



Supporting Children with Speech, Language, and Communication Needs in Indonesian Kindergarten Classrooms

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Abstract

This article provides a perspective on how children with speech, language, and communication needs (SLCN) in Indonesia are identified and supported in the classrooms. A narrative review of the extant peer-reviewed articles was adopted as the research method. Informed by the SANRA (Scale for the Assessment of Narrative Review Articles) protocol, 6 databases were searched, 214 articles published between 2011 - 2022 were identified, and 6 articles published between 2018 - 2022 were selected for analysis. The findings show that the identification of children with SLCN relied on general teacher observations instead of formal measurements. Children with SLCN were mostly supported by teachers through strategies such as modelling correct speech sounds, singing and storytelling. Researchers described SLCN using the terms 'speech' and 'language' without differentiation. There remains a scarcity of research about SLCN in Indonesia. This narrative review aims to provide recommendations for the future of SLCN research in Indonesia

Keywords: *early years; Indonesian kindergartens; narrative review; SLCN; developmental language disorder.*

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Introduction

Speech, language, and communication needs or SLCN is an umbrella term that encompasses a wide variety of communication difficulties which may include speech sound disorder, stuttering/stammering, developmental language disorder (DLD), and other communication difficulties with underlying medical conditions (Bercow, 2008, 2018; Bishop et al., 2017; Law et al., 2019). Speech, language, and communication needs may present themselves as difficulties that are transient (temporary) or persistent (continues beyond childhood). Difficulties that are transient (temporary), meaning that the children may catch up to expected speech, language, and communication abilities according to their age, are labelled as *delays*, whereas persistent difficulties are called *disorders* (Bishop et al., 2017). Before we explore SLCN further, it is worth discussing developmental language disorder or DLD, one of the most common developmental disorders in early childhood.

DLD runs in the family and is influenced by multiple genetic and environmental factors (Mountford et al., 2022; Valade et al., 2022). A wide variety of terms have been used to describe DLD such as specific language impairment, language disorder, language delay, etc.

This lack of agreement on terms spurred the initiative to get a consensus term among the allied professions that work with children with DLD (Bishop et al., 2016, 2017). Developmental language disorder or DLD is a term agreed to be used among clinicians, researchers, educators, and other allied professions to describe continual difficulties in understanding and using language up to middle childhood and possibly into adulthood which negatively impacts everyday communication, social interaction, or educational attainment (Bishop et al., 2017; Georgiou & Spanoudis, 2021). It is important to underline that DLD is not due to a certain biomedical condition, such as language disorders that co-occur with intellectual disability or autism spectrum disorder (Bishop et al., 2017). The term DLD is prevalent in use in clinical settings, primarily among speech-language therapists and other healthcare professionals. While the term speech, language, and communication needs or SLCN is preferred in educational settings as it shifts the focus from 'disorder,' to 'needs' - which implies a priority in supporting the child's needs in the classrooms (Bercow, 2008, 2018; Bishop et al., 2017; Law et al., 2019).

In understanding SLCN, it is imperative to differentiate the meaning of speech, language, and communication. Often in everyday, informal conversation, the terms speech, language, and communication are used interchangeably without clear differentiation (Prelock & Hutchins, 2018). In Indonesia, the term 'speech delay' has been used to also include language and communication with no differentiation in meaning, as presented in an article published in an online newspaper (Anna, 2014).

However, speech, language and communication are distinct and separable. The term *speech* refers to the production of speech sounds. This can be prelinguistic like the babbling of infants, or linguistic such as the production of words and sentences. Speech includes articulation (the way speech sounds are made), phonology (the way speech sounds are combined), voice (the way speech sounds are heard as a result of coordinated breathing and vocal fold vibration), and fluency - the way speech sounds are produced smoothly (Prelock & Hutchins, 2018).

On the other hand, the term *language* refers to a symbolic system that is governed by socially agreed rules (American Speech-Language-Hearing Association, 2023). Language comprises of semantics - the meaning of a word, morphology - defined as the formation of words, syntax - how words are put together to form meaningful sentences, and pragmatics - how language is used for social interaction (American Speech-Language-Hearing Association, 2023).

To round it up, the term *communication* refers to how we interact with others by exchanging verbal or nonverbal (gestures, facial expressions, and body language) information (Crichton, 2013; Prelock & Hutchins, 2018). In the educational context, children with SLCN may find it difficult to produce certain speech sounds, understand long verbal instructions, find the words to express themselves, tell a coherent story, converse with peers, use the right tone of voice and speak fluently (The Communication Trust, 2023).

Research in English-speaking and global south countries indicates that more than 7% of young children have DLD (Norbury et al., 2016; Oyono et al., 2018; Pham et al., 2019; Thapa et al., 2016; Tomblin et al., 1997). Research in Indonesia revealed a similar estimated number of children with DLD (Hapsari, 2020; Kesuma et al., 2014). Given the wider scope of SLCN, it can be argued that prevalence of children with SLCN is higher than the estimated number of children with DLD. Without any intervention, children with SLCN may experience significant barriers to their communication ability that stifle their academic progress, increase risks for socioemotional and behavioral disorders and in the future, decrease opportunities for job prospects (Bercow, 2018; Clegg et al., 2005; Conti-Ramsden et al., 2018; Cronin et al., 2020; Lindsay & Dockrell, 2012; Norbury et al., 2016; Toseeb et al., 2022).

How SLCN is identified and supported in the classrooms

Identification of SLCN in children is the process of documenting a child whose speech, language and communication ability may not follow typical or age-appropriate trajectory. In many cases, the identification of SLCN in children may be done by parents, teachers, or other healthcare professionals with a measurement tool designed by a speech-language pathologist (Whitworth et al., 1993). Concerns about SLCN in children are usually brought up when they start their formal schooling – that is when they enter preschool at the age of 3 or 4. At this point, parents and teachers are able to compare their children’s speech, language, and communication abilities with those of others.

Kindergarten teachers are advocated to be one of the professionals to identify SLCN in young children because they spend a significant amount of time observing and comparing children’s speech and language behaviors (Okalidou & Kampanaros, 2001). Research shows that children with SLCN will most likely be supported in the classrooms – as early as in the kindergartens (Williams, 2006). In the educational context, children with SLCN may find it difficult to produce certain speech sounds, understand long verbal instructions, find the words to express themselves, tell a coherent story, converse with peers, use the right tone of voice and speak fluently in accordance with what is expected at their age (The Communication Trust, 2023). Without support and intervention, children with SLCN are at risk of experiencing negative impacts on learning engagement, academic attainment, social-emotional, and behavioral difficulties (Bishop et al., 2017; Georgiou & Spanoudis, 2021)

Identification of SLCN in children is done for the purpose of designing the most suitable support to accommodate their learning (Williams, 2006). In Indonesia, where speech and language pathologists are not widely available, the identification of SLCN may primarily be done by the classroom teachers. Considering this circumstance, it is necessary for Indonesian classroom teachers to have adequate knowledge about speech, language, and communication developmental milestones, be equipped with screening tools to identify SLCN in children, have regular training regarding supporting children with SLCN in the classrooms and collaborate with experts such as speech language pathologists, educational psychologists, or other healthcare professionals.

A general speech, language, and communication assessment of children is recommended in order to identify those who may not follow the expected age-appropriate milestones. Support for children with SLCN should be done as early as possible to alleviate the significant impact of SLCN in the future (Conti-Ramsden et al., 2018; The Communication Trust, 2023). Whether SLCN is transient (temporary) or persistent (continues beyond childhood), intervention will improve children’s speech, language, and communication ability and increase their chances to thrive in school and beyond (Crichton, 2013).

Taking into account the negative impacts and the widespread existence of SLCN in early childhood in Indonesia (Hapsari, 2020; Kesuma et al., 2014), it is crucial to find out whether these children are being properly identified and supported in Indonesian kindergarten classrooms as no studies in Indonesia have done this before. This narrative review seeks to answer the following questions; 1) How is SLCN identified in Indonesian kindergarten classrooms?, 2) How are children with SLCN supported in Indonesian kindergarten classrooms? and 3) What is currently known about speech, language, and communication needs research in Indonesia?

Methodology

The main aim of this narrative review article is to deepen our understanding of the topic of SLCN in kindergarten classrooms on the research map in Indonesia. The narrative review approach is useful in describing the state of research on a particular topic. This narrative review protocol was informed by SANRA - Scale for the Assessment of Narrative Review Articles (Baethge et al., 2019). The SANRA protocol includes (1) justifying the importance of the review article; (2) stating the aims or questions of the review article; (3) describing the process of the literature search; (4) providing relevant references for main

statements; (5) incorporating appropriate evidence. This review considers only articles published in peer-reviewed journals.

The author searched the Indonesia literature database GARUDA and international databases Google Scholar, PubMed, Scopus, PsycINFO and ERIC on December 7th, 2022, for peer-reviewed articles on SLCN and DLD in Indonesia, published in English and Indonesian languages. Using the search terms, “speech language communication needs” OR “speech language communication” OR “developmental language disorder” OR “child language disorder” OR “language disorder” OR “communication disorder” OR “children communication disorder” OR “language delay” OR “language difficulties” OR “speech delay” OR “speech difficulties” OR “speech disorder” OR “DLD Indonesia” OR “SLD Indonesia” OR “speech language impairments Indonesia” OR “speech delay Indonesia”, the author retrieved 214 articles published between 2011 - 2022. The literature search process is presented in figure 1.

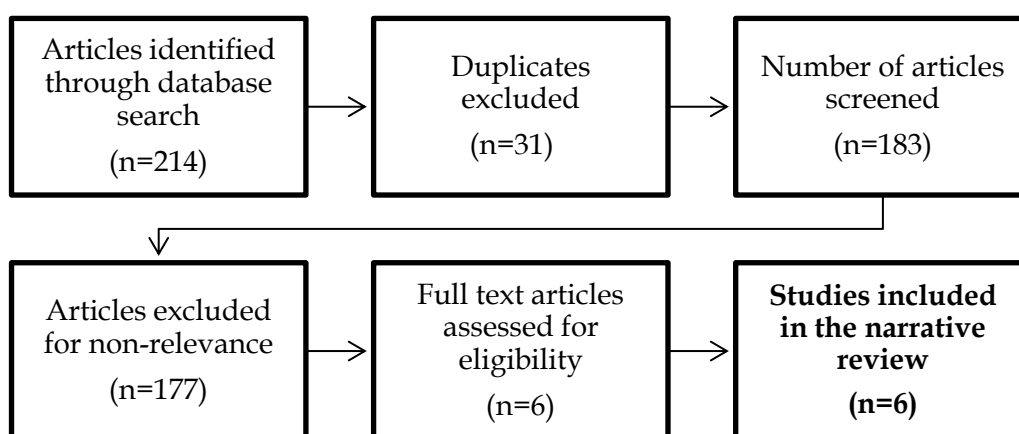


Figure 1. Processing and selecting journal articles.

The search databases produced a total of 214 articles published between 2011 - 2022. These articles were then compiled in a Microsoft Excel document and then screened for inclusion. The abstracts of all articles were read by the author, and information about the articles was placed on a Microsoft Excel spreadsheet. After removing thirty-one duplicates, 183 articles remained and were screened by title and abstract for the appropriateness of the content. The inclusion criteria for articles to be included in this paper are (1) research about SLCN as the primary difficulty; (2) identification of SLCN; (3) support for children with SLCN in the classrooms; (4) Indonesian-speaking participants between the age of 3 - 6 years old enrolled in kindergartens.

There were 177 articles excluded from this review because (1) they were dealing with subjects outside of the scope of the study; (2) outside of the age range of 3 - 6 years old (3) focus on language difficulties associated with Autism Spectrum Disorder or other neurodevelopmental disorders; (4) focus on studies conducted outside Indonesia. In the end, 6 journal articles were included for their relevance in terms of content and subjective importance. These articles are 4 qualitative studies (Arsita Sari et al., 2020; Istiqlal, 2021; Muyasiroh et al., 2018; Rustan, 2019) and 2 quantitative studies (Ardianti et al., 2021; Hadiman et al., 2021). These 6 articles were thoroughly read, pieced together, and synthesized into the narrative review by the author. A summary of the study characteristics (e.g., article title, sample size, study design, measures, use of terms and results) for the selected articles is detailed in Table 1 below.

Data extracted from these 6 articles were analyzed according to the three research questions outlined in the Introduction section of this article. The author discovered several important findings related to the use of terms, the practice of identification of children with

SLCN in the classrooms, the strategies implemented in helping children with SLCN, and the current snapshot of research on SLCN in Indonesia. These findings are discussed in detail in the Results and Discussion section of this article (table 1).

Table 1. Summary of the Studies about SLCN in Kindergarten Children in Indonesia

Article title	Sample	Design	Measures	Use of terms	Results
Ardianti et al. (2021)	N = 1 No data on age and gender	Single Subject Research – Quantitative study	No formal measure, SLCN is identified by teachers from observation of the child’s speech pattern.	‘Speech delay’ however, the study focused on vocabulary – an area of language	Singing activities increased child participant’s vocabulary words
Arsita Sari et al. (2019)	Kindergarten teachers	Qualitative descriptive study	No formal measure	‘Speech delay’ and ‘language disorder’ are used without discernment	Teacher training, support from officials and experts, partnership with parents
Hadiman et al. (2021)	N = 8 4 – 6 years old No data on gender	Intervention study – Quantitative study	Modified Developmental Milestones of phonological acquisition by Olmstead (1971)	‘Language production’, however, the study focused on speech sounds	Verbal imitation increased children’s accuracy in articulating letters and words.
Istiqlal (2021)	N = 1 6 years old No data on gender	Qualitative descriptive study	No formal measure, researcher used anecdotal evidence to identify SLCN	‘Speech delay’ and ‘speech disorder’ are used without discernment	Teachers supported children with speech delay through repeated instruction
Muyasiroh et al. (2018)	N = 1 No data on age and gender	Case study – qualitative study	No formal measure, no data on who and how (they) conducted the identification of SLCN	‘Speech delay’, however, the study focused on vocabulary – an area of language)	Storytelling activities increased the child’s vocabulary
Rustan (2019)	N = 6 No data on age and gender	Qualitative descriptive study	No formal measure, researcher used anecdotal evidence to identify SLCN	‘Speech delay’, But the study used the definition of language	Teachers supported children with speech delay by correcting pronunciation, storytelling, and gestures.

Result and Discussion

Misunderstanding in the use of terms to describe SLCN

Five of six studies included in this narrative review use the terms speech and language interchangeably. There was no differentiation between these two terms. One study used the term speech delay to describe language delay and conducted an intervention to increase the number of vocabulary words – an area of language ability (Ardianti et al., 2021). This study also defined speech delay as an abnormality in the language skills of young children compared to peers their age. The term speech delay is used interchangeably with the term language delay.

Another study used the term language production to describe speech production, specifically articulation of letters and words (Hadiman et al., 2021). The authors also used the definition of developmental language disorder to describe speech delay. Interestingly, this study referred to the prevalence of speech sound disorder – another different term – to describe the prevalence of speech delay (Hadiman et al., 2021).

The other three studies (Arsita Sari et al., 2020; Muyasiroh et al., 2018; Rustan, 2019) made no distinction between speech delay and language delay. Only one study consistently and correctly used the term speech to mean speech, although, the author did not differentiate between speech delay and speech disorder (Istiqlal, 2021).

Two studies conducted by Indonesian pediatricians on SLCN use the terms specific language impairment (Kesuma et al., 2014) and language disorder (Wangke et al., 2021), respectively. The study by Kesuma et al. (2014) describes specific language impairment using definition outlined in DSM 4 (American Psychiatric Association, 1994) while Wangke et al. (2021) though uses the term language disorder and language delay interchangeably, describes the term language delay informed by international studies. These terms are used and adopted by researchers around the globe. This narrative review did not include these two articles because (1) they focused on the impacts and risk factors of SLCN, respectively; (2) they did not conduct a study about supporting SLCN in kindergarten classrooms. Nevertheless, these studies are important to cite due to their attempts in defining and conceptualizing SLCN.

In view of the studies cited above, there is an urgent need to clarify the misunderstanding in the use of terms to describe SLCN and DLD among the researchers themselves. As previously mentioned in the Introduction section of this article, reports published in non-scientific sources such as articles in online newspapers indicate that the term speech delay is widespread in use and understood by the public as having similar meaning to SLCN and DLD – this is an area that needs to be improved upon in the future.

Identification of SLCN in Indonesian classrooms

To date, there is no formal measure to identify SLCN in Indonesian children. One study in a kindergarten in Bandung relied on the information and concerns from the school counsellor in identifying SLCN in children in the age range of 4 – 6 years old (Hadiman et al., 2021). The authors then used developmental milestones as a point of comparison to ascertain whether these children exhibited atypical language development (Hadiman et al., 2021). Another study indicates that a five-year old pupil with SLCN was identified by their classroom teacher through anecdotal evidence – that is from their day-to-day observation and documentation of the child's speech and language skills. However, the authors did not provide details on the checklist or indicators used to identify children with SLCN (Ardianti et al., 2021).

Similarly, this lack of speech and language measurement in schools is reported by Arsita Sari et al. (2020) study. Teachers primarily employed a general observation of the way these young children talk. Interestingly, Istiqlal (2021) and Rustan (2019) did not mention whether the teachers who participated in their studies conducted the identification of SLCN. Instead, the identification of children with SLCN was conducted by the researchers themselves – not by the teachers.

Istiqlal (2021) asserted that signs of children with SLCN included atypical speech pattern, difficulties in interacting with peers, tendency to withdraw from peers and usage of gestures instead of talking. Meanwhile, Rustan (2019) considered limited vocabulary as a sign of SLCN. The last study by Muyasiroh et al. (2018) did not specify the protocol for identifying SLCN in children.

These six studies reveal that the identification of SLCN in Indonesian kindergarten classrooms has mostly been done through general observations by the teachers. There is no mention of specific developmental speech, language, and communication checklists or indicators that teachers can use to see the signs of possible SLCN in children. This practice in Indonesian classrooms needs to be urgently rectified as research shows the importance of conducting a general assessment of speech, language, and communication and identification of SLCN as early as possible (The Communication Trust, 2023).

Support for children with SLCN in Indonesian classrooms

Even with the lack of formal or informal measures to screen children for possible SLCN teachers were aware of children's difficulties and provided support for these children. The type of support for children with SLCN will depend on the nature of their difficulties. Two of the six studies included in this narrative review examined difficulties in speech – specifically incorrect pronunciation of certain letters and words (Hadiman et al., 2021; Istiqlal, 2021). While other studies involved language difficulties – specifically low vocabulary words (Ardianti et al., 2021; Muyasiroh et al., 2018) or difficulties in speech and language (Arsita Sari et al., 2020; Rustan, 2019).

The common strategies used to support children with difficulties in speech in Indonesian classrooms are correcting errors in pronunciation by providing examples of the correct pronunciation of certain letters and words (Arsita Sari et al., 2020; Hadiman et al., 2021; Rustan, 2019) and speaking slowly and clearly to the child (Rustan, 2019). Whereas strategies to help children with SLCN expand the number of their vocabulary words are through singing activities (Ardianti et al., 2021), and storytelling sessions (Muyasiroh et al., 2018; Rustan, 2019). Other strategies applied by the teachers involved providing ample opportunities for children with SLCN to speak (Arsita Sari et al., 2020; Istiqlal, 2021; Rustan, 2019). Lastly, these studies also underscored the importance of partnering with parents in providing support for children with SLCN (Arsita Sari et al., 2020; Hadiman et al., 2021; Rustan, 2019).

It is worth mentioning that the majority of these studies are qualitative research. Further research needs to be done to confirm these strategies are suitable and successful for the children identified with SLCN in Indonesian classrooms. The studies that used quantitative research are single-subject research and low N quantitative research that will require more rigorous replication studies with a larger and more diverse population to ascertain the significance of their findings.

What is currently known regarding research about SLCN in Indonesia

SLCN or DLD is poorly understood in Indonesia. Confusion over the use of speech and language are commonly exhibited in peer-reviewed publications in Indonesia. The terms delay and disorder are used interchangeably with no distinct definitions. Studies about prevalence are scarce. To date, there were only two Indonesia studies (Hapsari, 2020; Kesuma et al., 2014) that estimated the prevalence of children with SLCN in Indonesia, yielding approximately similar number to the ones reported in global studies. Many aspects of SLCN and DLD such as prevalence, etiology, risk factors, impacts, future outcomes, and interventions still need to be significantly explored in Indonesia.

Studies conducted within the medical, specifically pediatric setting usually included large clinical samples and implemented a quantitative method. These studies tend to use measures to identify SLCN or DLD informed by clinical practice and focus on the impacts and risk factors for SLCN or DLD. Whereas research about SLCN and DLD within the education

setting commonly included N=1 or small sample and adopted a qualitative approach. These studies rarely used measures to identify SLCN or DLD in the classroom. The identification is done by teachers through their day-to-day observation and interaction with the children, although no details are provided regarding milestones checklists or indicators used.

Studies about SLCN in the early years setting mostly concern about how to improve children's communication abilities using strategies that can be implemented in the classrooms. One similarity between the research conducted within the medical and education settings is the use of early years or kindergarten age population. This speaks to the need for early intervention for children with SLCN to reduce the negative impacts of SLCN.

Conclusion

This narrative review asserted that the identification of SLCN is mostly done through general observation of children by classroom teachers. Formal and informal measures of SLCN are rarely or never used. Teacher strategies to support children with SLCN include correcting speech sounds, singing and storytelling, and encouraging children to speak more. This review also found that research about SLCN in Indonesia is still in its infancy. Many studies mix up 'speech' and 'language' - these terms are used without any differentiation. There is a dearth of research that focuses on etiology, prevalence, and effective interventions for children with SLCN. This review is the first of its kind to be done on research about SLCN in Indonesia. The author argues that future research should clarify the differences between 'speech', 'language, and 'communication' in reporting their studies. There is an immediate need to design a formal assessment for children with SLCN in the classrooms so that they can receive proper support. In relation to this, future research should investigate various ways that teachers can be empowered with adequate skills in identifying and providing effective classroom interventions for children with SLCN. Studies about SLCN that highlight the impact of SLCN on children's socioemotional development, behavior, academic attainment, and future outcomes are few and far between - this is a research gap that must be taken into priority. Lastly, this narrative review serves as an impetus for raising public awareness about SLCN in Indonesia and the importance of research on SLCN in Indonesian children.

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