Developing Educational Game Tools of JUMOFAN (Fantasy Jumanji Modification) to Enhance the Begining Literacy Ability to the Children of 4-5 Years Old

Nurul Khotimah[1,*] Rizka Aisyah[1] Ruqoyyah Fitri[1] Yatim Riyanto[1]

[1] *Early Childhood Education Department, Universitas Negeri Surabaya, Surabaya, Indonesia*
Corresponding author. Email: nurulkhotimah@unesa.ac.id

ABSTRACT

The Language aspect is the one of the children's development aspects, which needed to be noticed because the children to communicate with other people used language. The language development aspect is the one of six aspects, which should be developing in kindergarten. The current research had purpose to disseminate, the educational game tools of JUMOFAN product properness and effectiveness. The research method applied in this research was Research & Development by Borg and Gall. The researcher used R&D in level 3, which behaved to develop the product, had been existed. Moreover, the one-group pretest-posttest design, which was applied to the children 4-5 years old in Surabaya with number of kids, is 10. Besides, a content validity those are validating by two expert judgments, both media and content is confirmed valid. Furthermore the major finding using Wilcoxon test obtained the JUMOFAN is effective to develop the children language ability. Moreover, this study contribute in an educational curriculum to use game tools of JUMOFAN (Fantasy Jumanji Modification) in order to develop children' proficiency in language.

Keywords: Immerging Literacy, Educational Game, JUMOFAN Game

1. INTRODUCTION

Early Childhood Education is an effort aimed at individuals aged 0-6 years to stimulate their growth and development. This education is needed by early childhood because children at this age are in the golden age (golden age). Early Childhood Education is divided into three channels of education that can be obtained by early childhood namely the informal, formal, and non-formal channels.

Kindergarten provides basic stimulation for children aged 4-6 years which will be divided into six aspects of development, the six aspects of development namely aspects of NAM (Values, Religion, and Morals), SE (Social-Emotional), physical motor, cognitive, language and art.

"Language aspects are one of the children's development aspects that require to be considered, because the main function of language for children is to communicate with others. Children's language skills cannot automatically be self-controlled by the children,

but through active communication with others and the use of appropriate and precise language will stimulate children's language development skills [4].

The language aspect is one aspect of children's development that needs to be considered because children to communicate with others use language. The use of appropriate language will stimulate the development of children's language skills so that aspects of language development is one of the six aspects that must be developed in kindergarten.

Levy, Gong & Hessel [3] explain that the literacy experience of children at preschool age is believed to form a strong foundation on the development of reading. The knowledge, skills and attitudes of preschoolers that form the basis of reading and writing are called early literacy abilities [3] According to Schickedanz [7], the importance of detecting early literacy abilities of early children will provide information related to reading and writing diffculties, so early children's literacy abilities need to be detected early to be able to provide the best stimulation.

According to the Permendikbud RI No. 137 of 2014 concerning PAUD National Standards, one of them describes STPPA in the scope of language development, one of which is early literacy of children aged 4-5 years including: (1) recognizing symbols; (2) recognize the sounds of animals / objects around them; (3) making meaningful scribbles; and (4) imitate (write and pronounce) the letters a-z.

Based on observations made by researchers at TK Bina Tunas Bangsa on December 2, 2019. Observation activities recognize early literacy that is imitating (pronouncing and writing) letters and the introduction of letter symbols in children aged 4-5 years (TK A). Play and learn activities in these two schools use a classical learning model using blackboard media and book boxes. The teacher writes the letters on the board at random and then the teacher tells the child to say them.

Based on observations with 11 children, 5 girls and 6 boys. The focus of this observation activity is the early literacy ability; the researcher observes that there are 8 children out of 11 children who have developed. The percentage of 8/11 x 100 is 72.7%. In addition, while children who have not yet developed are 3 out of 11 children. If the calculation of the percentage is obtained, the result is 3/11 x 100 = 27.3%.

Children in this school still find it difficult to distinguish similar letter symbols, such as letters b and d and letters n and m. Children are also still difficult to pronounce letters that have sounds similar to the letters m and n. Next the child writes the letters on the board using the book box media. From these observations there are still children who have difficulty in writing letters, for example writing the letter s.

From interviews with teachers in Bina Tunas Bangsa Kindergarten using blackboards, book boxes, "let's read volumes" books, and letter boxes. At the school there is no APE that supports children's activities in recognizing early literacy so that children only use existing media. From the results of the literacy introduction activities carried out by the teacher the child can follow well, but in these activities an APE is needed in order to be able to increase children's interest and assist the teacher in preparing the activities.

In the modern era, many things continue to develop from day to day, especially in the world of education; this also applies to the development of Educational Games in PAUD. Educational Game Tools (APE) are all things that can be used as a means or equipment to play that contain educational values (educative) and can develop all abilities of children according to the PAUD Directorate [7]. Along with the times, the needs of this Educational Game Equipment need to be developed so that the early literacy development of kindergarten children A becomes more maximal.

According to [9] explains that the jumanji game was adopted from a fantasy American thriller made in 1995. Joe Jhonston directed the film by adapting from a novel by Chris Van Allsburg in 1981, which tells a magical game in which there are animals, and the stars will come out if printed on the board. The game is finished when one of the games can reach the Jumanji point.

Educational game tool JUMOFAN is an educational game tool that introduces early literacy, namely introducing symbols and imitating the words a to z, looking for animals that have the same letter prefix, classifying vowels and consonants, and imitating writing letters a-z. This game comes from a game adapted from a film called "Jumanji" where in this magical game there are animals that will come out if printed on the board. Here the researcher develops, tests the feasibility and effectiveness of this APE as an Educational Game Tool for children aged 4-5 years to develop aspects of language development, especially early literacy.

This JUMOFAN (Fantasy Modification Jumanji) game uses hard cover material, which is length and width 35 cm x 28 cm, where the board game has been designed with the original jumanji game with a forest theme. This game is equipped with challenge cards for the introduction of early literacy in the form of letters and pictures of animals. Children's writing skills are also supported by the presence of whiteboard stickers and markers and erasers that can be used to practice writing letters. to determine four pieces of pawns as pawns to walk and dice the extent to which players walk through the box.

Based on the problems encountered above, researchers will conduct research under the title JUMOFAN (Fantasy Modification Jumanji) development to improve early literacy skills for children aged 4-5 years. Media that is often used to stimulate children's language development especially early literacy in schools is still small and still not developing, so with this JUMOFAN Educational Game Tool is expected to become a new media as a result of innovation to stimulate early literacy skills of children aged 4-5 years.

2. METHOD

This research used Research and Development (R&D) from Borg and Gall. This Educational Development Tool Research was conducted to find out product development, understand product viability, and understand the effectiveness of APE products to improve early literacy abilities of children aged 4-5 years.

The trial subjects in the research development of the JUMOFAN Educational Game Tool are children aged 4-5 years at TK Bina Tunas Bangsa Surabaya. In determining the sample using non-probability sampling with the type of quota sampling. Researchers took a

sample of 10 children with the provisions received 4-5 years.

This study was carried out through observation (interviews), interviews (interviews), and questionnaires (questionnaire).

The trial design used was a pre-experimental trial design with the type of one group pretest-posttest design. Data analysis techniques used the Liliefors test to determine data normality. If the data generated is normal then use paired t test. While agreeing to be abnormal will start using the Wilcoxon test.

3. RESULT AND DISCUSSION

The following are the stages that are applied in the development of the JUMOFAN (Fantasy Modification Jumanji) to improve early literacy skills of children aged 4-5 years:

3.1. Research and Information Collecting

In the first stage observing and interviewing to obtain data in the form of problems with the initial literacy skills carry out the research and development or R&D. According to [1] revealed that researchers helped children in overcoming difficulties mastering the letters of the alphabet by using mnemonic methods

Researchers then conducted a literature study and found that APE has an important role, because through APE play and learning activities will take place smoothly, interestingly, creatively, and fun [2]. Of the problems that arise as well as the study of literature, so researchers develop a product called JUMOFAN (Fantasy Modification Jumanji) to improve early literacy abilities

3.2. Planning

Product development planning that must be done first is the selection of content or material content. JUMOFAN Educative Game Tool in the form of a rectangle measuring 35 cm x 28 cm with as many as 2 pieces which will be combined (dihard cover) with one of the squares divided into two sides, so that after being merged later the square will be opened and closed. Modification jumanji game is also equipped with 4 pieces of color pieces. This board game is made like a track consisting of four different tracks. In the middle of the JUMOFAN board there is a circle as a stop or finish. The design can be seen from the following Figure 1 and 2.
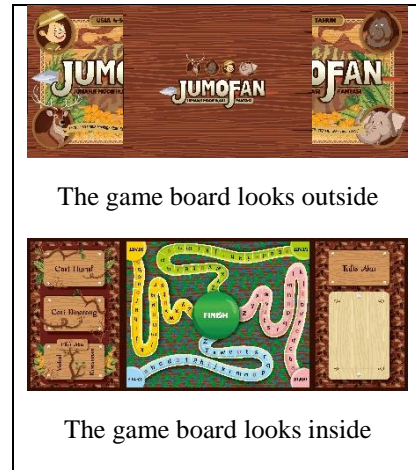

The game board looks outside

The game board looks inside

Figure 1 APE JUMOFAN Product Design

Cari binatang	Cari huruf	Pilih aku	Tulis aku
Challenge cards looking for animals with the same prefix	Challenge cards looking for the same letter	Challenge cards choose vowels or consonants	Challenge card writing letters

Figure 2 Challenge Card Design

| Kartu menulis | Kartu nama hewan | Kartu huruf | Kartu huruf vokal |

Figure 3 JUMOFAN Design Challenges

| Pawns | Dice | Reward | Markers and erasers |

Figure 4 JUMOFAN's Tools

Cover Design   Content Design

Figure 5 JUMOFAN's Handbook Design

3.3. Develop Preliminary Form of the Product

Based on the results of the validation of the material experts get a value of 98.86% and the results of the validation of the media experts get a value. In accordance with the product evaluation criteria, it is categorized very well so that it is suitable to be used to stimulate early literacy activities of children aged 4-5 years.

3.4. Preliminary Field Testing

Product testing was carried out on children aged 4-5 years in class A1 TK Bina Tunas Bangsa with a sample of 10 children. The trial was conducted by giving a pretest, then giving treatment, and giving posttest to children. The result can be seen from the following diagram:
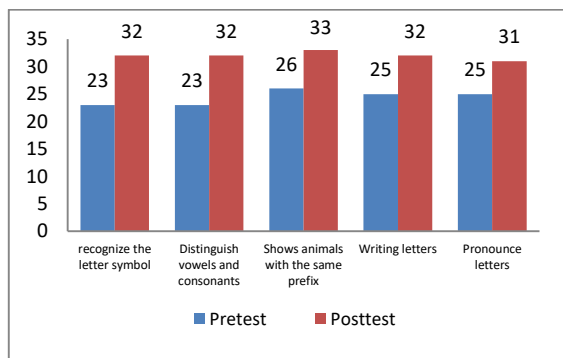

Figure 6 Results of Recapitulation of Pretest and Posttest Activities. *Source: Observation data*

The data of normality test used liliefors test. The result of liliefors test in pretest was obtained L counted (1.1005) > L table (0.258) it meant that the sample distributed abnormal. Whereas, the result of liliefors test in posttest was obtained L counted (1.10594) > L table (0,258) it meant that the sample distributed abnormal. Both data distributed abnormal, so it was continued by using wilcoxon test. The data of pretest and posttest results in Bina Tunas Bangsa kindergarten Lidah Wetan Surabaya using wilcoxon test was obtained T counted < T table (0 < 8). The conclusion was that the educational game tools of JUMOFAN (Fantasy Jumanji Modification) was proper and effective to be used for enhancing the beginning literacy ability to the children 4-5 years old.

3.5. Main Product Revision

Based on information, criticisms, and suggestions obtained improvements to product deficiencies in order to improve the product that is improving the rules of the game and improving the contents of the JUMOFAN educational game manuals.

JUMOFAN's Educational Game Tools can develop abilities in children aged 4-5 years through challenges given in games, including: (a) children will be able to be confident through the rules of the game that are done individually, but children will also be able to communicate with friends because this APE is played as a group; (b) Children's imagination will emerge along with the theme of the game that raises about the forest and animals; (c) The ability to think children will be aroused through the challenges given.

This study contribute in an educational curriculum to use game tools of JUMOFAN (Fantasy Jumanji Modification) in order to develop children' proficiency in language. Furthermore, Baltra [5] added that playing is something that children really like, besides learning activities because through playing children will be able to socialize with their peers and that's where the child will start communicating. The communication activities will add to the child's vocabulary so that aspects of early childhood language will be more developed, so that through play activities using APE JUMOFAN, will be able to stimulate the early literacy skills of children aged 4-5 years.

4. CONCLUSION

Based on the data interpretation of results and the discussions that have been put forward before, it can be explained that can be improved with the Educational Game Tools of JUMOFAN. This game tool makes children happy and happy, because children can play while learning. This game tool makes it easy for children in early literacy activities, namely recognizing symbols, approving (proving and proving) the letter a-z.

So, the suggestions in this research are as follows: (1) it is hoped that educators or product users can use APE JUMOFAN as an Educational Game Tool that can support learning activities, especially early literacy. In addition, it is expected to read and update the guidebook first before requesting a JUMOFAN Educational Game Tool for children. (2) It is expected that further researchers in making an Educational Game pay attention to the content or content to be shared, the goals, characteristics of children, and rules of play. (3) Kindergartens are expected to be able to apply Educational Game Tools to learning activities so that learning activities in kindergarten are more interesting and enjoyable for children. (4) It is hoped that Educational Game Equipment companies can produce Educational Game Tools that pay attention to content or content to fit the child's age wall.

REFERENCES

[1] K. E. Dilorenzo, C. A. Rody, L. B. Jessica, M. P. Brady, "Teaching Letter–Sound Connections with Picture Mnemonics: Itchy's Alphabet and Early

Decoding," *Preventing School Failure*. vol. 55, no. 1, pp. 28-34, 2011.

[2] M. Fadlillah, *Buku Ajar Bermain&Permainan*. Jakarta: Kencana, 2017.

[3] W. Hapsari, L. Ruhaena, W. D. Pratisti, "Peningkatan Kemampuan Literasi Awal Anak Prasekolah melalui Program Stimulasi," *Jurnal Psikologi*, vol. 44, no. 3, pp. 177-184, 2017.

[4] U. Kustiawan, "The Development of Diorama Learning Media Transportation Themes to Develop Language Skill Children's Group B," *REM-Research on Education and Media*, vol. 10, no. 2, pp 26-31, 2017.

[5] B. Meyer, "Game-Based Language Learning for Pre-School Children: A Design Perspective," *Electronic Journal of e-Learning,* vol. 11, no. 1, pp 39-48, 2013.

[6] Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia, *Undang-Undang No.137 tahun 2014 tentang Standar Nasional Pendidikan Anak Usia Dini*. Jakarta, 2014.

[7] Wartomo. "Membangun Budaya Literasi Sebagai Upaya Optimalisasi Perkembangan Bahasa Anak Usia Dini". Universitas Terbuka, 2017.

[8] N. A. Wiyani & Barnawi, *Format PAUD*. Jakarta: Ar-Ruzz Media, 2012.

[9] T. Yuliatun, *Pengembangan Instrumen Penilaian Berbasis Media Permainan Jumanji Untuk Mengukur Penguasaan Materi Fisika Dan Pencapaian Minat Belajar Peserta Didik SMA. Skripsi tidak diterbitkan*. Yogyakarta: Pendidikan Fisika Universitas Negeri Yogyakarta, 2017.