



The Influence of Image Media on Early Childhood Learning Motivation

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Abstract

This study investigates the impact of image-based media on early childhood learning motivation at Al-Furqon Islamic Kindergarten in Makassar, Indonesia. From the perspectives of intrinsic motivation and multimedia learning the study implements both quantitative data with a quasi-experimental one-group pretest–posttest design and qualitative classroom observation methods. The intervention involved Group B children viewing visual materials showing familiar cultural farm animals and their settings. This section included nineteen participants. After implementing image media the learning motivation scores of participants significantly increased as confirmed by a paired sample t-test ($p < 0.05$; Cohen's $d = 4.73$) indicating a very large effect size. The qualitative results demonstrated that participants showed higher levels of emotional engagement along with verbal communication and they continued tasks while working with peers based on classroom observations. The research shows that image-based media help both increase motivation levels and encourage valuable cognitive and social engagement during early childhood education. This study demonstrates how culturally relevant visual content available at low cost can build highly engaging learning places that respect child development in underfunded early education facilities. The paper presents implications for early childhood motivation research together with recommendations for educational implementation.

Introduction

The early learning period stands as a developmental stage independently from formal school preparation since it serves as a crucial starting point in human growth. Children undergo swift development of mental capacities combined with emotional development alongside social development within the “golden age” timeline (Latief, 2020). The recurrent period presents a unique opportunity for children to absorb learning stimuli with exceptional speed and strong intensity from their surroundings. Global recognition exists for maximizing this critical phase yet educators need to understand how they should keep young learners motivated with approaches that combine age-accorded strategies and cultural sensitivities.

The way children practice learning depends both on their psychological interaction with their learning areas and their willingness (Nisa & Sujarwo, 2020). The fundamental characteristics of academic success as well as social achievement throughout life can be predicted by three essential attributes which motivated learners exhibit: curiosity, persistence and joy (Kpolovie et al., 2014; Feraco et al., 2023). Developing intrinsic motivation poses significant hurdles when practiced in organized education settings such as kindergartens. The efforts of formal instruction to achieve both discipline and creativity tend to struggle at the same time and child participants disconnect when learning methods become repetitious or excessively theoretical (Rahayu & Muryanti, 2024).

The educational model used in Indonesian early childhood classrooms depends on teacher-oriented instruction as the main methodology. The structured approaches do not always activate

natural curiosity in young learners because they fail to address developmental requirements of their students (Agustina et al., 2022). Research shows that effective use of educational media which promotes visual and emotional engagement serves as a crucial link for teaching gaps within the early childhood classroom (Ita & Dhiu, 2022; Khotimah et al., 2021).

Image-based instructional media stands out as an effective tool for teaching children of young ages among all available educational resources. Visual educational materials consisting of pictures illustrations and photo cards assist education efforts because they help understand complex ideas better and build vocabulary skills and facilitate interactive educational approaches (Dey & Munshi, 2025; Ahmed & Othman, 2018; Anglin et al., 2013). The processing methods children use to learn naturally fall into sensory experiences and visual understanding thus image-based approaches match their learning preferences. According to Udju et al. (2022) images serve two important functions they attract and maintain attention as well as enable recognition and establish associations in addition to facilitating meaning creation.

The Indonesian early childhood environment obtains supplementary benefits from the usage of image-based media formats. Thoughtfully designed images in early childhood education enable realistic reflections of cultural and social contexts which include rural views and traditional animals and foods thus making them more effective communication tools (Woodhead, 1996; Rahma, 2025). The context must align with content in an essential manner. Learning success greatly increases when students spot themselves and their everyday experiences within the learning resources they must use (Doyle, 2023). Image media supports children to follow abstract learning targets through specific and concrete examples especially when teaching language acquisition and promoting scientific reasoning and moral learning (Schabas, 2023; Al Balushi et al., 2024; Atkinson et al., 2025).

Observations at Al-Furqon Islamic Kindergarten showed that instructional visual media were absent throughout the classrooms. Cognitive development efforts in the classroom involved text-based delivery methods even though the curriculum contained abundant material which could benefit from visual instructional tools. Lubis & Mavianti (2022) identified schools in Indonesia often fail to effectively use pictorial media because their staff lacks expertise or the institutions lack necessary resources. Few research studies exist that investigate how image-based media affects institutional motivation in Islamic schools and Islamic kindergartens specifically.

The researchers designed this study to investigate the motivational impact of image-based media on Al-Furqon Islamic Kindergarten early childhood learners. Data from both quantitative and qualitative sources helps to analyze measurable outcomes of the intervention while also revealing behavioral and emotional responses of motivation in the classroom setting. The objective reaches beyond proving a hypothesis to reveal how basic culturally relevant instructional tools affect young children's educational journey.

Methods

The research design consisted of quantitative methods and one-group pretest–posttest evaluation. The research design measured early childhood learning motivation changes through image-based media exposure by assessing participant motivation initially and once again after receiving the intervention. Researchers accept this experimental design even though it reduces external validity due to missing control conditions because educational research commonly faces practical hurdles when dealing with randomization methods while such styles effectively measure treatment outcomes.

Relevant research activities took place within Group B at the Al-Furqon Islamic Kindergarten based in Makassar. The research involved 19 total participants. Non-probability purposive sampling served as the technique to select participants. The researcher chose this method to include participants who met suitable developmental criteria and fit the conditions of their learning environment. This method grants suitable access for classroom intervention studies although it does not give every member of the population equal selection chances.

The research data collection methodology consisted of two separate stages beginning with the pre-intervention phase followed by the post-intervention phase. The pretest phase employed an observation instrument to assess learning motivation in children before image-based media integration. The researchers observed how children reacted to motivational behavior markers such as their enjoyment during learning sessions and their reactions to teacher instructions and their level of active engagement along with their continuous enthusiasm. Visual learning media became part of normal classroom activities in the intervention period. Large colorful images containing livestock combined with their food sources made up the image-based media. The educator carefully created these images for early childhood development understandability while using images that were directly related to educational content in the classroom. The educational materials were chosen to boost children's sense perceptions while encouraging inner drive for educational discovery. Researchers administered the same observation instrument after the intervention for measuring learning motivation shifts from before to after the subjects experienced image media.

Reliability and validity of the measurement instrument was established after expert validation occurred. Early childhood education professionals evaluated observation items to enhance their relevance and clarity for detecting motivational behaviors of children. Statistical analysis depended entirely on the quantitative data obtained during observations.

The statistical analysis required assumption testing for the data before proceeding with inferential tests. The Shapiro–Wilk test checked normal distribution patterns for pretest and posttest scores because the study possessed limited sample size. Statistical tests for parametric analysis became viable because the datasets exhibited normal distribution patterns based on the test results. Levene's test confirmed statistical equality between pretest and posttest score variances for the homogeneity of variance assumption.

An analysis of intervention effectiveness employed the Paired Sample t-Test method as the main testing approach. Research analysts commonly use the paired sample t-Test to evaluate two related variables that appear in experimental studies with pretesting and posttesting procedures. The research used $\alpha = 0.05$ as the standard threshold to establish statistical significance. Research findings generated a p-value that remained beneath $\alpha = 0.05$ to show the intervention successfully enhanced student learning motivation.

The evaluation of practical effects from the intervention generated an effect size computation by utilizing Cohen's d. The calculated effect size measure of 4.73 demonstrated an extremely large impact which confirms that image media usage created enduring motivation results in students who participated in the experiment. The reliability and consistency of the intervention could be determined by computing a 95% confidence interval for the mean gain score.

Results and Discussion

Descriptive Statistics Table

To examine the effectiveness of image media in enhancing early childhood learning motivation, descriptive statistics were calculated for both the pretest and posttest scores of 19 students.

Table 1. Descriptive statistics

Statistic	Pretest	Posttest
Number of Students (N)	19	19
Mean	52.68	82.95
Standard Deviation	8.14	6.30
Minimum	35.00	75.00
25th Percentile (Q1)	48.00	77.50
Median (Q2)	50.00	84.00
75th Percentile (Q3)	57.50	87.00
Maximum	67.00	95.00

The graph shows the strong visual distinction between pretest scores and posttest scores through its horizontal layout. Students exhibited significant improvement in motivation which led to an increase of the mean score from 52.68 to 82.95 due to the effect of image media on their motivation. After the intervention the distribution of student responses narrowed down (8.14 to 6.30) which demonstrates students delivered similar positive outcomes. The performance improvement was felt by every student group since minimum and maximum values along with all quartiles demonstrated significant growth following the intervention.

Tests of Normality

The results of this study used the *T paired sample t-test* to determine whether there was an increase in children's learning motivation. The researcher conducted a prerequisite test first, namely the normality test and the homogeneity test. The normality test is used to determine whether the data to be analyzed is normally distributed or not. There are many normality tests to determine data distribution, but this study used the *Shapiro Wilk normality test*. The data results can be seen below:

Table 2. Data from the results of the normality test of children's learning motivation

	Group	Kolmogorov-Smirnov ^a			Shapiro Wilk		
		Statistics	Df	Sig.	Statistics	Df	Sig.
Motivation to learn	Pretest	.155	19	.200*	.959	19	.550
	Posttest	.161	19	.200*	.912	19	.082
*. This is a lower bound of the true significance.							
a. Lilliefors Significance Correction							

The output in the *Shapiro Wilk table* shows that the pretest test has a value of 0.550 > 0.05. This means that the *pretest data* has a normal data distribution, as well as the *posttest output* which has a significance value of 0.082 > 0.05. This means that the posttest data has a normal distribution. So it can be concluded that the data in class B of Al-Furqan Islamic Kindergarten has a normal data distribution.

Table 3. Data from the results of the homogeneity test of children's learning motivation

Test of Homogeneity of Variance					
		Levene Statistics	df1	df2	Sig.
Motivation to learn	Based on Mean	.477	1	36	.494
	Based on Median	.283	1	36	.598
	Based on Median and with adjusted df	.283	1	27.480	.599

	Based on trimmed mean	.478	1	36	.494
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While the homogeneity test, if the significance value is greater than 0.05 then the data distribution is homogeneous, and if the significance value is less than 0.05 then the data distribution is not homogeneous. So, based on the output above the significance value is $0.494 > 0.05$ meaning that the data used is homogeneous. So it can be concluded that the distribution of data in class B of Al-Furqan Islamic Kindergarten has a homogeneous data distribution.

Next, the data analysis test is carried out using the Paired T Test or *paired T-test*. This is a difference test or comparative test, which compares the mean or average of groups originating from the same subject. The significance table can be used to identify differences between data. To measure the possibility of differences before and after treatment, the sig table (2-tailed), using the paired t-test decision making as follows: 1) The sig value (2-Tailed) < 0.05 indicates that there is a difference between before and after treatment; 2) The sig value (2-Tailed) > 0.05 indicates that there is no difference between before and after treatment. The results of data analysis using the Paired Sample T-test are as follows:

Table 4. Paired Samples Test

		Paired Differences					T	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pretest - Posttest	-30.26316	6.40175	1.46866	33.34870	27.17761	-20,606	18	.000

The results of this study showed a sig value (2-tailed) of $0.00 < \alpha (0.05)$, meaning there was a difference between before and after receiving treatment.

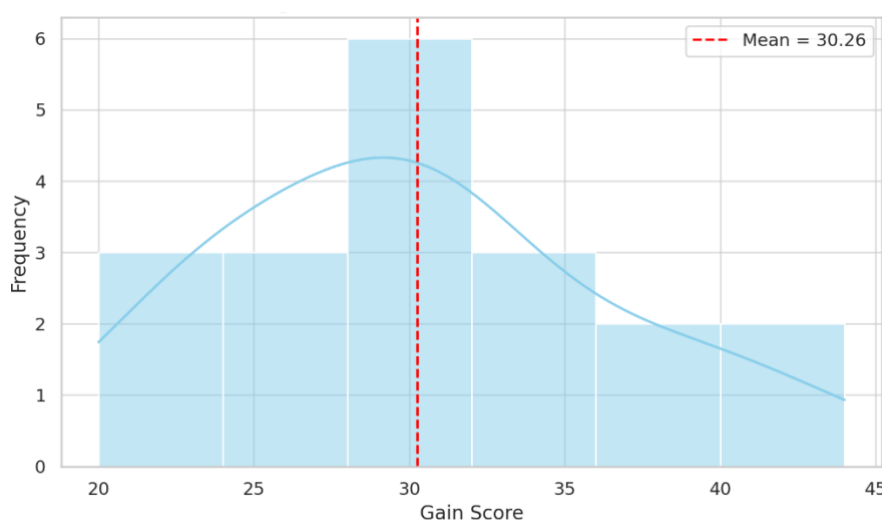


Figure 1. Distribution of Gain Scores

This figure shows the distribution of gain scores represented by posttest and pretest result differences among 19 students who received image-based media instruction. The learning motivation distribution shows symmetrical distribution with a positive-skewed pattern which demonstrates major improvements among most students.

Most students showed equivalent gains from the intervention according to data that shows a peak frequency in the 25 to 35-point area. The mean gain score sits at 30.26 points as marked by the red dashed line while supporting the densest area among the scores. The results in Table 5 regarding average improvement gain scores and the data distribution pattern indicate that motivation enhancement remained stable among all students.

The intervention showed unprecedented positive effects on particular participants particularly those who started the assessment less motivated. The intervention showed success through measured improvements in motivation because the least amount of growth was still twenty points. Students from every portion of the spectrum demonstrated improved motivation through this intervention since the data showed a single ascending pattern.

Table 5. Effect Size (Cohen's d)

Effect Size (Cohen's d)	Interpretation
4.73	Extremely large effect

The Cohen's d value of 4.73 indicates a very large practical impact. This confirms that image media was not only statistically effective but also educationally meaningful.

Table 6. 95% Confidence Interval for Mean Gain Score

Lower Bound	Upper Bound
27.18	33.35

The intervention has proven reliable based on the fact that its impact on motivation falls between 27.18 and 33.35 points with 95% confidence.

Systematic classroom observations collected qualitative data that showed the specific ways children reacted when using image-based media. The observation sessions took place in multiple meetings at Group B of Al-Furqon Islamic Kindergarten in Minasa Upa, Makassar. The educational environment featured flexible activities alongside structured group meetings and teachers used visual materials for their instruction. During qualitative assessment researchers investigated how children responded emotionally and cognitively and socially when interacting with image media.

The research observations followed four motivational dimensions adapted for early childhood learning environments that focused on emotional responses and verbal interaction with tasks and peer engagement. Research data were recorded through combination of field notes and informal checklists which were utilized during and after instructional times. The essential observed behaviors are demonstrated in the table below:

Table 7. Summary of Observed Motivational Behaviors During Learning with Image Media

Motivational Indicator	Description of Behavior in Context	Frequency of Occurrence	Representative Observations (translated from Bahasa Indonesia)
Emotional Expression	Smiles, laughter, facial excitement, exclamations upon seeing images	Very Frequent	"Wah, lucu sekali sapinya, Bu Guru!" ("Wow, the cow is so cute, Teacher!")
Verbal Engagement	Naming animals, asking spontaneous questions, connecting images to personal experiences	Frequent	"Bu, ayam ini bisa bertelur, kan?" ("Teacher, this chicken can lay eggs, right?")

Task Persistence	Completing coloring or matching activities without prompting, requesting more tasks	Frequent	“Saya mau gambar lagi, Bu!” (“I want to draw more, Teacher!”)
Peer Interaction	Sharing materials, talking to peers about pictures, collaborative play around the image cards	Moderate	“Kamu punya gambar kuda? Aku juga punya!” (“Do you have the horse picture? I have one too!”)

Asset-based media proved to be significantly stimulating and engaging to children according to the results of qualitative observation. Children reacted powerfully when viewing pictures that presented farm animals alongside images of their typical food since the pictures contained colorful illustrations of farm animals such as cows, chickens, and goats. Multiple children reacted spontaneously with excitement when they were first shown the media through pictures that made them point while laughing and clapping. Most Indonesian TK classrooms experience these typical reactions when students respond powerfully to visual and sensory learning tools because children in their developmental affective phase readily bond with such materials.

The children engaged in much more verbal interaction during media sessions that utilized images. Several children attempted to identify animals through Bahasa Indonesia names while making occasional use of English because their education comprised bilingual learning at some Islamic private institutions. Children often linked the instructional images to their life experiences through their questions and comments. One child declared he owned goats with his grandfather which proved that the media deliver instruction and trigger background knowledge and personal connections.

The activities demonstrated exceptional persistence towards the tasks. Most children spent longer than normal periods focusing on their tasks when performing image matching and coloring activities. The children known for their short attention spans repeatedly finished their assignments independently enough to request more coloring images. The initiative demonstrated by children is exceptional considering typical constraints that teachers set in learning environments. The media generated changes in how peers interacted with each other. The level of peer collaboration remained lower than individual work in this context but it developed on its own as a natural occurrence. Children exchanged crayons with each other to work together on doodles and they assessed their artwork by showing their drawings to one another and exchanging observations about the animals they detected in the pictures. Peer communication briefly developed through these appearances which showed that image media support both social connections and personal drive.

The impact of image media continued beyond students who already presented high motivation levels at the outset. Children who usually remained quiet during group activities started to participate more frequently after image media were shown to the class. The student who traditionally kept mute in group sessions used the goat picture to explain to a classmate that the animal ate grass by asking “Itu makannya rumput, ya?”. This revealed stronger cognitive connections to visual stimuli. The research investigated how image-based media affects motivation levels among Al-Furqon Islamic Kindergarten early childhood learners. The study provided strong proof that visual media effectively boosted students’ interest in participating in educational activities. The paired sample t-test analysis of quantitative data demonstrated an important statistical difference in pretest and posttest scores. Cohen's d calculation produced an extraordinary effect size which demonstrated that the intervention led to substantial

statistical and practical importance. The findings from this experiment include vital implications that reach further than just statistical values. The study addresses an important educational inquiry about what causes specific approaches to learning to impact children deeply.

Early childhood education shows motivation exists in multiple dimensions not consisting of a single element. The learning process involves three interacting components which form the basis of motivation including emotions with their cognitive components connected through behaviors (Barz et al., 2024; Quadt et al., 2022). These dimensions appeared to be simultaneously activated through the use of image-based media in the investigated study. Research demonstrates that emotional predictions which include excitement and joy in children lead to successful retention of information by young learners (AlZu'bi et al., 2022). These reactions are non-random because well-constructed visual stimuli function particularly well as motivational starting points in learning situations. The use of image media helped students develop abstract knowledge through cognitive processes. Visual materials provided students with tools to process semantically complex information by attaching real-life notions to it which led to advanced understanding. The research supports Mayer's (2020) multimedia learning theory because information presented with visual and verbal components proves more beneficial for understanding compared to information in either format alone. The children in this research established personal connections between media content and their personal experiences following the findings of Wang (2022) about meaningful visual representations helping early childhood learners build knowledge.

Motivational behavioral signs became apparent among these students. Each student worked independently on their tasks while requesting extra materials and some students continued their work for longer periods than the given instructions. The observed behaviors demonstrate intrinsic motivation according to the main principles of the self-determination theory framework. The three psychological needs of autonomy, competence and relatedness create the optimal conditions for intrinsic motivation to emerge according to Ryan & Deci (2020). Image media provided tools that fulfilled psychological requirements of the children and their learning needs. The activity enabled learners to select personal objectives and confirmed their success while developing social connections with their classmates which produces sustained learning involvement (Jordan & Métais, 1997).

Further investigations supported the collected information through qualitative observation methods. The classroom setting significantly changed when the implementation of media content occurred. Usage of the educational platform led shy children to develop verbal skills while students who excelled independently concentrated better on group activities. The students exhibited interactive social behaviors which included sharing image analysis while exchanging explanations with each other. The researcher's findings support Vygotskian ideas about early childhood learning because peer dialogue serves as an essential factor for developing mental skills (Bodrova & Leong, 2024; Forman & Cazden, 2013).

The cultural connection of media content stands as an essential point to understand. Children could understand the images because the depicted animals and objects matched their everyday experiences which activated their mental models for better understanding of new concepts (Bujuri, 2018; Woodward et al., 2022). Islamic-based early childhood education institutions in Indonesia benefit from implementing educational materials which derive from students' cultural background and personal experiences according to Lumbantoruan et al. (2021). The principles of culturally responsive pedagogy show that instruction should mirror learners'

social cultural environments for improved meaning-making according to Lähdesmäki et al. (2022) and Cegielski et al. (2023).

The visual media tools supported both cooperative learning processes along with cognitive Prosperities. Through the use of visual materials in traditional teacher-led early childhood classrooms in Indonesia students developed academic peer interactions. The students employed their tools together while comparing photographs which led them to build collective understanding through co-learning behaviors compatible with contemporary collaborative learning theories (Collet et al., 2023; Mahajan et al., 2021). These study outcomes demonstrate that social-cognitive aspects of learning engage students in dialogic classroom communities no matter what basic resources teachers use for instruction.

This investigation faces several drawbacks that should be considered. Due to the absence of a control group in the study design the researchers cannot prove definitive cause and effect relationships. Some enhancements in motivation could have stemmed from newness effects and normal educational development progression. New research should employ randomized controlled trials and mixed-method designs to improve generalizability and obtain comprehensive triangulation data. The analysis would receive enhanced understanding by adding parent interviews together with video documentation to present children's motivation through different perspectives (Nurhayati et al., 2023). These study limitations do not minimize the value of the obtained findings. Visual media emerge as a suitable educational solution within limited-resource classrooms which conventionally employ rote teaching methods. These tools need no advanced infrastructure or complex technology yet produce substantial changes in the learning environment. The strategic application of visual media results in motivating students and promoting their engagement which leads to meaningful learning experiences and establishes fundamental foundations for positive educational outcomes (Yu et al., 2021; Sigalingging et al., 2023; Ferrer et al., 2022).

Conclusion

The researchers investigated how image-based media affects learning motivation in students attending Al-Furqon Islamic Kindergarten. The classroom image intervention taught researchers vital insights into the learning patterns of young learners as they progress with educational content when appropriate support is provided. Multiple data sources demonstrate that properly utilized visual media act as strong instruments for boosting learning motivation by activating students' emotional responses and cognitive understanding along with their behavioral interest.

Statistical results showed substantial motivational effects because participant motivation levels significantly rose after getting the intervention. The children's observable behaviors showed how media power worked through their energetic actions and the way they started initiatives as well as their spoken remarks and social interactions with others. The responses demonstrate engagement elements which go beyond simple surface involvement. The research findings conform to modern motivational theories together with self-determination theory and constructivist learning theory and culturally responsive pedagogy. Within these theoretical frameworks motivation arises organically from inside students since they experience autonomy as well as competence and connection.

Image-based media tools can establish the particular conditions required for enriching learning experiences. The visual aids created more than instructional value by becoming active agents that drove students toward meaning creation while sparking both dialogue and self-learning experiences. These educational tools serve early childhood students well because they create

meaningful learning experiences with minimal technological needs or resource requirements for sensory and social-based learning.

The research results deliver both educational and teaching benefits. Educational practitioners should use this validation to implement visual resources connected to students' everyday experiences and cultural backgrounds. The research promotes designers of educational curricula to use easy-to-understand meaningful media which demonstrates how children learn by engaging with their surroundings rather than working independently. Educational policymakers can utilize this strategy at scale since it represents a minimal-cost solution to enhance early learning results in locations with limited resources. The study acknowledges multiple constraints as one of its primary weaknesses. The limited experimental conditions together with restricting evaluation to a single classroom require additional research for confirmation. Subsequent research should develop multi-site research approaches with extended timespan along with increased participant pool breadth to evaluate varying types of media content across different social and cultural environments.

The research findings demonstrate that early childhood motivation exists as a developmental state which develops in interaction with content material and relationships and environmental context. Sensical images coupled with reflection of their daily lives along with voice-inviting visuals enable children to do more than learn through their educational experiences. Participation combined with imagination drives these children to reach their full potential. Such a learning environment promises to recognize children as both learners and creators of their own personal meanings.

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