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INTRODUCTION TO LETTERS FROM FLOUR AS A STIMULATION FOR EARLY LITERACY IN CHILDREN AT PRAWIDIA KUMARA MAMBAL KINDERGARTEN

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Abstract

Early literacy is an important foundation in the development of language skills and academic readiness in early childhood. One of the main aspects of early literacy is the ability to recognize letters of the alphabet, which needs to be stimulated through activities that are appropriate to the characteristics of children's development. This study aimed to describe the use of flour as a learning medium in introducing letters of the alphabet and its impact on stimulating early literacy in children at Prawidia Kumara Mambal Kindergarten. This study used a descriptive qualitative approach with 10 children in group B and 2 class teachers as research subjects. Data collection techniques included participatory observation of children's activities during learning activities, semi-structured interviews with teachers to determine perceptions, benefits, and obstacles in implementing activities, and documentation in the form of photographs, children's work, and field notes. Data analysis was carried out through the stages of data reduction, data presentation, and drawing conclusions. The results showed that the use of flour as a medium for introducing letters was able to increase children's interest in learning, active involvement, and concentration, as well as support fine motor development and the ability to recognize letter shapes. Children showed high enthusiasm, courage to try, and an increase in the number of letters recognized. Despite obstacles such as flour that is easily scattered and the need for extra supervision, this activity was considered effective and enjoyable. Thus, the use of flour as a material can be an alternative medium for early literacy learning that is innovative, affordable, and appropriate to the characteristics of young children.

Keywords: *early literacy; letter recognition; flour; sensory learning, early childhood.*

INTRODUCTION

Literacy is the primary foundation for the development of children's language and cognitive skills from an early age, encompassing not only reading and writing skills but also the ability to understand, think critically, speak, listen, and express ideas meaningfully through symbols and language (Saracho & Spodek, 2006). In early childhood, literacy plays a crucial role in building the foundation for later academic and social success. Research from NAEYC (2009) shows that children who receive early literacy stimulation tend to have higher language development, imagination, and interest in reading than those who are not exposed to early literacy activities. Consistent environmental support and stimulating activities can strengthen these skills from the preschool age (Sulistyawati, 2024). Early literacy is a fundamental skill that is crucial to develop in preschool children because it forms the primary foundation for the development of language, reading, and writing skills at subsequent levels of education. Literacy encompasses not only letter recognition but also the ability to understand letters as meaningful language symbols and to connect letter shapes with sounds. According to the research results of Anggraini, D., & Sari, R. P. (2022), early literacy skills have a significant influence on children's success in reading and subsequent language skills, so literacy stimulation from an early age must be carried out appropriately and enjoyably.

However, based on observations conducted by researchers in practical contexts in many early childhood education institutions, including several kindergartens, various challenges remain in letter recognition and the development of basic literacy in early childhood. Early childhood education (PAUD) is a crucial foundation for building children's cognitive, affective, and psychomotor development. At an early age, children experience a golden age that significantly impacts their future development. One crucial element that must be instilled from an early age is literacy, particularly language literacy, which encompasses the ability to recognize letters, words, and ultimately simple reading. Alphabet recognition is the first stage in this process, which, if implemented correctly, will increase children's interest in literacy activities (Sulistyawati, 2024). However, the reality in the field shows that many young children still face challenges in effectively recognizing letters. This includes insufficiently varied learning methods that have not been fully adapted to the characteristics of young children who enjoy playing and exploring. Monotonous, text-only learning can lead to boredom and a decrease in children's motivation to learn. Therefore, a creative approach is needed that can combine elements of play, exploration, and learning in one exciting activity (Astuti & Wulandari, 2023).

Research from several educational institutions shows that most children have difficulty recognizing and writing letters due to a lack of varied and engaging learning media, less interactive learning methods, and a lack of exercises involving fine motor skills integrated into learning activities (Astuti & Wulandari, 2023). This challenge requires creative solutions so that the learning experience is not merely memorization, but stimulates children's active involvement in the letter learning process. Early literacy problems can also be seen from low reading interest and a lack of stimulating interactions in children's learning environments, as found in research conducted by Astuti & Wulandari (2023). As a result, basic literacy development is less than optimal and affects children's readiness to enter the advanced reading and writing stages in elementary school. Therefore, selecting learning media that are appropriate to the child's characteristics is an important aspect of the literacy development strategy (Astuti & Wulandari, 2023).

Various studies have shown that the use of innovative learning media, especially interactive and fun media, can significantly improve early childhood letter recognition skills. For example, the use of Labhur (letter maze) has been proven effective in improving letter recognition skills

in children aged 4–5 years through a more engaging and interactive learning process (Fauziah & Ramadhani, 2021). Similarly, other research shows that learning through sand and plasticine play not only makes children happy but also helps them recognize letters concretely through sensory experiences (Hidayati & Putri, 2022). In this context, using flour as a letter recognition medium is a creative and contextual alternative. Flour not only provides a fun tactile learning experience but also helps children develop fine motor coordination and strengthen visual memory of letter shapes through direct manipulation. Furthermore, this method supports children's creativity, increases focus, and strengthens social interaction when used in groups. This learning innovation is expected to be an efficient and enjoyable method for stimulating early literacy and can serve as a reference for other early childhood education institutions seeking creative approaches to letter teaching. With that background, the activity of introducing letters from flour at Prawidia Kumara Kindergarten, Mambal, not only aims to improve children's early literacy skills, but also serves as an innovation in direct experience-based learning and educational games. Thus, the introduction of letters from flour at Prawidia Kumara Kindergarten, Mambal, is expected to be an effective early literacy stimulation strategy, relevant to children's developmental characteristics, and able to facilitate children's active involvement in the literacy learning process from an early age.

METHODOLOGY

A descriptive qualitative approach was used in this study. According to Sugiyono (2020), qualitative descriptive research is a research method based on descriptive data (words, images) that aims to understand phenomena in depth, as they are (naturally), and in detail by describing facts without manipulation or generalization. The study was conducted at Prawidia Kumara Mambal Kindergarten, Badung Regency, Bali. The research subjects consisted of 10 children in group B (aged 5-6 years) and 2 class teachers as key informants. Data were collected through participant observation, namely by directly observing children's activities during learning activities with flour materials; then semi-structured interviews were conducted with class teachers to determine perceptions, benefits, and obstacles of the activities; and finally, data collection was carried out through documentation in the form of photographs, children's work, and field notes. The analysis technique used in this study was through three stages: data reduction, data presentation, and conclusion drawing (Miles & Huberman, 1994). Data validity was strengthened by triangulation (interconnectedness) of sources and techniques. Data collection methods included direct observation of activities, semi-structured interviews with teachers, and documentation of children's products. Data analysis was conducted thematically by observing interaction patterns, children's participation, and reactions to learning media.

RESULTS AND DISCUSSION

Based on the results of research conducted by researchers, the following results were obtained:

1. Results of Participatory Observation of Children's Activities

Based on the results of participatory observations conducted during the learning process, the activity of introducing the alphabet using flour had a positive impact on children's involvement and participation. Observations were made by directly observing children's behavior, responses, and interactions during the activity of writing letters on the flour surface. In the initial stages of the activity, most children showed a high curiosity about the flour medium. Children appeared enthusiastic about touching, squeezing, and flattening the flour before starting to form letters. When the teacher demonstrated how to write letters using their fingers, the children paid close attention and tried to imitate the movements. Children not only copied the letter shapes but also verbally stated the letter names, thus integrating the visual, motor, and language aspects.

During the activity, there was a visible increase in children's concentration and focus compared to writing activities using paper and pencil. Children were able to persist with the activity until completion without showing any significant signs of boredom. Observations also showed that children were more confident in trying to form letters, even when the results were not perfect. Mistakes were not a barrier, as children could easily erase and redo the letter shapes on the flour. In terms of fine motor development, children showed improved hand-eye coordination and finger flexibility. Children's finger movements became more controlled, especially when forming curved and straight lines in certain letters. These results align with Pica's (2006) opinion, which states that touch-based activities and finger movements are very effective in developing writing readiness in early childhood. Furthermore, social interaction between children also increased. Children often compared their writing, discussed letter shapes, and helped friends who were having difficulties. This indicates that this activity not only supports cognitive and motor development, but also supports children's social-emotional aspects.

2. Results of Semi-Structured Interviews with Class Teachers

Semi-structured interviews were conducted with two classroom teachers to explore their perceptions regarding the benefits, effectiveness, and challenges of using flour as a medium for letter recognition. The interviews revealed that the teachers viewed this activity as an engaging learning innovation that suited the characteristics of early childhood. The teachers reported that the children appeared more motivated and enthusiastic compared to conventional literacy learning. According to the teachers, the flour provided a different learning experience because children could learn while playing without feeling pressured. They also stated that children who had previously been less interested in writing began to show interest and courage in trying to write letters. In addition to these benefits, the teachers also revealed that using flour helped children understand letter shapes more concretely. Children not only memorized letters but also understood their shape and direction. This supports Montessori's (1967) theory, which emphasizes the importance of manipulating concrete objects in early childhood learning. However, the teachers also identified several challenges in implementing this activity. The main challenge was that the flour was easily scattered, requiring a dedicated space and extra supervision. They also mentioned that some children tended to become too engrossed in playing with the flour, requiring consistent guidance to maintain focus on the learning objectives. Furthermore, preparation and cleanup time for the flour were relatively longer than for conventional learning methods. Despite the challenges, teachers believe the benefits of this activity far outweigh the challenges. They stated that with careful planning, good classroom management, and small group work, this activity can be effective and enjoyable.

3. Results of Learning Activity Documentation

Documentation data was obtained through photos of activities, children's work, and field notes throughout the research process. Visual documentation shows that children were actively involved in writing letters on flour, both individually and in groups. The children's cheerful and focused facial expressions indicated that this activity provided a positive learning experience. The children's work, consisting of letter shapes made on flour, demonstrated the development of their letter recognition abilities. At the beginning of the activity, most children were only able to form letters roughly and inconsistently. However, after several sessions, the resulting letter shapes became clearer, neater, and resembled the correct letter shapes. Field notes also showed that the number of letters the children recognized gradually increased throughout the activity.

Figure 1. Children Scooping Flour and Making Letters
(Source: Surya Doc., January 8, 2026)

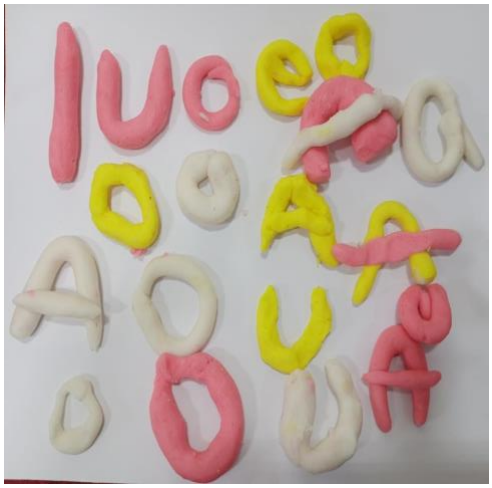

Figure 2: Children's Letter-Shaped Flour Creations
(Source: Surya Doc., January 8, 2026)

The use of flour has been shown to motivate children to actively try writing letters. Children demonstrated high enthusiasm, focused longer, and began to recognize letter shapes better. Furthermore, this activity helped develop fine motor skills, essential for writing readiness. Teachers observed improvements in fine motor skills such as hand-eye coordination, letter shape accuracy, and concentration. Letter shape recognition increased from 4-5 letters before the activity to 8-10 letters after two weeks of activity. This documentation reinforces observational and interview findings that the use of flour as a learning medium can support children's holistic early literacy development. These results align with the findings of Whitehurst and Lonigan (1998) and NAEYC (2009), which emphasize the importance of enjoyable, contextual, and hands-on activity-based early literacy experiences.

4. Discussion of Research Findings

Theoretically, the results of this study can be explained through Piaget's (1952) theory of cognitive development, which states that children aged 2–7 years are in the preoperational stage, where learning most effectively occurs through concrete exploration and direct

experience. The activity of writing letters on flour allows children to build an understanding of letter concepts through meaningful sensory and motor experiences. Furthermore, this approach aligns with Montessori learning principles, which emphasize the use of concrete media and freedom of exploration in building abstract concepts (Montessori, 1967). Flour functions as a flexible medium that allows children to learn from mistakes without fear, thereby increasing self-confidence and learning motivation. The results of this study are also consistent with previous research showing that the use of sensory media such as sand, plasticine, and other natural materials can increase children's interest in learning and early literacy skills (Fauziah & Ramadhani, 2021; Hidayati & Putri, 2022; Saracho & Spodek, 2006). Thus, flour can be an alternative literacy learning medium that is effective, affordable, and easy to apply in early childhood education institutions. The activity was carried out for two (2) weeks in a letter recognition learning session. The activity began with the teacher preparing a tray filled with flour where the teacher prepared a tray filled with flour and then demonstrated writing letters on the flour using fingers. The children were then asked to imitate the letters that had been shown, both individually and in small groups. The children were invited to imitate the letters according to instructions, say the names of the letters, and make letter shapes freely. The children showed high enthusiasm in participating in the activity. They enjoyed the sensation of touching the flour and writing letters with their fingers. Some children were able to repeat the letters without direction and name the letters written. Verbal interaction increased when children compared their writing results. The children were very enthusiastic and enjoyed the sensation of learning to recognize letters through this flour. However, during this process, the researcher also encountered several obstacles, such as flour being easily scattered so that a special area was needed, children tended to play excessively if not directed, and the preparation and cleanup time was relatively long. In addition to experiencing several obstacles in implementing this research, researchers also faced several challenges that emerged during the process, such as the need for extra supervision because the flour ingredients were easily scattered so that supervision was needed for each group of children, some children who had a tendency to play without a goal so that the activity became a little chaotic and needed close observation of each group of children, and the activity took longer than the conventional method.

From the research results above, it is known that the use of flour as a medium for introducing the alphabet at Prawidia Kumara Mambal Kindergarten has proven effective in increasing children's interest, involvement, and early literacy skills. This activity stimulates sensory and fine motor skills while creating a fun learning atmosphere. The use of this medium is highly recommended for regular implementation and adapted to the child's developmental needs. The results of the study indicate that the use of flour as a medium for introducing letters is effective in stimulating children's involvement and literacy awareness. This medium provides a multisensory learning experience that aligns with the Montessori approach and the principles of active learning (Montessori, 1967; Vygotsky, 1978). In the context of early childhood development, this activity also strengthens physical development through fine motor skills exercises, which are important prerequisites for writing (Pica, 2006). Although there are several obstacles, teachers can overcome them with careful planning and optimal supervision. This strategy is very suitable for implementation in early childhood education institutions that prioritize thematic learning and play while learning. With a variety of activities and contextual use of letters, flour as a medium can be part of an innovative and affordable literacy learning practice.

The use of flour in letter recognition is part of sensory learning that simultaneously involves the senses of touch and sight. In Piaget's (1952) theory of cognitive development, children aged

2–7 years are in the pre-operational stage, where exploration through physical and sensory activities is crucial for building cognitive schemas. The activity of writing letters on a flour surface brings together cognitive (recognizing letter shapes), affective (enthusiasm), and psychomotor (hand-eye coordination) aspects. This activity aligns with Montessori's learning principles, which emphasize the manipulation of concrete objects in building abstract concepts such as letters and numbers (Montessori, 1967). In this activity, flour acts as a flexible, inexpensive, concrete learning aid that can be used for both free and structured exploration. The activity of forming letters with fingers on flour stimulates fine motor development, namely small movement skills that are crucial for writing skills. Pica (2006) emphasized that writing skills are highly dependent on a child's motor readiness, including the ability to control hand and finger movements. In this study, teachers observed that children were able to form letter shapes more precisely and consistently after several sessions. Additionally, children learn to control pressure and direction of movement when forming letters, which is difficult to achieve using only pencil and paper in the early stages. This activity also trains children's patience, perseverance, and concentration in completing learning tasks independently.

The results of this study align with the findings of Whitehurst & Lonigan (1998), who stated that fun and structured early literacy experiences can strengthen phonemic awareness and pre-reading skills. Similar research by NAEYC (2009) also emphasized the importance of varied and interactive media in early childhood literacy education. This research also reinforces the findings of other studies using sensory materials such as sand, colored rice, or slime in literacy activities, where increased learning interest and strengthening of cognitive skills were consistently found (Saracho & Spodek, 2006). Despite its many benefits, implementing letter recognition activities using flour also faces practical challenges. Teachers require careful planning in preparing and cleaning the play area. Furthermore, teachers must maintain a balance between children's freedom to explore and a clear direction towards learning objectives. Some children show a tendency to play aimlessly when faced with new media. This requires a patient, creative, and consistent pedagogical approach from teachers to ensure activities remain focused on learning objectives without diminishing the elements of fun and exploration.

This research provides important implications for early childhood educators: learning media does not have to be expensive or complex to have a significant impact. With creativity, simple materials available in the environment can be transformed into effective educational media. Flour, for example, can be used for other activities such as recognizing numbers, geometric shapes, or patterns. Teachers are advised to systematically and regularly design sensory media-based activities, involve parents in home-based activities using similar media, and conduct informal assessments to assess children's literacy development over time. Furthermore, the use of flour as a learning tool can also be incorporated into thematic curricula with integration into other developmental areas, such as social-emotional, art, and science.

CONCLUSION

Based on the research results and discussion, it can be concluded that the use of flour as a medium for introducing the alphabet at Prawidia Kumara Kindergarten, Mambal, has proven effective in stimulating early literacy in young children. Flour media can create a fun learning atmosphere, increase children's interest and active involvement, and help children recognize letter shapes more concretely through sensory and motor experiences. The results of participatory observations showed an increase in children's concentration, courage to try, and fine motor development, especially in hand-eye coordination and finger movement control. Interviews with teachers revealed that flour media provides a different learning experience compared to conventional methods, encouraging previously passive children to become more

active, and helping teachers to stimulate literacy creatively. Documentation of children's activities and work also shows a gradual increase in letter recognition abilities throughout the learning process. Although this activity faces several obstacles, such as the need for extra supervision and longer preparation time, these obstacles can be overcome through careful planning and effective classroom management. Therefore, the use of flour materials is recommended as an alternative medium for early literacy learning in PAUD institutions. This medium is not only economical and easily obtained, but also aligns with the principles of play-while-learning and direct experience-based learning. Further research is recommended to examine the effectiveness of flour-based media quantitatively and integrate it with strengthening the phonological aspects and pre-reading abilities of children.

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