



Application Of Stimuli Program To Improve Literation Capabilities In Early Childhood

Nofha Rina^{a,*}, Lucy Pujasari Supratman^b, Abdul Fadli K^c

^a. Universitas Telkom, Indonesia

^b. Universitas Telkom, Indonesia

^c. Universitas Telkom, Indonesia

nofharina80@gmail.com, doktorlucysupratman@gmail.com, Fadkalaloi@telkomuniversity.ac.id,

Diterima tanggal 22 Februari 2020,
Direvisi tanggal 18 Agustus 2020,
Disetujui tanggal 26 Agustus 2020

Abstrak. Program stimuli merupakan program dengan memberikan paket buku literasi yang berisikan petunjuk kegiatan, media literasi pada anak serta sosialisasi untuk ibu. Memberikan simulasi pada anak harus sesuai dengan karakteristik anak dengan menghadirkan kegiatan belajar yang menyenangkan. Saat melakukan stimuli, metode dan media menjadi faktor penting untuk melakukan kegiatan yang menyenangkan. Hasil penelitian ini menerapkan suatu program stimuli bagi anak di rumah melalui metode dan media yang sesuai dengan karakteristik anak. Hal yang dilakukan dalam program stimuli dengan memberikan suatu paket literasi yang terdiri petunjuk kegiatan, media literasi, serta sosialisasi bagi orangtua. Tujuan penelitian untuk menguji efektivitas program stimuli dalam meningkatkan kemampuan literasi pada anak usia dini. Hipotesis yang diajukan adalah program stimuli dalam meningkatkan kemampuan literasi media pada anak usia dini. Metode yang digunakan yaitu *quasi experiment* dengan *desain non-equivalent control group*. Subjek penelitian adalah 30 anak berusia empat hingga lima tahun yang terbagi menjadi kelompok eksperimen dan kontrol. Berdasarkan hasil analisis melalui uji statistik non-parametrik *Mann-Whitney U* diketahui terdapat perbedaan peningkatan kemampuan literasi media pada kelompok eksperimen dengan kelompok kontrol. Adapun analisis kualitatif menunjukkan hasil adanya peningkatan kemampuan literasi dengan mengamati perubahan hasil pengukuran. Hasil penelitian ini penting sebagai kajian baru dalam menemukan alternatif metode stimuli anak usia dini.

Kata kunci: stimuli, literasi, media, anak usia dini.

Abstract. Stimuli program is a program by providing a literacy book package containing instructions on activities, media literacy for children and socialization for mothers. Providing simulations to children must be in accordance with the characteristics of children by presenting learning activities that are fun. When doing stimuli, methods and media are important factors to do fun activities. The results of this study apply a stimuli program for children at home through methods and media that are appropriate to the child's characteristics. This is done in the stimuli program by providing a literacy package consisting of instructions for activities, media literacy, and socialization for parents. The aim of the study was to examine the effectiveness of stimuli programs in improving literacy skills in early childhood. The proposed hypothesis is a stimuli program in increasing the ability of media literacy in early childhood. The method used is a quasi experiment with a non-equivalent control group design. The research subjects were 30 children aged four to five years who were divided into experimental and control groups. Based on the results of the analysis through the non-parametric Mann-Whitney U statistical test, it was found that there were differences in the increase in the ability of media literacy in the experimental group with the control group. The qualitative analysis shows the results of an increase in literacy ability by observing changes in measurement results. The results of this study are important as new studies in finding alternative methods of early childhood stimuli.

Keywords: stimuli, literacy, media, early childhood.

*Penulis Korespondensi
Institusi dan Alamat Institusi

: Nofha Rina
: Telkom University, 1. Telekomunikasi Jl. Terusan Buah Batu,
Sukapura, Kec. Dayeuhkolot, Bandung, Jawa Barat 40257

INTRODUCTION

Reading culture in Indonesian society occupies the lowest position of 50 countries in East Asia based on the results of a survey conducted by the Organization for Economic Cooperation Development. In addition, the ability of elementary school children in Indonesia is still very low, where of the 37 countries studied, Indonesia ranks 30th according to the results of a survey conducted by the IEA Study of Reading Literacy. The difficulties are found in children in primary schools in Indonesia one of which is the basis of language ability at an early age.

According to Snow in Hoff, 2005 stated that in children aged between 2 to 5 years have been able to demonstrate literacy abilities quite rapidly. In children aged 0 to 3 years, children should be able to recognize books through the cover, write letters, and listen to stories. Then, in children at age 3 to 4 years has been able to recognize handwriting in a simple, familiar sound of different languages, relates the story in the book to reality, and was interested to read a book. Whereas for children who are 5 years old, they should be able to predict the story line in books, be able to write names and words with dictation.

Researchers conducted a survey of 34 women in Posyandu Soka 9, Cipadung Kulon Village, Bandung City. These women had a child who had an age range of 3 to 5 years. The survey was conducted by giving questionnaires to the mothers that contains the experiences and developments that have been obtained child literacy. The survey results showed that most children have not shown the development of literacy skills as expected. If it is allowed, it can cause trouble adapting to the child's learning activities in formal school teachers and also cause difficulties in developing other skills.

Therefore it is very appropriate if the child is given a more directed stimulus from his parents. In addition to stimulation, other factors that cause a lack of mastery of literacy at an early age is a learning method that less attention to the characteristics of children. Ruhena (2013) states that the learning process in children is still a lot that using conventional methods, ie parents or teachers to teach children to memorize the alphabet name repeatedly with the media board and mimicked the teacher how to say it. Therefore, this matter should be a concern of all parties, especially parents, so that as early as possible introduce children to reading and writing activities with fun methods.

Literacy experience of children at preschool age is believed to form a strong foundation on the development of reading (Levy, Gong & Hessel, 2005). Knowledge, skills, and attitudes that form the basis of preschool children to read and write so-called early literacy skills (Whitehurst & Lonigan, 2001).

Teaching to children must be fun because learning that does not use media or playing methods is less able to optimize the psychological, physical and sensory functions of children who are developing rapidly. Children need opportunities to explore, move, and fulfill their play needs.

According to Vygotsky (1978) that children actively construct knowledge, and focuses on how important social interaction of culture on their cognitive development. Thus, children's cognitive development is influenced by patterns of interaction with the people closest to the child, namely how parents provide stimulation of literacy skills in children. For children, home is the first school, with parents as teachers and reading is the first lesson. So if stimulated early on children will be able to master the ability of subsequent literacy more easily. Therefore, a structured activity in a literacy stimulation program for children at home is needed in a consistent and appropriate manner.

Based on the explanation above, it can be seen that in providing stimulation in children should be in accordance with the characteristics of children oriented fun activities. The method and media used are important factors in fulfilling a pleasant literacy activity. Therefore, this study tries to implement a stimulation program for children at home with methods and media that are appropriate

to the child's characteristics. The intended program is in the form of a literacy package consisting of a literacy activity guide and media literacy, as well as socialization for parents.

This study aimed to test the effectiveness of the stimulus program to improve early literacy skills in preschool children. The hypothesis is effective stimulation program to improve early literacy skills in preschool children.

METHOD

The variables studied in this research that the stimulus program as the independent variable or tritmen, as well as early literacy skills as the dependent variable. Stimulation program is instrumental support by providing a package of literacy for children accompanied by socialization for mothers.

Literacy packages contain activity manuals and media literacy including children's story books, dolls, educational games and stationery. While socialization is a verbal guide for mothers in order to facilitate the child during the program. The program lasts for one month with the help of her mother as a secondary subject to record children's activities undertaken during this period. Early literacy skills are knowledge, attitude and skills of an early childhood associated with reading and writing before mastering formal ability at school age.

The ability is measured using a measuring instrument from our preliminary literacy contain components of early literacy, that interest in reading, language skills, phonological awareness, reading, and writing skills. The higher the score obtained by the subject, the higher the literacy ability. The lower the score obtained, shows the lower the literacy ability of the subject.

This research uses quasi experimental methods that have treatment, impact measurement, and has a control group design with nonequivalent control group design. The treatment given to the experimental group was in the form of a literacy package. While the control group was not given any treatment. The total number of subjects in this study were 30 children aged 3-5 years who were divided into experimental and control groups

Data analysis in this research uses a embedded embedded strategy that applies one stage of quantitative and qualitative data collection at a time. The secondary method which is not prioritized is added to the more dominant method, meaning that the secondary method serves to describe the problem formulation differently from the primary method.

Quantitative analysis is done by processing the initial literacy ability scale score using the Mann-Whitney U Test which is a non-parametric statistical measurement. The complete calculation is done with the help of computer statistics program SPSS for MS Windows version 16. Subject scores were obtained from measurements of pretest, posttest and follow-up. Based on these scores, the difference between the score obtained (post-test with pretest and follow-up with posttest). Difference score is exactly what is then analyzed using SPSS to know the difference between subject groups.

The qualitative data obtained through the scrutiny of the change score early literacy skills at pretest and posttest to follow-up. This observation is also supported by an analysis of children's activity records written by the mother as the child's tutor. Data from this recording can be used to explain changes in scores that occur before and after treatment on the subject.

RESULTS AND DISCUSSION

The measurement results in this study consisted of an initial literacy ability score. Descriptive data on the acquisition of scores can be seen in Table 1.

Table 1
Descriptive Data Scores for Early Literacy Ability

Group	N	Step	Range	Minimum	Maximum	Mean	SD
Experiment	15	<i>Pretest</i>	28	3	31	14.27	7.759
		<i>Posttest</i>	23	13	36	22.07	6.307
		<i>Follow Up</i>	24	6	40	24.60	7.434
Control	15	<i>Pretest</i>	29	7	36	17.07	7.968
		<i>Posttest</i>	30	6	36	16.60	7.980
		<i>Follow Up</i>	29	6	35	14.40	7.109

Data Source: Research Findings (2020)

Initial literacy scores were analyzed using Mann-Whitney U because the sample in this study was small. The Mann-Whitney U Test aims to find out whether or not there is a difference in the initial literacy ability improvement in the two groups. The test is done by comparing changes in scores that occur in each group. While the results of the hypothesis test can be seen in Table 2.

Table 2
The Results of The Statistical Analysis of The Mann-Whitney U Test

	Literacy Ability
Z	-4.679
Asymp. Sig. (2 tailed)	.000
Exact Sig. [2*(1-tailed Sig.)]	.000 ^a

Data Source: Research Findings (2020)

Table 2 shows the difference in improvement of literacy skills early in the experimental group and the control group ($p = 0.000$; $p < 0.05$). That difference is also shown by the mean difference in each group. Early literacy skills in the experimental group had a higher mean than the control group. This shows that the group given the literacy package increased their literacy ability better than the group that did not receive treatment.

Qualitative analysis was performed by observing the change score early literacy skills as well as notebook activity. Aspects of early literacy skills that have increased in each child is different. Reading interest shown by the response that tells the child sees the book contents when receiving the books. Improved aspects of language shown by the child's ability to communicate the answers in each question, especially problems in the language aspect.

Then, phonological awareness shown by the children's ability to spell simple syllables. During the initial measurement the subject only repeated the words mentioned, but some subjects were able to pronounce them by spelling syllables during the second measurement. The ability to read the subject is shown by its understanding in reading rules, related to the direction of reading and recognizing the cover of the book. However, to read simple words and mention of the alphabet with the sequence still many children who have not mastered. Meanwhile, in the aspect of writing, the increase in the subject shown by its ability to draw the line and thicken said.

Based on the notebook activity, it is known that the activity of a child who likes to do with his parents at home is bet. Plasticine which became one of the media in the package into the game fairly popular subject. Some subjects who experienced a significant increase in early literacy skills received good support from families, especially mothers. The support is in the form of assistance and motivation so that subjects are consistently interested in literacy activities at home. Therefore, parents should be aware of the importance of stimulating yourself and have an understanding of the effective ways to do so.

Early literacy skills known to have increased in all subjects during the course of the program. Aspects of literacy ability increase evenly on all subjects. The increased literacy ability is strongly

influenced by the experience the subject has gained. The experience gained by the subject during the research process is the provision of media literacy which aims to improve various aspects of literacy skills.

In qualitative analysis, it can be said that the early literacy skills can be improved by providing stimulation in the form of media literacy that appeal to children. In addition to interesting media, the role of the family environment is very important. That is because children need guidance or assistance from parents as tutors for children. Mothers who are able to motivate the child must have an awareness of the importance of providing stimulation to children as early as possible.

The results of this research are in accordance with the concept of Vygotsky's theory (1978) which emphasizes the sociocultural nature of the learning process. Intelligence in children grows with their interactions with the environment. The influence of the environment in the form of giving the right stimulus is literacy stimulation. Vygotsky put forward the concept of the Zone of Proximal Development (ZPD), scaffolding, and cooperative learning. ZPD is the process of a child learning new things which are in the potential areas of their ability.

In this research, stimulation is intended to provide a new literacy experience for children. The literacy experience is done by providing stimuli through literacy media that can foster the interest of the subject to do new activities in literacy. Based on these results, it is known that the provision of new experiences in the form of stimulation has been able to improve early literacy skills on the subject.

Scaffolding is the provision of assistance or guidance given adults in children in the early stages of learning to children can be more independent in solving various problems. Mother's indispensable role as the closest thing to help the subject using literacy package. The role given by the mother of the subject in this research is assistance when the subject wants to do literacy activities. For example, read a story book, introducing the letters, teach how to write. It is known from research that a given role in guiding and motivating mothers subject, is able to improve early literacy on the subject.

In this research, one of the stimulation provided in the program is to provide an interesting story books for the subject. Increased aspects of literacy skills can occur by reading story books. This is consistent with the results of research conducted by Aram, Most & Mayafit (2006), Stephenson, Parilla, Georgiou, & Kirby (2008), Raikes, BrooksGunn, Raikes, Pan, & Tamis La-Monde (2006) which states that stimulation in children in the form of reading a story book correlates with phonological awareness, general knowledge, and receptive language.

Shared book reading by children and parents can improve expressive vocabulary and morphological knowledge. It is also demonstrated in this study in which the development of language and phonological awareness of the subjects showed better progress after being given a children's book and use it with parents.

Children gather knowledge of understanding language begins from birth to the age of 6 years. Such knowledge is not gained through teaching, but through simple behavior by participating in literacy activities.

Literacy activities support the achievement of children's literacy abilities (Burgess, 2002; Lynch, 2008). In line with the results in this study, subjects who receive treatment stimulation program showed better literacy skills than the subjects not given program.

However, different from previous research that provides treatment through training in the mother or child, this study tries to provide stimulation in the form of literacy packages that can be used by children and parents in the home. In addition, several previous studies using only one type of method to improve one aspect of literacy.

Meanwhile, one of the contents in the literacy package of this study is a literacy activity guide that uses multimethods to improve early literacy skills including reading interest, language skills, phonological awareness, reading skills and writing skills.

The stimulation provided in the form of a one-month program on the subject is able to help the subject in increasing his literacy skills. It is known from the acquisition of subject scores, interview with the mother, and observations on the subject's behavior changes. Based on interviews, it is known that mothers find it helpful to provide literacy packages that are very useful in stimulating the literacy skills of the subject.

Awareness and understanding of parents of the importance of literacy stimulation becomes the basis for developing the literacy skills of children. Parental understanding is related to the right way or technique used in carrying out literacy activities with children.

Most parents in this study are less able to develop creativity to diversify activity in children, so that children experience boredom after the program ends. This shows that in Indonesia, parents tend to be passive in encouraging children to be active in literacy activities.

CONCLUSION

The results showed that the stimulation program was effective in increasing literacy abilities. The next finding is that parents' awareness and understanding of the importance of literacy stimulation is the basis for developing children's literacy abilities. This proves that by providing stimuli in the form of appropriate media literacy for children can foster children's interest in literacy activities thereby increasing their literacy abilities.

The importance of the type of media and literacy methods chosen is a challenge for parents to always be creative so that children are happy to do literacy activities. Therefore parents are expected to be active in developing their knowledge and skills to guide children in literacy activities.

BIBLIOGRAPHY

- Aram, D., Most, T., Mayafit, H. (2006). Contribution Of Mother-Child Story- Book Telling And Joint Writing To Literacy Development In Kinder- Garteners With Hearing Loss. *Language, Speech, And Hearing Services In School*, 37(1), 209-223.
- Burgess, S. R., Hecht A. S., & Lonigan, C. J. (2002). Relation Of The Home Literacy Environment (HLE) To The Development Of Reading-Related Abilities: A One-Year Longitudinal Study. *Reading Research Quarterly*, 37(4), 408-426.
- Farida, E. (2002). Kemampuan Bahasa Taman Kanak-Kanak. *Jurnal Psikologi Pendidikan*. Bandung: FIP UPI.
- Hoff, E. (2005). *Language Development*. Belmont, CA : Wodsworth Learning.
- Justice L. M., & Kaderavek, J. (2002). Using Shared Storybook Reading To Promote Emergent Literacy. *Teaching Exceptional Children*, 34(4), 8-13
- Lynch, J., Anderson, J., Anderson A., & Shapiro J. (2006). Parent's Beliefs About Young Children's Literacy Development And Parent's Literacy Behaviors. *Reading Psychology*, 27, 1-20. Doi: 10.1080/02702710500468708.
- Levy, B.A., Gong,Z., & Hessel, S. (2005). Understanding Print: Early Reading Development And The Contribution Of Home Literations Of Home Literacy Experiences. *Experimental Child Psychology*, 93, 63-93.
- Raikes, H., Luze, G., Brooks-Gunn, J., Raikes, H. A., Pan, B. A., & Tamislemonda, C.S., (2006). Mother Child Book Reading In Low Income Families: Correlates And Outcomes During The First Three Years Of Life. *Child Development*, 77(4), 924-953.

- Ruhaena, L. (2013). Proses Pencapaian Kemampuan Literasi Dasar Anak Prasekolah Dan Dukungan Faktor-Faktor Dalam Keluarga. Universitas Muhammadiyah Surakarta.
- Senechal, M., & Young, L. (2008). The Effect Of Family Literacy Intervention On Children's Acquisition Of Reading From Kindergarten To Grade 3: A Meta Analytic Review. *Review Of Educational Research*, 78(4), 880-907.
- Stephenson, K. A., Parilla. R. K., Georgiou, G. K., & Kirby, J. R. (2008) Effects Of Home Literacy, Parent's Beliefs And Children's Task-Focused Behaviour On Emergent Literacy And Word Reading Skills. *Scientific Studies Of Reading*, 12(1), 24-50. Doi: 10.1080/10888430701746864.
- Vygotsky, L. S. (1978). *Mind In Society*. Cambridge, MA: Harvard University Press.
- Whitehurst, G. J. & Lonigan, C. J. (2001). Emergent Literacy: Development From Prereaders To Reader. Dalam S. B. Neuman & Dickinson (Eds), *Handbook Of Early Literacy Research* (Pp. 11-28). New York: Guilford Press.