

The Influence of Flannel Board Media on the Ability to Recognize Letters in Syllables in Children Aged 4– 5 Years

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ARTICLE INFO	ABSTRACT
<p>Article history: Received: July 17, 2025 Accepted: August 31, 2025 Available online on: September 10, 2025</p> <hr/> <p>Keywords: <i>Flannel Board, Suku Kata, Anak Usia Dini</i></p> <hr/> <p>Copyright ©2025 by Authors. Published by Universitas Muhammadiyah Tangerang</p>	<p>This study aims to determine the effect of flannel board media on the ability to recognize letters in syllables in children aged 4–5 years. This research employed a quantitative approach with a quasi-experimental method and a one-group pretest–posttest design. The research subjects were 8 children in Group A at TK At-Taqwa Bojonegoro. Data collection techniques used observation sheets, and data analysis was carried out using the Mann-Whitney U test. The results showed that there was a significant effect of using flannel board media on the ability to recognize letters in syllables, as indicated by the significance value (Asymp. Sig. 2-tailed) of $0.001 < 0.05$ based on the Mann-Whitney U test. Thus, it can be concluded that flannel board media is effective for use in language learning for early childhood.</p>

Introduction

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Early childhood is at a very important stage of development, where every stimulation given has a major impact on their growth. This period is known as the “Golden Age” (Fairuzillah, 2021). At this stage, all aspects of child development progress rapidly (Restuningtyas et al., 2023), enabling them to have an extraordinary capacity to absorb information from their environment (Aprilianti & Widayati, 2021). Such development has long-term effects on cognitive, language, motor, and socio-emotional aspects (Maulana & Eliasa, 2024).

Language is one of the essential aspects as it is closely related to daily life (Saputri & Widayati, 2016). Language development includes the ability to speak, listen, read, and write, all of which must be developed integratively (Widayati & Simatupang, 2019). Language development can also be seen in children’s ability to respond to sounds, speak politely, and follow rules (Sefy & Simatupang, 2022). Children who are able to express ideas verbally and nonverbally tend to be more socially intelligent (Masruroh et al., 2025). Therefore, appropriate language use needs to be instilled through role models, motivation, and positive habituation (Khotimah et al., 2020; Isna, 2019).

According to Chomsky, language development is related to the concepts of LAD, Universal Grammar, and Transformational Grammar (Setiadi, 2005). He explained that children are born with a language acquisition device that develops through several stages, ranging from the pre-linguistic to the multi-word stage (Yahya, 2020). At the later multi-word stage, children aged 4–5 begin to arrange simple words into

meaningful language structures, even though their grammar is not yet complex. At this stage, the ability to recognize letters and combine them into syllables plays an important role in supporting early reading skills.

Montessori emphasized language development as part of natural growth, while Piaget viewed it in the context of cognitive development (Wulandari, 2020). Children aged 4–5 are generally able to communicate with others, but often still struggle to distinguish and pronounce letters correctly (Kholilullah et al., 2020). Such difficulties highlight the importance of teachers and parents in accompanying children's language learning, including aspects of syntax and semantics (Atik, 2021).

Children's language development is influenced by both internal and external factors (Naibaho et al., 2025). Differences in access to quality education also pose challenges (Hasbi et al., 2021). Moreover, teaching methods play a crucial role. Teacher-guided play has been proven to improve children's vocabulary (Weisberg et al., 2013). Shared reading activities within the family also have a significant impact on language skills (Souliotis & Kyridis, 2015), in line with findings that children's language growth takes place through daily social interactions (Sholikah et al., 2024).

Observations at TK At-Taqwa Bojonegoro revealed that several Group A children still had difficulty recognizing letters and forming syllables, particularly with the letters b, d, m, p, and l. These children were placed in special classes and monitored through the AHE (Anak

Hebat/Smart Child) book. Teachers also used visual media to spark children's interest, but home-based stimulation was still limited. Out of 28 children, 8 required a more intensive approach in learning letters. This condition indicates the need for concrete and engaging learning media.

Piaget emphasized that young children are in the pre-operational stage, where they learn through visual symbols (Marinda, 2020). Children begin to understand letters as sound symbols that can be combined into syllables (Kartika & Fitri, 2018). This is an important foundation for early literacy (Rahmah et al., 2023). Skinner further suggested that positive reinforcement and repeated practice support letter mastery (Andriani et al., 2022).

Interactive, enjoyable, and challenging learning is in line with national education regulations (Depdiknas, 2005). However, monotonous learning often leads to children losing focus (Rahmawati & Fitri, 2023). Therefore, creative educational media are needed to support language development (Dwiyanti & Khan, 2020; Kholid & Fitri, 2021).

The flannel board is one such alternative because it is easy to use, attractive, and effective in helping children recognize letters through visual and kinesthetic activities (Widayati, 2016; Widayati et al., 2021). This medium is also considered capable of boosting children's learning motivation (Rahmayanti & Fitri, 2023), although its production requires special skills (Melinda, 2018).

Previous studies have shown that flannel board media can improve children's language skills and assist teachers in presenting materials more engagingly (Qomariah et al., 2022). Other research has also found a significant influence of using flannel boards on children's cognitive abilities (Fatmaningsih, 2022). These findings strengthen the foundation of this study, but previous research has generally had a broader focus. In contrast, this study specifically aims to examine the influence of flannel board media on the ability to recognize letters in syllables in children aged 4–5 years.

Methods

The research approach used in this study was a quantitative approach. This study was a type of experimental research in the form of a Quasi-Experimental design using a Nonequivalent Control Group Design, also known as a pretest–posttest design with the addition of a control group selected without random assignment (Rosida et al., 2025). The study was conducted at TK At-Taqwa Bojonegoro with subjects of children aged 4–5 years who were divided into experimental and control groups.

Data collection techniques were carried out through observation using an assessment rubric for the ability to recognize syllables, which had been validated by experts. The number of children in the experimental group was 8, while the control group consisted of 10 children. The treatment given was in the form of flannel board media, adapted to early childhood development. The instrument was tested for

validity and reliability using content validity and Cronbach's Alpha. Furthermore, data analysis in this quasi-experimental study, according to Susdarwono (2021), was conducted using normality tests, homogeneity tests, and the non-parametric Mann-Whitney U test to determine the effect of the treatment on the ability to recognize letters in syllables.

Result and Discussions

The researcher conducted this study for 5 days to obtain research data. The study was carried out to collect data from the experimental and control classes. After obtaining the results of each pre-test and post-test activity in the control class, a recapitulation process was conducted. The recapitulated results of the pre-test and post-test assessments of the children in the control class are presented in the following table:

Table 1. Recapitulation Results of Pre-test and Post-test Assessments
in the Control Class

No	Name	Pre-test	Post-test	Score Difference
1	FR	13	14	1
2	KI	12	15	3
3	MA	12	14	2
4	EL	10	14	4
5	SH	12	15	3
6	FA	13	14	1
7	BE	13	14	1
8	IC	13	15	2

9	SL	12	14	2
10	DL	11	13	2
TOTAL		121	142	21

The table above shows a significant difference between the children's pre-test and post-test scores. The total score before treatment was 121, while the total score after treatment was 142, with a difference of 21.

In the experimental class, if the treatment given had an effect, the children would demonstrate progress in their abilities and knowledge. The recapitulated results of the pre-test and post-test assessments of the children in the experimental class are presented in the following table:

Table 2. Recapitulation Results of Pre-test and Post-test Assessments
in the Experimental Class

No	Name	Pre-test	Post-test	Score Difference
1	FR	12	19	7
2	KI	11	17	6
3	MA	12	17	5
4	EL	12	16	4
5	SH	12	17	5
6	FA	12	18	6
7	BE	11	16	5
8	IC	10	17	7
TOTAL		92	137	45

The table above shows a significant difference between the

children's pre-test and post-test scores. It is evident that there was a considerable change in the ability to recognize syllables, resulting in a sharp increase in the individual scores of the children. The total score before treatment was 92, while the total score after treatment was 137, with a difference of 45, showing the significant influence of flannel board media on the ability to recognize syllables in children aged 4–5 years.

Table 3. Rank Results of the Mann-Whitney U Test

Ranks				
	Kelas	N	Mean Rank	Sum of Ranks
Pretest	Kontrol	10	11,15	111,50
	Eksperimen	8	7,44	59,50
	Total	18		
Posttest	Kontrol	10	5,50	55,00
	Eksperimen	8	14,50	116,00
	Total	18		

Based on the results of the Mann-Whitney U test on the pre-test data, the mean rank of the control group was 11.15, while that of the experimental group was 7.44. This indicates that before treatment, the syllable recognition ability of the control group children was slightly higher than that of the experimental group.

After the treatment was administered, the post-test data showed that the mean rank of the experimental group increased to 14.50, while that of the control group decreased to 5.50. Based on these results, it can be concluded that there was a significant improvement in the experimental group's ability after being given treatment in the form of flannel board media.

Table 4. Statistical Results of the Mann-Whitney U Test

Test Statistics ^a		
	Pretest	Posttest
Mann-Whitney U	23,500	,000
Wilcoxon W	59,500	55,000
Z	-1,580	-3,649
Asymp. Sig. (2-tailed)	,114	<,001
Exact Sig. [2*(1-tailed Sig.)]	,146 ^b	<,001 ^b

a. Grouping Variable: Kelas
b. Not corrected for ties.

Based on the analysis using the Mann-Whitney U test, the pre-test results showed a significance value (Asymp. Sig. 2-tailed) of 0.114 and an Exact Sig. of 0.146, which means $p > 0.05$. Thus, there was no significant difference between the control and experimental groups before the treatment was given.

Meanwhile, the post-test results showed an Asymp. Sig. value of < 0.001 and an Exact Sig. of < 0.001 , or $p < 0.05$, indicating that there was a statistically significant difference between the experimental and control groups after treatment.

With these results, it can be concluded that the alternative hypothesis (H_a) is accepted, meaning that flannel board media has a significant effect on improving the ability to recognize letters in syllables. This was proven by the significant improvement in the experimental group's abilities compared to the control group, which did not receive the treatment.

Discussion

The results of this study indicate a significant improvement in the ability to recognize letters in syllables among children aged 4–5 years through the use of flannel board media. In the control class, there was

an increase in total scores from 121 in the pre-test to 142 in the post-test, with a difference of 21 points. Although there was some improvement, the change was relatively small. In contrast, the experimental class experienced a much greater increase, from a total score of 92 in the pre-test to 137 in the post-test, with a difference of 45 points. This confirms that the treatment using flannel board media had a real contribution to enhancing children's language skills, particularly in syllable recognition.

The Mann-Whitney U test analysis supports these findings. In the pre-test, there was no significant difference between the control and experimental groups ($p > 0.05$). However, after the treatment, the post-test results showed a significance value of < 0.001 ($p < 0.05$), which means there was a statistically significant difference. Thus, the alternative hypothesis (H_a) is accepted, confirming that flannel board media is effective in improving the ability to recognize letters in syllables in early childhood.

These findings are consistent with Piaget's view that young children are in the pre-operational stage, where they begin to understand visual symbols such as letters and connect them with particular sounds (Marinda, 2020; Kartika & Fitri, 2018). This study also supports Chomsky's theory of language acquisition, especially the later multi-word stage, where children begin to form simple, meaningful word structures even if their grammar is not yet complex (Yahya, 2020).

Previous studies also support these results. Qomariah et al. (2022)

found that flannel board media can enhance children's language skills and help teachers deliver material more engagingly. Similarly, Fatmaningsih (2022) found a significant influence of flannel board use on children's cognitive abilities. Thus, this study reaffirms the effectiveness of flannel board media, but with a more specific focus on the ability to recognize letters in syllables.

In addition to contributing to language acquisition theory, this study also has practical implications. Flannel board media can provide an interactive, visual, and enjoyable learning experience, consistent with the principles of early childhood education (Depdiknas, 2005). Children not only learn through repetition and positive reinforcement as suggested by Skinner (Andriani et al., 2022), but also gain meaningful experiences through play-based learning. This aligns with Weisberg et al. (2013), who stated that teacher-guided play can increase children's vocabulary, as well as Souliotis & Kyridis (2015), who emphasized the importance of daily interaction, including media use, in supporting children's language development.

Overall, this study confirms that flannel board media is an effective learning tool for improving the ability to recognize letters in syllables in early childhood. These findings add empirical evidence about the importance of selecting appropriate, creative, and engaging learning media to support children's language development, while also providing recommendations for teachers and early childhood practitioners to utilize simple yet impactful media in everyday learning.

Conclusion

Based on the results of data analysis and discussion, it can be concluded that flannel board media has a significant effect on the ability to recognize syllables in children aged 4–5 years. The increase in post-test scores as well as the results of the Mann-Whitney U test ($U = 0.000$; $p = 0.001 < 0.05$) indicate that this medium is effective in improving children's phonological abilities, particularly in distinguishing, pronouncing, and arranging syllables. Flannel board media has been proven to provide visual and kinesthetic stimulation, encourage activeness, and foster children's learning motivation. Thus, this medium can serve as an enjoyable educational alternative in language learning for early childhood education (ECE).

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