, 13(1), 34–69. <https://doi.org/10.37134/saej.vol13.1.3.2024>
- Sénéchal, M., & LeFevre, J. (2014). Continuity and change in the home literacy environment as predictors of growth in vocabulary and reading. *Child Development*, 85(4), 1552-1568. <https://doi.org/10.1111/cdev.12222>
- Sénéchal, M., & LeFevre, J. (2002). Parental involvement in the development of children's reading skill: A five-year longitudinal study. *Child Development*, 73, 445-460. <https://doi.org/10.1111/1467-8624.00417>
- Sunarso, B., Mahardhani, A. J., & Ausat, A. M. A. (2024). Analysis of Social Media Usage in Enhancing Parental Participation in Child Education. *Jurnal Terobosan Peduli Masyarakat (TIRAKAT)*, 1(1), 1-9. <http://dx.doi.org/10.61100/j.tirakat.v1i1.100>
- Swanson, E., Vaughn, S., Wanzek, J., Petscher, Y., Heckert, J., Cavanaugh, C., Kraft, G., & Tackett, K. (2011). A Synthesis of Read-Aloud Interventions on Early Reading Outcomes among Preschool through Third Graders at Risk for Reading Difficulties. *Journal of Learning Disabilities*, 44(3), 258-275. <http://dx.doi.org/10.1177/0022219410378444>
- Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (2010). *Early Childhood Matters: Evidence from The Effective Pre-School and Primary Education Project*. Oxon: Routledge. <https://www.taylorfrancis.com/books/edit/10.4324/9780203862063/early-childhood-matters-kathy-sylva-edward-melhuish-pam-sammons-iram-siraj-blatchford-brenda-taggart>
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education*, 2, 53. <https://doi.org/10.5116/ijme.4dfb.8dfb>

- Tomopoulos, S., Dreyer, B. P., Tamis-LeMonda, C., Flynn, V., Rovira, I., Tineo, W., & Mendelsohn, A. L. (2006). Books, toys, parent-child interaction, and development in young Latino children. *Ambulatory Paediatrics*, 6(2), 72-78. <http://dx.doi.org/10.1016/j.ambp.2005.10.001>
- Weiss, H., Caspe, M., & Lopez, M. E. (2006). Family involvement in early childhood education. *Family involvement makes a Difference*, 1, 1-8. <https://archive.globalfrp.org/publications-resources/publications-series/family-involvement-makes-a-difference/family-involvement-in-early-childhood-education>
- Williams, C. (2021, June 25). Social Wellness: Family Bonding through Reading. *Heartland Therapy Connection*. <https://heartlandtherapyconnection.com/social-wellness-family-bonding-through-reading/>

14. APPENDIX

QUESTIONNAIRE

State the scale for the statement that is most applicable to you on the scale from 0 (Not Applicable / strongly disagree) to 10 (strongly agree).

We would like to hear from you about your child's literacy development.

Parent's Engagement

I engage in supportive activities by:

- Reading aloud to my child at home
- Reading regularly to my child at home
- Talking to my child about lessons learned from the story
- Talking to my child about characters in the story
- Encouraging my child to identify the pictures
- Doing follow up activities related to the stories

Reading Development Programme (RSP)

Reading Seed Kit:

- I know how to use all the materials in the kit
- I know how to use the RSP module for Parents Reading Friends
- I know how to use the growth development checklist
- The growth chart helps to monitor my child's development
- Language used in all the materials are clear
- Reading materials attract my child's interest
- RSP materials help me to communicate with my child

I believe that the Reading Seed Programme:

- Provides access to quality early literacy materials
- Gives me the skill to read to my newborn
- Makes reading enjoyable for me and my child
- Exposes my child to greater number of words through books
- Grooms my child for more precise oral communication

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