



The Use of Letter and Color Puzzle Media in Early Childhood Literacy Learning

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Abstrak

Penelitian ini bertujuan mendeskripsikan penggunaan media puzzle huruf dan warna dalam mengembangkan kemampuan mengenal huruf dan warna anak usia dini di Taman Kanak-Kanak Pertiwi IV C Desa Purwodadi, Kecamatan Rimbo Bujang, Kabupaten Tebo. Penelitian menggunakan pendekatan kualitatif dengan jenis studi kasus. Subjek penelitian adalah anak Kelompok B (usia 5-6 tahun), guru kelas, kepala taman kanak-kanak, dan orang tua/wali murid. Teknik pengumpulan data dilakukan melalui observasi terhadap sepuluh butir indikator perkembangan, wawancara terstruktur terhadap dua puluh lima butir pertanyaan, dan dokumentasi. Data dianalisis dengan model interaktif Miles dan Huberman yang meliputi reduksi data, penyajian data, dan penarikan kesimpulan, sedangkan keabsahan data diuji dengan triangulasi sumber dan teknik. Hasil penelitian menunjukkan bahwa media puzzle huruf dan warna digunakan guru secara terjadwal sebagai media bermain sambil belajar dengan cara demonstrasi langsung dalam kelompok kecil. Penggunaan media tersebut mampu menstimulasi kemampuan mengenal huruf, mengenal warna, koordinasi mata-tangan, serta konsentrasi anak. Berdasarkan hasil observasi terhadap empat orang anak, capaian perkembangan sebagian besar berada pada kategori Mulai Berkembang (MB) dan Berkembang Sesuai Harapan (BSH), dengan beberapa indikator telah mencapai Berkembang Sangat Baik (BSB). Kendala utama yang ditemukan adalah keterbatasan jumlah media. Penelitian menyimpulkan bahwa media puzzle huruf dan warna efektif sebagai media pembelajaran yang menyenangkan dan kontekstual untuk mengembangkan kemampuan kognitif dan motorik halus anak usia dini.

Kata kunci: Media Puzzle, Mengenal Huruf, Mengenal Warna, Anak Usia Dini, Taman Kanak-Kanak

Abstract

This study aims to describe the use of letter and color puzzle media in developing early childhood letter and color recognition abilities at Pertiwi IV C Kindergarten, Purwodadi Village, Rimbo Bujang Subdistrict, Tebo Regency. The research employed a qualitative approach with a case study design. The research subjects were children of Group B (aged 5–6 years), the classroom teacher, the kindergarten principal, and parents/guardians. Data were collected through observation of ten developmental indicators, structured interviews comprising twenty-five items, and documentation. The data were analysed using the Miles and Huberman interactive model consisting of data reduction, data display, and conclusion drawing, while data validity was tested through source and technique triangulation. The findings reveal that letter and color puzzle media were used by the teacher in a scheduled manner as a learning-through-play medium using direct demonstration in small groups. The use of this medium was able to stimulate children's letter recognition, color recognition, eye-hand coordination, and concentration. Based on observations of four children, developmental achievement was largely at the Beginning to Develop (MB) and Developing as Expected (BSH) categories, with several indicators reaching Developing Very Well (BSB). The main obstacle identified was the limited quantity of media. The study concludes that letter and color puzzle media are effective as enjoyable and contextual learning media for developing early childhood cognitive abilities and fine motor skills.

Keywords: Puzzle Media, Letter Recognition, Color Recognition, Early Childhood, Kindergarten

I. INTRODUCTION

Early childhood education is a decisive stage in forming the basic personality and abilities of children. Within this age range, children are in a golden age marked by very rapid brain development. Appropriate stimulation during this period determines the quality of a child's development at subsequent stages. Therefore, selecting learning strategies and media that suit children's characteristics becomes highly important in delivering education in kindergarten.

One important aspect of cognitive development that should be nurtured in early childhood is the ability to recognise letters and colors. Letter recognition is the foundation for a child to enter the early reading stage, whereas color recognition is closely related to a child's ability to classify, distinguish, and understand the surrounding environment. Both abilities need to be developed through enjoyable activities so that children do not feel burdened and remain within the world of play that is their natural domain.

The introduction of letters and colors in early childhood needs to be carried out gradually and adapted to the child's developmental level. Forcing children to master a particular ability before they are ready may instead cause boredom and reduce learning motivation. Therefore, an approach that positions the child as an active subject who learns through enjoyable experiences is the appropriate choice. This approach requires teachers to be creative in selecting and using media that can attract children's attention while carrying meaningful learning content.

Learning in early childhood requires media that are concrete, attractive, and can be manipulated directly by the child. Learning media act as a bridge that connects abstract concepts with the child's real experience. Good media are able to foster interest, focus attention, and provide meaningful learning experiences. In the context of letter and color recognition,

manipulative media such as puzzles are a relevant choice because they allow children to learn while playing.

Letter and color puzzle media are educational play media that combine elements of letters and colors in the form of pieces that can be arranged by the child. Through arranging the puzzle pieces, children are not only trained to recognise letter shapes and colors but also to develop eye-hand coordination, concentration, perseverance, and problem-solving ability. This medium is multifunctional because a single activity can stimulate several aspects of development at once.

Based on preliminary observations at Pertiwi IV C Kindergarten, Purwodadi Village, Rimbo Bujang Subdistrict, Tebo Regency, the teacher had already used letter and color puzzle media in learning activities for Group B. However, a comprehensive picture of how the medium was used, how children responded, and the extent to which the medium developed children's abilities had not been systematically documented. Therefore, an in-depth study is needed to describe the use of letter and color puzzle media in that institution.

The choice of letter and color puzzle media as the focus of this study rests on several considerations. First, the medium is relatively easy for teachers to obtain and operate without requiring special technical skills. Second, the physical form of the puzzle, which is colourful and tactile, is highly suited to the cognitive developmental stage of early childhood, which still relies on concrete objects. Third, the activity of arranging puzzles naturally invites children's active involvement, so that learning does not proceed in one direction but involves exploration and discovery by the children themselves. These three considerations make the puzzle medium worthy of deeper study in a real kindergarten learning context.

Several prior studies have demonstrated the contribution of educational play media to early childhood development. However,

most of those studies emphasised the quantitative measurement of ability improvement through action research or experiments, while studies that qualitatively describe how media are used in everyday practice together with the dynamics of its support and obstacles remain limited. This study seeks to fill that gap by presenting a comprehensive portrait of the use of letter and color puzzle media from the perspectives of the teacher, the principal, and parents simultaneously.

This study aims to describe the use of letter and color puzzle media in developing early childhood letter and color recognition abilities at Pertiwi IV C Kindergarten, Purwodadi Village. Specifically, this study seeks to reveal how the teacher uses the medium, children's developmental achievement, and the obstacles and support accompanying the use of the medium. Based on these aims, three research questions were formulated: (1) how the teacher uses letter and color puzzle media in learning; (2) how children's achievement in letter and color recognition develops after using the medium; and (3) what support and obstacles accompany the use of letter and color puzzle media. The findings are expected to provide practical contributions for early childhood educators in optimising the use of educational play media, while also offering input for institutional managers in providing adequate learning facilities.

II. LITERATURE REVIEW

A. Early Childhood Learning Media

Learning media are anything used to channel a message from a sender to a receiver so that it can stimulate the thoughts, feelings, attention, and interest of the child in the learning process [1]. For early childhood, learning media must be concrete and manipulable because children at the pre-operational stage still think on the basis of real objects. The use of appropriate media can enhance learning motivation and

make it easier for children to understand the concepts being taught [2].

Educational play media are a type of media specifically designed for educational purposes while also containing elements of play. These media provide children with the opportunity to learn through exploration and direct experience. The principle of learning while playing becomes the main foundation in developing media for early childhood, so that children acquire knowledge without feeling that they are being formally taught [3].

B. Letter and Color Puzzle Media

A puzzle is a game of arranging separate picture or shape pieces into a complete whole. The letter and color puzzle is a modification of the puzzle that carries letter symbols and various colors on each piece. This game requires children to match, distinguish, and arrange the pieces according to their shape and color [4]. Through this activity, children are trained to recognise letter shapes, name colors, and develop fine motor skills.

The use of puzzle media provides several benefits for children's development, including training concentration and accuracy, developing eye-hand coordination, training patience and perseverance, and fostering self-confidence when a child succeeds in completing the puzzle arrangement [5]. In addition, the puzzle also trains problem-solving ability because the child must find the right piece for each position.

C. Letter and Color Recognition Abilities

Letter recognition ability is the child's ability to identify, distinguish, and name letter symbols. This ability is an important prerequisite for early reading skills. Meanwhile, color recognition ability is the child's ability to identify and name various colors, which is part of the cognitive aspect of development [6]. Both abilities develop gradually and optimally when stimulated through enjoyable activities.

The developmental achievement level of early childhood is measured through four categories, namely Not Yet Developing (BB), Beginning to Develop (MB), Developing as Expected (BSH), and Developing Very Well (BSB). These categories are used as a reference for assessing children's development in each aspect observed during the learning process [7]. The Not Yet Developing category indicates that the child still requires full guidance, Beginning to Develop indicates that the child is able to perform with assistance, Developing as Expected indicates that the child is able to perform independently and consistently, while Developing Very Well indicates that the child is able to perform independently and even help peers.

D. Play as a Learning Approach

Play is a fundamental need and a natural activity for early childhood. Through play, children develop various aspects of development, whether cognitive, language, social-emotional, or physical-motor. The learning-while-playing approach positions play activities as a vehicle for conveying educational content, so that children acquire knowledge and skills in an enjoyable atmosphere without pressure [3]. Letter and color puzzle media are one embodiment of this approach because they combine elements of play with the goal of developing particular abilities.

In play-based learning, the teacher's role shifts from an information giver to a facilitator who prepares the environment, provides stimulation, and guides children when needed. The teacher needs sensitivity in reading the needs of each child, providing challenges suited to the developmental stage, and keeping activities attractive and meaningful. The success of the play approach depends heavily on the teacher's ability to manage activities and use media creatively [2], [5].

E. Relevant Research

A number of prior studies have examined the use of puzzle media and educational play media in early childhood learning. In general, these studies show that puzzle media contribute positively to the development of children's cognitive abilities, particularly in recognising letters, numbers, shapes, and colors. Puzzle media are also reported to be able to improve children's concentration, perseverance, and fine motor skills through the repeated activity of arranging pieces [4], [5].

In addition, prior studies have also highlighted the importance of the roles of the teacher and the environment in determining the effectiveness of media use. Good media will not deliver optimal results without proper management by the teacher and support from the learning environment. Several studies emphasise that the variation of activities, group management, and the provision of motivation are factors that also determine the success of learning based on educational play media [2], [3]. This study positions itself as a complement to those studies by highlighting the descriptive aspect of using letter and color puzzle media in the real context of a single institution, together with the dynamics of the support and obstacles that accompany it.

III. RESEARCH METHOD

This study uses a qualitative approach with a case study type of research. The qualitative approach was chosen because the research aims to describe and understand in depth the phenomenon of using letter and color puzzle media in the natural context of learning in kindergarten. The case study type was used because the research focuses on one particular institution, namely Pertiwi IV C Kindergarten, as a case examined comprehensively and bounded by space and time.

The research was conducted at Pertiwi IV C Kindergarten, Purwodadi Village,

Rimbo Bujang Subdistrict, Tebo Regency, in Group B, aged 5–6 years. The research subjects consisted of Group B children as the main subjects, as well as the classroom teacher, the kindergarten principal, and parents/guardians as supporting informants. Subject selection was carried out purposively by considering their direct involvement in the use of letter and color puzzle media.

Data collection was carried out through three means. First, observation of ten indicators of children's development when using the puzzle medium using a four-level achievement scale (BB, MB, BSH, BSB). Second, structured interviews of twenty-five items addressed to three groups of informants, namely the classroom teacher (fifteen items), the kindergarten principal (five items), and parents/guardians (five items). Third, documentation in the form of assessment instruments and learning activity records.

The collected data were analysed using the Miles and Huberman interactive model consisting of three stages, namely data reduction, data display, and conclusion drawing. In the data reduction stage, the researcher sorted and summarised data relevant to the research focus. In the data display stage, data were presented in the form of tables, diagrams, and narrative descriptions. In the conclusion drawing stage, the researcher interpreted the data to answer the research questions. Data validity was tested through source triangulation, namely comparing information from the teacher, the principal, and parents, as well as technique triangulation, namely comparing observation, interview, and documentation data.

The observation instrument used contained ten indicators covering three main domains, namely the cognitive domain (letter and color recognition), the fine motor domain (eye–hand coordination and arranging pieces), and the learning-attitude domain (enthusiasm, concentration, independence, and compliance with rules).

Each indicator was assessed using a four-level achievement scale. For the purpose of presentation, the qualitative assessment results were also summarised in the form of a frequency distribution to clarify the overall tendency of developmental achievement, without changing the nature of the research as descriptive qualitative research.

The research procedure was carried out through several stages. The preparation stage included instrument development, permits, and coordination with the school. The implementation stage included observing children while using the puzzle medium, interviewing informants, and collecting documentation. The final stage included data processing, analysis, and report writing. Throughout the research process, the researcher sought to maintain objectivity by recording data as it was and re-checking the data obtained from various sources.

IV. RESULTS AND DISCUSSION

A. How the Teacher Uses Letter and Color Puzzle Media

Based on the interview with the classroom teacher, letter and color puzzle media were used in a scheduled manner in learning. The teacher stated that the intensity of media use varied between two to three times a week and once a week, depending on the learning theme in progress. The main purpose of using the medium was to introduce letters and colors simultaneously, so that in a single activity the child acquires two abilities at once.

The way the teacher introduced the medium to children was carried out mainly through direct demonstration, namely the teacher first gave an example of how to arrange the puzzle pieces before children tried it independently. Some teachers also combined several approaches, such as storytelling and singing, to attract children's attention. In practice, the teacher divided children into small groups ideally consisting of two to five children so that

each child obtained sufficient opportunity to interact with the medium.

When facing children who had difficulty arranging the puzzle, the teacher addressed this by giving examples, providing direct guidance, and offering motivation. To keep children from becoming bored, the teacher varied the activities by changing the color or theme of the puzzle, holding puzzle-arranging contests, singing while playing, and playing in groups. This shows that the teacher sought to keep the learning atmosphere enjoyable and to stimulate children's active involvement.

The interview results also revealed that some teachers prepared an activity plan before using the puzzle medium, although the frequency varied from always to sometimes. Preparing an activity plan shows the teacher's effort to direct media use in accordance with the intended learning objectives. In assessing children's developmental ability, the teacher used a variety of techniques, ranging from observation and performance tasks to a combination of several assessment techniques. The use of diverse assessment techniques allowed the teacher to obtain a more complete picture of each child's development.

According to the teacher, letter and color puzzle media were considered effective in improving children's letter recognition ability. This assessment was reinforced by the observation that children showed enthusiastic to very enthusiastic responses when using the medium. This enthusiasm is an important asset in learning because interested children more easily absorb the knowledge and skills being taught. Thus, letter and color puzzle media not only function as a tool for introducing letters and colors but also as a trigger for children's learning interest.

Table 1. Summary of Media Use Based on the Classroom Teacher Interview

Aspect	Findings
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Intensity of use	Two–3 times a week to once a week, by theme
Main purpose	Introducing letters and colors together
Way of introducing	Direct demonstration; combined with storytelling/singing
Ideal children per group	2–5 children
Handling struggling children	Giving examples, direct guidance, motivation
Activity variation	Changing color/theme, contests, singing, group play
Main obstacle	Limited quantity of media
Source of media	School procurement and government/donor aid

Source: Interview with the classroom teacher, 2026

B. Children's Developmental Achievement

Children's developmental achievement was obtained through observation of four Group B children using ten indicators. Each indicator was assessed with four achievement categories, namely Not Yet Developing (BB), Beginning to Develop (MB), Developing as Expected (BSH), and Developing Very Well (BSB). The observation results for the four children are presented in Table 2.

Table 2. Observation Results of the Developmental Achievement of Four Children

Indicator	C1	C2	C3	C4
1. Enthusiasm when the medium is introduced	MB	BB	BSH	MB
2. Naming letters on a piece	BSH	MB	BSH	BSH
3. Recognising & naming colors	BSH	MB	MB	BSH
4. Distinguishing letter shapes	MB	BB	MB	BSH
5. Arranging letter pieces correctly	BSB	BB	MB	BSH
6. Matching piece colors	BB	MB	MB	BSH

7. Eye-hand coordination	MB	BB	MB	BSH
8. Concentration until completion	BB	MB	MB	MB
9. Completing the puzzle independently	BB	BB	MB	MB
10. Following rules & instructions	MB	BB	BSH	MB

Note: C1–C4 = Child 1 to Child 4; BB = Not Yet Developing, MB = Beginning to Develop, BSH = Developing as Expected, BSB = Developing Very Well. Source: Observation results, 2026

To clarify the distribution of developmental achievement, the frequency of occurrence of each category out of all forty assessments (ten indicators multiplied by four children) is summarised in Table 3 and visualised in Figure 1 and Figure 2.

Table 3. Frequency Distribution of Developmental Achievement Categories

Category	Frequency	Percentage
Not Yet Developing (BB)	9	22.5%
Beginning to Develop (MB)	19	47.5%
Developing as Expected (BSH)	11	27.5%
Developing Very Well (BSB)	1	2.5%
Total	40	100%

Source: Processed observation data, 2026

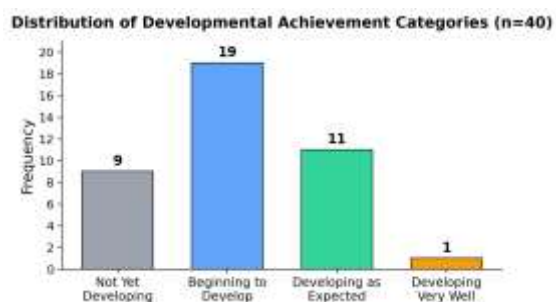


Figure 1. Bar Chart of the Distribution of Developmental Achievement Categories

Source: Processed observation data, 2026

Percentage of Developmental Achievement Categories



Figure 2. Pie Chart of the Percentage of Developmental Achievement Categories

Source: Processed observation data, 2026

Based on Table 3, Figure 1, and Figure 2, the Beginning to Develop (MB) category was the most frequently occurring achievement, followed by the Developing as Expected (BSH) category. A small portion of the assessments was still in the Not Yet Developing (BB) category, and there was one indicator that had reached the Developing Very Well (BSB) category. This pattern shows that, in general, children's abilities are in the process of developing toward the expected achievement. Indicators related to letter and color recognition, such as naming letters and recognising colors, tended to reach higher categories than indicators demanding full independence, such as completing the puzzle without the teacher's help.

Variation in achievement among children was also clearly observed. Children with high interest and learning support at home tended to show better achievement. This confirms that the development of a child's ability is influenced not only by the medium used but also by individual interest and a supportive learning environment. This finding is in line with the view that consistent and repeated stimulation is needed to move a child from the beginning-to-develop stage toward the developing-as-expected stage.

To clarify the diversity of achievement among children, a comparison of each child's achievement profile across the ten indicators is summarised in Table 4. This profile describes the tendency of strengths

and the areas that still require stimulation for each child.

Table 4. Developmental Achievement Profile per Child

Child	BB	MB	BSH	BSB	Tendency
Child 1	3	4	2	1	MB–BSH
Child 2	6	4	0	0	BB–MB
Child 3	0	7	3	0	MB
Child 4	0	4	6	0	BSH

Source: Processed observation data, 2026

Table 4 shows that Child 4 displays the highest achievement profile, dominated by the Developing as Expected category, followed by Child 1 and Child 3, who are in the range of Beginning to Develop toward Developing as Expected. Meanwhile, Child 2 still requires more intensive stimulation because part of the achievement is in the Not Yet Developing category. These profile differences show that although the medium used is the same, the response and developmental pace of each child differ according to their respective characteristics and readiness. This requires the teacher to give individual attention alongside group activities.

When viewed by indicator type, the highest achievement tended to appear on indicators related to letter and color recognition, such as naming letters on a piece and recognising colors. This condition shows that letter and color puzzle media are indeed effective in achieving their main goal, namely introducing letters and colors. Conversely, indicators demanding independence and completion, such as completing the puzzle independently and concentrating until completion, were still largely in the Not Yet Developing and Beginning to Develop categories. This finding provides direction for the teacher to design follow-up activities that specifically train children's independence and concentration.

C. Support and Obstacles in Media Use

The interview with the kindergarten principal showed support for the use of letter and color puzzle media. The school

stated that it supports media procurement and provides a budget as needed. The principal rated the teacher's creativity in using the medium as good to very creative. Even so, training programmes for teachers regarding the use of learning media are still occasional and have only been held once or twice, so capacity building for teachers through training still needs to be strengthened.

From the parents'/guardians' side, the interview results show that most children showed interest in learning letters and colors at home, ranging from the interested to very interested categories. Children also frequently told their parents about playing puzzles at school. Parents rated their children's letter recognition ability as improving, and children were able to name the colors of objects at home well. In general, parents support the use of puzzle media in school learning.

The main obstacle found in using letter and color puzzle media was the limited quantity of media. This limitation affected the limited opportunity for each child to interact with the medium individually, so the teacher needed to organise activities in small groups taking turns. This finding is an important note that optimising media use depends not only on the quality of the medium but also on the availability of an adequate quantity of media in line with the number of children.

Besides the obstacle of media quantity, the teacher's hopes for the future development of letter and color puzzle media include increasing the quantity of media and the variety of puzzle types so that learning activities become more diverse and less monotonous. This hope is in line with the need to sustain children's interest over the long term, given that early childhood easily becomes bored when facing repeated activities without variation. Thus, an adequate quantity of media and its variety become two mutually complementary matters in supporting the success of puzzle-based learning.

Table 5. Source Triangulation of Media Use

Source	View on Media Use
Classroom teacher	Media used on a schedule, effective for introducing letters and colors; obstacle in limited media quantity
Kindergarten principal	Supports media procurement, rates the teacher as creative; teacher training still needs improvement
Parents	Children interested in learning at home, letter and color recognition improving; supports media use

Source: Interview data triangulation, 2026

D. Discussion

The findings show that the use of letter and color puzzle media at Pertiwi IV C Kindergarten has proceeded in accordance with the principle of early childhood learning, namely learning while playing. The medium was used in a planned manner with the aim of introducing letters and colors at once, practised through direct demonstration in small groups. This approach suits the characteristics of early childhood, who need concrete media and direct experience to understand abstract concepts [2], [4].

The use of the medium in small groups of two to five children gave the teacher the opportunity to observe each child's development more closely while providing more personal guidance. This small-group management also enabled social interaction among children, such as helping one another and sharing, which further developed children's social-emotional aspects. Thus, although the main focus of the medium is the development of cognitive ability, in practice the puzzle medium also contributes to other aspects of development in an integrated manner.

Children's developmental achievement, which was largely in the Beginning to

Develop and Developing as Expected categories, shows that the puzzle medium contributes positively to the development of children's abilities. This medium proved able to stimulate various aspects of development simultaneously, including letter recognition, color recognition, eye-hand coordination, and concentration. This reinforces the view that the puzzle is a multifunctional medium effective for developing children's cognitive and fine motor abilities [5].

Indicators demanding full independence, such as completing the puzzle without the teacher's help, tended to be in lower categories. This is reasonable given that children are still in the process of development and require gradual guidance. The teacher's role in providing examples, guidance, and motivation becomes very important in helping children attain independence. With consistent stimulation and support from the school and family environment, children's developmental achievement has the potential to rise toward higher categories [3], [7].

Support from the principal and parents is an important factor that also determines the success of media use. Source triangulation shows agreement among the three informants that the puzzle medium is beneficial for children's development. However, the obstacles of limited media quantity and limited teacher training need attention so that media use can be more optimal. Increasing the quantity of media, the variety of puzzle types, and teacher capacity through training are relevant recommendations for future development [6].

The integration between media use at school and learning support at home is a finding worth underlining. Children who showed interest in learning at home and frequently told their parents about playing puzzles tended to have better achievement. This affirms the importance of partnership between school and family in supporting children's development. Learning carried

out at school will deliver more optimal results when reinforced by consistent stimulation in the home environment, so that children obtain a continuous learning experience.

Theoretically, the findings of this study reinforce the view that concrete, play-based manipulative media suit the developmental characteristics of early childhood. Letter and color puzzle media proved able to bridge the abstract concepts of letters and colors into a real and enjoyable learning experience. Practically, this study provides a concrete picture for educators on how to use the puzzle medium, manage activities in small groups, and overcome obstacles that arise in its implementation. Thus, the research results can serve as a reference in developing learning practices based on educational play media in other early childhood education institutions.

The implications of this study point to the need for institutional policies that support the provision of adequate learning media and the regular conduct of teacher training. Providing sufficient media will give each child broader opportunities to interact with the medium, while training will improve teachers' ability to use media creatively and with variety. Both, if carried out continuously, are expected to improve the quality of learning and optimise the development of early childhood abilities.

This study has limitations, including a scope of subjects limited to one institution and the number of children observed, so the findings are not intended to be broadly generalised but rather to provide an in-depth understanding of the case studied. Nevertheless, the detailed picture obtained is expected to serve as a reference for other institutions with similar contexts. Further research could broaden the scope of subjects, extend the duration of observation, or combine qualitative and quantitative approaches to obtain a more comprehensive understanding of the effectiveness of letter and color puzzle media in early childhood learning.

V. CONCLUSION

Based on the research results, it can be concluded that letter and color puzzle media at Pertiwi IV C Kindergarten, Purwodadi Village, Rimbo Bujang, Tebo, were used in a scheduled manner as a learning-while-playing medium to introduce letters and colors at once. The teacher used the medium through direct demonstration in small groups of two to five children, accompanied by guidance and motivation for children who experienced difficulty, as well as activity variation to sustain children's interest.

The use of letter and color puzzle media was able to develop children's abilities in letter recognition, color recognition, eye-hand coordination, and concentration. The developmental achievement of the four children observed was largely in the Beginning to Develop and Developing as Expected categories, with several indicators reaching Developing Very Well. The use of the medium obtained support from the principal and parents, although it still faced the obstacles of limited media quantity and limited teacher training. It is recommended that the school increase the quantity and variety of puzzle media and strengthen training for teachers to optimise the use of learning media.

Based on these findings, several suggestions can be put forward. For teachers, it is recommended to continue developing creativity in varying puzzle-play activities and to give individual attention to children who still need more stimulation, particularly on the indicators of independence and concentration. For institutional managers, it is recommended to provide media in adequate quantity and to hold training regularly to improve teacher capacity. For parents, it is recommended to also stimulate children at home so that learning carried out at school obtains continuous reinforcement. For future researchers, it is recommended to examine the use of letter and color puzzle media in a broader context or with a

different approach so that a more comprehensive understanding is obtained.

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