

# Intervening at the Margins: Preschool Teachers' Perception of Disability Intervention in Rural Areas

Noviana Mustapa<sup>a</sup>, Widya Rizky Pratiwi<sup>b</sup>, Dwi Rezki Hardianto Putra Rustan<sup>c</sup>, Juhana<sup>d</sup>, Anugrah Murtini<sup>e</sup>, Samihah Mahamud<sup>f</sup>

<sup>abcde</sup>Universitas Terbuka, Tangerang Selatan, Indonesia

<sup>f</sup>Albukhary International University, Malaysia

[noviana.mustapa@ecampus.ut.ac.id](mailto:noviana.mustapa@ecampus.ut.ac.id)

## Keywords: Abstract

children with disabilities;  
preschool teachers;  
early childhood  
intervention; inclusive  
education in rural areas

*anak dengan disabilitas;  
guru PAUD; intervensi  
anak usia dini; pendidikan  
inklusif di pedesaan*

This study employed a quantitative descriptive survey design to examine preschool teachers' perceptions of interventions for children with disabilities in rural areas of Banten, Indonesia. Data were collected from 62 preschool teachers using a 25-item questionnaire covering five domains: understanding of disability, early identification, intervention planning, classroom implementation, and evaluation. Descriptive statistical analysis was used to interpret the data. The findings indicate that teachers generally hold positive attitudes toward inclusive education and recognise the importance of differentiated learning approaches. However, notable gaps remain in teachers' practical competence and confidence, particularly in developing Individual Learning Plans and implementing interventions independently in classroom settings. Professional collaboration was also perceived as limited due to insufficient guidance and access to specialist support. These findings highlight the need for targeted professional development to strengthen teachers' capacity to implement inclusive practices effectively, especially in rural contexts where access to training and support remains constrained.

*Penelitian ini menggunakan desain survei kuantitatif deskriptif untuk mengkaji persepsi guru PAUD terhadap intervensi bagi anak dengan disabilitas di wilayah pedesaan Banten. Data dikumpulkan dari 62 guru PAUD melalui kuesioner berisi 25 butir yang mencakup lima aspek: pemahaman tentang anak dengan disabilitas, identifikasi dini, perencanaan intervensi, pelaksanaan di kelas, dan evaluasi. Data dianalisis menggunakan statistik deskriptif. Hasil penelitian menunjukkan bahwa guru umumnya memiliki sikap positif terhadap pendidikan inklusif dan memahami pentingnya pembelajaran yang beragam. Namun, masih terdapat kesenjangan pada kompetensi praktis dan kepercayaan diri, khususnya dalam penyusunan rencana pembelajaran individual dan pelaksanaan intervensi di kelas. Selain itu, kolaborasi profesional masih terbatas akibat kurangnya bimbingan dan akses terhadap dukungan. Temuan ini menegaskan perlunya pelatihan profesional yang lebih terarah untuk memperkuat kapasitas guru dalam menerapkan praktik pendidikan inklusif secara efektif, terutama di wilayah pedesaan.*

Journal of Disability Studies  
**INKLUSI**

Vol. 12, No. 02, 2025

doi [10.4421/ijds.120211](https://doi.org/10.4421/ijds.120211)

Submitted: Jul 7, 2025

Accepted: Dec 21, 2025



## A. Introduction

In recent years, early childhood education has increasingly prioritised inclusive practices to ensure that children with disabilities (CwD) have equitable access to learning opportunities. In this study, CwD refers to young children who experience developmental, functional, or educational difficulties that require individualised support and inclusive pedagogical approaches (Hande et al., 2020). Early childhood represents a critical period for developmental intervention, during which inclusive approaches play a vital role in supporting cognitive, social, and emotional development. Effective inclusive early childhood education not only enhances participation for CwD but also fosters acceptance and positive attitudes among peers from an early age. Consequently, understanding inclusive practice in early childhood settings has become a key concern in contemporary educational research (Tang et al., 2023).

Despite growing policy commitments, inclusive education in Indonesia continues to face substantial challenges, particularly when comparing urban and rural early childhood settings. Previous studies consistently highlight a gap between policy expectations and actual implementation across diverse contexts (Fauziyah et al., 2025; Kurniawati, 2021; Syafii et al., 2025). Urban areas generally benefit from stronger institutional support, greater access to professional development, and more adequate learning resources. In contrast, rural early childhood centres remain constrained by limited teacher training opportunities, shortages of specialised professionals, and insufficient resources to implement inclusive practices effectively (Adawiah & Sukinah, 2025; Pushpa & Kumar, 2025).

Within early childhood education, several researchers highlight a persistent crisis of inclusion in rural settings, driven by insufficient infrastructural investment and resource scarcity. Previous studies note that disparities in teacher training, curriculum coherence, and access to learning materials continue to undermine the quality of early childhood services across Indonesia (Fauziyah et al., 2025; Pratiwi et al., 2025). Similar challenges are documented in other developing countries where rural education systems face systemic neglect and resource scarcity (Radebe, 2025; Sepadi, 2025). These conditions underscore the importance of sustained teacher training and professional development to address structural barriers that hinder inclusive practice (Duncan & Punch, 2021). In the Indonesian context, gaps between policy intentions and practical implementation remain evident due to insufficient support and limited training for teachers working with children with disabilities in rural areas. Compared with urban teachers, their rural counterparts often have fewer opportunities for professional development, resulting in lower confidence and preparedness to implement inclusive practices (Adawiah & Sukinah, 2025; Pushpa & Kumar, 2025).

The Performance Report from the Directorate General of Basic and Secondary Education Indonesia in 2022 indicates that only 24% of Early Childhood Education (ECE) teachers have participated in professional training concerning inclusive education, with this percentage significantly lower in rural, remote, and 3T (frontier, outermost, and disadvantaged) areas (Directorate General of Basic and Secondary Education Indonesia, 2022). Data from the National Statistics Bureau of Indonesia also reveal persistent disparities in teacher qualifications, showing that rural ECE institutions employ far fewer teachers with undergraduate professional qualifications and markedly lower certification rates than urban institutions (BPS-Statistics Indonesia, 2023). Furthermore, the data also indicate that ECE in rural districts in Indonesia remain significantly dependent on non-certified volunteer teachers, who generally have limited access to professional development programs, especially those emphasizing inclusive pedagogical practices. These national trends collectively highlight essential structural inequalities that impede the readiness of rural ECE teachers to effectively implement inclusive education. Comparable trends are observable in the rural districts of Banten, where numerous preschool educators lack formal certification and have limited access to

training in inclusive education, rendering the region a critical context for examining teachers' perceptions of interventions for children with disabilities (Kurniawati, 2021; Prakosha et al., 2024).

Although many previous studies have concentrated on inclusive education in urban early childhood settings, far fewer have examined rural educational settings, where resource scarcity, limited staffing, and limited access to support services are more pronounced in these contexts. Empirical research examining preschool teachers' perceptions of support for CwD in rural areas also remains limited, despite evidence that rural teachers frequently experience challenges such as lower self-efficacy and reduced opportunities for professional development (Boniface et al., 2025; Greenwood et al., 2020; Huang & Diamond, 2009; Then & Floth, 2025; Ubbes, 2025). Moreover, no study has comprehensively investigated how rural preschool teachers in the Indonesian context, particularly in rural districts of Banten focusing on the intervention for CwD, including understanding, identification, planning, implementation, and evaluation. Addressing this gap is essential for strengthening inclusive early childhood practices in underserved regions.

In light of the identified gaps in literature and the persistent challenges faced by early childhood teachers in rural Banten, this study is guided by the following research questions:

1. How do early childhood teachers in rural areas understand the characteristics and learning needs of CwD?
2. How do teachers perceive the processes of identifying and planning interventions for CwD?
3. How do teachers perceive the implementation and evaluation of intervention practices for CwD within rural early childhood classroom settings?

## **B. Research Methods**

### **1. Research Design**

This study aimed to investigate preschool teachers' perceptions of understanding, identification, intervention planning, classroom implementation, and evaluation related to children with disabilities in rural areas of Banten. A quantitative descriptive survey design was employed. Descriptive statistics were used because the primary objective was to portray and illustrate the distribution of participants' perceptions across these five domains. A descriptive approach is appropriate for studies seeking to present a phenomenon as it naturally occurs through observable patterns, frequencies, and variations in respondents' answers (Takona, 2024).

### **2. Participants**

A total of 62 preschool teachers from rural areas of Banten participated in the study. The sample was drawn from a list of eligible rural preschool teachers provided by the *Ikatan Guru Taman Kanak-Kanak Indonesia* (IGTKI) of Banten Province. IGTKI Banten, which serves as the official coordinating body for kindergarten teachers in the region. This list constituted the sampling frame for identifying participants who met the study's inclusion criteria.

Participants were selected using a purposive sampling technique based on the following criteria: (1) teaching in formal early childhood education programs located in rural districts, and (2) having direct experience working with or supporting CwD, whether formally identified or informally acknowledged. All participants provided informed consent indicating their voluntary participation in the study.

### 3. Research Instrument

This study utilised a self-constructed questionnaire designed to assess preschool teachers' perception of intervention practices for CwD. The instrument was developed based on five fundamental domains of inclusive early childhood education: understanding of CwD, early identification, intervention planning, classroom implementation, and evaluation, as illustrated in Table 1. The development process was guided by relevant literature on inclusive practices and teacher competencies in early childhood education, particularly within rural contexts. Item generation followed a deductive approach, ensuring that each item corresponded with the operational definitions of the five domains.

Table 1  
Conceptual Domains and Items Distribution of The Questionnaire

Conceptual Domain	Number of Item
Understanding the concept of CwD	5 items
Early identification of CwD	5 items
Intervention planning for CwD	5 items
Implementation of interventions for CwD in the classroom	5 items
Assessment and evaluation of the intervention of CwD	5 items

Note. Based on the authors' analysis, 2025.

The questionnaire consisted of 25 items, with each domain represented by five indicators. All items were measured using a four-point Likert scale (Strongly Agree, Agree, Disagree, Strongly Disagree) to capture participants' levels of agreement. The questionnaire was administered electronically via Google Forms to facilitate efficient data collection and to reach respondents across geographically dispersed rural areas.

The instrument underwent expert evaluation by specialists in early childhood and inclusive education to ensure conceptual clarity, content validity, and cultural appropriateness. Following the expert evaluation, the internal consistency of the 25-item questionnaire was examined using Cronbach's alpha. As presented in Table 2, the Cronbach's alpha coefficient was 0.955, indicating a very high level of internal consistency and confirming the reliability of the instrument.

Table 2  
Reliability Statistics of the Questionnaire

Reliability Statistics	Value
Cronbach's Alpha	0.955
Number of items	25

Note. Based on the authors' analysis, 2025.

### 4. Ethical Considerations

Ethical principles were maintained throughout the research process. Prior to data collection, participants were informed about the purpose of the study. Informed consent was obtained from all participants, ensuring their understanding of their rights, including the voluntary nature of

participation, the confidentiality of their responses, and the option to withdraw from the study at any time without consequences.

## 5. Data Collection and Analysis

Data collection was conducted from 20 to 30 May 2025 using an online questionnaire distributed through Google Forms. Participants were given adequate time to complete the questionnaire at their convenience. All responses were automatically recorded and securely stored in digital format to facilitate efficient data management and ensure confidentiality.

The collected data were analysed using SPSS version 26 and STATA 19. Descriptive statistical techniques, including frequencies, percentages, and mean scores for each domain of the questionnaire, were employed to summarise participants' perceptions related to understanding, identifying, planning, implementing, and evaluating interventions for CwD. This analytical approach provided an empirical overview of response patterns and variations across the five domains examined in the study.

## C. Results and Discussion

### 1. Respondents' Demographic Background

A total of 62 preschool teachers from rural areas of Banten participated in this study. The respondent group was predominantly female, reflecting the general gender composition of the early childhood education workforce. In terms of age, the sample consisted of a relatively diverse distribution, with a substantial proportion of teachers under the age of 25, alongside teachers in middle and later career stages.

Regarding educational background, most respondents had completed secondary-level education, while a smaller proportion held associate or bachelor's degrees. Teaching experience also varied, ranging from novice teachers with less than one year of experience to educators who had taught for more than ten years. However, participation in specialised training related to intervention for CwD was limited, with only a minority of respondents reporting prior involvement in such training programmes.

Table 3  
Respondents' Demographic Background

Background	Variable	Frequency	Percentage (%)
Gender	Female	61	98.4
	Male	1	1.6
Age	< 25 years old	23	31.7
	25 – 30 years old	9	14.5
	31 – 40 years old	10	16.1
	41 – 50 years old	14	22.6
	> 50 years old	6	9.7
Education	High school	45	72.6
	Associate degree	3	4.8
	Degree	14	22.6
Teaching experience	< 1 year	14	22.6
	1 – 3 years	15	24.2
	4 – 6 years	10	16.1
	7 – 10 years	11	17.7
	> 10 years	12	19.4
Has attended intervention training for CwD	Yes	17	27.4
	No	45	72.6

Note. Based on the authors' analysis, 2025.

## 2. Summary of Five Domains Related to CwD

As presented in Table 4, teachers' perceptions of interventions for CwD varied across the five measured domains. The highest mean score was found in Understanding of CwD domain ( $M = 14.98$ ), indicating that respondents demonstrated relatively strong conceptual of disability-related concepts and inclusive principles. This was followed by the Assessment and Evaluation domain ( $M=14.50$ ), suggesting that teachers recognised the importance of monitoring children's progress and using evaluation data to inform practice.

Moderate mean scores were observed in the domains of early identification ( $M = 14.24$ ) and implementation ( $M = 14.19$ ), reflecting partial confidence in recognising developmental differences and implementing interventions within classroom settings. In contrast, the Intervention Planning domain recorded the lowest mean score ( $M = 14.08$ ), indicating that teachers perceived greater difficulty in designing and planning targeted interventions for CwD.

Table 4  
Mean Score of Five Domains Related to CwD Intervention

Domain	Mean	Std. Deviation
Understanding concept of CwD	14.98	.414
Early identicifation of CwD	14.24	.382
Strategic intervention of CwD	14.08	.354
Implementation of CwD	14.19	.353
Assesment and evaluation of CwD	14.50	.388

Note. Based on the authors' analysis, 2025.

The overall pattern of findings suggests a notable gap between teachers' conceptual understanding of inclusive education and their practical capacity to design and implement structured interventions. Strong performance in the understanding domain aligns with previous studies highlighting the role of foundational knowledge in fostering inclusive learning environments (Nagase et al., 2020; Hasanah et al., 2022). However, lower scores in early identification and intervention planning echo concerns raised in prior research regarding teachers' challenges in recognising developmental differences and translating knowledge into effective intervention strategies (Manxusa, 2025; Ostrowska et al., 2023).

Similarly, the moderate score in the implementation domain reflects practical constraints frequently reported in the literature, including limited resources and insufficient stakeholder support, which can undermine implementation fidelity (Abulhul, 2023). Although teachers demonstrated relatively strong engagement with assessment and evaluation practices, consistent with the emphasis on data-informed instruction (Jeder, 2022; Cheung et al., 2022). The overall results indicate that additional professional development is required to strengthen planning and implementation capacities. Addressing these gaps is essential to ensure comprehensive and effective interventions for CwD, particularly in rural contexts where access to specialised training remains limited (Bao et al., 2021; Jaya et al., 2023).

## 3. The Understanding of Children with Disabilities

As shown in Table 5, respondents demonstrated a moderate level of understanding of the concept of CwD, with mean scores ranging from 2.69 to 3.19. These results indicate that teachers generally recognised key principles of inclusive education, particularly the importance of differentiated learning

and inclusion within ECE settings. Higher mean scores were observed for items reflecting awareness of the holistic needs of CwD, including social and emotional dimensions, rather than a narrow focus on physical impairments. However, comparatively lower scores were evident in areas related to identifying specific categories of disabilities, suggesting uneven depth of understanding across different aspects of disability.

Table 5  
Respondents' perceptions on the understanding of the concept of CwD

Item	Mean	Std. Deviation
I understand the general definition of children with disabilities. (Q1)	2.85	.649
I know the various categories of special needs (sensory, intellectual, emotional, etc.). (Q2)	2.69	.692
I am aware that children with special needs require different learning approaches. (Q3)	3.02	.857
I understand the importance of acceptance and inclusion of children with special needs in early childhood education (ECE). (Q4)	3.02	.735
I understand that the needs of children with special needs are not only physical, but also social and emotional. (Q5)	3.19	.846

Note. Based on the authors' analysis, 2025.

The findings suggest that while preschool teachers possess a foundational and generally positive understanding of inclusive education, their knowledge remains conceptual rather than technical. This pattern aligns with previous research indicating that teachers often demonstrate general awareness of disability and inclusion without comprehensive mastery of specific disability classifications or specialised knowledge (Nagase et al., 2020; Hasanah et al., 2022). Stronger recognition of the holistic educational needs of CwD reflects growing awareness of inclusive principles that emphasise social and emotional development alongside academic learning (Manxusa, 2025).

Nevertheless, the lower scores related to identifying specific categories of disabilities highlight a persistent gap in teachers' technical understanding. This gap underscores the need for professional development programmes that integrate theoretical perspectives with practical knowledge of disability identification and support strategies (Catama et al., 2024; Ostrowska et al., 2023). Similar findings have been reported in studies advocating for more comprehensive and practice-oriented teacher training to strengthen inclusive competencies (Bao et al., 2021). The disparity between general inclusive awareness and limited technical knowledge further indicates that professional learning initiatives should aim not only to enhance teachers' understanding of disability classifications but also to build on the positive attitudes toward inclusion that teachers already possess (Abulhul, 2023; Cheung et al., 2022; Jeder, 2022).

#### 4. Early Identification of CwD

As presented in Table 6, respondents demonstrated a moderate level of perceived competence in the early identification of children with disabilities. Teachers reported relatively positive attitudes toward the importance of early identification practices, particularly in relation to ongoing observation of children's development and parental involvement in the identification process. However, lower mean scores were observed in areas related to recognising early developmental signs, using standardised



screening tools, and understanding referral procedures, indicating uneven confidence across different aspects of early identification.

Table 6  
Respondents' perceptions on the early identification of CwD

Item	Mean	Std. Deviation
I am able to recognize early signs of developmental disorders in children. (Q6)	2.63	.730
I know the importance of conducting routine observations of children's development. (Q7)	2.98	.799
I understand how to complete and interpret early childhood developmental screening instruments. (Q8)	2.53	.783
I feel the need to involve parents in the process of identifying children's needs. (Q9)	3.24	.843
I know when to refer a child to a professional (psychologist, doctor, etc.). (Q10)	2.85	.698

Note. Based on the authors' analysis, 2025.

The findings indicate a gap between teachers' recognition of the importance of early identification and their confidence in applying technical identification practices. Moderate confidence in recognising early signs of developmental differences suggests that many teachers may rely primarily on informal observation rather than structured identification approaches. This pattern aligns with previous research highlighting the need for targeted training to strengthen teachers' observational and diagnostic competencies in early childhood settings (Jaya et al., 2023; Lipscomb et al., 2021).

Teachers' relatively strong endorsement of continuous observation and parental involvement reflects established inclusive practices that emphasise collaboration and ongoing monitoring as key components of early intervention (Aprile & Knight, 2020). However, lower confidence in the use and interpretation of standardised screening instruments underscores a persistent challenge documented in the literature, where teachers often feel insufficiently prepared to employ formal assessment tools effectively (Jaya et al., 2023). Similarly, ambivalence regarding referral procedures suggests limited clarity about institutional pathways for specialist support, reinforcing calls for clearer referral systems and systematic professional development in this area (Ekowati et al., 2024; Jaya et al., 2023). These findings highlight the need for professional development initiatives that integrate theoretical understanding, practical training in screening tools, and clear guidance on referral processes. Strengthening these competencies is essential to ensure timely and effective identification of CwD, particularly in rural early childhood contexts where access to specialised support services may be constrained.

## 5. Intervention Planning for CwD

Respondents' perceptions of intervention planning for children with disabilities (CwD) indicate generally moderate levels of preparedness, with notable variation across different aspects of planning. The lowest confidence was associated with the development of Individual Learning Plans (ILPs), suggesting that many teachers felt inadequately prepared to design structured and individualised intervention programmes. In contrast, higher levels of agreement were observed in relation to parental involvement and consideration of children's individual strengths, indicating stronger endorsement of collaborative and child-centred planning principles. Moderate scores were also



evident for goal-setting and familiarity with common intervention strategies, reflecting partial readiness to engage in systematic planning practices (see Table 7).

Table 7  
Respondents' perceptions on the planning of interventions of CwD

Item	Mean	Std. Deviation
I am able to develop an Individual Learning Plan (ILP) for children with disabilities. (Q11)	2.44	.802
I understand the importance of setting specific learning goals for children with special needs. (Q12)	2.76	.783
I involve parents when preparing intervention plans. (Q13)	3.08	.685
I consider the unique abilities of each child with special needs when designing the program. (Q14)	3.02	.665
I have basic knowledge of common types of interventions used in ECE settings. (Q15)	2.79	.694

Note. Based on the authors' analysis, 2025.

These findings highlight a persistent gap between teachers' endorsement of inclusive planning principles and their capacity to operationalise those principles through structured intervention planning. The low confidence in developing Individual Learning Plans suggests that teachers may lack sufficient practical training in translating inclusive concepts into concrete, individualised instructional plans. This concern is consistent with previous studies emphasising that effective intervention planning requires specialised knowledge and skills that are often underdeveloped in early childhood teacher preparation programmes (Vilches et al., 2023; Long et al., 2022).

At the same time, stronger agreement regarding parental involvement and the recognition of children's individual strengths reflects an emerging orientation toward collaborative and child-centred practices. Prior research has shown that involving parents in the planning process can enhance the relevance and effectiveness of interventions by incorporating contextual knowledge of children's needs and abilities (Al-Mazidi & Al-Ayadhi, 2021; Dommelen et al., 2020). However, the coexistence of positive attitudes toward collaboration with only moderate familiarity with intervention strategies indicates that conceptual awareness alone may not be sufficient to support high-quality planning. This pattern reinforces the need for professional development initiatives that prioritise hands-on training in goal-setting, intervention design, and the practical application of inclusive strategies, particularly in rural early childhood contexts where access to specialised support remains limited (Stein & Steed, 2022; Coutinho & Saini, 2021).

## 6. The Implementation of Interventions for CwD within the Classroom Environment

Respondents' perceptions of their ability to implement interventions for children with disabilities indicate varying levels of practical competence across different aspects of classroom practice. Teachers reported the highest confidence in providing individualised support during classroom activities, suggesting greater comfort with direct, one-on-one interactions with CwD. Similarly, respondents expressed strong commitment to creating a friendly and supportive classroom environment, reflecting positive attitudes toward inclusive education.

In contrast, moderate confidence levels were observed in relation to adapting teaching methods and learning media as well as managing inclusive classrooms effectively, indicating

challenges in accommodating diverse learning needs through systematic instructional adjustments. The lowest level of confidence was associated with the implementation of specialised intervention strategies, suggesting that many teachers perceived themselves as insufficiently prepared to carry out targeted interventions in practice (see Table 8).

Table 8  
Respondents' perceptions on the implementation of interventions for CwD  
within the classroom environment

Item	Mean	Std. Deviation
I am able to adapt teaching methods and learning media for children with disabilities. (Q16)	2.76	.694
I provide individualized support to children with special needs during classroom activities. (Q17)	3.15	.721
I am able to manage an inclusive classroom effectively. (Q18)	2.68	.719
I feel confident in implementing interventions for children with disabilities. (Q19)	2.55	.761
I strive to create a friendly and supportive learning environment for children with special needs. (Q20)	3.06	.674

Note. Based on the authors' analysis, 2025.

The findings suggest that while teachers demonstrate supportive attitudes toward inclusion and feel relatively confident in providing individualised assistance, they encounter difficulties when required to implement more complex and structured intervention strategies. Strong confidence in one-on-one support aligns with research emphasising the importance of personalised interaction in enhancing the learning and social development of children with disabilities (Amaluddin et al., 2023). Likewise, teachers' emphasis on creating a positive classroom climate is consistent with inclusive education frameworks that highlight the role of emotionally supportive environments in promoting engagement and well-being (Hutapea, 2024).

However, the moderate confidence reported in adapting teaching methods and managing inclusive classrooms reflects challenges commonly identified in the literature. Without sufficient training in differentiated instruction and inclusive classroom management, teachers may struggle to respond effectively to diverse learning profiles (Tasu'ah et al., 2023; Hau & Rashid, 2023). The lowest confidence in implementing specialised intervention strategies further underscores a critical gap between teachers' inclusive intentions and their technical capacity to apply evidence-based interventions. Previous studies have highlighted that effective intervention requires not only conceptual understanding but also practical skills developed through targeted professional development (Rosin et al., 2025; Tonks et al., 2021).

These findings indicate that although teachers in rural early childhood settings exhibit positive dispositions toward inclusion, their capacity to implement systematic and specialised interventions remains limited. Strengthening professional development programmes that focus on practical intervention skills and inclusive classroom management is therefore essential to enhance teachers' confidence and effectiveness in supporting children with disabilities (Adnyani et al., 2023; Rice, 2022).

## 7. The Assessment and Evaluation Processes Related to Interventions for CwD

Teachers' perceptions of assessment and evaluation practices related to interventions for children with disabilities indicate a moderate level of engagement across core evaluation activities. Respondents reported recognising the importance of conducting periodic assessments and documenting children's progress and challenges, although confidence in consistently implementing these practices appeared limited. Slightly higher confidence was reported in the use of evaluation results to refine intervention plans, suggesting emerging awareness of data-informed decision-making in instructional practice.

The highest level of agreement was observed in teachers' openness to receiving feedback from colleagues, indicating a strong orientation toward collaboration. Respondents also demonstrated moderate involvement in preparing developmental reports for children with disabilities, reflecting acknowledgement of documentation as an essential component of ongoing assessment and monitoring (see Table 9).

Table 9  
*Respondents' perceptions on the assessment and evaluation processes related to interventions for CwD*

Item	Mean	Std. Deviation
I regularly assess CwD development after intervention. (Q21)	2.82	.713
I record progress and challenges faced by CwD during learning progress in the classroom. (Q22)	2.82	.736
I use evaluation results to improve intervention plans. (Q23)	2.84	.658
I am open to peer feedback on intervention that I implemented. (Q24)	3.15	.743
I compiled CwD development reports as part of the intervention evaluation. (Q25)	2.87	.665

Note. Based on the authors' analysis, 2025.

The findings suggest that while teachers value assessment and evaluation as integral components of intervention, their practices remain partially developed and inconsistently applied. Moderate engagement in periodic assessment and documentation aligns with previous research emphasising the importance of systematic monitoring to inform instructional adjustments and support children's learning needs (Shepley et al., 2024). However, the limited confidence reported in consistently carrying out these practices indicates potential gaps in assessment-related skills and procedural knowledge.

Teachers' growing awareness of using evaluation outcomes to refine intervention plans reflects a positive shift toward data-driven decision-making, which is widely recognised as essential in early childhood special education (Carada, 2023). The strong emphasis on openness to collegial feedback further highlights a collaborative professional culture, consistent with studies underscoring the role of peer support and professional dialogue in improving instructional quality and evaluative practices (Liubarets et al., 2021).

Despite these strengths, the moderate involvement in documentation and reporting suggests that teachers may require additional guidance and structured support to integrate assessment findings systematically into intervention processes. Prior research indicates that effective

documentation facilitates communication among educators, parents, and specialists, while also ensuring accountability in service provision (Long et al., 2022). These findings underscore the need for targeted professional development to strengthen teachers' assessment competencies and support the consistent application of evaluation practices within inclusive early childhood settings (Shepley et al., 2024).

## D. Conclusion

This study demonstrates that while preschool teachers in rural areas generally possess positive attitudes and foundational understanding of inclusive education, significant gaps remain in their practical capacity to plan, implement, and evaluate interventions for children with disabilities. These findings indicate a clear need for targeted and sustainable professional development that addresses the specific challenges of rural early childhood settings, particularly in strengthening teachers' technical competencies in intervention planning and implementation.

From a practical perspective, the study underscores the importance of collaborative approaches involving teachers, parents, and specialists, supported by clear referral and evaluation systems. Theoretically, the findings contribute to the inclusive education literature by highlighting the persistent gap between conceptual understanding and practical application in rural contexts. At the policy level, the results call for equity-oriented policies and integrated support networks to ensure that rural preschool teachers have adequate access to training and institutional support. Together, these implications emphasise the necessity of coordinated efforts among government agencies, educational institutions, and community stakeholders to advance inclusive early childhood education in marginalised areas.

## E. Acknowledgement

The authors express their appreciation to the Institute of Research and Community Services (LPPM), Universitas Terbuka, for providing the research grant, and to the Association of Early Childhood Education of Indonesia (HIMPAUDI), Legok, Banten, for their support during the research process.

## F. References

- Abulhul, Z. (2023). A logic model conceptualizes the initiative of applying for an inclusive education program. *Journal of Practical Studies in Education*, 4(6), 15–19. <https://doi.org/10.46809/jpse.v4i6.74>
- Adawiah, R., & Sukinah, S. (2025). Strengthening preschool teacher competencies in inclusive classroom management. *Journal of Innovation and Research in Primary Education*, 4(3), 1752–1780. <https://doi.org/10.56916/jirpe.v4i3.1756>
- Adnyani, L. D. S., Laksono, K., & Anam, S. (2023). Tailoring english questions for primary special needs students. *International Journal of Elementary Education*, 7(3), 448–457. <https://doi.org/10.23887/ijee.v7i3.54016>
- Al-Mazidi, S., & Al-Ayadhi, L. (2021). National profile of caregivers' perspectives on autism spectrum disorder screening and care in primary health care: The Need for autism medical home. *International Journal of Environmental Research and Public Health*, 18(24), 13043. <https://doi.org/10.3390/ijerph182413043>
- Amaluddin, A., Nildasari, N., Aisiah, S., & Lukman, D. H. (2023). Accomodation theory in language teaching and for students with special needs. *Ajesh*, 2(7), 569–579. <https://doi.org/10.46799/ajesh.v2i7.112>
- Aprile, K. T., & Knight, B. A. (2020). Preservice teachers' perceptions of inclusive education: the reality

- of professional experience placements. *Australasian Journal of Special and Inclusive Education*, 44(2), 88–101. <https://doi.org/10.1017/jsi.2020.7>
- Bao, D., Li, W., Shen, D., Wang, Y., & Jin, X. (2021). Using participatory design methods to explore changes in the self-efficacy of students with visual impairments after playing exergames. *Games for Health Journal*. <https://doi.org/10.1089/g4h.2020.0122>
- Boniface, J., Krishna, D., Brien, M., Ponnusamy, R., Venkatachalapathy, N., & Drynan, D. (2025). Promoting classroom inclusion for children with disabilities in rural South India. *Social Sciences and Humanities Open*, 11. <https://doi.org/10.1016/j.ssaho.2025.101366>
- BPS-Statistics Indonesia. (2023). Persentase guru TK, SD, SMP, SMA, dan SLB bersertifikasi pendidik; persentase guru berkualifikasi minimal S1 pada satuan tingkat pendidikan. <https://www.bps.go.id/id/statistics-table/2/MTc5OSMy/persentase-guru-tk-sd-smp-sma-dan-slb-bersertifikasi-pendidik-persentase-guru-berkualifikasi-minimal-s1-pada-satuan-tingkat-pendidikan.html>
- Carada, R. A. (2023). Development and validation of professional enhancement program on inclusive education for elementary teachers of alaminos district. *Edu.Lrng.Dvp.Ntn*, 1(1), 93–104. <https://doi.org/10.26480/eldn.02.2023.93.104>
- Catama, B. V., Domalanta, M. A. B., Balmeo, M. L., Ignacio, T. D., & Magat, S. M. C. (2024). Empowering and equipping parents with the basic intervention skills in handling their children with special learning needs. *Texila International Journal of Academic Research*, 11(1), 68–76. <https://doi.org/10.21522/tijar.2014.11.01.art007>
- Cheung, W. C., Ostrosky, M. M., Favazza, P. C., Stalega, M. V., & Yang, H.-W. (2022). Exploring the perspectives of preschool teachers on implementing structured motor programs in inclusive classrooms. *Early Childhood Education Journal*, 51(2), 361–370. <https://doi.org/10.1007/s10643-021-01295-x>
- Coutinho, F., & Saini, S. (2021). Reliability and validity of the red flag app: encouraging inclusive education for children at risk in the school system. *International Journal of Education*, 13(2), 9. <https://doi.org/10.5296/ije.v13i2.18376>
- Directorate General of Basic and Secondary Education Indonesia. (2022). Statistik pendidikan anak usia dini (paud) tahun 2022/2023. <https://data.kemendikdasmen.go.id/publikasi/p/guru-tendik-buku-statistik/statistik-pendidikan-anak-usia-dini-paud-tahun-2022-2023>
- Dommelen, P. v., Dijk, O. v., Wilde, J. A. d., & Verkerk, P. H. (2020). Early developmental milestones in duchenne muscular dystrophy. *Developmental Medicine & Child Neurology*, 62(10), 1198–1204. <https://doi.org/10.1111/dmcn.14623>
- Duncan, J., & Punch, R. (2021). Building inclusive education workforce capability: school principals' perceptions of roles and responsibilities. *Australasian Journal of Special and Inclusive Education*, 45(1), 62–75. <https://doi.org/10.1017/jsi.2021.2>
- Ekowati, D. W., Nusantara, T., Muksar, M., & Dwi, A. (2024). A literature review of multimodal semiotic reasoning in mathematics. *Pegegog*, 14(2). <https://doi.org/10.47750/pegegog.14.02.30>
- Fauziyah, N., Maruf, N., Wardana, D. J., Azis, F., Bahar, E. E., & Husniati, A. (2025). Evaluating inclusive education initiatives in indonesia: from policy to practice. *Educational Process: International Journal*, 16. <https://doi.org/10.22521/edupij.2025.16.232>
- Greenwood, M., Gercama, I., Lynch, P., Moore, K., Mankhwazi, M., Mbukwa, J., & Bedford, J. (2020). 'Let's grow together': understanding the current provision of early childhood development and education for children with disabilities in rural malawi through community-based participatory research. *International Journal of Disability, Development and Education*, 1–16. <https://doi.org/10.1080/1034912X.2020.1786021>

- Hande, M., Burcu, F., & Mertz, H. (2020). Children with special needs in school activities. *Journal Educational Verkenning*, 1, 8–12. <https://doi.org/10.48173/jev.v1i2.53>
- Hasanah, E., Suyatno, S., Maryani, I., Badar, M. I. A., Fitria, Y., & Patmasari, L. (2022). Conceptual model of differentiated-instruction (di) based on teachers' experiences in indonesia. *Education Sciences*, 12(10), 650. <https://doi.org/10.3390/educsci12100650>
- Hau, J. J., & Rashid, S. M. M. (2023). Level of knowledge of special education teachers towards occupational therapy. *International Journal of Academic Research in Business and Social Sciences*, 13(2). <https://doi.org/10.6007/ijarbss/v13-i2/16285>
- Huang, H.-H., & Diamond, K. E. (2009). Early childhood teachers' ideas about including children with disabilities in programmes designed for typically developing children. *International Journal of Disability, Development and Education*, 56(2), 169–182. <https://doi.org/10.1080/10349120902868632>
- Hutapea, R. H. (2024). Assessment of learning outcomes of children with special needs in vocational schools. *Pegegog*, 14(2). <https://doi.org/10.47750/pegegog.14.02.12>
- Jaya, I., Maulidina, C. A., Kasirah, I., Taboer, M. A., Bahrudin, B., & Yusro, M. (2023). Collaboration in education services for children with special needs inclusive school. *Journal of Icsar*, 7(2), 288. <https://doi.org/10.17977/um005v7i22023p288>
- Jeder, D. (2022). Pedagogy of diversity in teacher training. *Journal of Education Society & Multiculturalism*, 3(2), 236–243. <https://doi.org/10.2478/jesm-2022-0029>
- Kurniawati, F. (2021). Exploring teachers' inclusive education strategies in rural Indonesian primary schools. *Educational Research*, 63(2), 198–211. <https://doi.org/10.1080/00131881.2021.1915698>
- Lipscomb, S. T., Chandler, K. D., Abshire, C., Jaramillo, J., & Kothari, B. H. (2021). Early childhood teachers' self-efficacy and professional support predict work engagement. *Early Childhood Education Journal*, 50(4), 675–685. <https://doi.org/10.1007/s10643-021-01182-5>
- Liubarets, V., Miroshnichenko, T., Cherusheva, G., Volynets, N., & Протас, О. (2021). Control monitoring of the educational process of students with special learning needs. *Linguistics and Culture Review*, 5(S4), 1950–1967. <https://doi.org/10.21744/lingcure.v5ns4.1855>
- Long, T., Westerman, C., & Ferranti, N. (2022). Children with disabilities attending montessori programs in the united states. *Journal of Montessori Research*, 8(2), 16–32. <https://doi.org/10.17161/jomr.v8i2.18639>
- Manxusa, Y. (2025). Disability inclusion and participation in mount frere, eastern cape: barriers and facilitators. *African Journal of Disability*, 14(0). <https://doi.org/10.4102/ajod.v14i0.1735>
- Nagase, K., Tsunoda, K., & Fujita, K. (2020). The Effect of teachers' attitudes and teacher efficacy for inclusive education on emotional distress in primary school teachers in japan. *Frontiers in Education*, 5. <https://doi.org/10.3389/feduc.2020.570988>
- Ostrowska, B., Kozłowski, P., & Zawadzka, D. (2023). A new perspective on the role of the occupational therapist in the home rehabilitation of people with physical disabilities. *Physiotherapy Quarterly*, 31(3), 30–35. <https://doi.org/10.5114/pq.2023.128027>
- Prakosha, D., Anwar, M., & Martika, T. (2024). Typical challenges faced by sub-urban state primary schools implementing inclusive education in indonesia. *International Journal of Learning, Teaching and Educational Research*, 23(3), 468–485. <https://doi.org/10.26803/ijlter.23.3.23>
- Pratiwi, H., Wijayanti, A., Nggalu Bali, E., & Hajaroh, M. (2025). Rural early childhood teachers' sensemaking of kurikulum merdeka reform in indonesia. *Teachers and Teaching: Theory and Practice*. <https://doi.org/10.1080/13540602.2025.2591146>



- Pushpa, M., & Kumar, P. (2025). A comparative study of urban and rural teachers attitude towards inclusive education in rajasthan. *Shisrrj*, 78–88. <https://doi.org/10.32628/shisrrj258219>
- Radebe, S. P. (2025). Urban–rural divide in early childhood teacher professional development in south africa. *Research and Advances in Education*, 4(6), 26–40. <https://doi.org/10.63593/rae.2788-7057.2025.08.004>
- Rice, M. (2022). Special education teachers' use of technologies during the covid-19 era (Spring 2020–Fall 2021). *Techtrends*, 66(2), 310–326. <https://doi.org/10.1007/s11528-022-00700-5>
- Rosin, V., Westbrooke, V., Lucock, X., & Bailey, A. (2025). Excellence and reinvigoration of teaching: ert insights from a new zealand specialist land-based university. *Journal of Agricultural Education and Extension*, 31(3), 355–370. <https://doi.org/10.1080/1389224X.2024.2382727>
- Sepadi, M. D. (2025). Inclusive education in resource-constrained settings: exploring mainstream teachers' curriculum knowledge and practices for autistic learners in south africa. *Frontiers in Education*, 10. <https://doi.org/10.3389/feduc.2025.1641336>
- Shepley, C., Graley, D., & Lane, J. D. (2024). Preparing preschool educators to monitor child progress. *Infants & Young Children*, 37(1), 20–35. <https://doi.org/10.1097/iyc.0000000000000255>
- Stein, R., & Steed, E. A. (2022). Initial evaluation practices to identify young children's social emotional difficulties. *Topics in Early Childhood Special Education*, 42(4), 383–394. <https://doi.org/10.1177/02711214221075375>
- Syafii, M. H., Purnomo, H., & Rahmatullah, A. S. (2025). Inclusive education and social transformation: analysing the role of education policy in increasing equality among rural students in indonesia. *Educational Research for Social Change*, 14(1), 43–69. <https://doi.org/10.5281/zenodo.15311475>
- Takona, J. P. (2024). Research design: qualitative, quantitative, and mixed methods approaches / sixth edition. *Quality and Quantity*, 58(1), 1011–1013. <https://doi.org/10.1007/s11135-023-01798-2>
- Tang, Y., Luo, R., Shi, Y., Xie, G., Chen, S., & Liu, C. (2023). Preschool or/and kindergarten? the long-term benefits of different types of early childhood education on pupils' skills. *Plos One*, 18(11), e0289614. <https://doi.org/10.1371/journal.pone.0289614>
- Tasu'ah, N., Diana, D., Sugriyanti, S., & Martika, T. (2023). Teacher information literacy for inclusive early childhood education (ece) to provide literacy and numeracy for special needs children in central java-indonesia. *International Journal of Learning Teaching and Educational Research*, 22(12), 262–278. <https://doi.org/10.26803/ijlter.22.12.13>
- Then, D., & Floth, A. (2025). Mindsets for Preschool Inclusion: Preschool teachers' perspectives on disability in early childhood education. *Education Sciences*, 15(9). <https://doi.org/10.3390/educsci15091261>
- Tonks, D., Kimmons, R., & Mason, S. L. (2021). Motivations among special education students and their parents for switching to an online school: survey responses and emergent themes. *Online Learning*, 25(2). <https://doi.org/10.24059/olj.v25i2.2141>
- Ubbes, V. A. (2025). A new genre of digital texts that explore children's frame of mind, health literacy skills, and behavioral intentions for obesity prevention. *Children*, 12(6). <https://doi.org/10.3390/children12060663>
- Vilches, S., Pighini, M. J., Stewart, M. J., Rossa-Roccor, V., & McDaniel, B. (2023). Preparing early childhood educators/interventionists: scoping review insights into the characteristics of rural practice. *Rural Special Education Quarterly*, 42(1), 17–29. <https://doi.org/10.1177/87568705221150514>