

Early Identification of Children with Special Needs Based on Developmental Indicators in Kindergarten

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Article Info	Abstract
Article history: Received: January 22, 2026 Accepted: April 8, 2026 Published: May 30, 2026 Keywords: Children with special needs Early detection Stages of development This article is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License © 2026 Bubungan Tinggi: Jurnal Pengabdian Masyarakat	This community service activity aims to improve the knowledge and skills of teachers and parents in the early detection of children with special needs based on developmental stages at Karya Nyata Kindergarten in Banjarmasin. The implementation methods include outreach and educational mentoring activities carried out through the planning, implementation, and evaluation stages. This activity involved 55 participants, consisting of school principals, teachers, kindergarten/early childhood education supervisors within the Pelangi Cluster, North Banjarmasin District, as well as parents of students. Data were collected through pre-tests and post-tests. The research results showed an increase in participants' knowledge, as reflected by the rise in the average pre-test score from 67 to 97 on the post-test. Additionally, participants responded positively to the material and considered the activity relevant to their practical needs. Thus, outreach and practical guidance activities regarding the early detection of children with special needs based on developmental stages effectively enhanced participants' understanding and demonstrated potential for sustainable implementation within the early childhood education setting. To cite this article: Ramli, T. J., Widodo, A. P. A., Jaleha, S., Lawiyah, L., & Arnanda, A. N. (2026). Early identification of children with special needs based on developmental indicators in kindergarten. <i>Bubungan Tinggi: Jurnal Pengabdian Masyarakat</i>, 8(2), 418-425.

INTRODUCTION

A child's readiness to participate in the learning process is greatly influenced by the skills and abilities that develop at each stage of their development. Early childhood is a highly critical period, often referred to as the "golden age," because children at this stage are highly responsive to various environmental stimuli and possess optimal developmental potential across various domains, including cognitive, motor, language, social, and emotional aspects ([Kuswardani, 2025](#)). Therefore, each stage of a child's development must be optimized through the provision of stimulation and support tailored to the child's needs. Development during this early stage serves as the foundation for subsequent developmental stages. Delays in one aspect of development can affect other aspects. Consequently, monitoring a child's growth and development from an early age is of utmost importance. One way to minimize the risk of developmental delays is through early detection. Early detection allows deviations in a child's

growth and development to be identified at an early stage so that appropriate interventions can be provided immediately ([Humaedi et al., 2021](#)). In the context of early childhood education, early detection of children with special needs is a strategic step to identify a child's potential, challenges, and developmental needs as early as possible ([Astuti et al., 2019](#)). Monitoring a child's development based on developmental indicators helps teachers and parents assess whether the child's motor, cognitive, language, social, and emotional development aligns with the expected age range. Appropriate early detection enables the provision of relevant stimulation and more effective early intervention, thereby increasing the likelihood that children will achieve optimal development ([Humaedi et al., 2021](#)). Thus, developmental indicators serve not only as benchmarks for children's developmental achievements but also as systematic observation tools that support more accurate educational decision-making.

The implementation of early detection in practice still faces various challenges. Teachers' and parents' understanding of developmental indicators, as well as their ability to distinguish between developmental delays and individual developmental variations, remains limited. This situation can lead to delays in identifying developmental difficulties, resulting in educational services and support that do not fully meet children's needs ([Riyadi et al., 2020](#)). In fact, early childhood educators and parents are the individuals who interact most frequently with children, both in learning contexts and in daily life. Therefore, strengthening the capacity of teachers and parents through practical training and mentoring is a crucial step toward improving the accuracy of observation, documentation, and follow-up regarding children's development ([Fitri, 2014](#)).

These issues were also identified at the partner institution, Karya Nyata Kindergarten in Banjarmasin. Based on an initial assessment, the kindergarten has 40 students supervised by one principal and two teachers. This situation indicates that educators' capacity to conduct individual and ongoing developmental observations remains limited. Initial interviews with partners revealed several key issues, including teachers' limited understanding of how to identify children's growth and development as well as developmental delays in early childhood, limited availability of tools for the early detection of children with special needs, limited time for teachers to conduct observations due to the school's busy schedule, and suboptimal collaboration between the school, parents, and other professionals such as psychologists, therapists, or pediatricians. These challenges result in a lack of systematic early identification of developmental delays, thereby posing a risk that the educational services provided are not fully responsive to the individual needs of children. This condition indicates that early detection should be conducted in a structured, integrated, and continuous manner to ensure that services align with children's developmental needs ([Ningsih, 2025](#)).

In addition, parental involvement as partners with the school in monitoring children's development also needs to be strengthened. In fact, cooperation between schools and families is a crucial factor in the success of early detection, as monitoring of children's development should ideally be conducted on an ongoing basis at both school and home ([Wijayanti et al., 2022](#)). Without adequate understanding, practical, easy-to-follow guidelines, and effective coordination between teachers and parents, signs of developmental delays may be missed or addressed too late. Therefore, educational interventions are necessary not only to provide conceptual understanding but also to equip teachers and parents with practical skills in observing children's development based on developmental indicators.

METHODS

This community service activity employs a Participatory Action Research (PAR) approach, a participatory method that emphasizes the active involvement of partners throughout the entire process from problem identification, planning, and implementation to evaluation and reflection. This approach was chosen because it aligns with the program's objective, which is to enhance the knowledge and skills of teachers and parents in conducting early detection of children with special needs based on developmental indicators through a collaborative process between the implementation team and the partners. Although the main activity will take place on a single day, Saturday, September 6, 2025, from 8:00 a.m. to 12:00 p.m. WITA, at Karya Nyata Kindergarten in Banjarmasin, the application of the PAR approach in this program is not limited to that day. The problem identification and planning stages were carried out prior to the event through initial coordination and interviews with partners, while the reflection and evaluation stages were conducted after the event through analysis of pre-test and post-test results, observation sheets, and reflection questionnaires. Thus, the application of PAR in this program constitutes a systematic and continuous process.

This activity involved 55 participants, including school principals, teachers, early childhood education supervisors, and parents or guardians, reflecting a collaborative approach to the implementation of PAR, which emphasizes the active involvement of various stakeholders in a participatory problem-solving process ([Genda et al., 2025](#)). The implementation followed the PAR process, which consists of six stages. The first stage was problem identification. During this stage, the service team conducted initial coordination with Karya Nyata Kindergarten to identify the main needs and challenges faced by the partner. The results revealed limited teachers' understanding of recognizing children's growth and development, as well as developmental delays; limited availability of practical tools for the early detection of children with special needs; limited observation time due to the intensity of learning activities; and suboptimal collaboration among schools, parents, and professionals.

The second phase is planning. During this phase, the team works with partners to develop an activity plan, set the schedule and venue, identify the target participants, prepare outreach materials, and design data collection tools as part of a systematic process within the PAR approach, which emphasizes collaborative and context-specific planning ([Baum et al., 2006](#)). The instruments used in this activity include: (1) a pre-test questionnaire consisting of 15 items to measure participants' baseline knowledge; (2) a post-test questionnaire consisting of 15 items with equivalent indicators to measure participants' knowledge after the activity; (3) an observation sheet to assess participant engagement during the activity; and (4) a reflection questionnaire to gather feedback from participants regarding the program's benefits and relevance. All participants completed the pre-test and post-test questionnaires, resulting in 55 questionnaires analyzed for each phase.

The third stage involves data collection and analysis. Data were collected through initial interviews with partners, pre-tests administered before the presentation of the material, observations during the activity, post-tests administered after the activity concluded, and reflection questionnaires completed by participants. This data collection was intended to provide an overview of the participants' baseline conditions, their level of engagement during the activity, and changes in their level of understanding following the intervention ([Nuryanah et al., 2025](#)). Data analysis was conducted quantitatively on the pre-tests and post-tests using a descriptive method, specifically by comparing scores before and after the activity. The analysis involved calculating the minimum, maximum, total, and participants' average scores. Each respondent's score was converted to a scale of 0–100 using the formula: $\text{Score} = (\text{score obtained} / \text{maximum score}) \times 100$. Additionally, data from the observation sheets and reflection questionnaires were analyzed using qualitative descriptive methods to characterize participants' levels of participation, responses to the material, and perceptions of the activity's benefits.

The fourth stage is the implementation of activities. At this stage, activities are carried out in the form of educational outreach and practical guidance on the early detection of children with special needs based on developmental indicators. The main activities include presenting materials, interactive discussions, question-and-answer sessions, and simple exercises in observing child development using the prepared observation guidelines. The implementation of these activities is designed to ensure that participants not only gain conceptual understanding but also master basic practical skills in conducting more systematic observations of child development ([Lestari et al., 2024](#)).

The fifth stage is reflection and evaluation. Evaluation is conducted by reviewing pre-test and post-test results, observational data, and participants' responses in the reflection questionnaire. This stage aims to assess the achievement of the activity's objectives, participants' increased understanding, and the alignment of the material with the partners' needs. The results of this reflection are used as the basis for formulating follow-up actions, including strengthening collaboration between schools and parents and providing further assistance in the practice of early detection of child development ([Balqis & Andriani, 2024](#)).

Overall, this implementation method is designed to ensure that community service activities focus not only on delivering content but also on improving participants' measurable understanding, strengthening practical skills, and fostering collaboration between schools and families to continuously monitor children's development.

RESULTS AND DISCUSSION

The implementation of a community service program on the early detection of children with special needs based on developmental indicators at Karya Nyata Kindergarten in Banjarmasin was analyzed using the six stages of PAR: problem identification, planning, data collection, data analysis, implementation of interventions, and reflection and evaluation ([Felani et al., 2024](#)). This approach emphasizes the active involvement of partners throughout the process, ensuring that the solutions provided are better aligned with on-the-ground needs.

1. Problem Identification Stage: At this stage, it was found that teachers still have limitations in understanding children's growth and development, as well as in distinguishing developmental delays from individual developmental variations. In addition, the availability of practical tools for early detection remains limited, the time allocated to observing children at school is insufficient, and collaboration among schools, parents, and professionals has not yet been optimally established. These conditions indicate that partners require enhanced knowledge and practical skills to conduct more systematic monitoring of children's development. Theoretically, early detection is a crucial step in early childhood education, as it allows developmental delays to be identified at an early stage so that appropriate interventions can be provided promptly ([Humaedi et al., 2021](#)).
2. Planning Phase: During the planning phase, the service team, in collaboration with partners, designed outreach and practical mentoring activities focused on the early detection of children with special needs based on developmental indicators. These activities were held on September 6, 2025, at Karya Nyata Kindergarten in Banjarmasin, involving 55 participants, including the principal, teachers, early childhood education supervisors, and parents. At this stage, materials, simple observation guidelines, pre-tests, post-tests, observation sheets, and reflection questionnaires were also prepared. This planning is crucial, as effective early detection activities require tools that are easy to use and relevant to the conditions teachers and parents face in the field. This is supported by findings indicating that the availability of appropriate, practical, and user-friendly early detection instruments for both educators and parents is essential to obtain optimal information regarding children's developmental progress ([Mulyana et al., 2022](#)).

3. Data Collection and Analysis Phase, data were collected through a pre-test administered before the activity, observations made during the activity, a post-test administered after the activity, and a participant reflection questionnaire. Analysis results indicate an increase in participants' understanding, as reflected in the rise in the average score from 67 on the pre-test to 97 on the post-test. These findings suggest that the awareness-raising and mentoring activities were effective in enhancing teachers' and parents' knowledge regarding the concept of children with special needs, developmental indicators, and the importance of early detection. These findings align with [Mastikawati et al. \(2025\)](#), who state that awareness-raising activities can improve participants' understanding of child growth and development. Conceptually, developmental indicators can serve as a framework for systematic observation to assess whether a child's development aligns with the expected developmental stages appropriate for their age. The community service team, together with community service partners, is listed in Figure 1.



Figure 1 Community service team with community service partners

4. Implementation Phase: In this phase, activities were conducted through interactive lectures, discussions, question-and-answer sessions, and practical guidance using child development observation guidelines (see Figure 2). This approach allowed participants to understand the material in a more contextual manner, as it was directly related to the real-life experiences they encounter both at school and at home. Teachers and parents not only gain theoretical understanding but also master foundational skills in systematically observing child development. These findings align with [Watini \(2019\)](#), who emphasizes that a contextual approach can enhance participants' understanding through active engagement and the integration of learning materials with real-life experiences.



Figure 2 Participants in the socialization activity

5. Reflection and Evaluation Phase: During this phase, participants demonstrated enthusiasm and active engagement throughout the activity. The results are given in Table 1.

Table 1 Reflection and evaluation result

Respondent	Pre-Test	Post-Test
Number of Participants	55	55
Average Score	67	97
Lowest Score	50	90
Highest Score	90	100

They found the presented material relevant to on-the-ground needs and useful in supporting more structured observations of children's development. In addition to enhancing understanding, the program also strengthened participants' awareness of the importance of collaboration between schools and families in supporting the early detection of children's developmental progress. These findings align with [Wijayanti et al., \(2022\)](#), who emphasize that monitoring children's development is more effective when conducted collaboratively by educators and parents. Thus, this program represents a positive first step toward establishing more systematic and sustainable early detection practices within the early childhood education setting.

CONCLUSION

The community service program implemented through outreach on early detection of children with special needs based on developmental indicators at Karya Nyata Kindergarten in Banjarmasin yielded positive results. Following the stages of PAR, the program began with identifying the partner's problems, followed by planning, implementing actions, and reflection and evaluation. The research results indicate an increase in participants' understanding, as reflected by the rise in the average score from 67 on the pre-test to 97 on the post-test. These findings suggest that outreach and practical guidance are effective in enhancing teachers' and parents' knowledge regarding the early detection of children with special needs.

In addition to enhancing understanding, this program also strengthens the involvement of teachers and parents in monitoring children's development and emphasizes the importance of cooperation between schools and families. As such, this program can serve as a first step toward establishing more systematic and sustainable early detection practices in early childhood education settings.

Schools are recommended to implement routine milestone-based monitoring, accompanied by a simple, consistent format for recording progress. Also, schools need to follow up through periodic assistance/monitoring and by strengthening follow-up procedures (stimulation, school-home communication, and referral when necessary).

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

AUTHOR CONTRIBUTIONS STATEMENT

In this statement, we declare that each author contributed fully to both implementing community empowerment activities and compiling this article.

AI DISCLOSURE STATEMENT

The authors used ChatGPT to translate the manuscript and improve its grammatical structure during the preparation of this work. After using these tools, the authors thoroughly reviewed and edited the content as needed and take full responsibility for the content of the publication.

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