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ENGLISH VOCABULARY AND BASIC MATHEMATICS EDUCATION FOR SCHOOL-AGE CHILDREN THROUGH THE COMMUNITY SERVICE PROGRAM IN SUNGAI BINTI VILLAGe

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Abstract. The Community Service Program (KKN) Group 13 in Sungai Binti Village was implemented as an effort to improve school-age children's English vocabulary and basic math skills. In addition, interactive methods were proven to increase children's motivation, activity, and courage in learning. Support from KKN students, teachers, and parents also strengthened the success of this program. Thus, the activities of KKN Group 13 were proven to be effective in strengthening children's literacy and numeracy foundations and can be used as a sustainable strategy to improve the quality of basic education in the community.

Keyword: english vocabulary, basic mathematics, literacy, numeracy, KKN.

INTRODUCTION

Mastery of English vocabulary and basic mathematics skills are very important for school-age children because both are key foundations for learning in today's global era. English serves as an international language that allows children to access information, technology, and knowledge from various global sources from an early age (Ndraha, 2023d). Good vocabulary mastery has been proven to improve students' comprehension in reading, writing, and communicating effectively, thereby supporting academic achievement in various subjects (Sonnenschein, 2013b). Meanwhile, basic mathematics helps children develop the logical, analytical, and problem-solving skills needed in everyday life and in further studies (Riccomini, 2015b). Understanding mathematical vocabulary also greatly influences students' success in understanding concepts and solving math problems correctly (van der Walt, 2009). The combination of English proficiency and basic mathematics enables children to adapt to the demands of a modern world that is increasingly technology and information-based. In addition, these two skills complement each other in shaping children's academic readiness to face higher levels of education. Therefore, educational programs that emphasize improving English vocabulary and basic mathematics skills, such as those carried out by KKN Group 13 in Sungai Binti Village, are strategic steps to prepare

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children facing global challenges.

The gap between children's ideal needs in basic vocabulary and numeracy mastery and the reality in the field still exists due to various interrelated factors. First, many school-age children in Indonesia show limitations in vocabulary mastery, especially in the categories of nouns, verbs, adjectives, and numbers, which are still in the low category (Winarti, 2023g). Second, numeracy also faces challenges, with longitudinal data showing significant gaps between groups, including based on gender, which have an impact on long-term learning outcomes (Suryadarma, 2015a). The learning environment, both at home and at school, has been shown to have a major influence on children's vocabulary and numeracy skills (Novita, 2023e). However, teaching practices in schools are often inconsistent in providing adequate stimulation for these basic skills. Intervention programs such as Kampus Mengajar (Teaching Campus) have been proven to significantly improve literacy and numeracy, but challenges in teacher readiness and curriculum relevance remain obstacles (Pujiani, 2024g). In addition, variations in sociodemographic factors, such as social status and parental support, also widen the gap between students. This condition explains that the gap is not merely a matter of children's abilities, but rather the result of the complexity of the education system and their learning environment. Therefore, an integrative education strategy is needed to narrow the gap between ideal needs and reality in the field.

The Community Service Program Group 13 can be an effective educational tool to help improve children's English vocabulary and basic math skills in Sungai Binti Village through a structured and contextual approach. This activity is carried out using interactive learning methods such as educational games, group discussions, and hands-on practice so that children can more easily understand the material (Simorangkir, 2024a). KKN students act as facilitators who not only teach but also motivate children to be more active in learning. This kind of intervention is in line with research findings showing that KKN programs can improve children's basic reading, writing, and arithmetic skills in various regions of Indonesia (Fitriansyah, 2023a). In addition, literacy and numeracy-based activities help build children's capacity from an early age so that they are ready to face educational challenges in the future (Idries, 2023c). This program also involves teachers and parents as partners, so that the learning process is more sustainable outside of formal classrooms. With the direct involvement of the community, the sustainability of children's learning outcomes can be better guaranteed. Ultimately, KKN Group 13 serves as a bridge to overcome the limitations of access to basic education in coastal areas such as Sungai Binti. Thus, this program not only improves academic abilities but also strengthens children's motivation and participation

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in the learning process.

METHODOLOGY

Approach and Implementation Techniques

The implementation of English vocabulary and basic mathematics education for school-age children in Sungai Binti Village through the KKN Group 13 program was carried out in a structured manner with an interactive and contextual approach. This program utilizes tutoring methods and educational games to increase children's interest and understanding of everyday English vocabulary (Purwanto, 2022). In addition, numeracy skills are strengthened through arithmetic exercises and simple problem solving packaged in fun activities that are easier for students to understand (Febriani, 2023). This activity also involves teachers and the local community as partners in supporting learning to be in line with local needs. The project-based and collaborative approach has proven effective in increasing students' active involvement in the learning process (Simorangkir, 2024). Through this program, students showed improvement in both vocabulary and basic numeracy, as seen in the evaluation results before and after the activities. The challenges that arise are mainly related to limited learning facilities and student readiness to participate in the program. However, the involvement of KKN students has had a positive impact in the form of additional learning motivation and intensive mentoring. Thus, this KKN program has become one of the real solutions in strengthening the foundations of literacy and numeracy for children in Sungai Binti Village.

Activity Stages

The initial abilities of school-aged children (6–12 years old) in Sungai Binti Village in mastering English vocabulary and basic mathematics before the education program was implemented showed significant limitations. Most children did not have adequate English vocabulary skills because foreign language learning in elementary schools was still limited and often focused on simple memorization (Nurdiansyah, 2019). On the other hand, their command of Indonesian and local language vocabulary is more dominant, which makes the transition to a foreign language a challenge in itself (Use of Javanese and Indonesian Vocabulary in Improving Early Childhood Language Ability, 2022). In terms of numeracy, children's basic skills, such as counting and recognizing numbers, are still relatively low because mathematics learning tends to be teacher-centered, so children are less active in discovering concepts on their own (Sit, 2021). Low motivation to learn is also a factor that exacerbates this limitation. Other studies show that vocabulary skills are directly related to English speaking ability, so a lack of basic vocabulary can

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hinder overall language development (Bangun, 2022). Before the KKN program was implemented, children in Sungai Binti Village still showed varying learning outcomes and generally performed below the minimum standard. This condition emphasized the importance of intervention in the form of more intensive education in English vocabulary and basic mathematics. Thus, this initial mapping became a strong basis for developing a targeted learning program.

Visual media, flashcards, and teaching aids have been proven effective in increasing children's attraction and interest in learning English vocabulary and basic mathematics. The use of word cards can significantly strengthen vocabulary mastery by increasing student participation and enthusiasm (Fazriani, 2020). Visual media also helps students associate words with concrete visuals, thereby facilitating understanding and memory of new vocabulary (Nawaz, 2021). In addition, the use of flashcards and picture card games can make the learning atmosphere more interactive and enjoyable, encouraging active student involvement (Sari, 2024). Thus, the integration of these three media not only improves learning outcomes but also builds children's intrinsic motivation to learn more.

Activity Flow Diagram

Observation is an important method in educational research because it provides a realistic picture of how children interact and respond during the learning process. Through observation, researchers can record patterns of interaction among children, both with educators and with peers, including interactions that are constructive-dialogic, corrective, creative, and nonverbal (Noor, 2013). This technique also allows for the disclosure of educators' interaction styles and their influence on children's learning experiences, thereby providing a deeper understanding of the effectiveness of educational methods (Portugal, 2016). By observing children's responses directly, educators can assess their engagement, enthusiasm, and any obstacles that arise in the educational process. This is in line with the objectives of the English vocabulary and basic mathematics education program conducted through KKN, namely to improve children's understanding while strengthening their social interactions. Thus, observation is not only a means of data collection but also a tool for reflection to refine learning strategies to better suit children's needs.

The research procedure was carried out in three stages: preparation, implementation, and evaluation. In the preparation stage, the team conducted preliminary observations to identify the children’s basic abilities, designed a learning plan appropriate to their age and level of understanding, and prepared learning media such as picture cards, songs, and educational games.

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The implementation stage was conducted regularly at the community post/posyandu using interactive methods through games, singing, question-and-answer sessions, and simple quizzes. The materials provided covered basic English vocabulary such as colors, numbers, body parts, and simple greetings, as well as basic Mathematics exercises including addition and subtraction. The KKN students acted as both facilitators and mentors to create an enjoyable learning atmosphere, making the children more enthusiastic in participating. In the evaluation stage, assessments were conducted informally through short Q&A sessions, quizzes, and observation of the children's participation, and formally through the comparison of pre-test and post-test results.

RESULT AND DISSCUSION

The initial ability of school-aged children in Sungai Binti Village to understand English vocabulary prior to the educational program was still very limited. Most of the children were only familiar with a few basic words related to everyday objects or activities, which were often influenced by the dominance of their mother tongue (Asia, 2019). Research indicates that elementary school students in Indonesia, on average, are only able to produce a relatively small number of English vocabulary items; for instance, early-grade students typically master only around 45 words within a specific theme (Nusantara Science and Technology Proceedings, 2022). This limitation is influenced by the lack of access to English learning resources that are appropriate for their age. In addition, environmental factors, such as the minimal practice of using English at home or at school, further slow down vocabulary development (Novita, 2023). Teachers also often face constraints in terms of media and methods to enrich students' vocabulary, resulting in children having fewer opportunities for contextual learning experiences. Consequently, many children only recognize common words such as animal names, numbers, or colors, but struggle to understand more complex vocabulary. Thus, it can be concluded that the initial ability of children in this area remains at a basic level and requires more systematic learning interventions. This underlies the importance of implementing a vocabulary education program through the KKN initiative in Sungai Binti Village.

The implementation of the English vocabulary and basic Mathematics education program through KKN Group 13 in Sungai Binti Village ran smoothly and received positive responses from the children. At the beginning of the activities, most of the children still showed limitations in mastering basic vocabulary as well as simple arithmetic operations. Many of them appeared shy when trying to speak in English and hesitant to answer the given questions. However, after several

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sessions using interactive learning methods, the children began to show considerable progress. In the English aspect, the children became more familiar with basic vocabulary such as numbers, colors, body parts, and simple greetings. They also began to confidently attempt short sentences in everyday conversations. Activities such as singing, educational games, and small-reward quizzes proved effective in increasing their motivation and enthusiasm. Meanwhile, in the Mathematics aspect, the children demonstrated improvement in solving simple addition and subtraction problems. The results of simple assessments in the form of pre-tests and post-tests showed an increase in the average scores, indicating a development in their understanding after participating in the program.

In addition, documentation in the form of photos and videos illustrated a learning atmosphere filled with enthusiasm and familiarity. The children appeared more confident, active, and motivated in participating in the learning activities. Brief interviews with parents and teachers also revealed positive responses, as they considered the program beneficial for building the children's foundational skills while also fostering their interest in learning.

The results of the activities showed that interactive learning methods through games, songs, and group activities were able to create an enjoyable learning atmosphere and increase the children's motivation. This is in line with previous studies which emphasize that the learn-through-play approach is effective in enhancing the engagement of school-age children in the learning process. Simple learning media such as picture cards and flashcards proved to help children more easily remember new vocabulary, while quizzes and small rewards encouraged their enthusiasm to participate actively.

The improvement in test results for English vocabulary and basic Mathematics demonstrated that this program successfully contributed positively to the children's academic abilities. Children who were initially passive and lacking in confidence began to show the courage to try, even though there were still mistakes in pronunciation and calculation. This proves that providing appropriate stimulation through interactive methods can enhance both the children's confidence and their understanding.

The involvement of KKN students also became a supporting factor for the success of the program. Their presence as facilitators created a new atmosphere that was different from formal classroom learning, making the children feel closer and more motivated. In addition, the support from parents and teachers further reinforced the impact of the program, as the children continued to receive encouragement to practice outside the KKN activities.

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Thus, it can be concluded that the English vocabulary and basic Mathematics education program implemented through KKN Group 13 was effective in improving the children's fundamental skills while also fostering their learning motivation in Sungai Binti Village. Although there were still limitations in terms of facilities and time, this activity succeeded in providing meaningful learning experiences for the children and served as an initial step in strengthening their literacy and numeracy foundations.

CONCLUSION AND RECOMMENDATION

Conclusion

The English vocabulary and basic Mathematics education program through KKN Group 13 in Sungai Binti Village was successfully implemented and had a positive impact on school-aged children. The results showed an improvement in the children's ability to understand basic English vocabulary such as numbers, colors, body parts, and simple greetings, as well as an enhancement of their basic arithmetic skills in Mathematics. Interactive learning methods through games, songs, quizzes, and visual media proved effective in increasing the children's motivation, enthusiasm, and confidence in learning. In addition, the program demonstrated that the support of university students, teachers, and parents played an important role in its success. Thus, this KKN activity succeeded in strengthening the children's literacy and numeracy foundations while also fostering their interest in learning.

Recommendations

Such educational activities should be carried out continuously so that the outcomes achieved are not only temporary but also able to provide a long-term impact on children's development. Support from schools, parents, and the local government is highly needed to provide more adequate learning facilities and infrastructure. In addition, the learning methods used can be further diversified to keep children motivated and prevent them from becoming easily bored. In the future, similar KKN programs are expected to expand the scope of learning materials, not only focusing on English and basic Mathematics but also on other areas relevant to the needs of children in the local community.

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