Effectiveness of Dialogical Reading Literacy Programs In Improving Language Skills and Literacy of Early Students

by Syarif Hidayatullah

Effectiveness of Dialogical Reading Literacy Programs In Improving Language Skills and Literacy of Early Students

Syarif Hidayatullah*
Department of Indonesian language education, Universitas Pendidikan Indonesia, Bandung, Indonesia
syarifbahagia@upi.edu

Yeti Mulyati
Department of Indonesian language education, Universitas Pendidikan Indonesia, Bandung, Indonesia
yetimulyati@upi.edu

Vismaia S. Damaianti
Department of Indonesian language education, Universitas Pendidikan Indonesia, Bandung, Indonesia
vismaia@upi.edu

Tedi Permadi
Department of Indonesian language education, Universitas Pendidikan Indonesia, Bandung, Indonesia
tedipermadii@upi.edu

Abstract. The study is interrested by the lack of students' attention to the development of their children's literacy which is the main foundation when entering school age. The purpose of this study was to investigate the effectiveness of the dialogical reading literacy program intervention on the development of language skills and literacy skills of early childhood students. The research method used in this study was a quasi-experimental method. The participants involved in this study totaled 200 early childhood students and at the same time involved the parents of the students involved. The duration of this study was carried out for one year so that the impact of this preschool-home partnership intervention could be seen more clearly. The research findings show that the dialogical reading literacy program has proven effective in improving students' reading skills and literacy. Overall improvement was seen in four aspects of students' language skills and literacy. So, the intervention of dialogical reading literacy programs by involving parents in dialogic reading activities is very effective in language development and early childhood literacy. This happens because there is mutual trust, has a positive relationship between mentors and students, is goal oriented, and is balanced between stimulus and response. In addition, this literacy program intervention also has a sustainable impact on children's language and literacy development for the next few years. The implication of this research is that parents must be active in carrying out reading activities together with their children to support language and literacy development so that they are better prepared when they enter school age.

1. Introduction

The involvement of parents in supporting student academic achievement is a very important component and has been initiated long ago in supporting several literacy programs which are usually carried out for early students (Sampa et al., 2018; Walgermo et al., 2018). Most of the programs for early childhood students involving parents of students have a significant impact on the success of the program. Parental involvement in this program may have an indirect effect in changing parental views and people's habits as well as having a direct effect on early childhood students. The involvement of people in early childhood education programs is a correlation between the two microsystems to support developments in the lives of early childhood students (Thomas et al., 2020; Wood, 2021). Optimizing the potential for early childhood development can be done by establishing a relationship between parents and children so as to create mutual trust, a positive impression, goal-oriented, and responsive. Parental involvement in optimizing early childhood students has become one of the accreditation criteria at the kindergarten education level (Bean et al., 2020; Hadianto et al., 2021a). However, research on the role of parental involvement in helping to optimize the development of early childhood students is still limited. The majority of studies on the role of parents are seen from the correlation between socioeconomic status, educational level of parents, and parenting style on early childhood cognitive development (Incognito & Pinto, 2021; Thomas et al., 2020).

Although this correlational study is vital, this research is not optimal in seeing parents as a very important factor in supporting the potential development of early childhood, for example the role in strengthening basic or emergency literacy, strengthening early reading skills and basic numeracy. These abilities are often the main focus that is strengthened for early childhood students so that they are better prepared when they enter school age (Esmaeeli et al., 2019; Krijnen et al., 2020). There is still little research that examines the causal relationship of the role of parents in supporting literacy skills and language skills of early childhood students. Therefore, through this study, researchers tested the role of parental involvement in carrying out dialogic reading activities on the development of students' literacy skills and language skills in general. To find out the effectiveness of the role of parents on language skills and literacy, an experimental design with random data collection is needed. Parental involvement is believed to be able to support the optimization of children's developmental potential when they enter school age.

2. Literature Review

2.1 Involvement of the role of parents in early childhood education programs

Previous research confirmed that the role of involving people in supporting early childhood education programs can be carried out in several ways, namely communication between teachers and parents about students, volunteering to teach in class, and carrying out certain activities at home in support of educational programs, such as literacy programs (Gasser et al., 2022; Lepola et al., 2023; Piasta et al., 2020). The role of parental involvement in supporting a program is a form of intervention that can be carried out to support the success of the program. This has been proven in several previous studies which confirmed that it has a positive relationship in supporting several reading programs that have been carried out in various countries, such as the US, Korea, Japan, and Finland (Nevo & Vaknin-Nusbaum, 2018; Niu et al., 2021; Wood, 2021). Most of the parental support for the implementation of early childhood education programs is carried out at home with prior debriefing. However, currently this parental support has experienced rapid development, not only carried out at the early education level, but has also begun to be involved in supporting student academic achievements, for example at the elementary and secondary school levels helping in doing their child's homework (Lepola et al., 2023; Piasta et al., 2020). Unlike the early education level, parental involvement is not to help with homework, but to support the optimization of the potential development of students. Parents who are involved in early childhood education program activities will receive work instructions to be carried out while supporting children at home (Nevo & Vaknin-Nusbaum, 2018; Niu et al., 2021). The current research differs from previous research in that it emphasizes direct parental training rather than the introduction of interventions.

2.2 Dialogical reading intervention in early childhood students

The development of spoken language skills will begin rapidly when they start to enter the age of 2-5 years, but indeed every child will experience developmental differences depending on their environment (Lucas et al., 2021; Meng, 2021). The difference in the development of this ability is of course caused by the experience the child gets from his family environment and the early childhood programs he has received. One of them is a literacy program that can optimize literacy skills at that time and is able to predict abilities in the future. The role of parents in supporting early childhood education programs is an intervention that is considered to be quite effective even though it takes a relatively short time and has been proven in several reading education programs with various methods of support from their parents (Jung, 2019; Lenhart et al., 2022; Morgan & Meier,

2008). Several previous studies have confirmed that a literacy environment created at home with various methods (narrative activities, interactive reading activities, listening activities, etc.) can facilitate students to acquire literacy and language skills (Huennekens & Xu, 2016; Jones & Christian, 2021). In dialogic reading activities, the role of students changes from their role as passive listeners to active readers and creators of story meaning (O'Sullivan, 2021). Parents can change this role by playing the rhythm of reading activities, for example by asking questions about the picture or story they are reading and relating to their child's life. Apart from that, you can also ask questions about values, character traits, messages and so on. Through this dialogic reading activity, students are encouraged to repeat new vocabulary and use the new sentences they get in the story (Simpson et al., 2020; Şimşek & Işıkoğlu Erdoğan, 2021). In addition, students can also understand the contents of the story they read in depth.

In dialogic reading activities, parents can use several strategies or techniques while reading, for example asking short questions, giving opportunities to retell, asking to give examples, asking to explain the meaning of vocabulary, etc (Edwards-Groves & Davidson, 2020; O'Sullivan, 2021). The vocabulary that is usually used to optimize students' language skills and literacy is receptive vocabulary. Students who receive interventions for reading books with their parents tend to have better language and literacy skills than students who have never read books with their parents (Bowling & Cabell, 2019; Cameron et al., 2019). Students who initially had low reading skills and low language development experienced very rapid development after receiving intervention through reading books with their parents at home. The difference between the current research and previous research lies in the intervention of dialogic reading activities carried out by parents in order to improve the language skills and literacy of early childhood students during one year of education in kindergarten (Eviatar et al., 2018; Hannon et al., 2020). Teaching reading activities according to procedures to parents of students is carried out using a diffusion approach through various strategies including bulletins, communication between teachers and parents, information leaflets for parents, and parent education at school (Hadianto et al., 2021b; Zettler-Greeley et al., 2018). The intervention used in this study adopts Bronfenbrenner's theory which states that parental involvement in early childhood education can support more optimally in developing students' potential language skills and literacy. The potential for student development with parental involvement will be more optimal by taking into account a number of things, including teachers and parents must establish communication in a consensus-oriented manner with the aim of developing language skills and students' initial literacy skills, communication goes in two directions and is open during carrying out activities regarding obstacles and so on, the communication carried out will be more optimal if it is done face-to-face and personally (Zhang et al., 2020). So, the aims of this research was to test the effectiveness of the

partnership by involving parents in dialogic reading activities to improve language skills and early literacy of early childhood students.

3. Methodology

3.1 Participant

The method used in this research is a quasi-experimental method to test the effectiveness of partnerships by involving parents in dialogic reading activities to improve language skills and early literacy of early childhood students (Kim, 2011; O'Sullivan, 2021). The participants involved in this study totaled 200 early childhood students who were grouped into two groups, namely the experimental group and the control group. The sample selection was carried out randomly from several kindergartens in the Jakarta area, Indonesia. There are several criteria in selecting the kindergartens involved in the research, namely the profit and non-profit status of the institution and the accreditation status. This dialogical reading literacy program is carried out in families who have low to middle socioeconomic status, students who have poor reading ability scores, parents' educational degrees are at the secondary and undergraduate levels, and the intensity of reading books together or telling stories with parents in a rare house. The gender percentage of participants involved was 45% male and 55% female. Sampling indicators in this study are presented in table 1. Students involved in this study were in the 3-4 year range. Each parent filled out a willingness to be involved in this dialogic reading literacy program, so that the involvement of students and parents in this research was voluntary.

Table 1 Sampling

Sample grouping factors	Number of certified early childhood education	Contacted educational program	Recruited education program	Experiment group: Students	Control group: Students
Low socioeconomic status Not accredited	7	5	0	0	0
Low socioeconomic status/Not accredited	4	3	3	1 (15)	1 (20)
Medium or high socioeconomic status/ Not accredited	9	7	4	2 (15)	3 (25)

Middle or high socioeconomic status/Not accredited	10	7	4	3 (20)	4 (20)
Middle or high socioeconomic status /Accredited	15	11	5	4 (50)	4 (35)
Total		465	33	16	10 (100)	5 (100)

3.2 Intervention

The training workshops include activities to develop language skills and literacy, dialogic reading methods, demonstration models of dialogic reading activities through video and practice. The two groups (experimental and control) received the same book to use while receiving the dialogic reading activity intervention with their parents. The duration of the implementation of this dialogic reading activity is carried out for a year. Furthermore, teachers who are in charge of accompanying parents and students who are included in the experimental group receive additional workshops on involving parents in this dialogic reading activity. This teacher accompanies parents to carry out dialogic reading activities. The assistance is carried out through providing books to be used, distributing bulletins, parent-teacher meetings, parent workshops on dialogic book reading activities, and communication and monitoring. Dialogical reading activities are carried out by parents of students during the intervention according to procedures that have been instructed by the teacher. Teachers are also given guidance in carrying out dialogic reading activities and guidelines for practicing new vocabulary for students. The guide contains steps and question strategies that can be used to build interactive dialogues during group reading activities. Parents of students whose children were in the control group were only given instructions to read the same story book for 20-30 minutes each day. All participants involved in the research were carried out voluntarily and without coercion.

3.3 Evaluation

Several assessments were carried out to investigate students' initial abilities and literacy habits experienced by students in their families. The assessment was carried out on the character and habits of literacy in the family, language skills and literacy, ability to master receptive vocabulary, expressive vocabulary, taxonomy skills, and print convention skills.

3.3.1 Family literacy characters and habits

To investigate the literacy habits and characters of families, the researcher adopted Stony Brook's survey of family reading activities (Whitehurst 1992). This questionnaire survey uses a Likert scale consisting of 45 items that include family demographics, reading practice habits, and reading attitudes. Parents of students were asked to complete the questionnaire so that the data was valid. Examples of questions used in the questionnaire include a) What is the highest educational level of the student's parents? b) What is the intensity of reading books together with you in a week? c) How many minutes of time are used for reading activities in a day?

3.3.2 Assessment of language skills and literacy of early childhood students

Prior to the intervention phase, the researcher collected data on students' language skills and literacy at each kindergarten. Initial data collection was carried out for 2 weeks and then intervention was carried out for two semesters of kindergarten education. After the intervention, a posttest was carried out to see the results of the intervention and finally a follow-up test was carried out after the posttest with an interval of two weeks after the posttest was carried out. This initial ability test is carried out on emergency language skills and literacy needed by early childhood and is not tied to other variables. The initial ability test was carried out for 30 minutes for each student. Some students are able to complete in one visit, some others require up to two visits. All students who participated in this study were able to complete the initial proficiency test, although some of them required two visits to their educational institutions.

3.3.3 Assessment of vocabulary

In this test, students are asked to show some objects using pictures. The raw scores generated in this test are adjusted to the percentile ranking of students in the student population in Jakarta, Indonesia. The reliability score of this test, a score of 0.94 was obtained and the average reliability score among the assessors before data collection was carried out was 0.96 Cohen's Kappa in all pairs tested by 10 examiners. The reliability score range is 0.89-0.99. Furthermore, the Reliable Change Index (RCI) score is 2.35 which is greater than the reliable score at the pretest. This reflects that the intervention received by early childhood students has a significant impact on change.

3.3.5 Taxonomy Ability Assessment

Taxonomic ability is the student's ability to classify objects in the student's superordinate group. Students implicitly have the ability to organize noun meanings based on categorical relationships. In addition, vocabulary skills at an early age also have a correlation with taxonomic organizational abilities in cognitive learning. Taxonomic ability was assessed using expressive vocabulary

ability tests. Taxonomic ability was assessed using the same test that was carried out on the expressive vocabulary ability test, namely the Expressive One Word Picture Vocabulary Test. This test provides several images that require students' taxonomy abilities. Students are given several pictures such as tigers, wolves, elephants, etc. and students are asked to name the word that represents the group of animals. The percentage of students' correct answers analyzed were those that required taxonomy skills. The Reliable Change Index score for this assessment (RCI) is 4.3 which has a relatively higher value than the pretest score of 1.88. This means that the intervention has a significant impact on change.

3.3.6 Print Awareness Capabilities

Print awareness ability is the ability of students to understand the nature and procedures of using books or other prints. This ability to print was assessed using Story and Print Concepts and a survey of the experiences of students and their parents using print conventions. In this test, students are asked to demonstrate procedures for using books starting from showing the cover of the book and further reading instructions. There are 10 items for this survey. The internal reliability score in this test was 0.76, the reliability score between Cohen's Kappa assessors at the time of data collection got an average score of 0.95. The range of reliability scores is in the range of 0.91-0.97 scores for all test pairs. The Reliable Change Index (RCI) score in the posttest phase was 3.03 which was relatively higher than the reliable score of 1.98 in the pretest phase, which means that the intervention had a significant impact.

3.4 Comparison of the current study with previous studies

Most previous research still involved a relatively small sample of less than 100 students, most of the reading interventions had not used dialogic reading interventions, the research design only investigated the relationship between literacy skills and students' affective, gender, and socioeconomic status. The difference between this study and previous research lies in the dialogic reading intervention involving parents, a fairly representative sample, and sufficient duration of the intervention. In addition, the abilities investigated are not only literacy skills, but also include language skills and emergency literacy which are needed by young students. Language skills and literacy assessed in this study were more compared to previous studies which only focused on one ability. Involving several abilities in research is done so that research findings reveal more complex aspects of language skills and literacy which can be improved through

dialogic reading activities. So, this research adds new findings in the field of early childhood literacy.

3.5 Data analysis

Data analysis in this study used a hierarchical linear model with two levels of random intercept. This analysis is suitable for testing the effectiveness of dialogical reading literacy program interventions in early childhood students. To reveal the increase in students' emergency literacy skills, the level of literacy skills in the pretest phase and the marital status of parents were used as control variables. The variable between married parents and single parents got a p value of less than 0.05 which means there is a significant difference between students with married parents Students who live with complete parents are more likely to get reading activities together every day around 62% compared to parents who are incomplete because of separation or have died, which is only 38% of the intensity of reading books with them. hierarchical two-level random intercept is appropriate if only using level one predictors because it is used to test differences in treatment groups.The pretest scores of literacy skills and the effect of dialogic reading in the posttest phase are used as predictor variables to answer the objectives of this study.

Table 2 Differences in the experimental and control groups

Variable	Treatment group (n = 100)	Control group (n = 100)	t	P
Student characteristics				
Age of student (in months)	37.58	38.90	.85	ns
Percentage of male students	45%	54%	.13	ns
Percentage of students with a full day of education	50%	68%	.18	ns
Percentage of parents who are married	90%	83%	.75	ns
Pretest score				
Receptive vocabulary skills	115.71	114.42	−.50	ns
Expressive vocabulary skills	104.65	103.50	−.01	ns
Print Awareness capability	4.62	4.89	.70	ns
Taxonomy capabilities	18.92	25.23	1.20	ns

4. Results

4.1 Dialogical reading skills

In the posttest phase, parents of students who were included in the experimental group and teachers filled out a survey of retrospective questions. From the results of this survey, parents of students in the experimental group had a better frequency of using dialogic reading compared to the control group. Parents of students in the experimental group took books out of the house more often. From the results of the report, the parents of the students in the experimental group at least did the dialogue reading activity 4 times and at most 7 times a week.

Table 3 Development of students' language skills in each phase

	Receptive vocabulary	of Expressive vocabulary	Print awareness	Taxonomy skill
Pre-test (n = 100)				
Experiment group	114.25 (9.89)	105.12 (12.44)	4.31 (3.10)	20.89 (21.31)
Control group	113.60 (13.03)	104.32 (11.32)	4.80 (3.52)	23.62 (21.06)
Post-test (n = 100)				
Experiment group	120.21 (13.32)	107.80 (11.67)	5.62 (3.68)	25.80 (20.10)
Control group	114.61 (14.44)	105.90 (12.34)	5.61 (3.51)	15.14 (14.70)
Follow-up (n = 200)				
Experiment group	135.50 (12.91)	114.10 (14.50)	7.02 (3.41)	43.21 (23.89)
Control group	120.40 (14.10)	107.90 (16.05)	5.72 (3.52)	26.32 (24.90)

The assessment results for the three phases of pretest, posttest, and follow-up of language skills and literacy in each group are presented in table 3. The scores for language skills and literacy in the posttest phase are contrasted in the table to see the differences in each phase. A hierarchical linear model analysis was used to investigate the effect of a dialogical reading literacy program intervention through accompanying parents at home. The hierarchical analysis model with two random intercept levels was used for students at level 1 and level 2. This analysis was used to control for dependency because the samples were taken from the same level. In addition, hierarchical analysis was also used to examine differences in abilities in each group using the appropriate analysis.

Table 4 Results of the linear model analysis of the effect of the intervention on language skills in the posttest phase

Stable effect	Skills of Receptive vocabulary			Skills of Expressive vocabulary		
	B	SE	t	B	SE	t
Intercept	37.30	13.91	3.90*	34.60	8.42	5.48**
Level 1 (student level)						
Pretest score	0.72	0.13	6.51***	0.70	0.08	9.50***

Marital status of students' parents	5.20	3.71	1.53	8.06	3.63	3.80**
Level 2						
Conditions	5.13	2.70	1.61	4.89	3.08	1.82†
Effect	Variation	Variation				
Variant of program residuals	4.51	4.16				
Child residue variant	92.40	40.10				
Effect	Variation	Variation				
Variant of program residuals	0.31	0.36				
Child residue variant	3.40	289.70				

Table 5 The results of the analysis of the linear model of the effect of the intervention on language skills in the follow-up phase

Stable effect	Receptive vocabulary skills			Expressive vocabulary skills		
	B	SE	t	B	SE	t
Intercept	33.45	16.60	3.09 *	20.80	13.51	2.61
Level 1 (student level)						
Pretest score	0.72	0.17	4.91***	0.8	0.14	6.90***
Marital status of students' parents	5.70	4.16	1.40	9.10	4.30	2.15*
Level 2 (Program level)						
Homework assignment conditions	2.04	0.60	3.60**	23.90	6.62	4.62**
Random effect	Variance	Variance				
Variant of program residuals	0.25	4.50				
Child residue variant	2.80					

*p < .05. **p < .01. ***p < .001

The coefficients in the table are used as predictor metrics at level 2 which correspond to the effect on the experimental group because natural effects in hierarchical analysis have no natural effects. Based on the results of the analysis,

the coefficients describe the change in each unit in the results of the intervention. So, the increase in the unit of language results is interpreted in the form of a distribution by dividing the coefficient value by the standard deviation for each language ability and literacy pretest score. Based on the results of the analysis in tables 4 and 5, it shows two estimates of variance, namely the residual variance of the dialogic reading literacy program and the residual variance of students. The residual variance of the program contains the amount of variance that cannot be explained on the main effect when calculating program variables, while the residual variance of students contains the amount of variance that cannot be explained by students' language skills and literacy when controlling for all variables at the student level and dialogical reading literacy programs.

4.2 Students' language skills and literacy in the posttest phase

Based on the results of the analysis in table 4, the dialogic reading literacy program has a significant impact on the results of students' language skills and literacy. One of the most visible improvements in language skills is taxonomy skills. The ability to understand taxonomy words increased with an average of 12.28 and a standard deviation of 0.59 compared to the control group. The pretest score at factor level 1 appears. Furthermore, after considering variables at the student level and treatment conditions, there were no other significant variables in the program. Furthermore, based on the results of the analysis, indicates that students in each group have different language skills but there is a slight difference in the average score between the dialogical reading literacy program and the kindergarten education program.

4.3 Students' initial language and literacy

To find out the effect of the intervention more comprehensively, the researcher retested the students' language skills and literacy in the follow-up phase. By controlling for each student's pretest score and the marital status variable of the student's parents, the results of the analysis show that students' language skills and literacy are able to predict a significant increase in three. The score of improvement in aspects of receptive vocabulary has increased with an average score of 9.40 (representing a change with SD 0.86, an increase in the print awareness ability score of 2.05 with an SD of 0.86 represents an increase, then an increase in the taxonomy ability score is 22.85 with an SD of 1.10 representing a change, and the vocabulary ability score receptive experienced a not too significant increase of 5.80 with SD 0.48 representing a change (p=0.09).All improvements in each aspect of language were higher than the control group. Apart from these variables, there were no other variables which experienced a significant increase in the garden education program In this case.

4.4 Follow-up test of moderating the impact of the intervention on students' language skills and literacy

The moderation test uses a linear hierarchical random intercept model involving explanatory variables at the micro level. At level 1, the predictor variables used were language skills and initial literacy in the posttest phase of students. To investigate the after-effect of this literacy level using a dummy variable. The test results showed that students with high language and literacy levels experienced an increase with a greater average in the posttest phase. The increase in the group of students whose literacy was high in every aspect was the receptive vocabulary aspect of 15.73 with SD 1.24 increase, the expressive vocabulary aspect 13.60 with SD 1.18 increase, and the print awareness aspect of 2.50 with SD 0.95 increase in the posttest phase. From the results of the moderation test analysis, taxonomic abilities did not show a significant increase based on language skills and literacy levels. In the posttest phase, the variables that looked significant were aspects of receptive vocabulary ability and print awareness ability with ($p < 0.05$). The intraclass relationship in each outcome variable is 20% for aspects of receptive vocabulary and print awareness abilities. This indicates that the abilities of the students in each group were not much different between students who received reading instruction from their kindergarten and those who received the intervention in the dialogical reading literacy program (presented in table 6).

The same findings in the group of students who have high literacy language skills in the follow-up phase show a large average increase in each aspect (presented in table 7). This increase was seen in the receptive vocabulary aspect of 18.13 with an increase in SD of 1.35, expressive vocabulary ability of 15.60 with a change in SD of 1.02, and print awareness ability of 3.90 with an SD change of 1.17. The intra-class relationship on this variable is 50% which indicates that students' abilities are not much different. Furthermore, there is a large difference between the impact of the kindergarten education program and the results of the dialogical reading literacy program intervention. So, students who had good language skills and literacy experienced a more significant increase than the group of students with low initial language skills and literacy in the posttest and follow-up phases. Students with better abilities show better ability development and are responsive to the intervention of the dialogical reading literacy program by involving their parents.

4.5 Student family literacy activities and rate of use of dialogic reading program

To investigate the role of students' family literacy activities, researchers used a random intercept model of a hierarchical linear model at the same two levels involving micro-level explanatory variables. The pretest score resulting from the

family literacy activity survey was used as a predictor variable at level 1. In the posttest phase, the family literacy activity score increased for every one pound with an average of 3.40 on a print awareness ability scale. Other abilities did not show a significant increase based on family literacy activities. Furthermore, during the follow-up phase, no significant impact was found from aspects of family literacy activities on language skills and literacy. From the results of the analysis, parents of students who intensely use dialogic reading during the intervention have a significant impact on students' language skills and literacy compared to parents who rarely do so during the intervention.

5. Discussion

The increase in language skills and literacy in four aspects was significant from the pretest to the posttest, then three of the four aspects experienced a significant increase in the follow-up phase. These findings indicate that the dialogic reading literacy program intervention had a significant impact on students' language skills and literacy even after the intervention was completed (Meng, 2021; Morgan & Meier, 2008). The findings still increased students' abilities in the follow-up phase because during the intervention parents students intensively used their verbal abilities when carrying out dialogic reading activities. This made the parents' verbal abilities increase and automatically without coercion the parents of these students voluntarily built the habit of dialogic reading activities even though the intervention phase had ended (Lepola et al., 2023; Olszewski & Cullen-Conway, 2021). This dialogic reading activity builds active interaction with their children which in the end students' language skills and literacy also increase and even stabilize over a long period of time (Faulk, 2018; Hooper et al., 2020). So, this dialogical reading literacy program not only improves students' language skills and literacy but also trains the verbal abilities of students' parents so that a more intensive habit of reading books together at home is created.

The effect of the intervention in this study revealed a wider variance in language skills and initial literacy than some previous studies that focused only on abilities such as early childhood executive functioning abilities or vocabulary mastery abilities. This study proves that dialectical reading literacy programs can increase students' linguistic awareness in general to prepare students to enter school age (Cameron et al., 2019; Hannon et al., 2020). The dialogic reading literacy program is one of the comprehensive programs in developing early-age students' emergency literacy skills which become the basic foundation for students to develop and become a tool for accessing more complex knowledge (Barone et al., 2019; Bean et al., 2020; Westerveld et al., 2020). This study expands on the findings of previous research, especially on the findings of aspects of print awareness, taxonomic abilities, and receptive vocabulary skills. These findings are in

accordance with the theory which states that vocabulary and taxonomy skills in early childhood can be developed simultaneously because they are related to one another. This research also strengthens previous research that tested the effectiveness of dialogic reading strategies, but applied by non-parent teachers (Hadianto et al., 2022; Mansour, 2020; Simpson et al., 2020). The findings of previous research also proved to be effective in increasing students' language skills and literacy, but this increase did not occur in the follow-up phase because the habit of reading together with parents at home was not formed (Mansour, 2020; Zhang et al., 2020). In contrast to this study, which involved parents in the program, they were indirectly able to form the habit of reading books together even though the intervention phase had been completed. The involvement of parents in receiving workshops and mentoring from teachers is considered quite effective in encouraging dialogic reading activities in their respective homes.

The increase in students' language skills and literacy as a result of the intervention with a standard deviation of 0.48-1.10 represents an effect size in the moderate to high effect range. To analyze these findings, students in the experimental group were able to improve their receptive vocabulary skills with a standard deviation of 0.90 which had a higher score than the control group. This increase can be achieved within a span of 4 months which is faster than the control group which requires 8 months to show progress without dialogic reading intervention (Krijnen et al., 2020; Walgermo et al., 2018). One aspect of language that showed the most significant difference was the difference between the experimental and control groups, but this difference was equivalent to a standard deviation of up to 0.48. This means that the treatment group experienced faster development of their language skills than the control group. Based on these findings, the impact of the dialogic literacy literacy program initiated by this researcher by involving parents of students had a stronger impact compared to previous research which only relied on the role of early childhood education teachers (Barone et al., 2019; Edwards-Groves & Davidson, 2020). The finding of this strong impact is in accordance with the theory from Bronfenbrenne (1979) which states that the potential for the development of this mesosystem will be more optimal if there is mutual trust, has a positive relationship between chaperone and student, is goal oriented, and is balanced between stimulus and response (Bowling & Cabell, 2019; Huennekens & Xu, 2016). Of course this can be realized by people who have positive attachments, for example, parents and students have a closer relationship than the relationship between teachers and students.

The role of parents in accompanying their children is optimized through informal communication with teachers during the intervention phase. This approach is considered effective because students' parents do not hesitate to ask the teacher if they encounter problems. This is consistent with the theory that communication between parents and teachers will be more effective in supporting the

development of early childhood students because early childhood students have different characteristics that require more attention to support optimizing their developmental potential (Faulk, 2018; Meng, 2021; Morgan & Meier, 2008). Furthermore, students who have better language skills and literacy show a more significant improvement compared to students who have low language skills and literacy in the pretest phase. This difference in improvement occurred in three aspects of language ability and literacy (all aspects except taxonomy skills) with different effects ranging from moderate to high, with a standard deviation of 0.38-1.24 in the posttest phase. In addition, similar findings were also found in the effect that appeared in the follow-up phase. This finding occurs because smarter students tend to be more prepared to develop their language skills and literacy during the intervention phase (Lepola et al., 2023; Olszewski & Cullen-Conway, 2021). Literacy program A program that supports the cognitive development of early-age students will be optimal if it involves the parents of these students for several reasons, including parents knowing their child's character better, having closer relationships, mutual trust, and having a positive impression of one another. each other. Literacy programs that involve parents in order to support the potential of early childhood students in the US and Europe are one of the Head Start programs (Gasser et al., 2022; Weadman et al., 2022). The literacy program reinforces that apart from the effectiveness of involving parents in programs for an early age, involving parents also requires greater resources, such as regular meetings, intensive communication, and requires more time.

6. Conclusion, Implications, Recomendation

Dialogical reading literacy programs have proven effective in improving students' reading skills and literacy. Overall improvement was seen in four aspects of students' language skills and literacy. The role of parents in this dialogical reading literacy program is effective because there is mutual trust, has a positive relationship between mentors and students, is goal oriented, and is balanced between stimulus and response. The implication of this research is the need for parental support in developing the potential of early childhood, especially in developing basic competencies and main competencies that need to be possessed by early childhood. In addition, early childhood education institutions must coordinate with parents of students on a regular basis to monitor the development of students' literacy and academic abilities, collaboration between teachers and parents of early childhood students will be more optimal to develop language skills, literacy and other cognitive abilities what students really need. This study has several limitations, including samples that have not accommodated various groups of families, only focusing on families who have middle to low socioeconomic status, sampling areas that are only from certain areas,

retrospective self-reports that report the intensity of using dialogic reading may not be enough to monitor, not paying attention to gender variables in the data analysis which might affect the results, and competence only focuses on language skills and literacy. Based on the deficiencies of the study, the researcher recommends several things for further research, including the selection of samples that must be more complex from various socioeconomic status groups, students must be taken from various regions that may receive different early childhood education programs, self-reports for supervision during interventions need to be complemented by other methods such as supervision through filling out more comprehensive forms, involving gender in data processing to see the role of gender, and targeted competencies that can be expanded to a cognitive level that may have a relationship with language skills and literacy.

7. References

Barone, C., Chambuleyron, E., Vonnak, R., & Assirelli, G. (2019). Home-based shared book reading interventions and children's language skills: a meta-analysis of randomised controlled trials. *Educational Research and Evaluation*, *25*(5–6), 270–298. https://doi.org/10.1080/13803611.2020.1814820

Bean, A. F., Perez, B. I., Dynia, J. M., Kaderavek, J. N., & Justice, L. M. (2020). Book-Reading Engagement in Children with Autism and Language Impairment: Associations with Emergent-Literacy Skills. *Journal of Autism and Developmental Disorders*, *50*(3), 1018–1030. https://doi.org/10.1007/s10803-019-04306-4

Bowling, E. C. C., & Cabell, S. Q. (2019). Developing Readers: Understanding Concept of Word in Text Development in Emergent Readers. *Early Childhood Education Journal*, *47*(2), 143–151. https://doi.org/10.1007/s10643-018-0902-1

Cameron, T. A., Carroll, J. L. D., Taumoepeau, M., & Schaughency, E. (2019). How Do New Zealand Teachers Assess Children's Oral Language and Literacy Skills at School Entry? *New Zealand Journal of Educational Studies*, *54*(1), 69–97. https://doi.org/10.1007/s40841-019-00133-4

Edwards-Groves, C., & Davidson, C. (2020). Special Issue: Talk and interaction in the dialogic classroom: pedagogy, practice and change. *Australian Journal of Language and Literacy*, *43*(1), 4–4. https://doi.org/10.1007/bf03652039

Elek, C., Gray, S., West, S., & Goldfeld, S. (2022). Effects of a professional development program on emergent literacy-promoting practices and environments in early childhood education and care. *Early Years*, *42*(1), 88–103. https://doi.org/10.1080/09575146.2021.1898342

Esmaeeli, Z., Kyle, F. E., & Lundetræ, K. (2019). Contribution of family risk, emergent literacy and environmental protective factors in children's

reading difficulties at the end of second-grade. *Reading and Writing, 32*(9), 2375–2399. https://doi.org/10.1007/s11145-019-09948-5

Eviatar, Z., Taha, H., & Shwartz, M. (2018). Metalinguistic awareness and literacy among semitic-bilingual learners: a cross-language perspective. *Reading and Writing, 31*(8), 1869–1891. https://doi.org/10.1007/s11145-018-9850-9

Faulk, N. (2018). Bringing Scale and Structure to the Online Information Literacy Program. *Journal of Library and Information Services in Distance Learning*, 12(3–4), 198–208. https://doi.org/10.1080/1533290X.2018.1498633

Gasser, L., Dammert, Y., & Murphy, P. K. (2022). How Do Children Socially Learn from Narrative Fiction: Getting the Lesson, Simulating Social Worlds, or Dialogic Inquiry? In *Educational Psychology Review* (Vol. 34, Issue 3). Springer US. https://doi.org/10.1007/s10648-022-09667-4

Hadianto, D., Damaianti, V. S., Mulyati, Y., & Sastromiharjo, A. (2021a). Does reading comprehension competence determine level of solving mathematical word problems competence? *Journal of Physics: Conference Series, 1806*(1). https://doi.org/10.1088/1742-6596/1806/1/012049

Hadianto, D., Damaianti, V. S., Mulyati, Y., & Sastromiharjo, A. (2021b). Enhancing scientific argumentation skill through partnership comprehensive literacy. *Journal of Physics: Conference Series, 2098*(1). https://doi.org/10.1088/1742-6596/2098/1/012015

Hadianto, D., S. Damaianti, V., Mulyati, Y., & Sastromiharjo, A. (2022). Effectiveness of Literacy Teaching Design Integrating Local Culture Discourse and Activities to Enhance Reading Skills. *Cogent Education*, 9(1). https://doi.org/10.1080/2331186X.2021.2016040

Hannon, P., Nutbrown, C., & Morgan, A. (2020). Effects of extending disadvantaged families' teaching of emergent literacy. *Research Papers in Education*, 35(3), 310–336. https://doi.org/10.1080/02671522.2019.1568531

Hooper, S. R., Costa, L. J. C., Green, M. B., Catlett, S. R., Barker, A., Fernandez, E., & Faldowski, R. A. (2020). The relationship of teacher ratings of executive functions to emergent literacy in Head Start. *Reading and Writing*, 33(4), 963–989. https://doi.org/10.1007/s11145-019-09992-1

Huennekens, M. E., & Xu, Y. (2016). Using dialogic reading to enhance emergent literacy skills of young dual language learners. *Early Child Development and Care*, 186(2), 324–340. https://doi.org/10.1080/03004430.2015.1031125

Incognito, O., & Pinto, G. (2021). Longitudinal effects of family and school context on the development on emergent literacy skills in preschoolers. *Current Psychology*, 9819–9829. https://doi.org/10.1007/s12144-021-02274-6

Jones, C. J., & Christian, M. (2021). The Results of a Randomized Control Trial Evaluation of the SPARK Literacy Program: An Innovative Approach that Pairs One-on-One Tutoring with Family Engagement. *Journal of Education for Students Placed at Risk*, 26(3), 185–209. https://doi.org/10.1080/10824669.2020.1809419
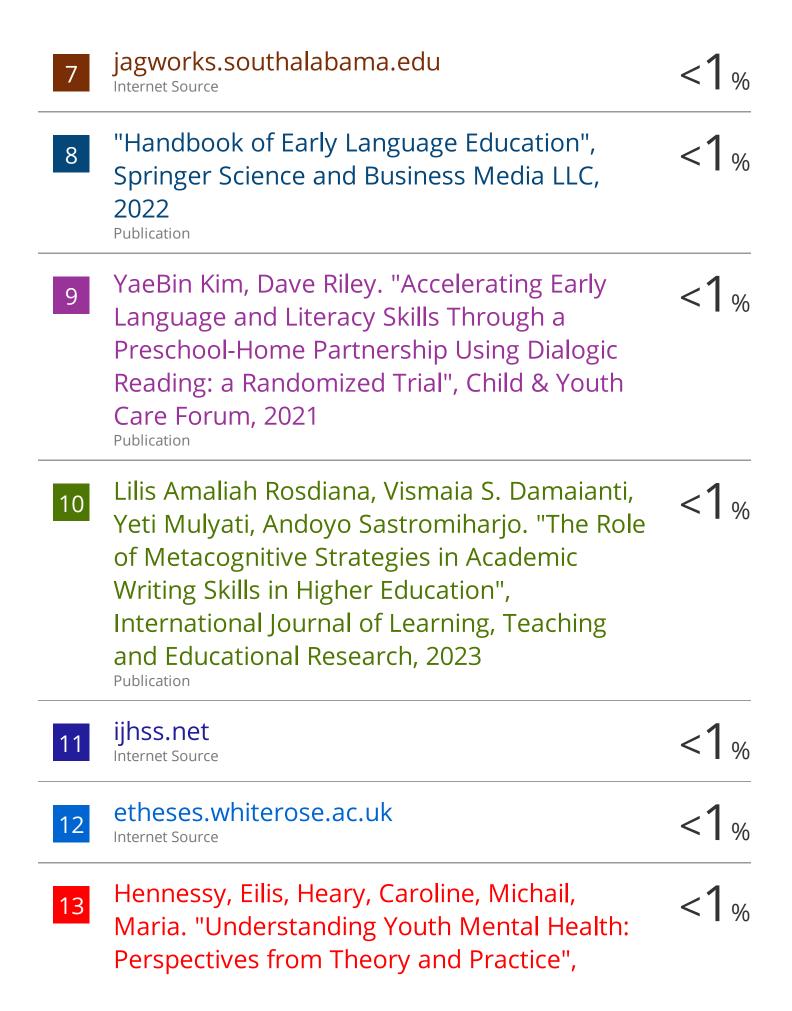
Jung, Y. (2019). Associations between in-the-moment behavior of children, family literacy program use, and Latina mother-child book reading. *Early Child Development and Care*, *189*(13), 2071–2084. https://doi.org/10.1080/03004430.2018.1438423

Kim, D. (2011). Dialogic meaning construction and emergent reading domains among four young English language learners in second-language reading. *Multilingual Education*, *1*(1), 1–21. https://doi.org/10.1186/2191-5059-1-2

Krijnen, E., van Steensel, R., Meeuwisse, M., Jongerling, J., & Severiens, S. (2020). Exploring a refined model of home literacy activities and associations with children's emergent literacy skills. In *Reading and Writing* (Vol. 33, Issue 1). Springer Netherlands. https://doi.org/10.1007/s11145-019-09957-4

Lenhart, J., Suggate, S. P., & Lenhard, W. (2022). Shared-Reading Onset and Emergent Literacy Development. *Early Education and Development*, *33*(4), 589–607. https://doi.org/10.1080/10409289.2021.1915651

Lepola, J., Kajamies, A., Laakkonen, E., & Collins, M. F. (2023). Opportunities to Talk Matter in Shared Reading: The Mediating Roles of Children's Engagement and Verbal Participation in Narrative Listening Comprehension. *Early Education and Development*, *00*(00), 1–23. https://doi.org/10.1080/10409289.2023.2188865

Lucas, C., Hood, P., & Coyle, D. (2021). Blossoming in English: Preschool Children's Emergent Literacy Skills in English. *Journal of Research in Childhood Education*, *35*(3), 477–502. https://doi.org/10.1080/02568543.2020.1742256

Mansour, N. (2020). The dissonance between scientific evidence, diversity and dialogic pedagogy in the science classroom. *International Journal of Science Education*, *42*(2), 190–217. https://doi.org/10.1080/09500693.2019.1706114

Meng, C. (2021). Parent–child interactions longitudinally mediate the association between shared literacy activities and emergent literacy and oral language skills. *Reading and Writing*, *34*(6), 1593–1612. https://doi.org/10.1007/s11145-021-10130-z

Morgan, P. L., & Meier, C. R. (2008). Dialogic Reading's Potential to Improve Children's Emergent Literacy Skills and Behavior. *Preventing School Failure: Alternative Education for Children and Youth*, *52*(4), 11–16. https://doi.org/10.3200/psfl.52.4.11-16

Nevo, E., & Vaknin-Nusbaum, V. (2018). Joint Reading of Informational Science Text Versus Narrative Stories: How Does each Affect Language and Literacy Abilities Among Kindergarteners? *Reading Psychology*, *39*(8), 787–819. https://doi.org/10.1080/02702711.2018.1547343

Niu, W., Cheng, L., Xu, W., Zhang, Q., & Zhang, X. (2021). Improving Resilience of a Child with ADHD: A Context Specific Intervention Program through Dialogic and Guided Reading. *International Journal of Disability, Development and Education*, *68*(6), 788–805.

https://doi.org/10.1080/1034912X.2021.1929085

O'Sullivan, J. (2021). Replacing a reading scheme with dialogic reading: an action research case study in 15 London nurseries. *International Journal of Early Years Education*, *29*(1), 25–40. https://doi.org/10.1080/09669760.2020.1754172

Olszewski, A., & Cullen-Conway, M. (2021). Social Media Accompanying Reading Together: A SMART Approach to Promote Literacy Engagement. *Reading and Writing Quarterly*, *37*(5), 479–494. https://doi.org/10.1080/10573569.2021.1902442

Piasta, S. B., Soto Ramirez, P., Farley, K. S., Justice, L. M., & Park, S. (2020). Exploring the nature of associations between educators' knowledge and their emergent literacy classroom practices. *Reading and Writing*, *33*(6), 1399–1422. https://doi.org/10.1007/s11145-019-10013-4

Sampa, F. K., Ojanen, E., Westerholm, J., Ketonen, R., & Lyytinen, H. (2018). Literacy programs efficacy for developing children's early reading skills in familiar language in zambia. *Journal of Psychology in Africa*, *28*(2), 128–135. https://doi.org/10.1080/14330237.2018.1435050

Simpson, K., Paynter, J., Wicks, R. T., & Westerveld, M. F. (2020). Early Literacy Learning Experiences across Home and Community Libraries for Young Children Who Have Autism. *Advances in Neurodevelopmental Disorders*, *4*(1), 74–84. https://doi.org/10.1007/s41252-019-00145-7

Şimşek, Z. C., & Işıkoğlu Erdoğan, N. (2021). Comparing the effects of different book reading techniques on young children's language development. *Reading and Writing*, *34*(4), 817–839. https://doi.org/10.1007/s11145-020-10091-9

Thomas, N., Colin, C., & Leybaert, J. (2020). Interactive Reading to Improve Language and Emergent Literacy Skills of Preschool Children from Low Socioeconomic and Language-Minority Backgrounds. *Early Childhood Education Journal*, *48*(5), 549–560. https://doi.org/10.1007/s10643-020-01022-y

Walgermo, B. R., Foldnes, N., Uppstad, P. H., & Solheim, O. J. (2018). Developmental dynamics of early reading skill, literacy interest and readers' self-concept within the first year of formal schooling. *Reading and Writing*, *31*(6), 1379–1399. https://doi.org/10.1007/s11145-018-9843-8

Weadman, T., Serry, T., & Snow, P. C. (2022). Oral Language and Emergent Literacy Strategies Used by Australian Early Childhood Teachers During Shared Book Reading. *Early Childhood Education Journal*. https://doi.org/10.1007/s10643-022-01381-8

Westerveld, M. F., Paynter, J., Brignell, A., & Reilly, S. (2020). No Differences in Code-Related Emergent Literacy Skills in Well-Matched 4-Year-Old Children With and Without ASD. *Journal of Autism and Developmental Disorders*, *50*(8), 3060–3065. https://doi.org/10.1007/s10803-020-04407-5

Wood, J. (2021). A dialogic technology-mediated model of feedback uptake and literacy. *Assessment and Evaluation in Higher Education*, *46*(8), 1173–1190. https://doi.org/10.1080/02602938.2020.1852174

Zettler-Greeley, C. M., Bailet, L. L., Murphy, S., DeLucca, T., & Branum-Martin, L. (2018). Efficacy of the Nemours BrightStart! Early Literacy Program: Treatment Outcomes From a Randomized Trial With At-Risk Prekindergartners. *Early Education and Development*, *29*(6), 873–892. https://doi.org/10.1080/10409289.2018.1475202

Zhang, S. Z., Inoue, T., Shu, H., & Georgiou, G. K. (2020). How does home literacy environment influence reading comprehension in Chinese? Evidence from a 3-year longitudinal study. *Reading and Writing*, *33*(7), 1745–1767. https://doi.org/10.1007/s11145-019-09991-2

Effectiveness of Dialogical Reading Literacy Programs In Improving Language Skills and Literacy of Early Students

| 7 | jagworks.southalabama.edu
Internet Source | <1% |
| 8 | "Handbook of Early Language Education", Springer Science and Business Media LLC, 2022
Publication | <1% |
| 9 | YaeBin Kim, Dave Riley. "Accelerating Early Language and Literacy Skills Through a Preschool-Home Partnership Using Dialogic Reading: a Randomized Trial", Child & Youth Care Forum, 2021
Publication | <1% |
| 10 | Lilis Amaliah Rosdiana, Vismaia S. Damaianti, Yeti Mulyati, Andoyo Sastromiharjo. "The Role of Metacognitive Strategies in Academic Writing Skills in Higher Education", International Journal of Learning, Teaching and Educational Research, 2023
Publication | <1% |
| 11 | ijhss.net
Internet Source | <1% |
| 12 | etheses.whiterose.ac.uk
Internet Source | <1% |
| 13 | Hennessy, Eilis, Heary, Caroline, Michail, Maria. "Understanding Youth Mental Health: Perspectives from Theory and Practice", | <1% |

Understanding Youth Mental Health: Perspectives from Theory and Practice, 2022
Publication

14 www.e-iji.net
    Internet Source   <1%

15 dokumen.pub
    Internet Source   <1%

16 link.springer.com
    Internet Source   <1%

17 Submitted to Chester College of Higher
    Education   <1%
    Student Paper

18 Sri Mulyani, Vismaia S Damaianti, Yeti Mulyati,
    Andoyo Sastromiharjo. "The Effectiveness of   <1%
    Opinion Gaps, Reasoning, and Information
    Tasks in Improving Speaking Skills",
    International Journal of Learning, Teaching
    and Educational Research, 2023
    Publication

19 ses.library.usyd.edu.au
    Internet Source   <1%

20 diglosiaunmul.com
    Internet Source   <1%

21 ejournal.undiksha.ac.id
    Internet Source   <1%

espace.curtin.edu.au

22 Internet Source   <1%

23 iopn.library.illinois.edu
    Internet Source   <1%

24 onlinelibrary.wiley.com
    Internet Source   <1%

25 Submitted to Bilkent University
    Student Paper   <1%

26 j-ces.com
    Internet Source   <1%

27 ojs.fkip.ummetro.ac.id
    Internet Source   <1%

28 researchspace.ukzn.ac.za
    Internet Source   <1%

29 scholars.wlu.ca
    Internet Source   <1%

30 worldwidescience.org
    Internet Source   <1%

31 www.frontiersin.org
    Internet Source   <1%

32 ir.canterbury.ac.nz
    Internet Source   <1%

33 ro.ecu.edu.au
    Internet Source   <1%

34 Reza Saeful Rachman, Vismaia S. Damaianti, Yeti Mulyati, Andoyo Sastromiharjo. "Effectiveness of instruction-based information literacy training on the readiness of lifelong learning and the students' information literacy ability", Cypriot Journal of Educational Sciences, 2022
Publication

<1 %

35 Andri Noviadi, Sumiyadi Sumiyadi, Tedi Permadi. "The Role of Literature Teaching in Improving Students' Language Skills", International Journal of Learning, Teaching and Educational Research, 2023
Publication

<1 %

36 Lati Andriani, Syihabuddin Syihabuddin, Andoyo Sastromiharjo, Dadang Anshori. "The Role of Writing Process Components and Cognitive Components in Improving the Quality of Narrative", International Journal of Learning, Teaching and Educational Research, 2022
Publication

<1 %

37 Yenti Arsini, Ahman Ahman, Nandang Rusmana. "The Role of Locus of Control and Resilience in Student Academic Achievement", International Journal of Learning, Teaching and Educational Research, 2023
Publication

<1 %

Exclude quotes	On	Exclude matches	Off
Exclude bibliography	On		

Effectiveness of Dialogical Reading Literacy Programs In Improving Language Skills and Literacy of Early Students