AL HIKMAH: INDONESIAN JOURNAL OF EARLY CHILDHOOD ISLAMIC EDUCATION
ISSN (P): 2550-2200, ISSN (E): 2550-1100,
VOL. 8 (1), 2024, PP. 44 – 50
https://journal.uaindonesia.ac.id/index.php/ijecie

# Effectiveness of Think Table Learning Media in Improving Students' Logical Thinking Abilities

**Mohammad Tsaqibul Fikri[1]✉, Siti Labiba Kusna[2], Farida Isroani[3]**
[1 2 3] Universitas Nadlatul Ulama Sunan Giri, Bojonegoro, Indonesia

**ARTICLE INFO**

*Article history:*
*Received June 06, 2024*
*Revised June 07, 2024*
*Accepted June 10, 2024*
*Available online June 29, 2024*

**Keywords:**
Early Childhood, Ability to Think Logically, Think Table Media.

This work is licensed under a Creative Commons Attribution 4.0 International License.

Copyright © 2024 by Author. Published by Universitas Al-Hikmah Indonesia.

**ABSTRACK**

The period of development and growth in a child's life is very fundamental, children begin to be sensitive to accepting various developmental efforts, one aspect of child development is logical thinking. The results of observations made at TK Islam an Nur, Purwosari District, Bojonegoro Regency. The results of observations made showed that the achievements in the development of logical thinking in children aged 4-5 years were still not optimal, this was due to the lack of media to improve children's logical thinking abilities. This research aims to produce Think Table media products to improve logical thinking skills. The type of research used is (Research and Development) with the ADDIE development model which includes 5 stages, namely analysis, design, development, implementation. and evaluation.The product results validated by media experts received a score of 95% in the very appropriate category and material experts received a score of 97% in the very appropriate category. Meanwhile, the results of the pre-test activities got a score of 66% in the good category, the treatment activities for 2 days by stimulating children using Think Table media.

## INTRODUCTION

Early childhood is very valuable and fundamental throughout the development and growth of human life (Slamet, 2005). In children aged 4-6 years, children begin to be sensitive to receiving various efforts to develop their full potential. Therefore, giving more attention to early childhood is a form of concern by providing education either directly from their own parents or through early childhood education institutions. According to Minister of Education and Culture Regulation number 37 of 2014, it is stated that early childhood education is education for young children that stimulates and optimizes their development.

There are 6 aspects of child development which include religious and moral values, cognitive, socio-emotional, linguistic and physical and motor values. One aspect of early childhood development is cognitive, which has indicators including: learning and problem solving, symbolic thinking and logical thinking.

Cognitive logical thinking (Piaget, 2020) is related to seriation, transitivity, and conservation. Seriation is what involves ordering objects for size, shape, or other

characteristics. Transitivity is the capacity to combine relationships logically to draw certain conclusions. Conservation is understanding that the quantity, length or number of objects is not related to the appearance of other objects.

Logical thinking for children plays an important role in everyday life. Logical thinking is defined as the process of reaching conclusions using consistent reasoning, cause and effect thinking, thinking according to certain patterns or logical inference rules or logical principles to obtain conclusions. Logical thinking is a thinking process using logic and reason, solving mathematical problems rationally is a characteristic of logical thinking (Sumarno, Hidayat 2013).

Children's logical thinking is based on experience of concrete objects, to facilitate this development, learning can be stimulated using learning media. According to Kustandi and Stjipto (2022) learning media are tools that help the teaching and learning process so that learning goals can be achieved better and more perfectly. According to Moreira, learning media are instruments used to show facts, concepts, principles and procedures to make them more real or concrete. The purpose of learning media as a learning tool is to facilitate the learning process, increase the efficiency of the learning process, maintain the relevance of learning material to learning objectives and help children concentrate in the learning process.

Based on observations at TK Islam An Nuur Purwosari, it is clear that children's developmental achievements in logical thinking abilities have not increased. The use of media in institutions that is less than optimal makes children bored so that children's understanding of logical thinking is not optimal (Matondang, et al. 2021), for example in educational activities educational institutions often use LKA (Children's Worksheets), learning is less fun and interesting. The use of real or concrete and interesting learning media makes activities fun and increases learning motivation (Gagne, 2022). One fun and interesting media is Think Table media.

Think Table media, which means thinking table, is a game tool in the form of a table for children with various kinds of games that exist in everyday life (R Yani et al, 2021). The initial basic material for ThinkTable media is wood which is shaped like a table. Think Table media has several types of games that can improve children's logical thinking. This game was chosen because it can create a fun atmosphere, arouse curiosity and with real material makes it easier for children to improve their logical thinking abilities.

The formulation of the research problem is what is the process and results of developing Think Table learning media to improve the logical thinking abilities of children aged 4 - 5? This research aims to explain the process and results of developing Think Table learning media to improve the logical thinking abilities of children aged 4 - 5 years.

## METHODS

This research uses the Research and Development method or what is often called Research and Development. Development is a strategy or research method that is powerful enough to improve learning practices, according to Sugiono (2013) that (Research and Development) or R&D research is used to produce certain products and test the effectiveness and feasibility of the product or not. The aim of this research is to develop learning media in the form of the Think Table game media to improve logical thinking skills.

This research uses the ADDIE development model which consists of five stages which include analysis, design, development, implementation and evaluation. The research steps for developing ADDIE are as follows. The analysis stage consists of two parts, namely performance analysis and needs analysis. The first is performance analysis, at this stage it is carried out to find out and find problems in learning, especially the logical thinking abilities of children at TK Islam Annur Purwosari that have not yet improved. Then Needs analysis to find solutions to existing problems by using learning media that is adapted to learning materials in a creative and interesting way to improve student learning outcomes.

The learning media used by researchers to overcome this problem is Think Table media. It is hoped that this media will succeed in creating a more interesting learning atmosphere and so that all children are more active.

## RESULT

At the design stage, design is done by creating media that suits the analysis of problems and needs. Then create a Think Table learning media design using the Canva application, including the top of the Think Table with 8 games, Think Table legs, and Think Table drawers. The researcher also prepared a validation sheet and instruments as a reference for revising the product being developed.

In the development stage, this is the stage of creating Think Table media. The final result of this stage is a product that will be tested. The stages carried out by researchers in developing learning media are creating learning media from a design and material perspective. carry out reviews or consultations on Think Table learning media development research with validation by a team of media experts and material experts, improve or revise learning media in accordance with suggestions and input from a team of media experts and material experts so that there is a comparison of the initial media and media after revision, and Data obtained from media validation results are analyzed and presented to determine the feasibility category of the media being developed.

At the implementation stage, the feasibility of Think Table media was carried out through trials carried out by 18 children aged 4-5 years. Researchers also distributed observation sheet questionnaires on children's logical thinking abilities which were filled out by teachers when children were trying out Think Table media products according to the indicators they wanted to achieve by conducting pre-tests and post-tests. This is done to see children's logical thinking abilities using Think Table media.

At the evaluation stage, namely the stage of assessing the suitability of the Think Table media by media experts and assessing the ability to think logically so that a conclusion can be reached as to whether or not the Think Table media that has been developed is appropriate.

In this research, the data collection techniques and instruments used in developing Think Table media were using observation and questionnaires. Observation is a technique used by researchers to evaluate children's logical thinking abilities using Think Table media. This observation sheet is used to measure practicality with the aim of obtaining data regarding children's development using Think Table media.

Meanwhile, the questionnaire in this research consists of a validation questionnaire sheet, where the validation questionnaire sheet is intended for material experts and media experts to find the feasibility of the product being developed. Through questionnaires given to material experts and media experts, researchers can collect data from respondents and gain an understanding of the variables they want to measure. The analysis technique is carried out by analyzing the feasibility of the Think Table media, product feasibility is determined by calculating the average aspect value for each validator.

In this research, the product produced is Think Table learning media to improve logical thinking skills in children aged 4-5 years in TK Islam Annur. The Think Table media development process uses the ADDIE development model, namely analysis, design, development, implementation and evaluation, which consists of five stages.

The first stage in development is analysis. At this stage there are two parts, the first is performance analysis and the second is needs analysis. In the first part, analyzing the existing problems by visiting the institution to make observations on February 28 2023. Based on the results of the observations made, the researchers obtained information, namely regarding children's developmental achievements in logical thinking abilities which have not yet improved, namely children have not been able to group objects based on size, recognize causal symptoms related to themselves, recognizing objects by pairing objects with their partners and recognizing patterns for example ABC-ABC and repeating them.

This is because the media is less than optimal in learning and the frequent use of LKA (*Children's Worksheets*) is seen in the RPPH that has been used by institutions so that children lack the ability to think logically. According to (Gagne, 2022), the media needed by early childhood is real or concrete and interesting media so that the learning process can be understood and enjoyable for children.

Next, the second part of the needs analysis is to determine media that suits the needs of the problems faced by children by determining the content of media material, attractiveness, safety and size. With the developmental achievements contained in STPPA (Child Development Achievement Level Standards) regarding logical thinking indicators for children aged 4-5 years to improve logical thinking abilities. Based on this analysis, researchers provide solutions to develop Think Table learning media to improve logical thinking abilities.

The second stage is design, at this stage the researcher designs the Think Table media according to indicators of the level of development achievement of children aged 4-5 years, choosing the color, size and safety of the Think Table media so that the Think Table media becomes interesting and fun. The results of the ThinkTable media design or design look like a folding table measuring 50 cm x 30 cm, and table legs measuring 20 cm which has parts, namely the table base, drawers and table legs.

There are 8 types of games according to the development of logical thinking skills, namely: the game of matching bottle caps into place, the game of tying shoelaces, the game of buttoning clothes, the game of bicycle bells, the game of zipping clothes, measuring objects with a tape measure, the orbit training game (orbit training), and patterned block game.

## DISCUSSION

In this research, the product produced is Think Table learning media to improve logical thinking skills in children aged 4-5 years in RA Raudlatun Nashirin, Tinawun Village, Malo District. The Think Table media development process uses the ADDIE development model, namely analysis, design, development, implementation and evaluation, which consists of five stages.

The first stage in development is analysis. At this stage there are two parts, the first is performance analysis and the second is needs analysis. In the first part, analyzing the existing problems by visiting the institution to make observations on February 28 2023. Based on the results of the observations made, the researchers obtained information, namely regarding children's developmental achievements in logical thinking abilities which have not yet improved, namely children have not been able to group objects based on size, recognize causal symptoms related to themselves, recognizing objects by pairing objects with their partners and recognizing patterns for example ABC-ABC and repeating them.

This is because the media is less than optimal in learning and the frequent use of LKA (Children's Worksheets) is seen in the RPPH that has been used by institutions so that children lack the ability to think logically. According to (Gagne, 2022), the media needed by early childhood is real or concrete and interesting media so that the learning process can be understood and enjoyable for children.

Next, the second part of the needs analysis is to determine media that suits the needs of the problems faced by children by determining the content of media material, attractiveness, safety and size. With the developmental achievements contained in STPPA (*Child Development Achievement Level Standards*) regarding logical thinking indicators for children aged 4-5 years to improve logical thinking abilities. Based on this analysis, researchers provide solutions to develop Think Table learning media to improve logical thinking abilities.

The second stage is design, at this stage the researcher designs the Think Table media according to indicators of the level of development achievement of children aged 4-5 years, choosing the color, size and safety of the Think Table media so that the Think Table media becomes interesting and fun. The results of the ThinkTable media design or design look like a folding table measuring 50 cm x 30 cm, and table legs measuring 20 cm which has parts, namely the table base, drawers and table legs.

There are 8 types of games according to the development of logical thinking skills, namely: the game of matching bottle caps into place, the game of tying shoelaces, the game of buttoning clothes, the game of bicycle bells, the game of zipping clothes, measuring objects with a tape measure, the orbit training game (orbit training), and patterned block game.

The learning process carried out by researchers provides stimulation to children using Think Table media. Next is the post test activity, in the process of this activity the researcher provides a post-test activity sheet which is the same as the pre-test activity sheet. Then the child's assessment sheet will be filled in by the homeroom teacher. The results of the post-test activity product trial obtained a total score on the post-test, with 87% in the "very good" category. Based on test results before and after ThinkTable media products.

Based on the results of the pre-test activity, the score was 66% in the "good" category, while the post-test activity received a score of 87% in the "very good" category. The difference in scores between the two was 21%. Apart from that, products that have been validated by stage II media experts received a score of 95% in the "very feasible" category, while stage II material experts received a score of 97% in the "very feasible" category.

Based on the development of Think Table learning media to improve logical thinking skills in children aged 4-5 years, using research (Research and Development) with the ADDIE development model which includes 5 stages, namely analysis, design, development, implementation and evaluation can be concluded as a product that is very suitable for use. Validation by stage II media experts received a score of 95% in the "very feasible" category and stage II material experts received a score of 97% in the "very appropriate" category.

## CONCLUSSION

The trial was carried out on children with the results of the children's pre-test activities being 66% in the "good" category without using media. Before the post test was carried out, the researchers carried out treatment, this activity was carried out by the researchers for two days. The learning process carried out by researchers provides stimulation to children using Think Table media. Meanwhile, the results of the children's post-test activity sheets were 87% in the "very good" category using Think Table media, this activity experienced an increase of 21%. It can be concluded that the Think Table media is very suitable to be used to improve logical thinking skills in children aged 4-5 years at RA Raudlatun Nashirin Tinawun Malo Bojonegoro. This is in line with the theory (J. Sweller, 2020) that having appropriate learning media can improve learning, especially the ability to think logically.

## DECLARATION

We would like to thank all parties who helped our research to completion.

## BIBLIOGRAPHY

Ahmad Mustafa Al-Maragi. (2022). *Tafsir Al Maragi Juz IV*. Semarang: PT. Karya Toha Putra. Cet 2, hal. 288.

Amini Mukti. (2021). *Perkembangan Dan Konsep Dasar Pengembangan Anak Usia Dini*. 65 <repository.ut.ac.id/4697/1/PAUD4107-M1.pdf>

Anidar Jum. (2014). *Teori Belajar Menurut Aliran Kognitif Serta Implikasinya Dalam Pembelajaran*. Jakarta

Arofah Rahmat dan Hari Cahyadi. (2019). *Pengembangan Bahan Ajar Berbasis ADDIE Model*. 3.1 35–43 <https://doi.org/10.21070/halaqa.v3i1.2124>

Faradina, Asti, and Mohammad Mukhlis. (2020). *Analisis Berpikir Logis Siswa Dalam Menyelesaikan Matematika Realistik Ditinjau Dari Kecerdasan Interpersonal*. 129–51 <https://doi.org/10.35316/alifmatika.2020.v2i2.129-151>

Farida, Susan Noor. (2018). *hadis-hadis tentang pendidikan (Suatu Telaah Tentang Pentingnya Pendidikan Anak).* Diroyah : Jurnal Studi Ilmu Hadis. 1.1, 35–42 <https://doi.org/10.15575/diroyah.v1i1.2053>

Fauziddin, Mohammad, and Mufarizuddin Mufarizuddin. (2018). *Useful of Clap Hand Games for Optimalize Cogtivite Aspects in Early Childhood Education. Jurnal Obsesi :* Jurnal Pendidikan Anak Usia Dini. 2.2. 162 <https://doi.org/10.31004/obsesi.v2i2.76>

Hasanah, Laeli, Teguh Wibowo, Program Studi, Pendidikan Matematika, dan Universitas Muhammadiyah Purworejo. (2020) *Jenis-Jenis Pola Pikir Anak Usia Dini Dalam Belajar Berhitung*. 93–98

Hidayat wahyu, Sumarno Utari. (2013). *Kemampuan Konumikasi Dan Berpikir Logis Matematika Serta Kemandirian Belalajar*. 21. 1–14

Hisyam Ahmad. (2021). *Jenis Penelitian dan metode penelitian dan pengembangan*, 32–50

Khotimah, Husnul. (2020). *Pengembangan Sikap Prososial Pada Anak Melalui Kegiatan Pembiasaan Di TK Diponegoro 59 Pangebatan Kecamatan Karanglewas Kabupaten Banyumas*. 1–60

Kurnia, Rita. (2018). *Media pembelajaran Untuk Anak Usia Dini Di Pendidikan*

Maghfiroh, Shofia, dan Dadan Suryana. (2021). *Media Pembelajaran Untuk Anak Usia Dini Di Pendidikan Anak Usia Dini*. 5

Nurhadi. (2020). *Teori Kognitivisme Serta Aplikasinya Dalam Pembelajaran*. 2. 77–95

Pendidikan, Kementerian, dan Kebudayaan. (2015) *Mentri pendidikan dan kebudayaan republik indonesia nomor 146 tahun 2014 tentang kurikulum 2013 pendidikan anak usia dini*. 2015

Radit Bunayya Giwangan. (2019). *peran digital parenting terhadap perkembangan berpikir logis anak usia 5-6 tahun*

Suryana Dadan. (2021). *Karakteristik Anak Usia Dini*. Jakarta: 1–65

Suyanto, Slamet, Slamet Suyanto. (2005). *Konsep Dasar Pendidikan Anak Usia Dini*. Jakarta: Erlangga

Tatminingsih, Sri. (2020). *Hakikat Anak Usia Dini*. Jogjakarta: 1–31

Tegeh, Kirna. (2013). *Pengembangan Bahan Ajar Metode Penelitian Pendidikan Dengan ADDIE Model*. Jurnal IKA: 11.1. 16

Yani, R, R Kurnia, dan N Zulkifli. (2021). *Pengembangan Media Busy Table Untuk Meningkatkan Motorik Halus Anak Usia 4-5 Tahun*. Jurnal Pendidikan: Tambusai. 5. 10625–30