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Investigating the Levels of Speech, Language, and Communication Needs in Indonesian Kindergarten Children Aged 3 – 5 Years Old

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Abstract

Background

Speech, language, and communication needs (SLCN) can have significant impact on children's literacy and academic outcomes, as well as broader social-emotional and behavioural outcomes. Early identification is important to facilitate access to learning in kindergartens and to prevent these poor outcomes long term. However, very little research has investigated children with SLCN in Indonesia. Furthermore, no research has investigated teachers' perspectives on identifying and supporting children with SLCN in Indonesia.

Aims

This project aims to:

1. Investigate levels of SLCN in Indonesian kindergarten children, according to a teacher screening observation checklist.
2. Investigate the thoughts, feelings, and beliefs of kindergarten teachers regarding SLCN in Indonesian kindergarten children.

Method

Teachers of kindergarten children (3 – 5 years old) were trained in SLCN and in the use of an adapted teacher screening tool. They then used this screen to rate children's (n = 144) speech, language and communication skills. Information about children's speech, language, communication development history, parent concern, and family socioeconomic background was collected through a Parent Questionnaire (return rate, n=83, 57.6%). Information about children's social-emotional and behavioural status (n=25) was collected through the Teacher-rated Strengths and Difficulties Questionnaire. Two focus groups with kindergarten teachers (n=10) investigated teachers' perspectives on identifying and supporting SLCN in Indonesia.

Results

Ten children (6.9%) had teacher screening scores suggesting moderate concern about one of five areas of speech, language, and communication skills—potential SLCN. A further 70 children (48.6%) had teacher screening scores suggesting a mild concern in at least one of five areas of speech, language, and communication skills. This suggests that teachers had some

level of concern for 55.6% of the kindergarten children in their classrooms. Among the five areas of speech, language, and communication skills (Articulation, Syntax, Vocabulary, Narrative, and Comprehension) the teachers had the most concern for the kindergarten children's Narrative skills. Fifty-five children had a teacher concern, either moderate (n=10, 3.5%) or mild (n=50, 34.7%), in the area of Narrative skills.

Parent questionnaire revealed that most parents did not have concern over their speech, language, and communication skills. Most of these children came from an advantaged background with parents who were university graduates, employed, and had a middle-high income. The Strengths and Difficulties Questionnaire results showed that, albeit only for 25 of 144 children (17.4%), most children had close to average results in social, emotional, and behavioural status.

The focus groups identified five key themes: 1) challenges in building a collaborative relationship with parents, 2) parents' lack of interaction with children as a cause of SLCN, 3) teachers need further knowledge and training in SLCN, 4) types of SLCN that draw teachers' attention, 5) various ways teachers support children with SLCN in the classroom.

Conclusions

Results indicate that teachers have concerns about a significant number of kindergarten children's speech, language and communication skills, though the adapted-teacher screening observation checklist is not able to diagnose possible speech, language, and communication needs in Indonesian kindergarten children. There is a need for a screening tool appropriate for use in Indonesian kindergarten children.

Findings support the evidence from the international studies regarding teachers' need for further training in SLCN; and the importance of collaboration between teachers, parents, and specialist professionals and services (e.g., speech and language therapy; educational psychologist). This study is one of the first to investigate SLCN in Indonesia in partnership with the teachers. Implications for both early education and future research are discussed.

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Table of Contents

List of Tables

List of Figures

Declaration

I, the author, confirm that the Thesis is my own work. I am aware of the University's Guidance on the Use of Unfair Means (www.sheffield.ac.uk/ssid/unfair-means). This work has not previously been presented for an award at this, or any other, university.

1 Chapter 1: Speech, Language, and Communication Needs in Children

1.1 Introduction

The ability to communicate allows humans to exchange ideas, emotions, and other internal experiences (Rosenbaum & Simon, 2016). Learning to communicate through speech and language is considered one of the critical milestones in a human's life (Reilly *et al.* 2015). The acquisition of speech, language, and communication ability is a process that starts from birth through adolescence. This ability allows children to interact with their caregivers and other people in their surroundings. Speech, language, and communication ability allows children to engage in social interactions and form attachments with other people. These social interactions lead to exchanges of ideas, knowledge, and perspectives. Speech, language, and communication ability also allow children to think about themselves, learn about their environment, and consider their place in their community. Speech, language, and communication abilities are fundamental to achieve full participation in society (Rosenbaum & Simon, 2016).

The acquisition of speech, language, and communication ability may be a typical progression in some children. For other children, it may not be so. Some children may not achieve the expected developmental milestones of speech, language, and communication ability. When this happens, these children may be at risk of being identified with speech, language, and communication needs (Rosenbaum & Simon, 2016).

Studies suggest that speech, language, and communication development problems are common in childhood (Reilly *et al.*, 2015). Some children experience delays in their speech, language, and communication development. Their speech, language, and communication ability continue to develop in a typical sequence, albeit later than their typically developing peers. Other children may develop speech, language, and communication abilities that are not typical compared to their peers. These children may be identified as having speech, language, and communication needs (Siu, 2015).

Speech, language, and communication needs negatively impact children and their families (Siu, 2015). These needs affect children's functioning in their daily lives, such as reading, writing, educational attainment, peer relations, and family interactions (Rosenbaum & Simon, 2016). Longitudinal studies have reported the adverse outcomes of speech, language, and communication needs on individuals' social, educational, and health functioning (Clegg *et al*., 2005; Siu, 2015). Additional factors such as poverty may exacerbate the risk for adverse outcomes, including significantly reduced participation in society, mental health issues, learning challenges, behaviour problems, low educational attainment, and chronic underemployment (Rosenbaum & Simon, 2016). With the knowledge that these conditions are common in childhood, and their impacts are debilitating (Reilly *et al.*, 2015), prevalence studies must be conducted to evaluate the significance of its impacts on society (Tomblin *et al.*, 1997). Prevalence studies are useful as foundational data to form public policy, educate society through campaigns, and assess and create support required and available to mitigate these impacts.

An epidemiological study in the USA by (Tomblin *et al.*, 1997) estimated that 7.4 % of children aged 5-6 years in the USA have language difficulties. A similar percentage is also revealed in a recent study in the UK by (Norbury *et al.*, 2016) that found that 7.58 % of children aged 4-5 years old have language difficulties of unknown causes. Studies from other parts of the world show it is a highly prevalent condition with estimates ranging from 8,11% - 14,7%: higher than the ones reported in the UK and USA (Eapen *et al*., 2004; McLeod & Harrison, 2009; Thapa *et al*., 2016)

Meanwhile, there is little published data on the prevalence of speech, language, and communication needs in kindergarten children in developing countries such as Indonesia. Indonesia is a country with the fourth highest population number in the world. Since 10 % of Indonesia's population is children under the age of five, further research to estimate the prevalence of speech, language, and communication needs in kindergarten children is essential. The current study investigated the levels of speech, language, and communication needs in Indonesian-speaking kindergarten children aged 3-5 years old in Jakarta, Indonesia through teacher screening. The present study also examined the association between levels of speech, language, and communication needs and other variables such as age, gender, social

emotional behavioural difficulties and socioeconomic background. Furthermore, the present study investigated kindergarten teachers' perspectives regarding speech, language, and communication needs in Indonesian-speaking children through semi-structured focus groups. The research findings may contribute to a deeper understanding of the levels of speech, language, and communication needs in the population of Indonesian children aged 3-5 years old, specifically, in the early years setting.

1.2 Speech, Language, and Communication Needs

1.2.1 Speech Sound difficulties

Speech has been described as producing meaningful words, phrases, and sentences from the complex organised movement of the oral-facial (tongue, lips, and cheeks) muscles (American Psychiatric Association, 2013; Rosenbaum & Simon, 2016). For most children, speech ability development is usually achieved when they reach eight years old (Reilly *et al.*, 2015). For other children, the development of speech may be disrupted or halted altogether. When this happens, these children may have speech sound difficulties. Children with speech sound difficulties have difficulties in articulation and phonological/prosodic development. An articulation difficulty is identified when certain sounds are incorrectly pronounced—for example, children who lisp on the letters s and z. A phonological difficulty is identified when children fail to understand the rules for a language's sounds—for example, saying the word "tat" for cat or "gog" for dog (Reilly *et al.*, 2015). Difficulties in prosodic development occur when children fail to sound words in a correct rhythm and melody to convey certain emotions. Children with difficulties in prosodic development use intonation and stress on sounds in an atypical way that speech sounds robotic or does not fit the context. These difficulties can be one of the symptoms of communication difficulties in children with autism. However, these difficulties also occur in children without autism (Bishop *et al.*, 2017).

Some children may have speech sound difficulties so severe that it is mostly or entirely unintelligible even to family members. Speech sound difficulties often (not always) become apparent during the preschool years when there is an explosion of children's language development. Preschool is the time when children's expressive vocabulary words develop at

an accelerated rate, and they begin to use a combination of words to form phrases and sentences (Reilly *et al*., 2015; Rosenbaum & Simon, 2016). Referral to clinicians such speech-language therapists should be made when unfamiliar listeners cannot understand children's speech by the age of 3 or when people close to the children cannot understand their speech without context (Reilly *et al.* , 2015).

Another form of difficulty in speech is stuttering. Stuttering is identified when there is a disruption in the fluency of speech. Sounds, words, or phrases may be repeated or prolonged. In some cases, children hesitate to produce the full sound or experience blocks where they open their mouths but do no produce sounds. Stuttering is usually impermanent, with as many as two-thirds of children recover spontaneously within four years (Reilly *et al.*, 2015). Due to its impermanence and positive prognosis, most stuttering cases in preschool children are considered mild. Stuttering is also not related to negative impacts on psychosocial health, language, or non-verbal skills (Reilly *et al.*, 2015). However, a referral is necessary when stuttering is severe and not diminished within 12 months after the onset. In addition to that, a referral must be made when there is a family history of stuttering or children are distressed or being teased (Reilly *et al.*, 2015).

1.2.2 Language Difficulties

Language is the ability to understand, and use spoken and written words and sentences (Reilly *et al.*, 2015). Receptive language is defined as the ability to understand the message that others have conveyed through words, phrases, and sentences. Expressive language is defined as using words, phrases, and sentences to deliver messages to others. Language can also be expressed through other modalities such as symbols, gestures, and writing. Language difficulties in children occur when the ability to understand (receptive language) or use (expressive language) is developing below the expected age (Reilly *et al.*, 2015). According to the DSM V and ICD 10, language difficulties are commonly categorised into three main types. These types are:

- Expressive language difficulties, defined as problems in producing new ideas and conveying messages using language.

- Receptive language difficulties, defined as problems in grasping the messages encoded in language.
- Expressive-receptive language difficulties, defined as problems both in producing and understanding messages encoded in language.

The categorisation of language difficulties can also be based on whether they affect the ability to use proper pragmatics, semantics, and grammar as briefly detailed below:

- Pragmatic language difficulties, also called social communication disorders, may be seen in children who have problems using language in everyday social situations. These include knowing what to say, when to say it and how to say it. Pragmatic language or social communication disorders also include problems with expressing proper intonation, gestures, and body language to deliver a message by context (American Speech-Language-Hearing Association, 2020)
- Semantic language difficulties may be seen in children who have low vocabulary words compared to their typically developing peers.
- Grammatical language difficulties may be seen in children who lack a basic understanding of how to construct sentences following basic grammar rules (American Speech-Language-Hearing Association, 2020).

The course of language development varies in children. Some children may have language problems that naturally resolve when they get older while other children may experience persistent language problems. The recommended public health model to monitor children's language developmental course includes developmental surveillances practices combined with support services. Referrals should be made when children, upon entering school, still present with receptive or expressive language below their expected age. Difficulties in language after school entry has been shown to persist and require intervention (Reilly *et al.*, 2015).

1.2.3 Terminology for Speech, Language, and Communication Needs

Research studies use a variety of terminologies such as "delay," "disorder," and "impairment," among others, to describe differential diagnoses of children with speech, language, and communication problems (Bishop, 2017). Historically, the term 'delay' refers to the development of speech, language, and communication that follows the milestone stages but slower than typical. The term 'disorder' refers to the development of speech, language, and communication that does not follow the typical patterns of milestone stages (Bashir & Scavuzzo, 1992). Another frequently used term, 'impairment' is used to describe either delay or disorder (Law *et al.*, 2000). Reilly *et al.* (2014) asserted the necessity of diagnostic labels to support services and cautioned about the negative impact of diagnostic labels such as stigma and reduced expectations. However, terminologies to describe speech, language, and communication problems are so many that it has driven a need for a consensus for one agreed terminology.

This section will briefly describe the attempts to obtain a consensus for terminology in describing speech, language, and communication problems, as closely examined in studies by Bishop (2014, 2017) and Bishop *et al.* (2016, 2017). These studies underline that the researchers and practitioner disagree on choosing one fixed term to describe speech, language, and communication problems. The cited reasons for this lack of agreement are the fact that experts involved come from a multitude of backgrounds, difficulties in establishing identification and categorisation, no medical tests available to identify language problems, and the definition of language problems is influenced by the identification purposes (Bishop, 2017).

In the earlier discussion about terminologies, Reilly *et al.* (2014) concluded that labels such as 'language delay,' 'primary language impairment,' and 'language disorder' should be precluded from use. 'Language delay' implies a full achievement of language abilities in later years. Children do not universally experience the language delay trajectory. Moreover, this label is wrongly used to prevent children from getting the support they needed. The term 'primary language impairment' is also ruled out because it is not always clear which condition is considered primary in children with co-occurring conditions (Conti-Ramsden *et al.* , 2014)

Additionally, the term 'primary' is too similar to the term used for primary school age. The term 'language disorder' also received many criticisms since, as a search term, it generates too many results not associated with children's unexplained language problems (Bishop, 2014).

The lack of agreement with criteria and terminology urged Bishop *et al.* (2016, 2017) to invite a panel of experts from medicine, education, and affiliated fields to provide their opinions to get agreement about terminology, as well as diagnostic criteria and process. Various experts' opinions were processed using the Delphi technique, a statistical method to obtain agreement from various opinions of experts on selected subject matters. The result recommended using the term 'developmental language disorder' or DLD to describe speech, language, and communication problems without known causes. The other accompanying statements for this term are:

- It no longer includes the non-verbal criteria for diagnosis purposes. Low non-verbal ability no longer precludes a diagnosis of developmental language disorder.
- Risk factors do not preclude a diagnosis of developmental language disorder
- A diagnosis of developmental language disorder is still ascertained even with the presence of other co-occurring neurodevelopmental disorders such as ADHD
- The term 'developmental' applies to affected individuals between birth and adolescence. The term 'developmental' will be dropped as affected individuals become adults.

It is important to note that Bishop (2017) asserted that the use of the term DLD, which indicates a diagnosis, may not be suitable for younger children where the prognosis is unpredictable. Bishop advised on the use of the term SLCN which has been widely used in the UK's educational settings. The terms SLCN, in this case, suggests a wider inclusion of a variety of problems, including stuttering, speech, language, and communication problems with known aetiological causes and unknown causes. The term 'needs' underlines that the focus is on the children or adolescents, and the required type of support to improve their speech, language, communication abilities within the educational context. The term SLCN serves as an entry point in bringing attention to the problems that a child experiences rather than a clinical diagnosis of DLD (Bishop, 2017). This term is useful to identify children who have

speech, language, and communication needs that will benefit from additional support and accommodations in the classroom (McKean *et al*, 2017).

Cross (2011) states that the term SLCN has been defined from two different approaches, the medical approach and the educational approach. The medical approach focuses on ascertainment of diagnoses of children with SLCN whereas the educational approach centres around classifying children based on their special educational needs to obtain the most appropriate services. Both in her paper and the Bercow review (2008), the term SLCN is an umbrella term that describes all children with any kind of Speech, Language and Communication Needs. The term SCLN is recommended to be used when it has resource implications. The present study adopts the conceptualisation of the term SLCN, as it has been asserted by Bishop (2017) that it serves to 'flag up' the problems instead of making clinical diagnosis and by Cross (2011) that within the educational context, it serves to identify and focus on the needs of the children. More specifically, the present study uses the term SLCN to refer to difficulties in speech, language and communication abilities with no known causes, within the educational setting.

1.2.4 Risk and Protective Factors

Risk factors are biological, psychological, and environmental factors related to the occurrence of speech, language, and communication needs in children (Bishop *et al*., 2017). On the other hand, protective factors are aspects of children's lives that prevent or reduce the possibility of speech, language, and communication needs. Studies found that the most common factors associated with the presence of speech, language and communication needs are the male sex, history of speech, language and communication needs in the family, and disadvantaged socioeconomic background (Collisson *et al*., 2016; Conti-Ramsden & Durkin, 2016; Harrison & McLeod, 2010; Reilly *et al*., 2007, 2010, 2015; Siu, 2015; Wallace *et al.,* 2015). Further, it was found that certain maternal factors such as low maternal education, possibly a function of disadvantaged socioeconomic background, led to poor language outcomes for children aged four years old (Reilly *et al.*, 2010). Research also indicates that low maternal responsivity, early speech, language and communication development, and the number of siblings predicted poor language outcomes for children aged five years old (Short *et al.*, 2019).

To counter the adverse effects of speech, language, and communication needs, studies were conducted to examine the protective factors that can alter the course of a speech, language, and communication needs in children. Harrison & McLeod (2010) examined the protective factors in three broad categories, as identified by Nelson *et al.* (2006). These categories are child factors, family factors, and environmental factors. Social temperaments in children (child factor), good maternal mental well-being (family factor), and language learning conducive home (environmental factor) have been shown to prevent the occurrence of low speech, language, and communication outcomes in children (Collisson *et al.*, 2016; Harrison & McLeod, 2010).

Studies on the risk and protective factors are needed to provide foundational data in creating programs that benefit children and communities at risk. Current knowledge shows that the causal relationship between risk factors and speech, language, and communication needs is still uncertain (Bishop *et al.*, 2017). Risk factors are not robust predictors for speech, language, and communication needs in children. Risk factors are aspects that are consistently present in children with speech, language, and communication needs compared to typically developing children (Zubrick *et al.*, 2015). Longitudinal studies conducted by Reilly *et al.* (2007) and Reilly *et al.* (2010) sought to examine factors that predicted language outcomes at two years of age and four years of age, respectively. The results showed that common risk factors such as male sex and family history of speech, language, and communication needs were only responsible for 7% of the variation in poor language outcomes at two years old. However, the course of speech, language, and communication development becomes more stable as children grow older. The common risk factors may be more accurate in predicting the outcomes for older children (Reilly *et al.*, 2007). The results for children at four years of age showed that risk factors such as a family history of speech/language problems, low maternal education levels, and socioeconomic background were responsible for 18.9% - 20.9% variation in poor language outcomes at four years old. However, these results showed limited predictability on whether these poor outcomes would later be disorders. Nevertheless, these studies suggested that as children grow older, the environmental influences, such as social disadvantage, begin to play an important role in predicting poor outcomes. These results imply that if children were provided with a language-learning

conducive environment, the prediction of poor outcomes could be prevented or reduced (Reilly *et al.*, 2010).

1.2.5 Impacts of Speech, Language and Communication Needs

Studies have shown the debilitating impacts of having persistent speech, language, and communication needs. Oral language is fundamental to literacy and studies have shown the association between early childhood language problems and low literacy in childhood and adulthood (Schoon *et al.*, 2010; Zubrick *et al.*, 2015). Children with persistent speech, language, and communication needs experienced significant problems with literacy, education, and socialisation as adults. They struggled to keep jobs and had difficulties maintaining intimate relationships. These conditions increased the risk for long term unemployment, social isolation, and mental health issues (Clegg *et al.*, 2005; Glogowska *et al.*, 2006; Rosenbaum & Simon, 2016).

Rosenbaum & Simon (2016) asserted that reciprocal exchanges' ability is severely affected in children with speech, language, and communication needs. Reciprocal exchanges, especially between parent and child, are crucial to the development of emotional attachment, social learning, cognitive development, and communication development. Without this ability, children are at risk for a wide array of adverse impacts. Some studies have shown the links between early identified speech, language and communication needs and continued academic difficulties (Young *et al.*, 2002), persistent speech, language, and communication needs and literacy difficulties (Soler *et al.*, 2009). Early speech, language, and communication needs were also strongly related to an adult diagnosis of written-language difficulties (Stoeckel *et al.*, 2013).

In this age of information in which so many world activities rely on communication, having good speech, language, and communication ability is a prerequisite to survival (Keating *et al.*, 2001). The current trends show the move from appreciating physical labour to recognising the full worth of cognitive, speech, language, and communication abilities in the work industry (Ruben, 2000). Individuals with persistent speech, language, and communication needs suffer the disadvantage of not being able to earn as much as their typically developing

counterparts and, consequently can potentially be relegated to living a life in substandard conditions (Ruben, 2000).

1.3 Speech, Language and Communication Needs in Indonesia

In the past ten years, there has been a growing concern about children identified with speech, language, and communication needs in Indonesia, though research in this area remains limited. Articles in major newspapers in Indonesia have reported a rise in cases of speech, language, and communication needs (Kompas, 2014), though this concern is not linked to official empirical data that describe the estimates of prevalence and incidence of children identified with speech, language, and communication needs. However, the results from developmental surveillance conducted by The Indonesian Paediatric Society (IDAI, 2007) indicate that speech, language, and communication needs are among the most common developmental disorders in Indonesian children. The developmental surveillance was conducted in seven teaching hospitals in the seven largest cities in Indonesia: Surabaya, Jakarta, Bandung, Palembang, Denpasar, Padang, and Makassar, with a reported population ranging from 600 thousand to 10 million people with Jakarta being the most populous city in Indonesia (Kementerian Dalam Negeri Republik Indonesia, 2020). The developmental surveillance result shows that the incidence figure of speech, language, and communication needs among children between 18 months and six years old is estimated to be 21 % (IDAI, 2007). However, the methodological details of this surveillance are not available and details such as the sample size, assessment used, and participant characteristics are not known.

A report from the Paediatric Growth and Developmental Clinic of Dr. Kariadi Hospital in Semarang, Central Java in 2007 shows that among the 436 new patient visits, 100 children (22.9%) came with concerns regarding language delay. Among the children who came with language delay concerns, 13 children (2.98%) were diagnosed with language difficulties (Klinik Tumbuh Kembang Anak RS Dr. Kariadi, 2007). Another report from the Department of Medical Rehabilitation RSCM in Jakarta in 2006 shows that 10.13% of children among 1,125 patient visits were diagnosed with speech, language, and communication delay (Departemen Rehabilitasi Medik, 2006). However, again the methodological details of this report are not available in terms of assessments or diagnostic criteria for a delay.

An earlier study conducted by Wahjuni (1998) in an urban area of Central Jakarta found that the prevalence of language delay was estimated to be 9.3% among 214 preschool children aged younger than three years. The methodological details of the study are not available; therefore, the information about participants, recruitment, and diagnosis criteria is unknown. Without further details of the methods, it is difficult to interpret the discrepancy in numbers, and subsequently, the comparisons between these reports cannot be generated.

The concern about speech, language, and communication needs was further highlighted in 2012 when The Ministry of Health Republic of Indonesia issued a handbook on treatment for referral cases of developmental disorders in children under five years old for healthcare staff working in primary health care services (Kementerian Kesehatan RI, 2012). The handbook reported that from research conducted in one region in Bandung (the third-largest city in Indonesia), 20 – 30 % of children under five years old have developmental difficulties. Speech, language, and communication needs were reported to be one of the most common developmental difficulties. Reportedly, 80% of the primary cause of developmental difficulties is a lack of stimulation from the home environment (Kementerian Kesehatan RI, 2012). For example, parents reportedly prefer to keep their children busy with gadgets (games on smartphones or iPad) instead of having conversations with them.

Despite this preliminary data, there remains scarcity in empirical prevalence studies of speech, language, and communication needs in Indonesian children. It should be noted that most of the information, the surveillance data, and the hospital data records were accessed from articles written in online newspapers and the Indonesian Paediatric Society website, IDAI. Access to more detailed reports of these figures is not available. This circumstance underlines a dearth of academic studies in speech, language, and communication needs in Indonesia.

To the best of the author's knowledge, the most recent study on speech, language, and communication needs in Indonesia is the study conducted by Kesuma *et al.* (2014). The study examined the association between specific language impairment with behavioural disorders in 1340 children aged 3-5 years who were enrolled in kindergartens in Palembang, Indonesia. A specific language impairment checklist was used to determine language impairment in

children. The criterion for language impairment was answering 'no' on ‘more than one occasion' on items in the checklist (Kesuma *et al.*, page 23, 2014). Unfortunately, details about the checklist and how to use it were not available. The study found that 12.9 % of children were identified with specific language impairment. As previously discussed in this section, studies about speech, language and communication needs in Indonesia are still scarce, and among the few available studies, details of the methods used are also unclear. Therefore, the prevalence of speech, language, and communication needs in Indonesian children are still needed.

1.4 Summary

This chapter has addressed the importance of speech, language and communication skills and the long-lasting impacts of persistent speech, language and communication needs using evidence from past research. This chapter provides the definition of speech sound difficulties and language difficulties. The chapter briefly examines the different terminologies used to describe children with SLCN. The context of speech, language and communication needs in Indonesia is also provided.

2 Chapter 2: The Identification and Prevalence of SLCN

2.1 Introduction

This chapter describes the identification of speech, language and communication needs through teacher screening. The importance of prevalence studies is examined with emphasis on the various methods used in studies conducted in English-speaking countries, studies in other languages and studies in Indonesia.

2.2 Teacher Screening of Children with Speech, Language, and Communication Needs

As previously outlined in section 1.1, the prevalence of speech, language, and communication needs in preschool children is between 7.4% – 14.7% (McLeod & Harrison, 2009; Norbury *et al*., 2016; Tomblin *et al.*, 1997). Given the high prevalence, it is important to identify children with potential SLCN for further assessment. Since it is not possible for specialists to screen all children for possible speech, language and communication needs due to logistical reasons such as the availability of budgets, time, and personnel (Reilly *et al.*, 2015; Williams, 2006), it is recommended that screening be performed by people who routinely work with all children, in the education settings, it means teachers (Williams, 2006). Since children with speech, language, and communication needs will mostly be supported in the classrooms (Dockrell *et al.*, 2014) having teachers screen children for possible speech, language and communication needs is a viable option (Williams, 2006). These subsections below discussed issues around teacher screening for children with speech, language, and communication needs.

2.2.1 Teachers' Ability to Screen Children with Speech, Language, and Communication Needs

There is a growing body of literature that investigated the usefulness of teacher screening in estimating the number of children with speech, language and communication needs (Antoniazzi *et al.*, 2010).

Whitworth *et al.* (1993) compared teacher and parent screening accuracy via a questionnaire with clinical judgment from speech-language therapists to identify SLCN in 5-year-old preschool children. The cohort was 6,050 children from 187 preschools in Western Australia with parent completed questionnaires and teacher questionnaire data. Among these children, 553 children had parent concerns, and 372 children had teacher concerns. Parent concerns were derived from the parent questionnaire results. The parent questionnaire had 11 questions that collected data about the children's speech and language behaviours. A child was considered to have a parent concern when at least one of the questionnaire items was positive (atypical speech and language behaviours). A child was considered to have no parent concern when all questionnaire items were negative (typical speech and language behaviours). For the teacher checklist, the teacher-rated children as age-appropriate, mild, or moderate-severe on eight categories of speech and language behaviours. These categories are phonology, syntax, expressing ideas, narrative, vocabulary, comprehension, stuttering, and voice. A child was considered to have a teacher concern (teacher positive) when the overall rating was moderate-severe ratings. No teacher concern (teacher negative) was assigned if a child had an overall rating of age-appropriate or mild ratings (Whitworth *et al.*, 1993).

Children with concerns from parents and teachers were then assessed by speech-language therapists (SLTs). An assessment battery, which sought to sample children's language, was specifically developed by the SLTs for this study. The SLTs used three different ratings to describe these children; the first one was age-appropriate, the second was mild, and the third was moderate-severe. Two cut-off points were used to analyse the results. The first cut-off point included children with overall mild and moderate-severe ratings. The second cut-off point included children with an overall moderate-severe rating. When the first cut-off point was used, 74.4% of children with parent concerns were identified as 'positive' by the SLTs, with 33.3% of children rated as mild, 41.1% of children rated as moderate-severe, and 25.6% of children rated as age-appropriate (negative). Using the second cut-off point, only 41.1% of children with parent concerns were identified as positive, while 58.9% of children with parent concerns were identified as negative. This means that parent screening has a 74.4% sensitivity rate using the first cut-off point and only 41.1% sensitivity rate using the second cut-off point.

In Whitworth *et al.* (1993) study, the sensitivity rate refers to the proportion of children with parent concerns in SLCN who were correctly identified as positive by the SLTs.

Meanwhile, among the 660 children rated with teacher checklist, 372 children (56.4%) had moderate-severe ratings (teacher concern/teacher positive), 152 children (23%) had mild rating (no teacher concern/teacher negative), and 136 children (20.6%) had age-appropriate rating (no teacher concern/teacher negative). Among the 372 children with moderate-severe ratings (teacher concern/teacher positive), 283 children (76.2%) were rated as positive by the SLTs. This means that the sensitivity rate of the teacher checklist is 76.2%. The study suggests that the teacher checklist has higher accuracy (76.2% sensitivity rate) in identifying children with speech, language, and communication needs compared to the parent screening (41.1% sensitivity rate) when using the cut-off point of having a child rated with moderate-severe ratings.

The SLTs also assessed 553 children without parent concerns. Using the first cut-off point, 66.1% of children were rated age-appropriate; however, 90.6% of children without parent concerns were rated age-appropriate using the second cut-off point. With this result, the study showed that using the first cut-off point, the specificity rate is 66.1%, and using the second cut-off point, the specificity rate is 90.6%.

In Whitworth *et al.* (1993), specificity rate refers to the proportion number of children with typical speech and language skills (without parent concerns) who were correctly identified as negative by the speech-language therapists. A screening tool is considered accurate if it has high sensitivity levels, ≥ 80%, and high specificity levels, ≥ 70% (Kilgus *et al.*, 2014). Unfortunately, this study did not investigate the specificity rate of the teacher checklist.

Approximately twenty years later, Thapa *et al.* (2016) conducted teacher screening to estimate the levels of speech, language, and communication needs in Nepalese primary school children using the same teacher screening measure developed by Whitworth *et al.* (1993) in Australia. Two different samples (690 and 2086) were recruited, with a total of 2776 primary school children between the age of 5 – 11 years old, with mean age = 8.11 years old. The teacher estimation result showed that 8.11% of primary school children had speech,

language, and communication needs. Thapa *et al.* (2016) adapted the teacher screening observation checklist from Whitworth *et al.* (1993) and conducted a reliability measurement of the teacher screening observation checklist on the Nepalese primary school children. Thapa *et al.* (2016) provided training and written guidance for teachers prior to using the teacher screening observation checklist. The reliability of the screening observation checklist was measured through an intra rater agreement. The screening was conducted in two phases for each different sub-sample. The results generated a high intra rater agreement of 86.7%, above the level of acceptance of 70%. With this result, the study indicated that the adapted teacher screening observation checklist could be used for further research to estimate the levels of speech, language, and communication needs in Nepalese primary school children (Thapa *et al.*, 2016).

When provided with appropriate training, teachers are able to screen for SLCN, and their identification of children with SLCN is broadly in agreement with formal language assessment by a specialist (Williams, 2006). Teachers have the advantage of observing children on a day-to-day basis in the education context (Seager & Abbot-Smith, 2017). The role of teachers in screening these children become increasingly important because they are also the ones who support the children at risk of speech, language, and communication needs in the education settings (Dockrell *et al.*, 2014). When teachers understand these children's specific needs, they will create programs suitable to meet these needs (Dockrell & Hurry, 2018). Teacher screening is not meant to replace the assessment by professionals such as speech and language therapists; instead, it will complement the assessment results conducted by health professionals (Williams, 2006).

Chow *et al.* (2020) conducted a study that examined the agreement between teacher judgments using Children's Communication Checklist 2 (Bishop, 2006) and direct assessments of speech, language, and communication skills using Test for Auditory Comprehension of Language–Fourth Edition (Carrow-Woolfolk, 2014) and the Clinical Evaluation of Language Fundamentals–Fifth Edition (Semel *et al.*, 2017) in 161 first grade age and 204 second grade age students in the United States. This study was conducted on the knowledge that teacher judgments of child language skills start the referral process. With this knowledge, the study sought to explore whether teacher ratings accurately identify language difficulties that may

need further assessment. The result showed that teacher ratings of children's language skills agree with the direct assessment results. The study suggests that a reliable teacher language screening for all children is beneficial in starting the referral process which means that children at risk will be supported as early as possible (Chow *et al.*, 2020).

Harrison *et al.* (2017) found a high level of agreement between parents' and teachers' judgment and the clinical diagnosis of speech sound disorder of 157 children aged 4-5 years old in Australia. The study was motivated by the knowledge that parents' and teachers' concern usually start the referral process, therefore it is crucial to investigate the accuracy of parents' and teachers' judgment. The results showed that teachers' judgment achieved a lower level of agreement (71%) than parents' judgment (88%). Several reasons can explain this lower level of agreement. The first reason is that teachers possibly implement a relaxed approach in judging children's speech because they need to highlight the children's strengths instead of focusing on their problems. The second reason is that teachers' past education is not adequate to equip them with the knowledge to identify speech sound disorder. The third reason is that teachers may not have adequate ongoing professional development and access to knowledge about children's speech (McCormack *et al.*, 2010). However, the study underlines that this level of agreement is higher than the numbers reported in studies in the other studies in Australia: 41% (Antoniazzi *et al.* , 2010), and 50% (Jessup *et al.* , 2008b). Despite the results, Harrison *et al.* (2017) asserted that teachers' judgment is useful to inform the clinical diagnosis. Teachers' judgment provides information on how children's speech skills function in the classrooms. It also shows their perspectives about the impact of children's speech difficulties in the education context.

Teacher screening is not always sensitive and specific to the level of need. In contrast to Whitworth *et al.* (1993) and Thapa *et al.* (2016) outlined above, a study by Antoniazzi *et al.* (2010) showed that teachers' judgment had a low agreement with the results of the formal screening. Teachers used the Children's Communication Checklist-2 (Bishop, 2003) to screen 149 children for possible language needs. Teachers' results were then compared with the Clinical Examination of Language Fundamentals Screening Test (Semel *et al.*, 2004) results. The results showed that teachers missed 59% of children identified as having language needs through formal screening (specificity rate of only 41%), while Kilgus *et al.* (2014) suggested

that a screening tool is considered useful when it shows more than 70% specificity rate. Further, Antoniazzi *et al.* (2010) indicated that between 6% and 13% of preparatory school children (aged 5 years old) would have undetected language needs. As a result, these children would not be adequately supported in the school.

Antoniazzi *et al.* (2010) suggested plausible reasons to explain the low agreement between teacher judgment and formal language screening in this study. The first one is that teachers did not receive specific instructions on how to identify children with possible SLCN. They relied on their own knowledge and experiences in making judgments about children who showed signs of possible SLCN. Secondly, teachers might have limited knowledge of language development. The third reason is that teachers might not clearly understand how to differentiate between speech and language. The fourth reason is the timing of the checklist completion. The teachers completed the checklist in term 2 of the school academic year; they might not have adequate time to form a comprehensive judgment about the children. The study suggests that a better agreement outcome may be obtained if teachers have adequate training and knowledge in speech and language and are provided with ongoing professional development regarding speech, language, and communication needs (Antoniazzi *et al.*, 2010).

2.2.2 The Need for Specific Training for Teachers to Identify Children with Speech, Language, and Communication Needs

While the section above highlights the importance of teacher identification with supporting studies, this subsection focuses on teachers' training needs to identify children with speech, language, and communication needs. Mroz (2006) conducted interviews with 25 early childhood educators from various education-based nurseries and schools in the UK. The results suggest that teachers believed in early identification of speech, language, and communication needs in children. However, this belief was not supported by their perception of their ability to identify such needs. Most teachers felt that they were not confident in their knowledge about speech, language, and communication development and needs. Teachers also felt there was a lack of training in speech, language, and communication for teachers. Teachers specifically expressed the desire to have workshops that allow them to share

experiences and find the best way to support children with speech, language, and communication needs. Moreover, teachers in this study valued the opportunities to collaborate with speech-language therapists (Mroz, 2006).

A similar study in Australia by Brebner *et al.* (2016) examined early childhood educators' perspectives towards children's speech, language, and communication development through focus groups with 19 educators. The results show that teachers showed adequate knowledge of normal variations of children's speech, language, and communication development. However, teachers felt that they were not skilled in supporting children with speech, language, and communication needs. Similar to Mroz (2006) finding, teachers also wanted more speech, language, and communication development training. Furthermore, teachers expressed the importance of finding practical solutions to support children with communication challenges, which can be done by collaborating with speech-language therapists (Brebner *et al.* , 2016).

2.2.3 The Need for an Accurate Teacher Screening Tool

Many studies have begun to examine the accuracy of teachers' screening tools to screen children with speech, language, and communication needs. Some studies showed that some tools such as Kindergarten Development Check (Jessup *et al.*, 2008b) and Children's communication checklist (Antoniazzi *et al.* , 2010) were inaccurate in identifying children with speech, language, and communication needs.

A study by Seager & Abbot – Smith (2017) showed that early-year teachers' inaccuracy to identify children with speech, language, and communication needs was not because they lacked the skills to do it, but rather, due to the components related to the screening tool. The background of Seager & Abbot – Smith (2017) study was that early years' teachers in England were required to assess the children's language comprehension. Many early years' teachers in England used Early Years Foundation Stage Unique Child Communication Sheet (EYFS:UCC) (Department of Education, 2012) The teachers in Seager & Abbot – Smith (2017) used EYFS:UCC and the WellComm (Sandwell Primary Care Trust, 2012) to assess 70 children aged

21/2 – 3 years old. The clinical judgments were conducted by psychology graduates who assessed the same children using the Preschool Language Scale.

The results showed that EYFS:UCC had low sensitivity rate (40%) whereas WellComm had good sensitivity rate (75%) and acceptable specificity rate (68%). Further analyses showed that a component from the tool, such as explicit instructions, could determine the results' accuracy. The study also underlined that the nature of the tools, the EYFS:UCC required teachers to observe and indicate their observation into the sheet, whereas WellComm provided clear instructions for teachers to conduct some direct testing of the children, might affect the results of the assessment. Seager & Abbot – Smith (2017) suggested that teachers were able to accurately identify language problems when given the appropriate tools to do so.

2.3 The Importance of Prevalence Studies

It is important to know how widespread speech, language, and communication needs are within the population (Enderby & Davies, 1989). This knowledge is essential for understanding the history, pathways, and outcomes of these needs. This knowledge is also used to evaluate the possible risk and protective factors (Johnson, 2007). Prevalence is defined as the proportion of people in a representative sample of people identified with a particular condition or disease. Prevalence is distinguished from 'incidence' in the sense that incidence studies focus on estimating the rate of people' newly' identified with certain conditions or disease (Enderby & Pickstone, 2004).

The result from prevalence studies is used to ensure that services are readily available to help children manage and mitigate the potential lifelong consequences of speech, language, and communication needs. The world report on the global burden (World Health Organization, 2011) shows that speech, language, and communication needs are among the most common developmental disorders in the world. Studies conducted in predominantly English-speaking countries show that the current prevalence of speech, language, and communication needs is estimated to be 3 percent to 16 percent in children aged 2-6 years old (Rosenbaum & Simon, 2016; Wallace *et al.* , 2015).

As mentioned in the above paragraph, speech, language, and communication needs are the most common disabilities in kindergarten-aged children (Reilly *et al.* , 2015; Rosenbaum & Simon, 2016; Wallace *et al.* , 2015). Children with persistent SLCN experience difficulties in vocabulary and grammar (Paul *et al.* , 2017), which can last into adulthood (Johnson *et al.* , 1999). They also show lower reading skills than their typically developing peers (Catts *et al.* , 2008). These findings drive the importance of early identification of children with SLCN. Kindergarten children with SLCN, when identified early, will have adequate support that prevents or reduces the disadvantages of SLCN (Reilly *et al.* , 2015).

However, there are emerging issues in identifying the prevalence of speech, language, and communication needs in children. The different criteria for diagnosis and various assessment tools are among the issues articulated by (Rosenbaum & Simon, 2016). To date, there has not been a single agreement to establish universal gold standards in identifying the occurrence of speech, language, and communication needs. Standards for the identification of speech, language, and communication needs vary between countries. However, Bishop *et al.* (2017) describe important indicators to ascertain speech, language, and communication needs in children. These indicators vary by the children's age.

By the age of 3 to 4 years old, children are thought to have speech, language, and communication needs when:

- They say no more than two-word utterances
- They do not understand simple instructions
- Their immediate family members do not understand much of their speaking

Children are at risk of having language problems by the age of 4 to 5 years old when:

- They have inconsistent or abnormal interaction
- They say no more than three-word utterances
- They have poor receptive comprehension
- Strangers do not understand much of their speaking

Children may have language problems by the age of 5 years and older when:

- They have difficulty in generating narratives
- They have difficulty to understand what they read or listen to
- They struggle in following or remembering
- They talk a lot but do not engage in a give-and-take conversation

- They tend to take over-literal interpretation, missing the point

As Bishop *et al.* (2017) recommended, these indicators are meant to be a guide for referral to specialist services, to be used by non-experts. It is not always the case that younger children who present with these indicators will be identified with speech, language, and communication needs once they have been assessed. Similarly, the indicators for children aged 4-5 years old are useful to refer children for possible language problems, as children's language development becomes more stable as they reach four years old (Reilly *et al.* , 2010). Although children's language development can significantly change during the preschool years (the age of 4 to 5 years old), persistence in comprehension and expression problems signifies severe language problems (Bishop *et al.*, 2017). Meanwhile, the indicators for children aged five years and older are used to signify serious language problems. Children must be referred to determine the degree to which their language problems affect aspects of their lives and the type of support services needed (Bishop *et al.*, 2017).

Despite, and perhaps, because of the emerging issues related to the prevalence studies as briefly discussed above, more prevalence studies are needed. At the core of its purpose, prevalence study is aimed at prevention. It is essential to inform the planning for the support services delivery. It is essential to evaluate the impact of interventions. When interventional impacts are high, the results are a declining prevalence (Law *et al.*, 2013). Prevalence is also needed to determine which identified cases respond to intervention and which do not (Law et al., 2000). This information is useful to delineate between what is thought to be typical and atypical in children's speech, language, and communication development (Law *et al.* , 2000). On a larger scale, prevalence is used to inform researchers and policymakers about its social and economic burden to society. This information is used to start or improve the priorities of children's speech, language, and communication development in healthcare and educational contexts (Harder, 2014). For the general public, prevalence is the data for awareness campaigns highlighting the importance of communication supportive home environment and communication supportive classrooms.

2.3.1 Prevalence Studies in English-speaking Countries

This section will discuss the prevalence of studies conducted in English-speaking countries for the past twenty years. Table 2.1 summarises selected journal articles about the prevalence of speech, language, and communication needs in English-speaking countries for the last twenty years.

Table 2.1 Summary of Prevalence Studies in English-speaking Countries

Study	Sample	Measures	Findings	Method
Tomblin *et al.* 1997, USA Speech and language impairment	7218 5–7-year-olds	Test of Language Development (TOLD)	7.4%	Screening, diagnostic assessment
Shriberg *et al.*, 1999 USA Speech delay	1.328 6-year-olds	TOLD, Conversational Speech Sample	3.8 %	Screening and diagnostic assessment
Keating, Turrell, & Ozanne, 2001 Australia Speech sound disorder	12.388 0–14-year-olds	Standard protocol interview to parents	Childhood speech disorders 1.7 %	Parent report
McKinnon *et al.*, 2007 Australia Stuttering, voice, and speech-sound disorders	10.425 5-12 years old	Teacher identification Diagnostic assessment	Stuttering 0.33 % Voice disorder 0.12 % Speech sound disorder 1.06 % Combined speech disorders 1.51 %	Teacher report Diagnostic assessment by SLP
Jessup et al., 2008 Australia – Tasmania Speech and/or language impairment	308 5-year-olds	Daz Roberts Test of Articulation Clinical Evaluation of Language Fundamentals – Australian Standardized Edition	Speech impairment 8.7% Language impairment 18.2% Speech and language impairment 14.3%	Diagnostic assessment by speech language pathologist
McLeod & Harrison, 2009 Australia Speech and language impairment	4983 4-5	Adapted Peabody Picture of Vocabulary Test Parent/teacher report	14.7	Parent report, teacher report, direct assessment
Eadie *et al.*, 2015 Australia Speech sound disorder	1494 4-year-olds	The Goldman-Fristoe Test of Articulation, 2nd Edition.	3.4 %	Direct assessment

Norbury *et al.*, 2016 United Kingdom Language disorder	7267 4-5	Children's Communication Checklist-short, assessment of speech intelligibility & five language composites	9.92%	Teacher report, direct assessment
Wren, Miller, Peters, Emond, & Roulstone, 2016 United Kingdom Speech sound difficulties	7.391 8-year-olds	Speech samples from expressive language task.	The estimated prevalence of persistent SSD was 3.6%.	Direct assessment

2.3.1.1 Prevalence of Language Difficulties

A study that has become the classic reference point in the literature of prevalence studies of children with language disorder is by Tomblin *et al.* (1997). The study employed two stages of data collection to record the occurrence of language disorder. The first stage was a screening of all child participants. Each child was individually administered 40 items from the five subtests (Picture Vocabulary, Oral Vocabulary, Grammatic Understanding, Sentence Imitation, and Grammatic Completion) of the Test of the Language Development-2:P (Newcomer & Hammill, 1998).

The second stage was a more comprehensive assessment of all children who failed the screening, and a portion of children who passed the screening. The calculation of including children who passed the screening was by a ratio of 1 to 1. So, for each child who failed the screening, one child who passed the screening was invited for the diagnostic stage. The diagnostic stage included assessment of hearing, non-verbal IQ, and language abilities of the children who failed the screening. Since hearing loss was one of the exclusionary criteria for language disorder, children who failed the screening went through audiometric testing to assess their hearing ability. One of the criteria for language disorder diagnosis also included a Performance IQ higher than 85 on the Wechsler scale. Children were administered Block Design and Picture Completion, two subtests from the Wechsler Preschool and Primary Scale

of Intelligence test used as a short form of the WPPSI Performance scale (LoBello, 1991). To assess the language abilities, children were administered five subtests (Picture Vocabulary, Oral Vocabulary, Grammatic Understanding, Sentence Imitation, and Grammatic Completion) of the Test of the Language Development-2:P (Newcomer & Hammill, 1988) and a narrative story task (Culatta *et al.*, 1983). Children were considered to fail the language abilities assessment when they obtained two or more composite score – 1.25 SD or more from the mean of the age group. This two-stage method has been regarded to increase the accuracy in determining prevalence rates compared to studies that use either only screening in the form of a parent or teacher report or direct assessment (Law *et al.*, 2000).

Over twenty years have passed since this study was first published, but its insights remain useful. (Tomblin *et al.*, 1997) asserted that the variability in prevalence studies made comparisons of results difficult. These variabilities include differences in cut-off points for diagnosis, differences in age, and size of the samples, differences in assessment tools, among other things. With these issues in mind, the validity of the prevalence studies results depends on the diagnostic standards used and the sample representativeness.

Tomblin's other critiques of the methodologies used in past studies before 1997 were regarding the samples' size and representativeness, the possibility of attrition bias risk in longitudinal research designs, and the lack of 'universal' agreement of what constituted a diagnosis. These critiques remain relevant today as many of the methodological approaches or choices made in prevalence studies have resulted from a lack of resources (Okalidou & Kampanaros, 2001; Oyono *et al.*, 2018; Thapa *et al.*, 2016).

Tomblin *et al.* (1997) proposed that in the absence of comparable studies, prevalence studies should aim to establish their study's rigour by carefully selecting the appropriate methods such as determining diagnostic standards and sample representativeness. Tomblin and his research team determined language disorder diagnosis using a cut off at -1.25 standard deviations below the mean average for two or more composite scores of Test of Language Development 2nd edition. The cut off was selected because it was deemed comparable to clinicians' criteria in establishing the diagnosis of language disorder (Records & Tomblin, 1994).

The study recruited 7,218 kindergarten children aged 5-7 years old who were monolingual English speakers. The exclusionary criteria included children who spoke a language other than English as their first language or lived in an environment where a language other than English was spoken more often and children who were present with mental disability, autism, or other neurodevelopmental disorders. The study selected a stratified cluster sampling method; the urban, suburban, and rural populations of Iowa recruit participants to ensure the sample's representativeness. The proportion of gender and race diversity of the sample reflected the USA population's proportion at the time (Tomblin *et al.*, 1997). The results showed that approximately 7.4% of children were identified with a language disorder. This estimate has become the reference point of prevalence studies and reviews in English-speaking countries (Jessup et al., 2008a; Law et al., 2000; McLeod & Harrison, 2009).

Another comparable study is by Norbury *et al.* (2016). This study estimated the prevalence of developmental language disorder among children in the United Kingdom. The study recruited 7, 267 children between the ages of 4 and 5 when children in the United Kingdom first start their formal schooling. The reason for choosing this age period is because the diagnosis of developmental language disorder is more stable after a child enters formal schooling (Tomblin *et al.*, 2003). The exclusion criteria included intellectual disability or previously identified medical diagnoses.

Furthermore, the study aimed to provide information about the clinical presentation and functional impacts on the academic progression of children with a developmental language disorder. The study was the first study that described clinical presentation developmental language disorder using the new criterion of language disorder as outlined in the Diagnostic and Statistical Manual of Mental Disorders – the Fifth Edition (American Psychiatric Association, 2013). The new criterion removes the non-verbal abilities in the average range as one of the conditions to establish the diagnosis of developmental language disorder (American Psychiatric Association, 2013). By choosing to highlight this, the Norbury *et al.* (2016) study became the starting point for future prevalence studies to examine and compare developmental language disorder with low and average nonverbal abilities and analyse the implications for children and their surroundings environments.

The study used two stages of identification, the screening stage in which teachers completed a short version of Children's Communication Checklist-2 (Bishop, 2003) and the diagnostic stage through direct assessment of the children. The occurrence of developmental language disorder was confirmed when a child obtained scores of -1.5 standard deviations or below on two of five language composites (vocabulary, grammar, narrative retelling, comprehension and expressive & receptive composites comprised of the relevant vocabulary, grammar and narrative indices). This cut off is comparable with the criteria selected by other prevalence studies in clinical samples and the common standard used by current clinicians (Norbury *et al.*, 2016). This cut off is stricter than the one used in Tomblin *et al.* (1997). However, it was known that the criteria used by (Tomblin *et al.*, 1997) yielded many false positives (Tomblin *et al.*, 2003).

Norbury and colleagues found that 7.58 % of children were identified with a developmental language disorder, which would significantly interfere with their learning progression. The study also underlined no significant difference between children with low and average non-verbal abilities in terms of language, learning, and emotional and behavioural problems. However, the study acknowledges that there needs to be a more in-depth study on the impacts of varying non-verbal abilities on children with developmental language disorder (Norbury *et al.* , 2016).

McLeod & Harrison (2009) conducted another comparable study in design on monolingual English-speaking children in Australia. The study aimed to estimate the prevalence of speech and language difficulties in children aged 4-5 years old. The study recruited 4,983 children that reflected the heterogeneity of the population studied at the time. The study used two stages of identification involving a screening stage through teacher and parent report through interviews, and a diagnostic stage through direct assessment of the children. The diagnosis of speech and language impairment was made when a child obtained scores equal to or below 1-2 standard deviations from the mean on the language test.

The study found that approximately 14.7 % of children were identified with speech and language difficulties. This prevalence estimate, although relatively high, is still within the range of worldwide prevalence estimates. In contrast, another Australian study in speech and

language difficulties reported a high prevalence estimate of 18.7 % (Jessup *et al.*, 2008). The choice of the methodological approaches such as the socio-demographic characteristics of the sample, the sources of identification, and other related variables may account for this result.

2.3.1.2 Prevalence of Speech Difficulties

The challenges in the attempts of estimating prevalence were also experienced by studies on speech difficulties (Eadie et al., 2015; Keating et al., 2001; McKinnon et al., 2007; Shriberg et al., 1999; Wren et al., 2016) or combined speech and language difficulties (Jessup et al., 2008a; McLeod & Harrison, 2009). In the speech difficulties domain, the challenges related to selecting the age and representativeness of the sample are even more relevant as studies show that the course of speech difficulties depends on the age because speech difficulties may spontaneously resolve when children reach the age of 6. Therefore, the representativeness of the samples should take priority. Furthermore, follow-up studies that confirm or disprove the stability of this diagnosis become necessary (Shriberg et al., 1999).

Studies on speech difficulties reveal prevalence estimates between 1-3 % (Eadie *et al.*, 2015; Keating *et al.*, 2001; McKinnon *et al.*, 2007; Shriberg *et al.*, 1999; Wren *et al.*, 2016). These studies suggest that prevalence estimates of speech difficulties are usually lower than prevalence estimates of language difficulties because speech difficulties identified in early childhood may spontaneously resolve by the time children enrolled in formal schooling (Tomblin *et al.*, 2003).

Another plausible reason for the lower prevalence rate is that speech difficulties are considered more 'tangible' or 'recognisable' by parents or teachers, which prompts them to do an intervention in the form of referral. These early referrals may play a role in helping children to improve their speech ability. These studies, once again, show that despite efforts to increase the rigour of studies by employing careful choices in research designs, attempts to estimate the true prevalence rate is still a challenge.

2.3.2 Prevalence Studies in Other Languages

To date, there is a paucity of research into the prevalence of speech, language, and communication needs in languages other than English. The few studies that exist (see Table 2.2) across the continents of Asia (Belgin *et al.* , 2017; Binu *et al.* , 2014; Karbasi *et al.* , 2011; Mohamadi *et al.* , 2016; Thapa *et al.* , 2016), Africa (Oyono *et al.* , 2018)), South America (Rabelo *et al.* , 2015) and Eastern Europe (Okalidou & Kampanaros, 2001) have articulated the need for more studies to estimate the prevalence rates of children identified with speech, language and communication needs. These studies show that speech, language, and communication needs are highly prevalent among children. The estimates were reported between the range of 8.11% (Thapa *et al.*, 2016) and 33.6% (Rabelo *et al.*, 2015).

These estimates are higher than the average worldwide prevalence rates between 3% and 16%, reported by Wallace *et al.* (2015) and Rosenbaum & Simon (2016). However, some variables account for these differences in prevalence estimates. These variables include:

1) The age of the child participants. It was reported that younger cohorts of children generated higher prevalence estimates than older cohorts of children (McCormack et al., 2010; McKinnon et al., 2007). Interestingly, this finding does not seem to be supported by the results of the existing prevalence studies in other languages. There has not been a certain pattern about the effect of age cohorts in the prevalence estimates in the other languages. Both younger and older cohorts between the ages of 0 and 11 show that speech, language, and communication needs are highly prevalent. These results bring into light the finding from studies about speech, language, and communication needs in English-speaking countries, suggesting that speech difficulties may spontaneously resolve in certain children when they reach the age of 6 years old due to maturation effects or other mitigating factors (Tomblin *et al.*, 2003). There are several plausible reasons why the finding does not apply to the prevalence estimates in other languages. One of these reasons is that in the context of English-speaking countries, these findings were reported from countries with an awareness of speech, language, and communication needs and adequate resources for services. Quite the contrary, research findings from the other languages were frequently derived from studies in the countries with a lack of awareness and lack of resources in speech, language,

and communication needs. Services and policies regarding the treatment of speech, language and communication needs in children may be more readily available in English-speaking countries compared to other countries.

2) The sources of information. Findings in the English language show that parent report-only yield overestimated numbers, whereas teachers report-only resulted in underestimated rates (Thapa et al., 2016; Whitworth et al., 1993). Unfortunately, these findings have not been discussed further in the above studies in other languages.

3) The domain of research. Interestingly, some prevalence studies in the other languages which focus on speech difficulties (Karbasi *et al.*, 2011; Mohamadi *et al.*, 2016; Rabelo *et al.*, 2015) generated higher prevalence rates compared to those that focus on language difficulties (Eapen *et al.*, 2004) or combined speech and language difficulties (Oyono *et al*., 2018; Thapa *et al*., 2016). The range of prevalence rates in speech difficulties in other languages is between 13.7% - 17.7%. These findings are in contrast with the findings in English-speaking countries that reported much lower prevalence rates for speech difficulties (Eadie *et al*., 2015; Keating *et al*., 2001; McKinnon *et al*., 2007; Shriberg *et al*., 1999; Wren *et al*., 2016) compared to language difficulties (Norbury *et al*., 2016) only or combined speech and language difficulties (Jessup *et al*., 2008; McLeod & Harrison, 2009; Tomblin *et al,* 1997).

4) The criteria for diagnosis. Similarly, prevalence studies in other languages are also laden with issues of the variability of methodological approaches, which makes comparisons difficult. Moreover, the attempts to estimate the prevalence in other languages carry their own set of challenges. The most-reported challenge is the dearth of speech, language and communication assessment tools that are valid and reliable in each country's own culture and norms (Okalidou & Kampanaros, 2001; Oyono *et al*., 2018; Thapa *et al*., 2016). Since constructing new assessment tools requires, often not readily available, resources such as human resources, time, and costs, it has become common practice that these studies carry out cultural adaptation of assessment tools in the English language (Oyono *et al.*, 2018).

In the context of the author's present study in Indonesia, several important points regarding methodological approaches can be taken from these previously mentioned studies. In the

presence of scant resources, the assessment tool's choice, sampling technique, the age of identification, and other related variables must show adequate rigour to collect valid information for the study in Indonesia.

Table 2.2 Summary of Prevalence Studies in Other Languages

Study	Sample – Age	Language of child	Measure	Findings	Methods
Okalidou & Kampanaros, 2001 Greece Communication impairments	676 4-8 year olds	Greek	Communication checklist for preschool teachers	14.4 – 18.7	Teacher report
Eapen *et al.* 2004 United Arab Emirates Language delay	694 3-year-olds	Arabic	Denver Developmental Screening Test	9.9	Direct assessment
Karbasi *et al*., 2010 Iran	7881 6-year-olds	Persian		Speech disorders were 14.8%. 13.8% had speech-sound disorder, 1.2% stuttering and 0.47% voice disorder.	Screening and diagnostic assessment.
Binu *et al.* 2014, India Speech and language delay	102 0-6 year olds	Hindi	Language Evaluation Scale Trivandrum (LEST-3)	13.7	Direct assessment
Rabelo *et al.*, 2015, Brazil	539 4–10-year-olds	Portuguese	Orofacial motor skill protocol, adapted from the Myofunctional Evaluation Guidelines; the Child Language	33.6% had oral language disorder, 17.1% had orofacial motor skill impairment,	Direct assessment

			Test ABFW --- Phonology; and a simplified auditory processing evaluation.	and 27.3% had auditory processing disorder	
Mohamadi *et al.*, 2016 (Shahrekord, Iran)	1,387 5-6 year olds	Persian	Speech disorders was 17.1. %. Stuttering was 1.5 %. Voice disorders was 2.2 %. Speech sound difficulties was 13.4 %.	Screening and diagnostic assessment	Picture stories screening tool Persian version of the Stuttering Severity Instrument-3 (SSI-3), the Persian Phonetic Information Test, and the Persian version of the Consensus Auditory-Perceptual Evaluation of Voice (CAPE-V)
Thapa *et al.*, 2016 Nepal Speech-language impairments	2776 8-11 year olds	Nepal	Adapted-Teacher's Speech and Language Referral Checklist	8.11	Teacher report
Belgin *et al.*, 2017 India Speech and language delay	400 0–6-year-olds	Hindi	Language Evaluation Scale Trivandrum (LEST-3)	9.5 %	Direct assessment
Oyono *et al.* , 2018 Cameroon Speech and language difficulties	460 3–5-year-olds	French	The Evaluation du Langage Oral Fluency	speech disorders, 14.7%; language difficulties, 4.3%; and speech and language	Direct assessment and clinical judgment by speech language pathologist

				difficulties, 17.1%.	

2.3.3 Prevalence Studies in Indonesia

There continues to be a shortage of prevalence studies in Asian countries, even though a research report on the global burden of disease has confirmed that up to 80 percent of people with disabilities are from developing countries (World Health Organization, 2011). There are plausible reasons why there is a paucity of research on the prevalence of speech, language, and communication needs in Asian countries, especially those considered developing. These reasons are:

1) lack of standardised instruments validated in or developed for the home country population to identify the occurrence of speech, language, and communication needs (Law *et al.*, 2000)

2) lack of resources in conducting and documenting such research, especially in the context of this present study in Indonesia (Vice Deputy of the Ministry of Health, Family Health, Republic of Indonesia, Kesga Kemkes Republik Indonesia, 2016, personal correspondence).

To the author's knowledge, studies that attempted to estimate the prevalence of speech, language, and communication needs in Indonesian preschool children are few and far between. To date, there have been three studies (see table 2.3), which investigated the prevalence of speech, language, and communication needs of children in the Indonesian population. This section will discuss the details, where available, of these studies in chronological order.

Table 2.3 Summary of Prevalence Studies in Indonesia

Study	Sample – Age	Sample size	Measure	Findings	Methods
Wahjuni, 1998	3 year-olds	214	Early Language Milestone	9.3	Unknown
Beyeng *et al.,* 2012	3 months – 36	148	Early Language Milestone - 2	8.6	Direct assessment

	months – olds				
Kesuma *et al.,* 2014	3 – 5 year olds	1.340	Paediatric Symptoms Checklist (PSC 17)	12.9	Direct assessment

The few prevalence studies in Indonesia have focused on examining the occurrence of a language delay in children. Wahjuni (1998) investigated the prevalence of language delay on 214 children aged three years old from an administrative urban village in a sub-district in Jakarta, Indonesia, using the Early Language Milestone Scale (ELMS). The study showed that 9.3% of these children were identified with language delay. Unfortunately, the details about the definition of the language delay, the research design, the validity of the assessment tool, and the socio-demographical profile of child participants in this study were not available. Approximately fourteen years later, a study published in 2012 found that 8.6% of 48 children within the age range of 3 months to 36 months old, with the mean age of 13 months old, were identified with language delay (Beyeng *et al.*, 2012). Wahjuni (1998) and Beyeng *et al.* (2012) employed the same language screening tool, with the latter opted for the newer version, the ELMS-2. Beyeng *et al*. (2012) found no association between a mother's educational background and the occurrence of language delay. The study added that there was no correspondence between male gender and the occurrence of language delay.

Kesuma *et al.* (2014) conducted a study investigating the association between the prevalence of speech and language difficulties and behavioural difficulties in kindergarten children. The study recruited 1340 children between 3 to 5 years old enrolled in kindergartens in Palembang, Indonesia. Palembang is a metropolitan city with an estimated population of 1.6 million in 2016 (Badan Pusat Statistik Kota Palembang, 2020). The study collected the data through the Specific Language Impairment checklist developed by the authors of the study using the definitions described in the Diagnostic and Statistical Manual of Mental Disorders-IV (American Psychiatric Association, 1994) and the International Classification of Diseases – 10 (The ICD-10, 1993). In the study, specific language impairment is defined as "expressive or receptive impairment not caused by deficits in sensory or intellectual ability, neurological condition or environmental influences." (Kesuma *et al.* , 2014). Information about behavioural disorders in children was collected using Paediatric Symptom Checklist 17 (PSC 17). The study

found that specific language impairment occurred in 12.9 % of the children studied. The study also found that behavioural disorders were positively associated with expressive language impairment and negatively associated with receptive language impairment. The research team conducted all data collection through interviews with parents and direct assessments of the children. However, the study may not reflect the true prevalence rate because of these reasons:

(1) the study may miss children who were not enrolled in kindergarten since, in Indonesia, the compulsory education starts in primary school when children reach the age of 6 years old.
(2) the study may miss children whose parents decided not to enrol them in kindergarten because the parents perceived that they were not ready for school due to language or behavioural problems.
(3) the study did not provide any details about the socio-demographical profiles of the child participants. There is no information available to confirm whether the sample reflects the heterogeneity of the Palembang children population.

Nevertheless, it is interesting to find out that the previously mentioned studies generated results that are within the range of worldwide prevalence rate of 3% - 16% as reported by Wallace *et al.* (2015) and Rosenbaum & Simon (2016) despite differences in the focus of participants' age, the definition of diagnosis of speech, language and communication needs, and assessment tools used.

Nevertheless, in the absence of comparable results, studies must focus on verifying their results' rigour or accuracy by taking extra care to select the appropriate methods through, among other things, establishing certain diagnostic standards and recruiting representative samples (Tomblin *et al.* , 1997).

2.4 Summary

The first section of this chapter has examined previous research findings regarding the identification of children with speech, language, and communication needs through teacher

screening. Several issues related to teacher screening for children with speech, language, and communication needs are highlighted. These are:

- Teachers' ability to screen children with speech, language, and communication needs. Studies showed that teacher screening results for children with speech, language, and communication needs are in line with clinical assessment results. Studies by Whitworth *et al.* (1993) and Thapa *et al.* (2016) suggested that teachers were able to reliably screen children with speech, language, and communication needs. Both studies utilised a low-cost teacher screening observation checklist to screen children with speech, language, and communication needs. The current study adapted the teacher screening observation checklist (Whitworth *et al.* , 1993) to screen Indonesian preschool children for speech, language, and communication needs. The current study also adopted some of the steps from both studies, notably, parent questionnaires concurrent with teacher screening and written guidance and training for teachers before conducting the screening using the teacher screening observation checklist.
- Teachers need for training in identifying children with speech, language, and communication needs. This issue is inextricably linked with the teacher's ability to screen children with speech, language, and communication needs. The two issues were topics explored in the current study's focus groups.
- The need for an accurate teacher screening tool.

The second section has explored the significance of prevalence studies as foundational data to drive awareness and the creation of support services to address the needs of children with SLCN. This section has also examined prevalence studies in different sociocultural contexts and how various methods influence the results.

3 Chapter 3: Teachers' Perspectives on Inclusive Teaching for Children with Special Educational Needs and Children with Speech, Language and Communication Needs

3.1 Introduction

This chapter presents a review of the literature on teachers' perspectives focusing on two research themes: 1) teachers' perspectives towards the inclusion of children with special educational needs; 2) teachers' perspectives towards the inclusion of children with speech, language, and communication needs. These perspectives are viewed from research studies in English and research studies in other languages, including the Indonesian language, Bahasa Indonesia.

3.2 Teachers' Perspectives on the Inclusion of Children with Special Educational Needs

The last twenty years have seen a growing trend towards the integration and inclusion of children with special educational needs in mainstream settings (Avramidis & Norwich, 2002; Saloviita, 2020). The philosophy underpinning the movement is the idea that every child has the right to education, as stated in article 28 of The UN Convention on the Rights of the Child. The World Conference of Special Needs with representatives from 92 countries and 25 international organisations – then resulted in the Salamanca Statement and Framework (UNESCO, 1994), which urged countries to implement an inclusive approach into their education systems. Inclusive education advocates for a change in the education settings so all children, regardless of their backgrounds, can have equal access to education (UNESCO, 1994). The Salamanca Statement and Framework highlights certain conditions to ensure the successful implementation of the inclusive education approach. One of the most necessary conditions is having teachers with positive perspectives towards the inclusion of children with special educational needs in mainstream classrooms (Saloviita, 2020). Studies showed that teachers have the responsibility and direct involvement in creating changes that reflect the mainstream classrooms' inclusive education approach (Avramidis *et al.*, 2000; Avramidis & Norwich, 2002; Boer *et al.*, 2011; Horne & Timmons, 2009; Hsieh & Hsieh, 2012; Forlin & Chambers, 2011). The section below summarises some of the studies that examined teachers'

perspectives towards inclusive children with special educational needs. This section is divided into three sub-sections:

- The first subsection summarises studies investigating the teachers' perspectives towards the inclusion of children with special educational needs in English-speaking countries.
- The second subsection presents a summary of studies about teachers' perspectives towards the inclusion of children with special educational needs in other languages.
- The third subsection focuses on the summary of studies about teachers' perspectives towards the inclusion of children with special educational needs in Indonesia.

3.2.1 Teacher Perspective Towards the Inclusion of Children with Special Educational Needs in English-speaking Countries.

Many research studies have been conducted to examine the teachers' perspectives regarding the inclusion of children with special educational needs. Studies in the past twenty years have primarily been conducted in English-speaking countries such as the United Kingdom, Australia, United States, and Canada. These studies mostly recruited teachers of mainstream classes in preschool and primary school years. Many researchers have utilised surveys to measure teachers' perspectives (Avramidis *et al.*, 2000; Avradimis & Norwich, 2002; Horne and Timmons, 2009; Boer *et al.*, 2011; Hsieh and Hsieh, 2012) while others used interviews (Rose, 2001) or the combination of surveys, interviews, and classroom observations (Horne & Timmons, 2009; Anderson & Lindeman, 2017).

Among the findings revealed by these studies, the first one was teachers' mixed attitude towards the inclusion of children with special educational needs. Studies by Avramidis et al (2000), Horne & Timmons (2009) and Anderson & Lindeman (2017) found that teachers showed positive attitude towards inclusion. While Rose (2001) and (Hsieh & Hsieh, 2012) found that teacher showed support for inclusion when certain conditions were met. The teachers in the study conducted by Rose (2001) asserted that the availability of additional staff in the classroom, restructured environment that provided access for children with physical disabilities and teacher training were key to achieving successful inclusion in the classroom. While Hsieh & Hsieh (2012) showed that teachers' attitudes towards inclusion

were related to two factors, previous positive experiences in managing children with special educational needs and holding a leadership position in the classrooms. Meanwhile, two review studies included in this section revealed that teachers showed conditional support (Avramidis & Norwich, 2002) and negative or undecided beliefs (Boer *et al.*, 2011) towards inclusion.

The second finding from these studies was the importance of training in special education for teachers. Most studies reviewed in this section underlined the necessity of having adequate knowledge and skills in special education to manage children with special educational needs in the classroom (Avramidis *et al.*, 2000; Rose, 2001; Avramidis & Norwich, 2002; Horne & Timmons, 2009; Boer *et al.*, 2011; Anderson & Lindeman, 2017). While (Anderson & Lindeman, 2017; Hsieh & Hsieh, 2012) found that previous positive experience with managing children with special educational needs and having a leadership position in the classroom was related to teachers' attitudes, these factors were linked with sufficient knowledge and skills managing children with special educational needs.

The third one was that the majority of these studies were conducted with primary school teachers. Only two studies (Hsieh & Hsieh, 2012; Anderson & Lindeman, 2017) were conducted with teachers in the early years' settings. In the context of inclusion, Anderson & Lindeman (2017) argued that early childhood educators were often kept out of the loop from accessing resources that increase their professional development because they operate outside the k-12 sector. Early childhood teachers indicated great distress over the "perceived lack of professional status within the education system" (Anderson & Lindeman, 2017, p.20). The paragraphs below discussed each study with more details, highlighting prominent findings, and how studies supported or refuted previous findings in twenty years.

A survey study with primary and secondary teachers by Avramidis *et al.* (2000) found that teachers with experiences working with children with special educational needs showed positive attitudes towards inclusion. The study suggested that knowledge in special education contributes to the teachers' confidence in managing these children, and as a result, influenced their attitudes towards inclusion.

In contrast, through a semi-structured interview with 27 educators (20 teachers, 7 headteachers) from seven primary schools in North Hampton, United Kingdom, Rose (2001) found that teachers perceived students with special educational needs as 'a major challenge.' The study sought to uncover the perspectives of the teachers regarding the requisites for inclusion. Teachers articulated conditions such as the availability of classroom support in the form of additional support staff, proper physical access for children with disabilities, and adequate training to manage children with special educational needs to be essential in achieving inclusive classroom practices. Teachers also voiced concerns regarding the extra time needed to prepare inclusive classroom instructions and dealing with the parents' anxieties about having children with special educational needs in regular classrooms. These were the requisites perceived to be essential in creating an inclusive classroom.

In 2002, Avramidis and Norwich reviewed a large body of research studies published between 1984 and 2001. The review study was motivated by the idea that for inclusive education to be successfully implemented in the education system, teachers or educators need to have a positive attitude towards inclusion. The study conducted analyses on the results of these studies and arrived at several conclusions:

(1) Teachers appeared to have positive attitudes towards the idea of inclusive education. However, the analyses show that there does not seem to be any evidence of absolute acceptance towards inclusive education. Teachers' attitudes towards inclusion come in varying degrees or conditions. Teacher attitudes are associated with the nature and severity of the children's disabling conditions. Teacher attitudes depend on the type of impacts these difficulties have on their abilities to keep up with the classroom's academic demands.
(2) The availability of support system that included learning support teams to assist teachers on teaching and meeting the needs of these children could shift teachers' attitudes to be more positive
(3) The importance of trainings during pre-service years and in-service years. Trainings would provide access for teacher to obtain adequate knowledge and skills for the successful implementation of inclusion in the classrooms.

Avramidis and Norwich (2002) differentiated terms' integration' and 'inclusion' used in their study. The definition of integration seems to be based on the Warnock Report (1978), which states that integration attempts to place children with special educational needs in the least restrictive environment. The integration means the children assimilate into a mostly unchanged school environment (Thomas, 1997) because there is no expectation that the children will be functionally integrated. These children are placed in mainstream classrooms to the extent that is suitable to their difficulties and circumstances.

The definition of inclusion is defined as an attempt to carry out or organise a complete revamp of mainstream schooling so that every school can accommodate every child regardless of their varying abilities. In this definition, inclusion attempts to ensure that learners of varying educational needs belong to a community. This idea is rooted in the values discussed in the Salamanca Statement and Framework (UNESCO, 1994). In this definition, inclusion is comparable to equality as a social value in relating to all aspects of social disadvantage, oppression, and discrimination. Avramidis & Norwich (2002) also reported that there is no correlation between positive attitudes and the date of publication. Teacher attitudes seem to remain the same over the years. The studies' review showed that teachers, in general, are accepting of the inclusive education idea. However, in practice, these attitudes are influenced by the type of difficulties presented by the students. Teachers show more acceptance of students with mild educational needs or physical difficulties than students with more severe educational needs. In some cases, teachers hold negative views on the inclusion of students with severe educational needs (Avramidis & Norwich, 2002).

The review study also suggested that attitude measurement, such as via a survey, might not be adequate to uncover the rationale behind the teachers' views, given that attitudes will be manifested through actions. Since inclusive education is generally considered as the ideal, teachers may inadvertently be persuaded to provide responses that support this ideal. The support for inclusive education may not always translate into actions. With these methodological considerations in mind, the study recommends that future research use additional data collection methods, such as a classroom observation, for opportunities to see the correspondence between teachers' attitudes and their actual actions and needs in the classroom (Avramidis & Norwich, 2002). Although classroom observation presents itself with

certain limitations, such as people's tendency to change their behaviour when observed, this method will record true behaviour over continuous observation schedules, compared to only using survey data (Avramidis & Norwich, 2002). In a previous study, Avramidis *et al.* (2000) also recommended using interviews to obtain a more in-depth understanding of how teachers arrive at certain perspectives, whether it is positive or negative, towards inclusion.

In 2009, Horne and Timmons conducted a small-scale study with primary school teachers in Prince Edwards Island, Canada. Twenty teachers participated in the study that examined the teachers' perspectives on the inclusion of children with special educational needs and its impact on their daily working lives. Twenty teachers completed a survey, and five of the twenty teachers were randomly selected to be interviewed. The study found that these teachers believed that all children should be in the mainstream classroom regardless of their educational needs. The results also show that certain factors, such as teacher training, comprehensive support as led by the school leadership, and extra time, needed to be considered in inclusive classroom practices.

Boer *et al.* (2011) reviewed 26 international studies published between 1998 – 2008 that investigated primary school teachers' attitudes towards the inclusion of children with special educational needs. Among the studies reviewed, twelve studies were conducted in English-speaking countries such as the USA, United Kingdom, and New Zealand. The remaining studies were from countries in Europe, Asia, and Africa. Most of the studies were from high-income countries. The review study found that primary school teachers showed mostly negative or undecided views towards the inclusion of children with special educational needs in mainstream classrooms. Teachers in these studies also perceived themselves as lacking adequate knowledge and skills to implement inclusive education in the school.

Furthermore, Boer *et al.* (2011) identified several factors correlated with the teachers' attitudes, which are, training, years of experience with children with special educational needs, and the student's type of disabilities. Training in special education is related to a more positive attitude towards inclusion, a finding that is supported by studies such as Rose (2001) and Horne and Timmons (2009). Experience with teaching children with special educational needs is related to a more positive attitude. However, more years of teaching are not related

to more positive attitudes; in contrast, fewer years of teaching are connected to more positive attitudes towards inclusion. Boer *et al.* (2011) suggested that teachers with more teaching years might have 'grown stale in their profession.' (p. 19) They might struggle to provide the best strategies for children with special educational needs, therefore, have a hard time accepting inclusive education. The study also found that teachers are more inclined to show negative attitudes towards the inclusion of children with mental disability and behavioural difficulties. This finding is supported by a previous review study by Avramidis and Norwich (2002). In contrast, teachers showed more positive views on the inclusion of children with physical disabilities and learning difficulties.

Two studies in the USA (Hsieh & Hsieh, 2012; Anderson & Lindeman, 2017) examined early childhood teachers' attitudes towards inclusion. These studies yielded similar results; Hsieh & Hsieh (2012), that used a questionnaire to collect data, showed that teacher had moderately positive view on inclusion, while Anderson & Lindeman (2017), that used a combination of surveys, interviews, and classroom observations, showed that teachers had a positive view on the inclusion of children with special educational needs. Hsieh & Hsieh (2012) further investigated factors related to teachers' attitude which are prior experiences working with children with special educational needs and the teacher's role in the classroom. The result suggests that prior experiences with children with SEN and a lead role in the classroom related to positive view. The study further suggests that lead teachers showed more positive attitudes than assistant teachers because they held the primary responsibility for inclusion in the school, thus had greater access to consultation from related services or other teaching personnel than assistant teachers (Hsieh & Hsieh, 2012).

Anderson & Lindeman (2017), with the advantage of using interviews and classroom observation in addition to surveys, found that teachers were aware of the benefits of inclusion, which included the opportunities for children regardless of their needs to learn together within one setting, reflecting the reality in the society, and to have the values of tolerance and acceptance instilled early in their lives. The study also asserted the need for accessible training specifically intended for early childhood special education and recognising the importance of early childhood educators to successfully implement inclusion in the education systems (Anderson & Lindeman, 2017).

There are highlights and common themes that can be derived from the results of these studies. The first key finding from the studies is that teachers showed mixed attitudes towards the inclusion of children with special educational needs in regular classrooms. Most studies suggest that positive attitudes towards inclusive education are related to adequate knowledge and skills in special education, previous positive experiences in managing children with special educational needs in the classroom, and the types of learning needs presented by children. The second key finding is that teachers from all these studies still expressed the need for adequate knowledge and skills in special education. The third finding is that the research in inclusion leaned towards the primary school up to secondary school settings. There is still insufficient focus on the research of inclusion in the early years setting. In terms of methodological consideration, studies recommended that future research select data collection tools that can capture the complexity of teachers' perspectives regarding implementation of inclusive education. Avramidis *et al.* (2000) recommends interviews, and Avramidis & Norwich (2002) recommends classroom observations, in addition to surveys, to obtain a more in-depth understanding about teachers' perspectives and experiences about inclusion.

3.2.2 Teacher Perspective Towards the Inclusion of Children with Special Educational Needs in Other Languages

Studies about teacher perspectives towards the inclusion of children with special educational needs beyond English- speaking countries are beginning to emerge. This subsection presents some of the studies conducted in other languages. A study from Turkey by (Sari *et al.* 2019) was concerned with analysing preschool teachers and pre-service teachers' attitudes towards the inclusion of children with special educational needs. A survey was used to measure teachers' attitudes towards inclusion. The results showed that both in-service and pre-service teachers held neutral attitudes towards inclusion.

Further analysis showed that pre-service teachers were more inclined to show positive attitudes than in-service teachers. The study suggested that pre-service teachers viewed inclusive education as a concept that upholds every child's equal rights for education;

therefore, they were more willing to embrace the inclusion of children with special educational needs. In contrast, in-service teachers showed more apprehension towards inclusive education because they encountered challenges in implementing inclusive education in their classrooms; therefore, they were less inclined to show positive attitudes.

A survey study with 95 primary school teachers and 71 preschool teachers in Egypt (Emam & Mohamed, 2011) showed that teachers viewed inclusion positively. Previous experience in managing children with special educational needs is one of the factors influencing teachers' attitudes. The study found that more experiences working with children with special educational needs are related to less positive attitudes. This finding is in line with a survey study with 68 preschool teachers in Portugal (Dias & Cadime, 2015) who found that previous experiences managing children with special educational needs resulted in lower support for inclusion. Emam and Mohamed, (2011) suggested that as teachers accumulate more years in managing children with special educational needs, they may become weary with the circumstances. The relation between more years of experiences with children with special educational needs and more positive attitudes towards inclusion seems to only apply to teachers equipped with knowledge and expertise to manage these children (Emam and Mohamed, 2011). Additionally, Dias and Cadime (2015) reported that the type of previous experience influence teacher perception towards inclusion. Teachers with prior negative experiences managing children with special educational needs showed negative attitude, on the contrary, teachers with prior positive experiences showed positive attitude.

A study by Sukbunpant *et al.* (2013) sought to investigate preschool teachers' perceptions towards the inclusion of children with special educational needs. This study was a part of a mixed-methods investigation about preschool teachers' opinions on inclusion. Ten preschool teachers with the most positive attitude (MPA) towards inclusion and ten preschool teachers with the least positive attitude (LPA) towards inclusion were interviewed.

The results showed that most teachers described inclusion as placing children with special educational needs and typically developing children in the same setting. All LPA teachers believed that children with severe disabilities should not be placed in the same setting as typically developing children. Instead, they need to be placed in a special education

classroom. 8 of 10 MPA teachers support the inclusion of children with severe disabilities in the mainstream classroom for the benefits of learning social skills and reduce parents' stress. All preschool teachers reportedly made efforts to assist children within their knowledge and abilities, even in the absence of school support. Most LPA teachers expressed concern about their lack of adequate knowledge and skills, compared with special education teachers, in managing children with special educational needs in the mainstream classroom. They also highlighted the benefits of inclusion, which included learning social skills for children with special educational needs and learning to accept differences for typically developing children. Most teachers did not have special education training during their pre-service years. Some teachers who had in-service training voiced concerns about the practical usefulness of the training in implementing inclusive education in the classroom. Most teachers asserted that special education training remained the priority for improving inclusive education in mainstream classrooms. This is followed by the support of the school principal in leading the inclusion policy across the school. The third priority is support from special education teachers and teacher assistants. As previously mentioned, LPA teachers believed that children with special educational needs should be taught separately with special education, with opportunities to join regular classrooms in some activities. The fourth priority is the availability of resources such as educational materials, school budgets, and teachers' assistants to ensure the success of inclusion. Additionally, teachers also agreed that collaboration with parents is instrumental to the success of inclusion in the classrooms. However, in terms of collaboration, they perceived themselves as the leaders where parents should adhere to their suggestions in helping children with special educational needs.

Some of the findings from Sukbunpant *et al.* (2013) are in line with the results from the study by Galovic *et al.* (2014) in Serbia that sought to examine the teachers' attitudes towards inclusive education. A survey with 322 Serbian teachers from preschool, primary, secondary, and high school level showed that they were generally neutral towards inclusion. Teachers voiced concerns about the implementation of inclusive education in a mainstream classroom. They viewed themselves as lacking the adequate skills to implement certain methods and techniques (such as co-operative learning, co-teaching, peer tutoring, etc.) in inclusive education classrooms. These teachers believed that the needs of these children would be adequately met in special education schools. Teachers also believed that placing children with

special educational needs in special schools would mitigate the negative outcome of being placed in the mainstream schools, such as a feeling of failure, frustration, rejection by typically developing peers, behaviour problems in the classroom, etc.). Most teachers in the study supported the concept of segregated education. It is important to note that 70% of the study sample had no experience in inclusive education. The study also found that fewer experiences working with children with special educational needs are related to more positive attitudes towards inclusion. This finding is supported by a previous research in Egypt (Emam & Mohamed, 2011).

Teachers' conditional support towards inclusion is also reported by a survey study with 410 early childhood teachers in Hong Kong (Lee *et al.* 2015). The findings revealed that teachers showed only modest support for the inclusion of children with special educational needs. The study found that support for inclusion was related to the severity of the children's needs. Support for inclusion was highest for children with learning difficulties and speech, language, and communication needs, and lowest for children with behavioural difficulties. The study asserted the importance of leadership within the school settings to promote inclusive education policy and the implementation of inclusive education practices in the classrooms. The study acknowledged the limitations of the survey and recommended that future studies use other instruments to reveal the depth and complexity of the teachers' perspectives.

In a recent study with 147 teachers in Greece (Pappas, 2018) teacher participants, overall, demonstrated support for the inclusion of children with specific learning difficulties but showed apprehension about the inclusion of other types of special educational needs such as mental disability, autism spectrum, and genetic syndromes.

A survey completed by 129 preschool teachers and 132 primary teachers in Slovenia (Stemberger & Kiswarday, 2018) showed that teacher participants generally demonstrate support for children with special educational needs. The study found that prior experiences in managing children with special educational needs are not related to more support for inclusion. On the contrary, an absence of prior experiences with children with special educational needs is related to more support for inclusion. This finding is supported by previous studies by Emam & Mohamed (2011) and Dias and Cadime (2015), which found a

correlation between fewer years of experience or lack of experience with special education and support for inclusion. Furthermore, the survey revealed that teachers were more likely to support inclusion after receiving in-service training in special education, a finding that is supported by Lee *et al.* (2015). With these findings, the study underlines the need for continuous training in special education for teachers to be in favour of the inclusion of children with special educational needs in the classrooms. This need for continuous training for teachers is in line with the recommendations from studies conducted more than a decade ago (Avramidis *et al.,* 2000; Emam and Mohamed, 2011). It is worth noting that despite the gap in years between this study and the studies before it, similar issues and recommendations persist.

A recent survey study with 4,567 primary teachers in Finland (Saloviita, 2020) found that teachers demonstrated low support for the inclusion of children with special educational needs. The study found that factors such as the availability of support networks and additional resources strongly influence teachers' attitudes. Teachers with adequate support networks and access to additional resources are more likely to show support for inclusion. The study suggests that low support for inclusion will result in an absence of legislation for the provision of resources for inclusive education. In return, the lack of resources in the regular classrooms will result in teachers' low support for inclusion. The study suggests that the successful implementation of inclusive education in Finland depends on the coordination between teachers' positive attitudes and resource availability. In terms of methodological tool consideration, similar to previous studies by Avramidis and Norwich (2002) and Lee *et al.* (2015), the study recommended interviews and case studies to further explore the teachers' views towards inclusion in a more detailed manner.

In summary, the studies presented in this subsection showed that internationally teachers' attitudes towards inclusion are varied with a tendency towards neutral and negative attitudes. The studies previously discussed suggests that support towards inclusion seems to be conditional and prior experiences with children with special educational needs are related to low support for inclusion. All studies found that teachers lack the necessary training in special education which will allow them to implement inclusive education successfully. The takeaway from these results is that teachers need more knowledge and expertise to properly

support the inclusion of children with special needs in regular classrooms. As first recommended almost two decades ago in a study by Avramidis and Norwich (2002), teacher empowerment is instrumental in the successful implementation of inclusive education. A significant highlight in the context of methodological consideration is that most studies described above still used the survey as the primary tool of data collection, with much less research using focus groups or interviews to obtain more in-depth understanding about teachers.

3.2.3 Teacher Perspectives Towards the Inclusion of Children with Special Educational Needs in Indonesia.

Inclusive education is a relatively new concept in Indonesia (Kurniawati *et al.*, 2012). The inception of inclusive education in Indonesia began merely ten years ago when the Indonesian government issued a national regulation titled the National policy of inclusive education towards the education for all in Indonesia, i.e., the Regulation of National Ministry of Education (Permendiknas) Number 70 the Year 2009 (Mulyadi, 2017). It is perhaps unsurprising that there is a dearth of research studies about teachers' perspectives towards the inclusion of children with special educational needs in Indonesia, with only two studies to date.

Kurniawati *et al.* (2012) conducted a survey with 208 primary teachers from public and private schools in Jakarta, Indonesia. The results showed that teachers generally demonstrated support for the implementation of inclusive education in their classrooms. This result was unexpected, considering that inclusive education has only become known in recent years. The study also revealed that previous experiences with children with special educational needs were related to more positive attitudes. There was no information about the types of previous experiences reported by the teachers in the study. Some international studies revealed that the type of previous experiences managing children with special educational needs affected the kind of support towards inclusion (Dias & Cadime, 2016; Saloviita, 2020). Teachers with previous positive experiences showed positive support for inclusion; on the other hand, teachers who experienced struggles in previous experiences showed little support for inclusion (Dias & Cadime, 2016.

; Saloviita, 2020). The study also found that teachers who had completed a special education course were more likely to show positive attitudes. In terms of methodological concerns, the study acknowledged the limitations of using a survey as a data collection tool. A survey's measurement of attitude is open to social desirability effects, and attitude does not always translate to actions.

A recent survey study in Yogyakarta, Indonesia, investigated the teachers' attitudes towards inclusion with 177 pre-service teachers (Ediyanto, 2020). The study used the Teacher Attitudes on Inclusion Scale (TATIS) (Cullen *et al.*, 2010) to examine attitudes towards inclusive education. The TATIS scores comprise of three different grades which are low, moderate, and high grades. Low scores indicate low support for inclusive education, and high scores suggest high support for inclusive education. The study found that pre-service teachers demonstrated moderate support towards inclusive education. The study did not define what moderate support is. However, considering that moderate support sits between low support and high support, it may mean that the pre-service teachers in the study did not show high support nor low support towards inclusive education. The study also showed that prior experiences with children with special educational needs did not influence teachers' attitudes; this contrasts with the finding presented by Kurniawati *et al.* (2012). The study concluded that for further understanding of teachers' views towards inclusive education, future studies should use interviews for data collection, as recommended by previous studies by Avramidis *et al.* (2000), Lee *et al.* (2015) and Saloviita *et al.* (2020).

Even with the relatively similar methods in place, some of the findings from Kurniawati *et al.* (2012) seem to be in direct contrast with the findings from a more recent study by Ediyanto *et al.* (2020). A possible explanation for this is the different characteristics of the teachers that participated in these studies. The two studies described above show that there needs to be more research to better understand teachers' perceptions of inclusive education in Indonesia.

3.3 Teacher Perspective Towards the Inclusion of Children with Speech, Language, and Communication Needs.

The subsections below present the studies focus on teachers' perspectives towards the inclusion of children with speech, language, and communication needs in English speaking countries and global north countries and other languages.

3.3.1 Teacher Perspective Towards the Inclusion of Children with Speech, Language, and Communication Needs in English-speaking Countries

Some studies in the UK that examined the teachers' views towards children with speech, language, and communication needs showed that in-service teachers and pre-service teachers held positive attitudes (Marshall *et al.*, 2002; Sadler, 2005). However, Marshall *et al.* (2002) suggests that the attitude is conditional, with pre-service teachers showing positive attitudes only when they feel they understand the children's educational needs and feel equipped to meet those needs. In a similar vein, Sadler (2005) showed that despite holding positive attitudes, in-service teachers in the study felt they were not equipped to manage the needs of children with speech, language, and communication needs. The study further suggests that teachers did not feel confident in meeting the needs of these children (Sadler, 2005). The feeling of inadequacy in managing children with speech, language and communication needs was also experienced by the early-years teachers in Letts & Hall (2003) study. Without adequate knowledge and ongoing professional development, teachers still sought ways to meet the needs of children with speech, language and communication needs through 'hands-on' experience or knowledge from books (Sadler, 2005). Interviews with fifty early years teachers (Mroz & Letts, 2008) showed that teachers implemented various ways to meet the children's needs, depending on their experience and knowledge. There were no standards guide about who should conduct the identification, and who should conduct the case management. The positive outcome of this study is that early years' practitioners were revealed to be highly motivated in looking for ways to identify and manage children with SLCN (Mroz & Letts, 2008). However, the result also showed that only a few teachers had access to support from the professionals (Sadler, 2005).

The studies above all recommend adequate training in managing children with speech, language, and communication needs, with Letts & Hall (2003) recommending rigorous training for teachers to identify children with speech, language, and communication needs,

while Mroz & Letts (2008) further recommend that early years teachers are provided with adequate support in knowledge, expertise, and networks.

In 2014, (Marshall & Lewis, 2014) conducted semi-structured interviews with 12 early-year practitioners to examine their beliefs about children's environment's impact on speech and language development, assessments of the child's environment, and interventions. The study presented the results in three themes:

1. The environment's impact on speech-language development results showed that many early year practitioners believe that early experiences such as attachments with caregivers, adequate attention from caregivers, opportunities to explore the surrounding environment, and wide exposure of many experiences, influence speech and language development in children. The study highlighted that, early years practitioners did not make any attempts to differentiate between experiences that stimulate typical speech and language development, experiences that minimise the risk of speech and language delay in children, and experiences that curtail the repercussions of diagnosis of speech and language delay.
2. Assessment of the child's environment. The results showed that early years practitioners acknowledge the importance of assessing children and conducting interventions in their home environment.
3. Interventions. The results showed that early years practitioners describe their interventions without differentiating the interventions' focus, whether it is reserved for children or the child's environment.
The study recommends that future studies should be aimed at investigating how early years practitioners differentiate their interventions and whether these differentiated interventions have values that are backed by research evidence.

The common theme from these studies is that teachers and early years professionals expressed a great need for knowledge and expertise to identify and manage children with speech, language, and communication needs. The expressed need for more training indicates the lack of adequate support for teachers and practitioners working in early years settings. It is also interesting to learn that despite the gap of more than a decade between Marshall *et*

al. (2002) and Marshall & Lewis study (2014), more rigorous training speech and language development and needs remain.

3.3.2 Teacher Perspective Towards the Inclusion of Children with Speech, Language, and Communication Needs in Languages Other than English

This section describes teachers' perspectives towards the inclusion of children with speech, language, and communication needs in other languages. To the authors' knowledge, there is only one study that examined teachers' perspectives about the inclusion of speech, language, and communication needs in other languages. Navsaria *et al.* (2011) examined teachers' perspectives towards the inclusion of children with speech, language, and communication needs in Western Cape, South Africa. The study used semi-structured interviews as the data collection tool to gauge the perspectives of two teachers who taught at grades 4-6 in elementary school. The study focused on written language difficulties, given the deep concerns of communication difficulties reported to the speech and language therapists in this area.

The results showed that both teachers were very concerned about the written language expression of most students. The teachers reported that 50-70% of the students did not meet the academic requirements of the grade level's written language ability. Teachers reportedly suggest that the students' written language difficulties be viewed from three perspectives: the school system level, the individual learner level, and the community level. The school system level includes lack of inclusive education practices, limited training and lack of support for teachers, limited reading and writing opportunities from the curriculum, disrupted and incompetent teaching, poor foundation skills, large teacher-learner ratio, language barriers, and absence of library at school. The individual learner level is involved with how students dislike writing and reading. The home community level includes a lack of parent support and family socio-economic disadvantages.

Teachers also recommended that a solution can be achieved through teacher empowerment. The study underlines that further education for teachers would remedy the lack of training and support issues and inspire teachers to create opportunities to develop children's literacy

skills, improve foundation skills, and manage the language barriers. The study suggests that teachers viewed the children's written language difficulties as a product of systemic failure. The study recommended that bearing these issues in mind, the speech and language therapists in South Africa bore the duty to become agents of change to create an environment where children's speech, language, and communication skills could thrive.

3.4 Summary

The first two sections of this chapter explored the importance of teachers' perspectives towards children with special educational needs. Teachers' perspectives towards inclusion were described, and the factors associated with the perspectives were briefly explained. Some highlights from the literature include:

- Teachers, in general, showed mixed perspectives and attitudes towards inclusion. The presence of neutral or negative perspectives towards inclusion is the product of unresolved challenges teachers experienced in managing children with special educational needs.
- The need for knowledge and training for teachers to identify and manage children with special educational needs. Sukbunpant *et al.* (2013) asserted that teachers needed practical guidance to identify and manage children with special educational needs.
- The importance of previous successful experiences in managing children with special educational needs.
- The need for support system (school leadership, additional teaching staff, material resources) for teachers to successfully implement inclusion in the classrooms.
- Studies recommend using interviews and classroom observations for an in-depth exploration and understanding of teachers' perspectives. The current study opted to use focus groups with kindergarten teachers to allow for dynamic discussion among teachers.

The studies discussed in this chapter showed the complexity of teachers' perspectives regarding speech, language, and communication needs. The studies also recommended a certain data collection tool, interviews, that are suitable for in-depth explorations of the teachers' perspectives. Considering the findings and the recommendations from the studies

previously discussed, the current study conducted semi structured focus groups to get a deeper understanding of the teachers' perspectives regarding speech, language, and communication needs.

3.5 Research Aims & Research Questions

In light of Indonesia's context, there is very low public awareness, lack of support services for referral and a paucity of research about speech, language, and communication needs. Research in Indonesia will need to investigate how best to identify children with speech, language, and communication needs in Indonesia's socio-cultural context.

International studies showed that teachers frequently conducted the screening to identify SLCN in young children (e.g., Whitworth *et al.*, 1993, Williams, 2006; Jessup *et al.,* 2008b; Antoniazzi, Snow, & Dickson-Swift, 2010; Thapa *et al.*, 2016; Harrison *et al.*, 2017; Seager & Smith, 2017; Dockrell & Hurry, 2018; Chow *et al.*, 2020). Studies such as Whitworth *et al.* (1993) and Thapa *et al.* (2016) showed that teacher screening tool was appropriate for screening children's speech, language, and communication needs. Teachers were deemed to be knowledgeable about speech, language, and communication development in children. Teachers are deemed to be a reliable source of information since they interact with children in their classrooms daily. They can make judgments by comparing the abilities of children in their classrooms. Teachers are also more accessible than other reliable sources of information such as parents because the act of observing and assessing children's abilities is part of the teachers' job description (Williams, 2006).

Considering the previous research findings regarding the usefulness of teacher screening, the current study adapted a teacher screening observation checklist originally developed in Whitworth *et al.* (1993) for Australian kindergarten children. The checklist was subsequently adapted by Okalidou & Kampanaros (2001) for Greek kindergarten children and Thapa *et al.* (2016) in for primary school children in Nepal. The teacher screening observation checklist adapted for use in Indonesia provided teacher concern data about kindergarten children with possible speech, language, and communication needs.

The present study is the first academic study in Indonesia to investigate speech, language, and communication needs (SLCN) in kindergarten children using teacher screening observation checklist. The study is mixed methods and uses the following methods of enquiry:

1. Kindergarten teachers were asked to complete screening observation tools for all children in their class, to identify those with potential speech, language, and communication needs.
2. Children with poor ratings on the teachers screening observation tool completed a narrative language sample to provide qualitative information about their speech, language, and communication skills.
3. Two focus groups with kindergarten teachers investigated perceptions of children with SLCN in Indonesia.

This current study has two aims, which are:

1. To investigate levels of speech, language, and communication needs in Indonesian kindergarten children, according to a teacher screening observation tool.
2. To investigate the thoughts, feelings, and beliefs of kindergarten teachers regarding speech, language, and communication needs in Indonesian kindergarten children.

The present study has six objectives. These are:

1. To adapt a teacher screening observation checklist for use in Indonesian kindergarten children aged 3-5 years old.
2. To explore the feasibility of using this adapted teacher screening observation checklist as a means of identifying children at risk of SLCN in a pilot study.
3. To investigate the levels of teacher concern about SLCN in kindergarten children in Indonesia, using the adapted teacher screening observation checklist.
4. To investigate the feasibility of using a narrative language sampling task with Indonesian kindergarten children identified by teachers as being at risk of SLCN.
5. To explore associations between risk of SLCN (as measured by the level of teacher concern) and other child factors such as social, emotional, and behavioural difficulties and socioeconomic background.
6. To investigate kindergarten teachers' perspectives towards speech, language, and communication needs in Indonesia via focus group discussions.

Based on the aims and objectives of the study outlined above, the research questions are:

1. What are the levels of speech, language, and communication needs in Indonesian kindergarten children, according to a teacher screening observation tool?
2. What is the feasibility of using a) an adapted teacher screening observation checklist and b) a narrative task to identify children with speech, language, and communication needs?
3. What are the perspectives of kindergarten teachers in Indonesia regarding speech, language, and communication needs?

Chapter 4 Research Methods

4.1 Introduction

The chapter begins by establishing the sociocultural context that influenced the current study. The sociocultural context includes a summary of the Indonesia country profile, an overview of the Indonesian education system, a snapshot of early childhood education in Indonesia, a brief description of the history and the current state of inclusive education in Indonesia, and the sociocultural-related challenges of conducting research in Indonesia. The following sections of the chapter describe the designs, methods, and procedures used in the current study.

4.2 The Sociocultural Context of the Research: Indonesia

4.2.1 Indonesia Country Profile

Indonesia is a democratic republic with more than 300 ethnic groups and six recognised religions (Islam, Catholic, Protestant, Buddha, Hindu, and Confucianism). As an archipelago country, Indonesia has more than 17,000 islands located between the Pacific and Indian oceans. Approximately 87 percent of Indonesians identified as Muslim, while 10 percent of the population is Christians, and 1.7 percent of Indonesian is Hindus. The three largest ethnic groups in Indonesia are the Javanese (40.1 percent), primarily located on the island of Java, the world's most populous island and home to more than 50 percent of the Indonesian population; the Sundanese (15.5 percent); and the Malays (3.7 percent). There are hundreds of regional dialects spoken in Indonesia; however, Bahasa Indonesia is the official language. Indonesia's cultural and regional diversity is as vast as the number of its islands. Areas like rural West Timor or Kalimantan (Borneo) are home to hunter-gatherers, a world apart from the modern technology and contemporary shopping malls in the city centre of Jakarta, Indonesia's capital city of approximately 10 million people (Roach, 2019).

Indonesia has approximately 270 million people, making it the fourth most populated country in the world. Indonesia shows stable economic growth and is currently an upper middle-income country. Indonesia is considered the largest economy of the Southeast Asia countries. Indonesia's economic planning was established to follow a 20-year long term development plan with a 5-year medium-term plan, spanning from 2005 – 2025. Currently, Indonesia is at the last phase of its planning, which focuses on improving human capital and competitiveness in the global market. Human capital is defined as the knowledge, skills, and health possessed by an individual, which increases her/his productivity in society (Goldin, 2016). For comparison, the human capital index score in low-income countries is 0.37, whereas high-income countries have a human capital index score of 0.70. On average, the worldwide human capital index score is 0.56. The index score of human capital for Indonesia in 2020 is 0.54; this indicates that a child born in Indonesia today can expect to be 54 percent productive under this country's complete full education and full health status (The World Bank, 2019).

4.2.2 Indonesia Education System

The Indonesian education system is organised into primary education, junior and upper secondary education, and higher education. The Indonesian education system is based on a 12-year school structure (6+3+3) followed by higher education if they choose to continue. Education is compulsory for the first nine years of schooling: 6 years of primary school and 3 years of junior secondary school. Islamic education is offered at all levels. This practice has been implemented and finally legalised through the National Education System Law no 20 enacted in July 2003.

The language of instruction in all state schools is Bahasa Indonesia, but local dialects may be used in the first three years of primary school. Some private schools and all international schools, commonly located in large cities such as Jakarta, use English as their language of instruction. However, private, and international schools' functional language remains solely Bahasa Indonesia or a mix of Bahasa Indonesia and English.

All schools are obligated to adopt the national curriculum developed by the Ministry of Education and Culture. All state schools will solely use the national curriculum. In contrast,

private and international schools have the option (and usually choose this option) to combine national curriculum with international curricula such as the Cambridge curriculum, the International Baccalaureate, International Primary Curriculum, and Australian Curriculum. The school year runs from mid-July to mid-June on a semester system. Private schools are required to comply with national education regulations in curriculum, educational calendar, teaching load, and teacher quality standards (Roach, 2019).

4.2.3 Challenges in the Indonesian Education System

Indonesia encounters significant challenges in its education system. Compared to other countries in Southeast Asia, Indonesia has much lower literacy levels (Roach, 2019). The ministry of education and culture reported that low access to books and low reading culture are some of the proximate causes of Indonesia's literacy problems (Rosser, 2018). Furthermore, research showed that approximately 55 percent of Indonesians who complete schools are functionally illiterate, meaning that their low reading ability hinders them from understanding the meaning of the materials they read (Roach, 2019). Only 9 percent of Indonesians over the age of 25 had completed at least a bachelor's degree in 2016. This number is the lowest among the member states of the Association of Southeast Asian Nations (ASEAN). The unemployment rates are the highest among the university-educated Indonesians. Indonesian universities' research output has rapidly increased, but it is still low compared with the research output from other emerging economies (Roach, 2019).

The current analysis by the World Bank indicates that the causes for the poor education system in the Indonesian system are related to inadequate funding, low human resources quality, perverse incentive programs, and poor management (Rosser, 2018). Several reforms have been implemented to improve the Indonesian education system. The reforms that started in the mid-2000s include decentralising parts of its school system, improving teacher training, and increasing the national education budget (Roach, 2019).

4.2.4 Early Childhood Education

Early childhood education in Indonesia is defined as the educational programs and strategies provided for children from birth to 6 years. Early childhood education and development's objective is to assist in children's physical and mental development so they will be ready for primary education (Direktorat Pembinaan Pendidikan Anak Usia Dini, 2017). Early childhood education in Indonesia is organised into three stages based on the age group; the first stage is from birth to 2 years, the second stage is 2 – 4 years, and the third stage is 4 – 6 years old. Article 28 of the National Education System Law of 2003 stipulates that early childhood education (ECE) is provided through formal, non-formal, or informal education. Formal ECE is provided at kindergarten or similar institutions; non-formal ECE covers playgroups/preschools, children's daycare centres, or similar types of provision. ECE provided through informal education can take the forms of infants' family development, integrated health service centre (Posyandu), or other equivalent forms. There are also religious (Islamic) preschools that have the same status as kindergartens. Relevant to the focus of age in this current study, playgroups in Indonesia are schools that accept children aged 2 – 4 years old, while kindergartens are schools that accept children aged 4 – 6 years old. Since early childhood education is not compulsory, most playgroups and kindergartens are privately-owned organisations (Roach, 2019).

The achievement standard for early childhood education in Indonesia comprises the development and growth that focuses on the moral and religious values, motor-physical, cognitive, language, social-emotional, and the arts (Kemendikbud, 2020). In terms of language, the Ministry of Education and Culture Regulation No 137, the Year 2014 stipulates that early childhood education provides opportunities for developing receptive language, expressive language, and literacy skills. Receptive language includes understanding stories, commands and rules, and enjoyment and appreciation of storybooks. Expressive language encompasses the ability to ask and answer questions properly, retell parts of all previously gained knowledge, use language for social interaction (pragmatic language), and express emotions, ideas, and wants in writing. While literacy comprises the ability to understand the connection between forms and sounds of letters, copy the forms of letters, and understand the meaning of words in stories. Recent statistics showed that there are approximately 19

million children aged 3 – 6 years old in Indonesia. The enrolment rate of early childhood education is estimated to be 41 percent (Kemendikbud, 2020).

4.2.5 Inclusive Education

The Salamanca Statement and Framework of Action is a consensus among the international community that education must be inclusive, that education is for all, meaning all children regardless of their abilities have the right to education, that regular schools should strive to include children and youths with special needs (physical, intellectual, social, emotional, linguistic, or other conditions) in the educational settings made for regular children (UNESCO, 1994). Inclusive education is an equal opportunity for every child regardless of their difficulties and differences to get a basic education. This includes children with disabilities and giftedness, children in need of special protection such as street children and working children, children from remote or nomadic populations, children from linguistic, ethnic, cultural minorities, and children from other disadvantaged groups (UNESCO, 1994).

In keeping with the endorsement for the Salamanca Statement and a recognition that education for all children is a right as stated in the constitution, the government of Indonesia commits to the promotion and implementation of inclusive education. Inclusive education is officially recognised and regulated by the government with the issuance of the Law on the National Education System Number 20 the Year 2003 (UU No. 20 Tahun 2003), which mandates that all Indonesian citizens have the right to education. The government's commitment is further declared with the Ministry of National Education Regulation Number 70 the Year 2009 (Permendiknas 70/2009), which states that inclusive education is an education system that strives to provide opportunities for children with special educational needs, including children with SLCN, to learn alongside their peers in regular classrooms. The implementation of inclusive education requires schools to make necessary changes in their curricula, physical settings, and learning approaches to meet the students' individual needs (UNESCO, 1994).

Reinforcing the commitment to inclusive education, the government started the pilot projects of inclusive schools in nine provinces in Indonesia in 2002, most notably in Yogyakarta and

Jakarta. However, the implementation of inclusive education has been slow-moving. Today, only 11 percent of Indonesia's total schools have implemented inclusive education, and only five of thirty-four provinces have provided inclusive education (Firmanda, 2020). Challenges encountered in achieving the inclusive education model include limited infrastructure, lack of special education teachers and limited qualified teachers, among other things (Roach, 2019).

4.2.6 Sociocultural Challenges in Conducting Research about SLCN in Indonesia

There is little awareness of SLCN in Indonesia. Research and practice in SLCN have predominantly been led by the paediatrics field (IDAI, 2007). The Indonesian Paediatrics Society conducted a national-scale developmental surveillance in seven large cities in Indonesia in 2007 (IDAI, 2007) A developmental surveillance is defined as observations of children conducted by paediatricians and other healthcare staff during routine child health care visits that includes recording children's developmental history, attending to parental concerns, and performing tests (Dworkin, 1992). The national-scale developmental surveillance in 2007 found that the incidence of speech, language, and communication in Indonesia children under the age of five is 21 percent (IDAI, 2007). However, details about the methods used in this study are not available. Several studies have estimated the prevalence of SLCN in Indonesian children, but they are not well-documented (Wahjuni, 1998; Kesuma *et al.*, 2014). A study with children under the age of three in a disadvantaged urban area in Jakarta found that the number of children with SLCN was 9.3 percent among the population studied (Wahjuni, 1998). Details about the methods used in this study were not available. The most recent study about children with SLCN was conducted by Kesuma *et al.* (2014). The study, led by a group of paediatrics, investigated the association between SLCN and behavioural disorders in 1.340 children aged 3 – 5 years old who were enrolled in kindergartens in Palembang, one of the large cities in Indonesia. A checklist was used to determine SLCN in children. Unfortunately, details about the checklist and how to use it were not available. The study found that 12.9 % of children were identified with SLCN.

As previously discussed in Chapter 1, studies about SLCN in Indonesia are scarce, and among the few available studies, details of the methods used are not available. Therefore, it is not surprising that speech-language pathology is considered a little-known domain in both the

clinical practice and research fields in Indonesia. There has been no provision of formal educational courses in accredited universities, and there is a lack of facility provision of assessment and intervention for children with SLCN who require support.

4.3 Research design

The study consisted of two phases. Phase 1 was non-experimental quantitative research that used a cross-sectional design to estimate the levels of speech, language and communication needs in a population of children aged 3-5 years old in district Pasar Minggu, Jakarta, Indonesia. Information about the prevalence of SLCN in children was collected through Teacher Screening Observation Checklist (Whitworth *et al.*, 1993). Children with a teacher rating of moderate concern were invited to complete a Narrative Informal Assessment (Heilmann, 2010). The Narrative Informal Assessment task was intended to analyse children's expressive language. Information about children's speech, language, communication development history, and parent socio-demographic background was collected through the Parent Questionnaire (Whitworth *et al.*, 1993). Information about children's social-emotional and behavioural status was collected through the Strengths and Difficulties Questionnaire (Goodman, 1997) completed by the child's teacher. The data were analysed to determine the frequency and distribution of children with teacher concerns in SLCN in this population. Data analysis was completed to determine possible associations between SLCN and factors such as age, gender, and social-emotional and behavioural difficulties.

Phase 2 employed qualitative research through focus group methodology to investigate teachers' perspectives towards SLCN in Indonesia. The focus group methodology consisted of questions derived from the findings in phase 1 of the study. Focus group data were analysed using thematic analysis to identify themes to inform teaching and learning approaches and the services for children with SLCN in Indonesia.

4.4 Research Participants

Participants in phase 1 of this study were children between the age of 3 years and 5 years, 11 months enrolled in kindergarten schools from the district Pasar Minggu, Jakarta, Indonesia. Participants in phase 2 of this study were teachers previously involved in phase 1 of the study.

4.4.1 Description of Research Participants

4.4.1.1 First Phase of the Study

Approximately 200 children aged between 3 years and 5 years, 11 months were recruited from kindergarten schools located in the district of Pasar Minggu in Jakarta, Indonesia. These kindergarten schools were invited to participate in this study via e-mail or a letter sent in the post. The researcher obtained e-mail consent from the school principals for the study to take place in these kindergarten schools after they agreed to participate. Children fulfilled the following criteria to participate in phase 1 of the study if:

- They were Indonesian children who speak Bahasa Indonesia.
- They were between 3;00 and 5;11 years.
- They were enrolled in kindergarten or any other formal early childhood setting.

They were not previously diagnosed with hearing impairment and/or neurodevelopmental disorders such as autism, Asperger's syndrome. This information was collected from the Parent Questionnaire (Whitworth *et al.*, 1993).

4.4.1.2 Second Phase of the Study

Participants were the teachers who were involved in the first phase of the study. The inclusion criterion was involvement in phase 1 of the study. The exclusion criterion was no consent to participate in the focus group study. Teachers met the following criteria to participate in the study if:

- They were previously involved in the first phase of the study.
- They consented to participate in the second phase of the study.

4.4.2 Recruitment of Child Participants

In phase 1 of the study, the researcher conducted a two-stage process to recruit child participants. The first stage was to obtain the principal's written permission for the children's recruitment and the teacher focus groups to take place at the school. The second stage was to provide information sheets and consent forms to school principals to be forwarded to the potential participants. The school principals forwarded the invitation to the parents, who then provided the consent for their child to participate. The school principals also forwarded the invitation to the teachers, who then provided their consent.

Approximately ten kindergarten schools in district Pasar Minggu selected through cluster random sampling were invited to participate in the study via e-mail or a letter directly delivered to the schools. The researcher telephoned each school approximately one week after sending the letter to discuss the research study further. After the school agreed to participate in the study, the researcher delivered research packs containing information sheets, consent forms, and the Parent Questionnaire (Whitworth *et al.*, 1993) give to the parents of children who fulfilled the inclusion criteria. Teachers were asked to give the information sheet and consent form to parents. Parents indicated their permission for their child to participate in the research study by returning the consent form and Parent Questionnaires to their child's teacher to pass on to the researcher. The researcher collected the consent forms and questionnaires in the next schedule of school visits.

After reviewing the completed parent questionnaires, the researcher sent letters to the parents of children who did not meet the inclusion criteria. The letter explained why their child could not participate and thanking them for their interest in the research study. At the end of the recruitment, the total number of participants was 144 children in the age range of 3 to 5. There were 19 children aged three years old (range of 36 – 47 months old). There were 54 children aged four years old (range of 48 – 59 months old). There were 71 children aged five years old (range of 60 – 72 months old). The mean age of the child participants is 4;9 years old. In terms of gender distribution, there were 71 males (49.3%) and 73 females (50.7%) that participated in teacher screening.

4.4.3 Recruitment of Teacher Participants to Conduct the Screening of The Children

For teacher recruitment, a separate letter about the screening process was sent to the schools. The researcher telephoned the school approximately one week after sending the letter to have a discussion with the school principals about the training for teachers to use the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) and Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997). After a further two weeks, the researcher made a telephone call to see how many teachers consented to be involved with the screening. At this point, a schedule was arranged for the researcher to visit the schools.

The researcher conducted a two-hour training activity on how to use the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) and the SDQ (Goodman, 1997) to teachers. The training was scheduled on a Friday where school hours in Indonesia are relatively shorter. The training was conducted at the five kindergarten schools where the study took place. The training included brief case studies of completed Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) and SDQ (Goodman, 1997) on real students from other schools unknown by the training participants. After the training, the researcher visited the schools again to hold additional discussion sessions to confirm teachers' familiarity and understanding of how to use the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) and the SDQ (Goodman, 1997). The duration of each discussion session was over three hours. Each school had three additional discussion sessions with the researcher. In total, the training sessions with teacher to use the Teacher Observation Screening Checklist (Whitworth *et al.*, 1993) SDQ (Goodman, 1997) were eleven hours. The subsections below provide details about the information gathered during the school visits and teacher training.

4.4.4 School Visits

The kindergarten schools in Indonesia have three levels in accordance with the children's age. The first level is the Preschool (Playgroup) level for children aged 3 - 4 years old, the second level is the Kindergarten A level for children aged 4 - 5 years old, and the third level is the Kindergarten B level for children aged 5 - 6 years old. The recommended number of children in the Preschool (Playgroup) level is maximum 10 children. The recommended number of

children in the Kindergarten A or Kindergarten B levels is between 15 - 20 children. The ratio between the number of children and the number of teachers in the classroom is 15:1.

The researcher conducted visits to five kindergarten schools to build rapport and provide training to the teachers. Each classroom usually had two teachers, a main teacher, and an assistant teacher. The main teachers were the ones who completed the Teacher Screening Observation Checklist. Training sessions aimed at providing a demonstration to the teachers on how to complete the Teacher Screening Observation Checklist, complete the SDQ and understand the information collected in the Parent Questionnaire. The training provided knowledge about typical speech and language development and SLCN. The training also provided opportunities for teachers to discuss their concerns about the children in their classrooms. Each school received one training session that lasted two hours and three additional discussion sessions, with each additional discussion session lasting over three hours. In total, each school received eleven hours of training with the researcher. During school visits, the researcher was invited to visit the classrooms. The section below describes the school visits conducted in each participating school.

4.4.4.1 Visits in School 1

School 1 was in the residential area of the district Pasar Minggu. The school was a house converted into a school. It was situated directly in front of a busy street. During classroom visits, a teacher at the preschool (playgroup) level expressed concerns about two students in her class. The first student, a male aged 4;2 years old, often repeated teachers' questions instead of answering them. The student used rigid grammar when speaking, was overactive, and had bitten his classmates when he felt angry or provoked. The main teacher, though concerned, insisted that the student's behaviour was quite typical for his age. The other student, a male aged 3;5 years old, alerted the teachers' attention because he did not speak much and was shy. Teachers in kindergarten A and kindergarten B levels did not express concerns about the students in the classes.

During the training, the school principal requested that teachers discuss the challenges they experienced in managing children with difficulties (SLCN or other neurodevelopmental

problems) with the researcher. Teachers did not ask many questions about the Teacher Screening Observation Checklist, Parent Questionnaire, or SDQ. They verbally stated that they understood how to complete the Teacher Screening Observation Checklist and the SDQ. On the other hand, they asked several questions about the signs of Autism and where to go for a referral if one of the students had been diagnosed with Autism. Some teachers were concerned about engaging the attention of students who had developmental difficulties.

4.4.4.2 Visits in School 2

School 2 was in the quiet residential area of sub-district Pejaten Timur, district Pasar Minggu, Jakarta. The kindergarten was a house converted into a kindergarten with classrooms, a mini hall, and a small play area in the front yard. The principal explained that all the current teachers have worked for less than a year in this kindergarten. The principal had previously let go of all teachers and brought in new teachers. She decided to do this because she thought that the school needed to start with new teachers' perspectives. The training was immediately followed up with short discussion sessions with teachers in their respective classrooms.

4.4.4.3 Visits in School 3

School 3 was in the government staff residential area of sub-district Pasar Minggu in district Pasar Minggu. It was a quiet area despite being near the main street of Pasar Minggu. The school was a house turned into small classrooms, small hallways, and small teacher offices. The small front lawn has been transformed into a play area for the children. The school had twenty students in total. There were only three teachers in School 3, all of whom had a degree in guidance and counselling with 7 to 36 years of teaching experience. During the training session, teachers observed that there was an increase in the number of preschool children with SLCN in recent years.

4.4.4.4 Visits in School 4

School 4 was in a residential area, in front of a busy street. The school had a traditional school building with a large playing area for the children. During the training, some teachers were interested in learning more about the symptoms of neurodevelopmental disorders such as Autism. They shared their observations about students and wondered whether the students had neurodevelopmental disorders.

4.4.4.5 Visits in School 5

School 5 was in a residential area of sub-district Pasar Minggu. The school was quite large. It had a traditional school building, a large play area, and parking spaces. The school principal requested that the researcher explained the research during the parent-teacher meeting sessions. The session was conducted on two different days, attended by many parents. Parents had many questions about late talking children. They also had questions about managing children who were verbally active at home but silent in the classroom. The teachers had between 1.5 to 16 years of teaching experience. They come from various educational backgrounds. Most of the teachers had a degree in English. During the training, the teachers verbally stated their understanding of the research and how to complete the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) and the SDQ. During the discussion sessions, teachers discussed their concerns about students who were struggling in their classes.

4.4.5 Recruitment of Teacher Participants for Focus Groups

In phase 1 of the study, the researcher conducted another two-stage process for the recruitment of the teachers for focus groups. The first stage was obtaining the school principal's written permission for the recruitment to conduct the focus groups and for the focus groups to take place at the school with the teaching staff. The second stage was providing information sheets and consent forms to school principals to be forwarded to the

potential teacher participants who then volunteered and provided their consent to participate in the focus groups.

Approximately five schools and twenty teachers involved in phase 1 of the study were invited to participate in phase 2 of the study. After the invitation, ten teachers from two of the five schools agreed to participate in the focus groups of the phase 2 of the study.

4.5 Rationale for Research Sample Size for the Screening

The sample size is calculated using the prevalence sample calculator. To calculate sample size for an estimate of prevalence with a 95% confidence limit, the formula is:

1.96 = Z value for 95% confidence limits

P = Estimated prevalence (e.g., 0.3 for 30%)

(P)(1-P) = variance for a binary (binomial) variable

d = ½ of desired confidence interval (e.g., 0.025 for ± 5%)

With estimated prevalence in Indonesia being 12.9% (Kesuma *et al.*, 2014) and the desired confidence interval at 5 %, the minimum total sample size for this study was 163 rounded up to be 200.

4.6 Measures

4.6.1 Phase 1 Teacher Screening of SLCN

4.6.1.1 Overview of Teacher Screening Observation Checklist (Whitworth *et al.*, 1993)

Teachers were asked to complete a screening observation checklist to identify children in their classes who showed signs of SLCN. Since there are no standardised assessments of speech and language ability in the Indonesian language, including teacher report or other observational schedules, the present study had to look at measures that would have some validity and reliability for children who speak the Indonesian language, Bahasa Indonesia.

Whitworth *et al.* (1993) developed a Teacher Screening Observation Checklist to be used by teachers to screen preschool children who may have SLCN. The study conducted in Australia research population shows that the Teacher Screening Observation Checklist has good validity and reliability (Whitworth *et al.*, 1993). It has also been adapted in other languages such as Greek (Okalidou & Kampanaros, 2001) with adequate validity and reliability and Nepalese (Thapa *et al.*, 2016) with good validity and reliability. Therefore, a decision was taken to select the Teacher Screening Observation Checklist developed by Whitworth *et al.* (1993) for this present study.

The adaption of the Teacher Screening Observation Checklist began with a translation and cultural adaptation of the Teacher Screening Observation Checklist content into Bahasa Indonesia. Acquadro *et al.* (2008) underlined the importance of preserving the ideas in the original language when conducting studies in different populations by carrying out appropriate translation and cultural adaptation. Acquadro *et al.* (2008), in their review, recommended a multi-step approach, which includes forward translation, backward translation, and synthesis of translation. However, there has not been any evidence that shows one approach to be more rigorous than the others.

The researcher worked together with a certified professional translator who was native in Bahasa Indonesia and fluent in the English language to conduct translation and cultural adaptation of Whitworth *et al.* (1993) checklist to be used in the Indonesian population. The steps taken to produce the material were forward translation conducted by the researcher and the translator, and back translation conducted by the researcher, and resolving of discrepancies between the original materials and the back-translated materials.

The researcher developed phrases or sentences for concepts in the English language that were non-existent in the Indonesian language, e.g., the usage of past tense as reflected in the verb. In Bahasa Indonesia, to refer to the past, sentences use adverbs of time. In the translated materials, the researcher also included additional consonant clusters appropriate in Bahasa Indonesia such as ‘ny’ and ‘ng’.

In a pilot study for this Ph.D. research, the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) was piloted on ten Indonesian teachers who had educational backgrounds ranging from three-year college degrees to master's degrees. The location of the pilot study was a private school in the southern part of Jakarta Indonesia. The pilot study was conducted from November – December 2017. The general aim of the pilot study was to examine the usefulness of the screening observation checklist in the Indonesian population. The aims of the pilot study were:

- To assess whether the description of speech and language behaviours fulfilled the expected speech and language behaviours of Indonesian children to the best of teacher participants' knowledge.
- To assess whether the wording of the checklist could be easily understood by teachers who had little experience and knowledge of SLCN.

The pilot study results indicated that these aims were achieved, with all participants reporting that the teacher guidelines and teacher screening checklist were easy to understand and useful in identifying children who may display signs of SLCN. The pilot study showed that teachers were able to use the checklist to identify speech and language behaviours in children in schools in Indonesia.

The Teacher Screening Observation Checklist (Whitworth *et al.* 1993) is a form to be filled out by teachers. The checklist consists of five areas of speech and language ability: Articulation, Syntax, Narrative, Vocabulary, and Comprehension. Teachers rate each child with scores for each speech and language area. A score 1 indicates a rating of "no concern" in speech, language, and communication abilities. A score 2 indicates a rating of "mild concern" in speech, language, and communication abilities. A score 3 indicates a rating of "moderate concern" in speech, language, and communication abilities. A child with a score of 3 in at least one of the five speech and language areas was rated with a moderate teacher concern. A child with a teacher rating of moderate concern would be referred to a clinician, an educational psychologist, or a speech-language therapist, where available. A child with a score 2 in at least one of the five speech and language areas was rated with a teacher rating of mild concern. A child with a teacher rating of mild concern would be followed up. The follow-ups involved

informing the teachers and parents about the best ways to support the child. This might include a referral to an educational psychologist.

Teacher Guidelines are provided for teachers to help them understand how to complete the Teacher Screening Observation Checklist (Whitworth *et al.* 1993). The Teacher Guidelines consists of information about the description of speech, language, and communication abilities in typically developing children aged three, four, and five years old across five areas, namely Articulation, Syntax, Narrative, Vocabulary, and Comprehension (Whitworth *et al.*, 1993). The guidelines include examples of speech, language and communication abilities that can be classified as "no concern," "mild concern," or "moderate concern" (Whitworth *et al.*, 1993).

4.6.1.2 Using the Teacher Screening Observation Checklist

Teachers indicated their evaluation of children's speech and language skills by filling out the teacher screening observation checklist form. The form is used in conjunction with the teacher guidelines. The teacher guidelines consist of descriptions of five different areas of speech and language abilities namely Articulation, Syntax, Narrative, Vocabulary and Comprehension. Each area consists of a list of behaviours according to the children's age. Each area of a child's speech and language ability is rated as "no concern" (a score of 1), "mild concern" (a score of 2), or "moderate concern" (a score of 3) following the accompanying teacher guidelines. An overall rating of moderate concern is given when a child has a rating of "moderate concern" in at least one of the five areas assessed. An overall rating of no concern is given when a child has a rating of no concern in all the five areas assessed. An overall rating of mild concern when a child has a rating of mild concern only in any of the areas assessed or a rating of mild concern and no concern in any of the areas assessed. Teachers have observed the children in the classroom for at least one semester before completing the teacher screening observation checklist form.

4.6.1.3 Descriptors for Teacher Screening Observation Checklist Guidelines by Age

As mentioned above, teachers indicate their evaluation of children's speech and language abilities based on the descriptors in the teacher guidelines. Based on past observation of the child, teachers decide which classification the child falls on. There are descriptors for no concern, mild concern and moderate concern for each area of speech and language by age. Some examples about the descriptors in the Articulation area are provided below:

- Following the guidelines for articulation for 3-year-olds, a child who is mostly intelligible when speaking and shows difficulty in saying the letters b, d, k, g, f and y is rated as having mild concern.
- The guidelines differ for children aged 4 years old. Four-year-olds who are very intelligible in connected speech, show improvement in saying sounds and words, and already master certain consonant sounds (e.g., b, d, k, g, f, y) will be classified as showing no concern in speech and language ability.
- Five-year-old children who are always difficult to understand and get frustrated with their inability to say sounds and words will be classified as showing moderate concern in speech and language skills.

During the adaptation of the teacher screening observation checklist, modifications were made to accommodate Bahasa Indonesia. The adaptation included replacing tense inflections in English with adverbs of time in Bahasa Indonesia. In the "no concern" descriptors of Syntax for five-year-olds, children may make errors with some past tense endings e.g., runned for ran. In the adaptation, the tense inflections were replaced with adverbs of time. The equivalent of "ran" in Bahasa Indonesia is "lari + an adverb of time". Some examples of adverbs of time are words such as "*kemarin*" meaning "yesterday" or "*waktu itu*" which means "*at the time*" or "*nanti*" meaning "later". Reflecting on this decision to replace tense inflections with adverbs of time, it is possible that other skills such as vocabulary skills were also inadvertently sampled for the Syntax area. In Bahasa Indonesia, a child would have to know certain vocabulary words to indicate the adverbs of time. This may mean that the adaptation of the descriptors of Syntax from the original English language into Bahasa Indonesia may not be fully equivalent.

4.6.1.4 Parent Questionnaire (Whitworth *et al.*, 1993)

The parent questionnaire was adapted from the one used in Whitworth *et al.* (1993). The researcher created five additional questions that collect parents' socio-demographic information. Parents were asked to complete a parent questionnaire, collecting information about their child's speech and language development history, and parents' socio-demographic background. The parent questionnaire consists of 23 items and is in the Indonesian language, Bahasa Indonesia. The first five items contain questions about their child's birth order, early language development, and existing clinical diagnosis. The second ten items ask parents about the description of their child's current speech and language abilities. The next three items ask parents whether they have any concerns about their child's speech and language ability and whether their child have speech-language therapy. The last five items contain questions about the parents' socio-demographic information. The complete parent questionnaire is available on appendix H.

The parents' sociodemographic background contains information about the family's socioeconomic status. The family socioeconomic status was determined from three components: the parents' educational background, employment status, and family monthly income. The socioeconomic status was calculated from the scores attributed to each component of the family socioeconomic status. Score 1 was assigned to 'high school' as the last completed education, 'out of work' as the employment status, and 'less than 3 million to 5 million rupiahs" as the family monthly income. Score 2 was assigned to 'bachelor's degree' as the last completed education, 'homemaker/student' as the employment status, and '5 – 9 million rupiah' as the family monthly income. Score 3 was assigned to 'master's degree' as the last completed education, 'employed' as the employment status, and 'more than 9 million rupiahs' as the family monthly income. The low socioeconomic status was assigned when the total score was 3 - 4. The middle socioeconomic status was assigned when the total score was 5-6. The high socioeconomic status was assigned when the total score was 7 - 9. The socioeconomic status was calculated following the recommendations from the American Psychological Association (American Psychological Association, 2021). For data entry in SPSS, the total score of 3 – 4 indicating low SES was transformed to the score of 1, the total score

of 5 – 6 indicating middle SES was transformed to the score of 2, and the total score of 7 – 9 indicating high SES was transformed to the score of 3.

4.6.1.5 Strengths and Difficulties Questionnaire (SDQ (Goodman, 1997)

The teachers completed the Indonesian-adapted SDQ (Goodman, 1997) for child participants in their class. The Indonesian-adapted Strengths and Difficulties Questionnaire was translated and has been used for research and clinical purposes in the Indonesian population (Wimbarti *et al.*, 2019).

The SDQ is a short behavioural screening questionnaire for 2-17-year-olds. The questionnaire consists of five sections: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behaviour (Goodman, 1997). Each section has five statements. The teachers rated each child based on a range of scales. These scales are “not true,” “true,” and “certainly true.”

Following published scoring guidelines, the externalising score was obtained by calculating the sum of the conduct problems score and the hyperactivity score. The internalising score was obtained by calculating the sum of the emotional problems score and the peer problems score. The total difficulties score was obtained by calculating the sum of the conduct problems score, the hyperactivity score, the emotional problems score, and the peer problems score. The scores range from 0-20. For data entry in SPSS, all result scores for each subscale were transformed. For the emotional problems subscale, all scores from 0-3 were transformed into 1 (‘close to average’), all scores 4 were transformed into 2 (‘slightly raised’), all scores 5 were transformed into 3 (‘high’), and all scores from 6-10 were transformed into 4 (‘very high’). This transformation pattern was applied to the rest of the subscales, conduct problems score, hyperactivity score, peer problems score, externalising score, internalising score, and total difficulties score, except for prosocial score. For the ‘prosocial’ subscale, as mentioned in the previous paragraph, score 1 means ‘close to average’, score 2 means ‘slightly lowered,’ score 3 means ‘low’, and score 4 means ‘very low’. The result scores for ‘prosocial’ scale were transformed accordingly.

4.6.1.6 Narrative Informal Assessment (Heilmann *et al.*, 2010)

Gutierrez-Clellen *et al*. (2000) asserted that the use of language sampling has become common practice in studies where standardised tests are not available. Paul (2007) suggested that language sampling is best used for describing a child's language problems and asserted that the identification of a language disorder should be conducted using standardised assessments. In response to the absence of standardised procedure to assess children's speech and language abilities in the Indonesian population, a decision was taken to use a Narrative Informal Assessment (Heilmann *et al*., 2010) for the present study.

Narrative language sampling is typically conducted to generate indicators of children's expressive language development such as the mean length of utterance in words (MLUw) – to measure the syntactic complexity, the number of different words (NDW) – to measure lexical diversity and productivity, and words per minute (WPM) – to measure verbal fluency (Rojas & Iglesias, 2009). Some studies have shown that these measures can differentiate children with language difficulties from children with typically developing language (Fey et al., 2004; Newman & McGregor, 2006; Scott & Windsor, 2000). For the present study, the narrative task was intended to assess children's expressive language development through the measure of mean length of utterance (MLU).

Children with a teacher rating of moderate concern were invited to complete a Narrative Informal Assessment (Heilmann *et al*., 2010) task with the researcher. The elicitation material for the narrative task is a story called '*Frog, Where Are You*?' (Mayer, 1969). This type of narrative task was chosen because it has a comparable norm, is easily administered, and appropriate for cultures that speak language other than English (Heilmann *et al.,* 2010).

4.6.2 Phase 2 Focus Groups

The focus groups were in the form of a facilitated discussion to investigate teacher perspectives about SLCN in Indonesian children. The researcher followed a guideline to initiate and maintain the flow of conversation in the discussion. The guideline includes pre-determined questions to be discussed in the focus group. The structure of the focus group

discussion includes an introduction, opening, key topics questions, closing, and post-discussion. The opening contains questions about special education needs in Indonesia. The key topics contains 19 questions about SLCN in Indonesian kindergarten children. These include how teachers understand SLCN, support children SLCN in the classroom, perceive the implications of having SLCN in the classroom, perceive the level of awareness from parents regarding SLCN, and their experiences in using the Teacher Screening Observation Checklist. The topic questions are as follows:

- How teachers conceptualise speech, language and, communication needs
- The diagnosis processes
- Their estimation of the prevalence of speech, language and, communication needs
- Support provided in the classroom
- Support provided by other professionals
- Parental support
- Challenges and opportunities
- Their reflections on the use of the screening observation checklist

More details on the focus groups questions are available in appendix J.

4.7 Procedures

4.7.1 Procedure for the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993)

The researcher delivered the Teacher Screening Observation Checklist (Whitworth *et al.,* 1993) forms to the school principals. The school principals then distributed the forms to the teachers. The teachers were asked to rate the speech and language skills of child participants in their class as “no concern,” “mild concern,” or “moderate concern” in each of the five speech and language areas based on the information provided in the Teacher Guidelines. The teachers were asked to do this based on their past and ongoing observation of the children in their respective classes. Teachers were asked to return their completed checklists in a sealed envelope (provided previously) to their school principal. The researcher made visits to the school to collect the completed checklists. The time between the delivery of checklists and the collection of the completed checklists was estimated to be three weeks.

4.7.2 Procedure for Parent Questionnaire (Whitworth *et al.*, 1993)

Parents received the parent questionnaire form via their child's teacher. Parents returned the completed questionnaire in a sealed envelope (provided previously) to the researcher via their child's teacher. The researcher made visits to the school to collect the completed questionnaires. The time between the delivery of the questionnaire and the collection of the completed questionnaire was estimated to be three weeks.

4.7.3 Procedure for Strengths and Difficulties (SDQ) (Goodman, 1997)

The researcher visited the school to deliver the SDQ (Goodman, 1997) forms to the teachers. Teachers completed the SDQ (Goodman, 1997) forms based on their past and ongoing observation of the children in their class. The teachers were asked to return their completed SDQ (Goodman, 1997) forms in a sealed envelope (provided previously) to their school principals. The researcher made visits to the school to collect the completed SDQ (Goodman, 1997) forms. The time between the delivery of the SDQ (Goodman, 1997) forms and the collection of the completed SDQ (Goodman, 1997) forms was estimated to be three weeks.

4.7.4 Procedure for Narrative Informal Assessment (Heilmann *et al.* 2010)

Children with a teacher rating of moderate concern from the screening were invited for a Narrative Informal Assessment (Heilmann *et al.* 2010) by the researcher. The invitation was made through the parent letter. Parents had the choice either for their child to participate or opt-out of the assessment. The children were given information about the study in a simple choice of words, asked for assent, and explained that they had a choice to stop anytime during assessment without any consequences.

The assessment took place in a room allocated by the school where the research was being conducted. The elicitation material is the story titled Frog, Where Are You? (Mayer, 1969), a 24-page story book. The story is about a boy along with his dog who go in search of a missing frog. In the assessment, the researcher explained that she would read a story about a boy, a

dog and a frog. Each page of the book contains pictures that the child can look through. The researcher sat next to the child and read the story aloud page by page. After the researcher finished reading the story, the child was shown another book containing wordless pictures from the story and asked to retell the story based on the wordless pictures. The duration of the assessment was approximately 20 minutes for each child. Each child was accompanied by one teacher. The assessment was audio-recorded.

4.7.5 Procedure for Focus Groups

All two focus groups were facilitated by the researcher and the information obtained was audio recorded for ease of transcriptions. The focus groups took place in an allocated room in the schools where teachers worked. The focus group was conducted after school, at a convenient time and date agreed with the teachers. The focus groups lasted between 30 – 45 minutes. Prior to the focus groups, the participants were given a copy of the information sheet to read explaining why the sessions were audio recorded, and how the data would be kept anonymous and confidential. During the discussion, participants were seated in chairs forming the letter 'u' with the researcher seated in the middle. There was a handheld recorder to audio-record the discussion from beginning to end. At the end of the discussion, all participants were asked to complete a brief questionnaire that collected information about their professional experiences and knowledge about speech and language development. The structure of the focus group was as follows:

- Welcome: researcher welcomed the participants and thanked them for their participation.
- Introduction: re-iterated the purpose of the focus groups and asking permission for the focus groups to be audio recorded.
- Anonymity: assured the anonymity of all data collected in the focus groups.
- Ground rules: established the ground rules for the focus groups.
- Warm up: introduced themselves to all participants – only when participants did not know each other.
- Introductory questions: asked general questions about special education needs.

- Key topic questions: asked key topic questions to begin the discussions in the focus groups.
- Concluding question: asked participants about the most important issues about SLCN in Indonesian preschool children.
- Conclusion: thanked the participants for participating in the focus groups and asked them to fill out a questionnaire.

4.8 Data Analysis Plan

Data from the completed Teacher Screening Observation Checklist (Whitworth *et al.,* 1993), the completed SDQ (Goodman, 1997) and the completed Parent Questionnaire (Whitworth *et al.*, 1993) were coded, entered, checked for accurate data entry, and rechecked for missing information using Microsoft Excel program. The objective was to get clean data ready for processing.

Children's language samples from the Narrative Informal Assessment (Heilmann *et al.* 2010) were transcribed and processed manually to obtain clean data. The computation using Microsoft Excel program was done to obtain the mean length of utterance (MLU) that measures grammatical ability, and the total number of utterances that measure verbal productivity, and the total number of different words that measure semantic diversity.

Examination of associations between SLCN, and other variables such as age, gender, and social-emotional and behavioural difficulties was performed using non-parametric statistical analysis. All statistical analyses were performed using SPSS software.

For the focus groups, the method used for the analysis is the thematic analysis which uses the whole data set of the focus group discussion results to find semantic themes that reflect the experiences, meanings and realities of the preschool and kindergarten teacher participants (Braun & Clarke, 2006). For this analysis, the identification of the themes was anchored by the research question which sought to investigate the perspectives of teachers regarding

speech, language, and communication needs (SLCN) of the Indonesian-speaking children. The process of the thematic analysis uses the 6 phases recommended by Braun and Clarke (2006).

- Phase 1 involved with transcribing the audio-recorded discussions. The transcription was verbatim and included all non-verbal communication of the participants. The full transcription was then translated from Bahasa Indonesia to English.
- Phase 2 involved with the finding of preliminary codes. At first, all data were extracted to provide data extracts. These extracts were then coded. The process of generating these codes was governed by the four rules below:
    - the code captured something important in relation to the research question
    - the code referred to a sentence or a phrase that occurred more than once in the transcription of the focus group discussion data
    - the code referred to inclusive education, special education, speech, language and communication needs, parent awareness, parent support
    - The code consisted of data that were interesting to the researcher
- Phase 3 involved analysing the codes from the phase 2 and assembling these codes to build certain themes. These codes were put into an excel table. Codes that belonged in a certain theme were highlighted with a certain colour. This phase also produced themes which had subthemes with data extracts coded in relation to these themes.
- Phase 4 involved reviewing the themes produced in phase 3. This included checking whether the coded data extracts under the subthemes were linked with one another and whether the main themes were coherent with the research question.
- Phase 5 involved two subphases: 1) naming the themes followed with 2) writing detailed analyses of these themes. The analyses related back to the research question which sought to investigate the perspectives of the preschool and kindergarten teachers regarding speech, language and communication needs of the children.
- Phase 6 involved writing up all aspects of theme around a central idea in the research question. This phase also involved relating the key themes found in focus group data with past literature on teacher perspectives regarding speech, language and communication needs in children.

4.9 Ethical approval

The study received ethical approval from the Human Communication Sciences departmental ethics committee at the University of Sheffield. The ethical approval for the first phase of the study was received on 6 April 2018, and the ethical approval for the second phase of the study was received on 9 December 2019.

5 Chapter 5: Levels of SLCN in Indonesian Kindergarten Children According to Teacher Screening Observation Checklist

5.1 Introduction

This chapter presents the results of the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) (n=144), Narrative Informal Assessment Task (Heilmann *et al.*, 2010) (n=6), Parent Questionnaire (n=65), and Strengths and Difficulties Questionnaire (Goodman, 1997) (n=25) for Indonesian kindergarten children aged 3 - 5 years old enrolled in five schools in Jakarta, Indonesia.

Section 5.2 presents the results of the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) of the kindergarten children across the five schools. The section describes children with a no teacher concern, a teacher rating of mild concern in at least one of the areas of language assessed, and a teacher rating of moderate concern in at least one of the areas of language assessed. Section 5.2.8 describes the Narrative Informal Assessment (Heilmann *et al.*, 2010) results of six children with a teacher rating of moderate concern in at least one of the areas of language assessed in the Teacher Screening Observation Checklist (Whitworth *et al.* 1993).

Section 5.3 presents the results of the completed Parent Questionnaire (Whitworth *et al.*, 1993) (n=65). This section describes the children's speech and language development history, current speech and language abilities, parent level of concern regarding their children's speech and language abilities, and family socioeconomic background. The section also provides a comparison between the number of children with a teacher concern (either mild or moderate) in at least one of the areas assessed in the Teacher Screening Observation Checklist (Whitworth *et al.,* 1993) and the number of children with parent concern as indicated in the Parent Questionnaire.

Section 5.4 presents the results of the Strengths and Difficulties Questionnaire (Goodman, 1997). It provides a summary of children's socioemotional behavioural status as evaluated by

the teachers. The section also compares teacher concerns of SLCN and children's socioemotional behavioural status.

The last section (5.5) provides an overall summary of the results of Teacher Screening Observation Checklist (Whitworth *et al.*, 1993), Parent Questionnaire (Whitworth *et al.*, 1993), the Strengths and Difficulties Questionnaire (Goodman, 1997) and the Narrative Informal Assessment (Heilmann *et al.*, 2010).

5.2 Results of the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993)

Teachers from five kindergarten schools completed the Teacher Screening Observation Checklist (Whitworth *et al.* 1993) for 144 children. This checklist asks teachers to rate children's ability in the language area of Articulation, Syntax, Vocabulary, Narrative, and Comprehension skills. As described in Chapter 4 Research Methods, this checklist was adapted from a teacher screen developed by Whitworth *et al.* (1993) and used in international studies (Okalidou & Kampanaros, 2001; Thapa *et al.*, 2016). The pilot study suggested that it was appropriate for use by kindergarten teachers in Indonesia.

The Teacher Screening Observation Checklist (Whitworth *et al.,* 1993) uses scores to describe the child's speech and language ability in each area (Articulation, Syntax, Vocabulary, Narrative, and Comprehension). A score of 1 means the teacher has no concern regarding the child and is considered having 'no concern'.' A score of 2 means the teacher has a 'mild concern' regarding the child in at least one of the areas of language assessed and is considered below where they would expect given the child's age. A score of 3 means the teacher has a 'moderate concern' regarding the child in at least one of the areas of language assessed and is considered significantly below where they would expect given the child's age.

The teachers received training on how to complete the Teacher Screening Observation Checklist (Whitworth *et al.,* 1993) to screen children with possible SLCN. The training included information on typical speech, language, and communication development in children and the characteristics of children with SLCN. In addition to training, teachers were provided with additional discussion sessions, and on-site consultations with the researcher, as outlined in

Chapter 4: Research Methods. Teachers used the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) to screen the children in their class. Each teacher had approximately 15 – 20 children in the classroom. Teachers were given two weeks to return to the completed Teacher Screening Observation Checklist (Whitworth *et al.,* 1993) to the researcher.

5.2.1 Child Participant Demographics

This section describes the child participants' demographic information, which included the distribution of their gender, age group, and socioeconomic status. The information about the children's gender and age group was collected from the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) (n=144), whereas the information about the children's socioeconomic status was collected from the completed parent questionnaire (n=65). There was no socioeconomic status information available for 79 children since only 65 of 144 parent questionnaires were completed.

5.2.1.1 Child Participant Age, Gender and Socioeconomic Status

In terms of the age distribution, 19 children (13.2%) were aged 3 years old (the range of 36 – 47 months old), 54 children (37.5%) were aged 4 years old (the range of 48 – 59 months old), 71 children (49.3%) were aged 5 years old (the range of 60 – 72 months old), as shown in the table 5.2.1.1a below. In terms of gender distribution, there were 71 males (49.3%) and 73 females (50.7%).

The socioeconomic (SES) status information was available for 65 of 144 children based on the information from the parent questionnaires. The family socioeconomic status was determined from three components: the parents' educational background, employment status, and family monthly income as previously described in Chapter 4: Research Methods, section 4.6.1.2. The parent questionnaire showed that 54 families (83.1%) were considered to have high socioeconomic status, 9 families (13.8%) have middle socioeconomic status, and 2 families (3.1%) have low socioeconomic status. There were no socioeconomic data for 79 children. Table 5.1 and table 5.2 below show the information about the age, gender, and the socioeconomic status of the child participants.

Table 5.1 Age and Gender of the Child Participants

Age	Number	Percentage
3 years old	19	13.2%
4 years old	54	37.5%
5 years old	71	49.3%
Total	144	100%
Mean	4.9	
Std. Deviation	0.706	
Range	2	
Gender		
Males	71	49.3%
Females	73	50.7%
Total	144	100%

Table 5.2 Socioeconomic Status of Child Participants

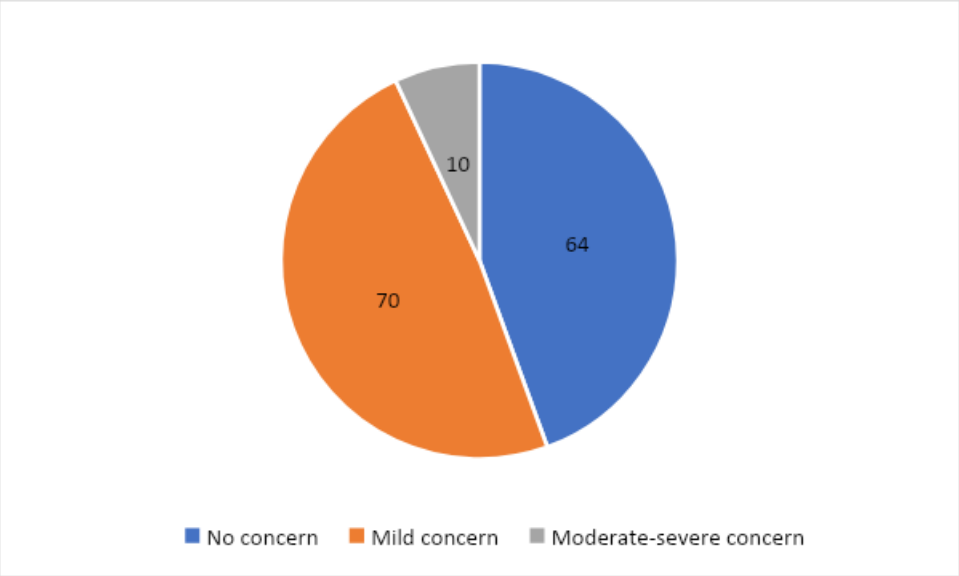
Socioeconomic status		
	Number	Percentage
Low SES	2	3.1
Middle SES	9	13.8
High SES	54	83.1
Total	65	100.0
Mean	2.80	
Std. Deviation	0.474	
Range	2	

5.2.2 Teacher Screening Observation Checklist (Whitworth *et al.*, 1993)

The teachers recorded their evaluation of the children's speech, language, and communication abilities onto the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993). The screening results yielded three different evaluations of the children's language abilities; a teacher rating of no concern, a teacher rating of mild concern on at least one of the five language areas assessed, and a teacher rating of moderate concern on at least one of the five language areas assessed.

The screening results showed that there were 64 children (44.4%) with a no teacher concern, 70 children (48.6%) with a teacher rating of mild concern, and 10 children (6.9%) with a teacher rating of moderate concern, as shown in the pie chart below (figure 1).

Figure 1. Results of the Teacher Screening Observation Checklist (n=144)



When the number of children with a teacher rating of moderate concern (n=10) and the number of children with a teacher rating of mild concern (n=70) were combined, there were 80 children (55.6%) with a teacher concern, either mild or moderate, in SLCN.

5.2.3 Teacher Screening Observation Checklist Results in Each Language Area

This section describes the Teacher Screening Observation Checklist results in each of the language areas assessed. As shown in the table 5.3 below the most reported concern was in the language area of Narrative. Five of the 144 children had a teacher rating of moderate concern and 50 of the 144 children had a teacher rating of mild concern. The least reported concern was in Vocabulary with five of the 144 children a teacher rating of moderate concern, and 27 of the 144 children with a teacher rating of mild concern.

Table 5.3 Teacher Screening Observation Checklist Results in each of the Language Area

	No concern	Mild concern	Moderate concern	Total
Articulation	101	39	4	144
Syntax	103	36	5	144
Narrative	89	50	5	144
Vocabulary	112	27	5	144

Comprehension	104	36	4	144

5.2.4 Teacher Screening Observation Checklist Results based on the Number of Concerns

There were 64 children (44.4%) with no teacher concern, 24 children (16.7%) with a teacher concern in one area, 17 children (11.8%) with a teacher concern in two areas, 16 children (11.1%) with a teacher concern in three areas, 12 children (8.3%) with a teacher concern in four areas, and 11 children (7.6%) with a teacher concern in five areas. Figure 2 shows the number of children with either a teacher rating of mild concern (orange colour) or a teacher rating of moderate concern (grey colour) in each of the clusters of concerns.

Figure 2. Comparison of the Teacher Screening Observation Checklist Results based on the Number of Concerns

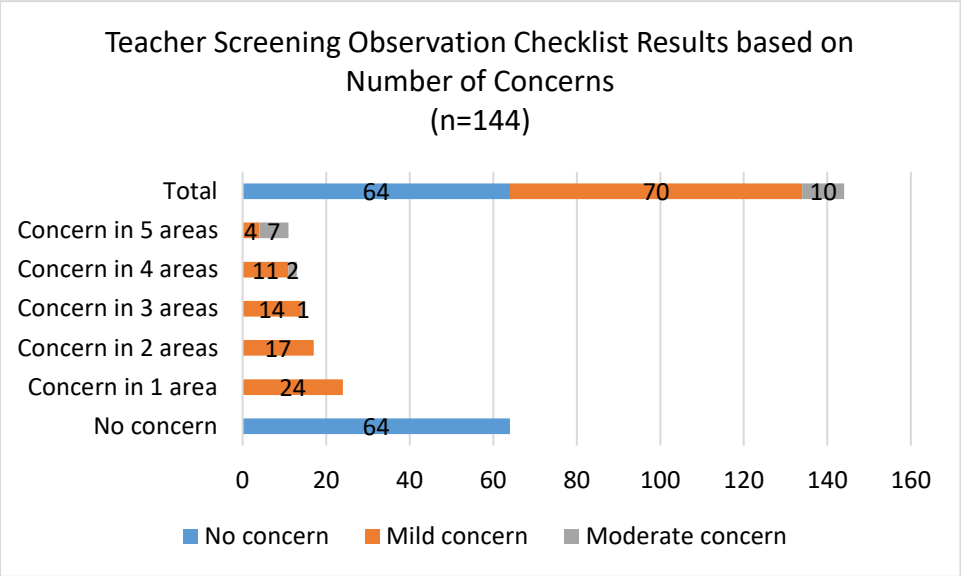


Figure 2 shows in the cluster of concern in all five language areas four children had a mild but widespread teacher concern across all five areas. There were 7 children with a teacher rating of moderate concern across 5 areas of language.

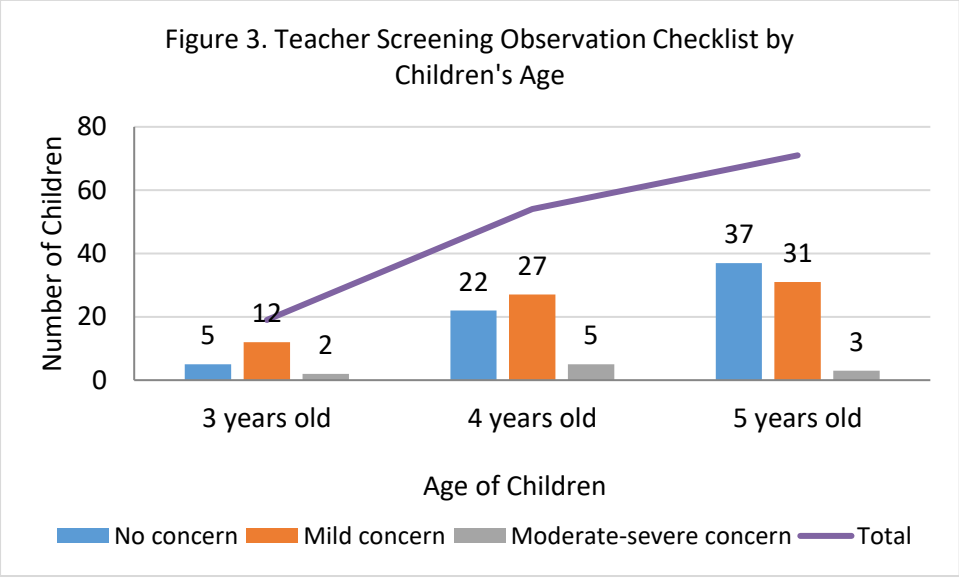
In the cluster of concern in four language areas, there were 11 children with a teacher rating of mild concern, and two children with a teacher rating of moderate concern. In the cluster of concern in three language areas, there were 14 children with a teacher rating of mild concern and one child with a teacher rating of moderate concern. In the cluster of concern in

two language areas, there were 17 children with a teacher rating of mild concern and none with a teacher rating of moderate concern. In the cluster of concern in one language area, there were 24 children with a teacher rating of mild concern and none with a teacher rating of moderate concern.

5.2.5 Teacher Screening Observation Checklist Results by Age

Five children aged three years old, 22 children aged four years old, and 37 children aged five years old had no teacher concern. There were 12 children aged three years old, 27 children aged four years old, and 31 children aged five years old with a teacher rating of mild concern. There were two children aged three years old, five children aged four years old, and three children aged five years old with a teacher rating of moderate concern. Figure 3 shows the teacher screening observation checklist results of the children in their respective age groups

Figure 3. Teacher Screening Observation Checklist by Age (n =144)



5.2.6 Teacher Screening Observation Checklist Results by Gender

There were 25 males with a teacher rating of no concern, 42 males with a teacher rating of mild concern, and four males with a teacher rating of moderate concern. In the female participants there were 39 females with a teacher rating of no concern, 28 females with a

teacher rating of mild concern, and six females with a teacher rating of moderate concern. As shown in table 5.2.6 more females (n=39) than males (n=25) received a teacher rating of no concern. Table 5.4 also shows more males (n=42) than females with a teacher rating of mild concern. However, there were more females (n=6) than males with a teacher rating of moderate concern. Overall, there were more males (n=46) than females (n=34) with a teacher rating concern (either mild or moderate) indicating SLCN.

Table 5.4 Teacher Screening Observation Checklist Results by Children's Gender

	No concern	Mild concern	Moderate concern	Total
Males	25	42	4	71
Females	39	28	6	73
	64	70	10	144

5.2.7 Teacher Screening Observation Checklist Results by Socioeconomic Status

Socioeconomic status data was available for 65 children in the current study (see Table 5.5). These 65 children participated in the teacher screen. There were 36 of 65 children (55.4%) with a teacher concern (either mild or moderate) who were from advantaged backgrounds (either middle SES or high SES). Two children (3.1%) with a teacher no concern was from disadvantaged backgrounds (low SES), 27 children (41.5%) with a teacher no concern were from advantaged backgrounds (either middle SES or high SES).

Table 5.5 Results of the Teacher Screening Observation Checklist by the SES

		Socioeconomic status			Total
		Low SES	Middle SES	High SES	
Screening results	No concern	2	5	22	29
	Mild concern	0	3	28	31
	Moderate concern	0	1	4	5
Total		2	9	54	65

5.2.8 Narrative Informal Assessment (Heilmann *et al.*, 2010)

The Narrative Informal Assessment (Heilmann *et al.*, 2010) was conducted to further explore the Teacher Screening Observation Checklist's findings. Children with a teacher rating of

moderate concern were invited for the narrative informal assessment. There were ten children with parental consent to complete this narrative informal assessment task (see section 4.1.6.4 in Chapter 4 for the method). One child had his parents withdrew their consent; three children did not attend the assessment despite multiple reschedules. Six children, three males, aged 3;5, 4;2 and 5;2 years old respectively and three females aged 5;3, 5:4 & 5;3 years old respectively, attended the assessment.

The Narrative Informal Assessment (Heilmann *et al.*, 2010) task aimed to obtain each child's language sampling by asking a child to retell a story. The eliciting material for this assessment was a storybook written by Mercer Mayer (1969) called *'Frog, Where Are You?'* The story tells about a boy and his dog that go in search of a missing frog. Each child was told the story and asked to retell the story with the help of wordless illustrations of the storybook. During the assessment, each child was accompanied by a teacher who quietly observed the child and the researcher.

Five children completed the narrative informal assessment task; one child decided to stop the assessment because he did not want to retell the story. The child did not provide a further explanation; instead, requested to do drawing and colouring with the researcher. The language samples were analysed to calculate the Mean Length of Utterance (MLU). The calculation of the Mean Length of Utterance was carried out informally as all participants did not produce the minimum sample of 100 utterances per individual (Miller & Chapman, 1981). The MLU was calculated by taking the total number of morphemes and dividing it by the total number of utterances. The result showed that most children had a Mean Length of Utterance comparable to equivalent age of 1 to 3 years old, except for one child (female, 5;4 years old) who produced a Mean Length of Utterance comparable to equivalent age of > 4 years old. The equivalent age comparison uses the chart recommended by Miller & Chapman (1981).

The teacher screening results of all six children that participated in the narrative informal assessment task showed that all children had a teacher rating concern (either mild or moderate) on Syntax and Narrative. Five children had a teacher rating concern (either mild or moderate) in Articulation. Three children had a teacher rating concern (either mild or moderate) in Vocabulary and Comprehension. All six children had a teacher rating of

moderate concern in at least one of the five language areas and a teacher rating of mild concern in at least two of the five language areas assessed. One child had a teacher rating of no concern in Articulation, another child has a teacher rating of no concern in Vocabulary, and another child had a teacher rating of no concern in Comprehension. Table 5.6 details the teacher screening results for the six children. For the sake of brevity, the terms are abbreviated. Articulation is abbreviated into Art.; Syntax is abbreviated into Syn.; Narrative is abbreviated into Nar.; Vocabulary is abbreviated into Voc.; Comprehension is abbreviated into Com; Equivalent Age is abbreviated into Eq. Age.

Table 5.6 Summary of the Speech, Language, and Communication Levels of 6 Children which includes Parent Concern, Teacher Screening Observation Checklist Results and the Mean Length of Utterance (MLU)

ID	Age	Gender	Parent concern	Teacher screening					MLU	Eq. Age
				Art.	Syn.	Nar.	Voc.	Com.		
1	3;5	M	No*	No	Mod.	Mod.	Mild	Mod.	1.39	1;6 – 1;9
2	4;2	M	Yes	Mild	Mod.	Mod.	Mod.	Mod.	N/A	N/A
44	5;3	F	No	Mod.	Mild	Mild	Mild	Mild	1.74	1;9 – 2;2
47	5;4	F	No	Mild	Mild	Mod.	No	No	8.11	> 4
135	5;3	F	Yes	Mild	Mild	Mod.	No	No	2.92	2;9 – 3;0
136	5;2	M	Yes	Mild	Mild	Mod.	No	No	3.06	2;9 – 3;0

*Parent Questionnaire was not returned but one of the parents attended the narrative informal assessment and expressed concern about the child's speech and language abilities.

During the assessment, three children (male aged 3;5, female aged 5;3, male aged 5;2) were observed to be replacing the sound of certain letters in a word (e.g., the sound /r/ was replaced with the sound /w/), omitting the first syllable of a word, and inserting an additional letter in a word. One child (female aged 5;3) needed prompts to retell the story in each page and responded better to close-ended questions rather than open-ended questions. Another child (female aged 5;3) produced short phrases to describe the Frog story.

One child (male aged 3;5 years) said the same word to retell the whole Frog story and used gestures to describe the pictures in the story. This child's mother attended the assessment and was concerned about her child's speech and language abilities. The mother said that her child was only able to say two words to express his needs. There was no more information regarding the child's speech and language abilities since the parent questionnaire was not returned. Only one child (female aged 5;4) could retell the story with complete sentences and without prompts. The MLU result of this child showed that it was equivalent to> 4 years old.

The narrative assessment results seemed to be comparable with the teacher screening results for the Syntax and Narrative language areas for some children. Four children (male aged 3;5, female aged 5;3, female aged 5;3, male aged 5;2) who produced MLU below their chronological age also had a teacher concern (either mild or moderate) in Syntax and Narrative language areas. However, one child (female aged 5;4) who was able to retell the story without prompts and produced MLU equivalent to > 4 years old also had a teacher concern (either mild or moderate) in Syntax and Narrative language areas.

Among the four children who produced MLU below their chronological age, two children (male aged 3;5, female aged 5;3) had a teacher concern (either mild or moderate) in both the Vocabulary and Comprehension language areas. Interestingly, the other two children (female aged 5;3, male aged 5;2) had no teacher concern in both the Vocabulary and Comprehension language areas.

For the language area of Articulation, among the four children who produced MLU below their chronological age, three children (female aged 5;3, female aged 5;3, male aged 5;2) had a teacher concern (either mild or moderate), and one child (male aged 3;5) had no teacher concern in Articulation area. The teacher screening results for this child's Articulation skills (male aged 3;5) is interesting since the teacher and parent (mother) verbally stated that they were concerned that he could not express himself clearly. The details of the narrative language sampling result for each child are provided in appendix G.

5.3 Parent Questionnaire (Whitworth *et al.*, 1993) Results

This section describes the results from the parent questionnaire. There were 88 questionnaires returned to the researcher. Among the returned questionnaires, 23 questionnaires were incomplete because some items were unanswered, and therefore could not be analysed. After data cleaning, 65 completed questionnaires (45.1%) were analysed.

The parent questionnaire contains a total of 23 questions divided in three sections. The first section has five questions asking information about their child's speech and language development history. The second section has thirteen questions asking information about their child's speech and language abilities. The third section has six questions asking information about the parents' socioeconomic background.

The parent questionnaire results showed that 7 of 65 parents (10.8%) reported they had concerns about their child's speech and language abilities. Fifty eight of the 65 parents (89.2%) did not have concerns about their child's speech and language abilities. Among the 7 parents who reported they had concerns about their child's speech and language abilities, one parent reported their child was attending speech and language therapy. The sections below present the information collected from the completed parent questionnaires in detail.

5.3.1 Information about Parents' Socioeconomic Status

This section presents a description of the socio-economic status of the parents. The majority of the questionnaires were completed by the child's mother (n=57, 87.7%; fathers n=8, 12.3%). Most parents were in the age range of 30 – 39 years old (n=51, 78.5%) and 40 - 49 years old (n=12, 18.5%) and 3.1 % of parents (n=2) were in the age range of 20 - 29 years old. Most parents (n=48, 73.8%) had a bachelor's degree, 16.9% of parents (n=11) had a master's degree, and 9.2% of parents (n=6) had a high school diploma as their latest completed education.

Most parents were employed (n=41, 63.1%), 35.4% of parents (n=23) were home makers or students, 1.5% of parents (n=1) identified themselves as unemployed. The majority of the

parents (n=50, 76.9%) reported household income of more than 9 million rupiah (category high), 15.4% of parents (n=10) reported household income between 5 – 9 million rupiah (category middle), and 7.7% of parents (n=5) reported household income between 3 – 5 million rupiah (category low). Table 5.7 presents the information about the parents' demographic.

Table 5.7 Parents' Demographic Information (n=65)

Status		Mother	Father		Total
	Number	57	8		65
	Percentage	87.7%	12.3%		100%
Age		20 - 29 years old	30 - 39 years old	40 - 49 years old	
	Number	2	51	12	65
	Percentage	3.1%	78.5%	18.5%	100%
Education		High School	Bachelor's degree	Master's degree	
	Number	6	48	11	65
	Percentage	9.2%	73.8%	16.9%	100%
Work status		Out of work	Homemaker/Student	Working	
	Number	1	23	41	65
	Percentage	1.5%	35.4%	63.1%	100%
Income		Low (<3 up to 5)	Middle (5 – 9 mil)	High (> 9 mil)	
	Number	5	10	50	65
	Percentage	7.7%	15.4%	76.9%	100%

The family socioeconomic status was determined from three components which were the parents' educational background, employment status, and family monthly income (see 4.6.1.2).

Table 5.8 Family Socioeconomic Status

Socioeconomic Status	Low SES	Middle SES	High SES	Total
Number	2	9	54	65
Percentage	3.1%	13.8%	83.1%	100%

5.3.2 Information about Child Developmental History

This section describes information about the history of children's development, as reported in the parent questionnaire. Thirty-six children (55.4%) were firstborn children, and 29 children (44.6%) were later born children. Most parents (n = 63, 96.9%) reported that their child was born full-term, and two parents (3.1%) reported their child was born prematurely.

Most children (n=45, 69.2%) said their first word before the age of 12 months, 18 children (27.7%) produced their first word between the age of 12 – 18 months, and 2 children (3.1%) produced their first word after the age of 18 months.

There were 50 children (76.9%) who produced their first phrase between the age of 12 months and 18 months old. Twelve children (18.5%) produced their first phrase when they were was between 18 – 24 months, and 3 children (4.6%) produced their first phrase after they reached the age of 24 months. All parents (n=65, 100%) reported their child did not have any previous medical diagnoses. Table 5.9 below describes the children's language development history.

Table 5.9 Information about Children's Language Development History

Children's Language Development History				
	Firstborn	Later born		Total
Birth order	36 (55.4%)	29 (44.6%)		65 (100%)
	Full term	Premature		
Birth condition	63 (96.9%)	2 (3.1%)		65(100%)
	< 12 months	12 - 18 months	> 18 months	
First word	45 (69.2%)	18 (27.7%)	2 (3.1%)	65 (100%)
First word combinations	50 (76.9%)	12 (18.5%)	3 (4.6%)	65 (100%)
	None	Yes		
Diagnosis	65 (100%)	0 (0%)		65 (100%)

5.3.3 Information about Children's Speech and Language Abilities

This section describes information about the children's speech and language ability reported by parents in the questionnaire. The parents provided information about their children's current abilities at the time they were completing the questionnaire. The first 10 items asked about children's speech and language abilities. These items required one response out of four responses. The choice responses were 'always,' 'mostly,' 'sometimes,' and 'not often.' The additional three items asked about parents' concern and children's history with speech and language therapy. The paragraphs below describe each item's statement followed by the answers as reported in the parent questionnaire.

Item 1: My child says his/her words correctly. There were 23 parents (35.4%) who reported their child always said words correctly, 56.9% of parents (n=37) reported their child mostly said words correctly, and 7.7% of parents (n=5) reported that their child sometimes said words correctly.

Item 2: People who do not know my child do not understand his/her speech. Three parents (4.6%) reported that their child's speech was always not understood by people who did not know their child. Two parents (3.1%) reported their child's speech was mostly not understood by people who did not know their children. Approximately 30.8% of parents (n=20) reported that sometimes their child's speech was not understood by people who did not know them. Most parents (n=40, 61.5%) reported tit was not often that their child's speech was not understood by people who did not know them.

Item 3: My child uses gestures and/or noises when talking. When asked whether their child used gestures and/or noises when talking, 3.1% of parents (n=2) reported their child always used gestures and/or noises when talking. There were 6.2% of parents (n=4) who reported that their child mostly used gestures and/or noises when talking. 18.5% of parents (n=12) reported their child sometimes used gestures when talking. There were 72.3% of parents (n=47) who reported that it was not often their child used gestures when talking.

Item 4: My child is reluctant to talk in a group but will talk to one person. When asked whether their child was reluctant to talk in front of many people but was willing to talk to one person, three parents reported (4.6%) child was always like that. There were 15.4% of parents (n=10)

who reported their child was mostly reluctant to talk in a group. There were 26 parents (40%) who reported their child was sometimes like that. There were 26 parents (40%) who reported their child was not often reluctant to talk in a group but would talk to one person.

Item 5: My child stutters when he/she is talking. Two parents (1.2%)) reported their child sometimes stuttered. Most parents (n=63, 96.9%) reported t their child did not often stutter.

Item 6: My child needs to have instructions repeated because he/she does not understand them. When asked whether their children needed instructions repeated because he/she did not understand them, two (3.1%) parents reported their child mostly needed instructions to be repeated. 27 parents (41.5%) reported their child sometimes needed instructions repeated to them, 55.4% of parents (n=36) reported that it did not often happen.

Item 7: My child enjoys talking about books, pictures and toys. Many parents (n=32, 49.2 %) reported their child always enjoyed talking about toys, pictures, and books, 41.5 % of parents (n=27) reported t their child mostly enjoyed these activities, 7.7 % of parents (n=5) reported that their child occasionally sometimes these activities, and 1.5 % of parents (n=1) reported that their child did not often enjoy these activities.

Item 8: My child asks a lot of questions. When asked whether their children asked a lot of questions, 63.1% of parents (n=41) reported their child always asked a lot of questions, 32.3% of parents (n=21) reported their child mostly asked a lot of questions, 3.1% of parents (n=2) reported their child sometimes asked a lot of questions, and 1.5% of parents (n=1) reported their child did not often ask a lot of questions.

Item 9: My child has trouble putting words together. Concerning the question of whether their child had trouble putting words together into sentences, 1.5 % of parents (n=1) reported that it always happened with their child. There were 1.5 % of parents (n=1) who reported that their child mostly had trouble with it. There were 35.4 % of parents (n=23) who reported that their child sometimes had trouble putting words or sentences together and 61.5 % of parents (n=40) reported that it was not often the case with their child.

Item 10: My child says very little and is not very talkative. When asked whether their child said very little and was not very talkative, 1.5% of parents (n=1) reported that their child mostly showed these tendencies, 7.7% of parents (n=5) reported that their child was sometimes like this while many parents (n=59, 90.8 %) reported that their child was not often behaving this way.

When asked whether they are concerned about the way their child talks, 89.2% of parents (n=58) reported that they were not concerned whereas 10.8 % of parents (n=7) reported that they were concerned. Most parents (n=64, 98.5%) reported that their child was not currently attending speech and language therapy, compared to 1.5% of parents (n=1) who reported that their child was currently attending speech and language therapy. All parents (n=65, 100 %) reported that their child never had any speech and language therapy in the past.

Table 5.10 Information about Children's Speech and Language Abilities

Children's Speech and language Abilities						
	Item	Always	Mostly	Sometimes	Not often	Total
1	My child says his/her words correctly	23	37	5	0	65
2	People do not understand his/her speech	3	2	20	40	65
3	My child uses gestures and/or noises	2	4	12	47	65
4	My child is reluctant to talk	3	10	26	26	65
5	My child stutters when he/she is talking	0	0	2	63	65
6	My child needs instructions repeated	0	2	27	36	65
7	My child enjoys books, pictures and toys	32	27	5	1	65
8	My child asks a lot of questions	41	21	2	1	65
9	My child has trouble putting words together	1	1	23	40	65
10	My child says very little and isn't very talkative	0	1	5	59	65
		Yes	No			
11	Concern about the way my child talks	7	58			65
12	My is attending speech language therapy	1	64			65
13	My child used to attend speech language therapy	0	65			65

5.3.4 Agreement between Teacher Concern and Parent Concern on Children with SLCN

This section presents the agreement between the number of teacher concerns indicated in the Teacher Screening Observation Checklist (Heilmann *et al.*, 2010) and the number of parent concerns indicated in the Parent questionnaire (Whitworth *et al.*, 1993). The Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) results showed that there were 80 of 144 children (55.6%) with either a teacher rating of mild concern or a teacher rating of moderate concern, and there were 64 of 144 children (44.4%) with a teacher rating of no concern. The parent questionnaire results showed that there were 7 of 65 parents (10.8%) with concerns over their children's speech and language abilities. There were 58 of 65 parents (89.2%) with no concerns about their children's speech and language abilities. Based on this straightforward comparison, the teacher reported more concerns over the children's speech and language abilities (n=80, 55.6%) than parents (n=7, 10.8%). Table 5.11 below presents the comparison between the teacher concern and the parent concern.

Table 5.11 Comparison between Teacher Concern and Parent Concern

Teacher concern			Parent concern		
	Number	Percent		Number	Percent
Teacher concern	80	55.60%	Parent concern	7	10.8%
No teacher concern	64	44.40%	No parent concern	58	89.2%
Total	144	100%	Total	65	100%

As shown in table 5.12, teachers and parents agreed on 7 of 144 children that participated in the current study. There were two children with both teacher and parent concern with a moderate teacher concern, and the remaining five children, had a mild teacher concern. Parents' concern as indicated in the parent questionnaires included unclear speech, not fluent talking, and difficulties in communicating with others.

Table 5.12 Teacher and Parent Agreement for 7 Children with a Parent Concern

ID	Age (In years)	Gender	Teacher screen	Parent concern	Additional information from Parent Questionnaire
4	4;2	M	Moderate concern	Yes	

22	5;1	M	Mild concern	Yes	
28	3;0	M	Mild concern	Yes	
39	5;4	M	Mild concern	Yes	
49	3;9	M	Mild concern	Yes	Not fluent talking
55	4;3	F	Mild concern	Yes	Difficulty comm with others
127	5;3	F	Moderate concern	Yes	Unclear

Among the 58 children with no parent concern, two children had a moderate teacher rating concern, 49 children had a mild teacher rating concern, and seven children had no teacher rating concern. The result suggests some agreement between teacher concern and parent concern. It also suggests that teachers reported more concerns over children's possible SLCN than parents. No information was available for 79 children since the parent questionnaires were not returned or incomplete.

5.4 Results of Strengths of Difficulties Questionnaire (Goodman, 1997)

This section presents the result of the SDQ (Goodman, 1997). Teachers completed SDQ for 25 of the cohort of 144 children (17.4%). No information was available about the social emotional behavioural status for 119 of 144 children because the teachers did not return the SDQ despite multiple reminders. This sample included 12 male (48%) and 13 female children (53%), with an age range of 4 to 6 years old. There were eight children aged four years (32%), 10 children aged five years (40%) and seven children aged six years (28%). There were five subscales of the SDQ (Goodman, 1997) completed by the teachers: conduct problems scale, hyperactivity scale, emotional problems scale, peer problems scale and prosocial scale.

5.4.1 Results of the Four Main Subscales (Emotional Problems, Conduct Problems, Hyperactivity, Peer Problems) of the Teacher-rated Strengths and Difficulties Questionnaire

The results show that the teachers perceived the children in this sample to be on the 'close to average' classification in four main subscales of the Strengths and Difficulties Questionnaire. There were 21 children in the Emotional Problems subscale, 24 children in the

Conduct Problems subscale, 22 children in the Hyperactivity subscale, and 17 children in the Peer Problems subscales who were rated with 'close to average' classification.

In summary, the results of the four main subscales in the Strengths and Difficulties showed that most children in the sample were rated as 'close to average' or typical behaviour compared with the normative sample (see Table 5.13).

Table 5.13 Results of Children's SDQ (Goodman, 1997) in Four Main Subscales (Emotional, Conduct, Hyperactivity and Peer Problems) (n=25)

	Emotional problems	Conduct problems	Hyperactivity	Peer problems
Close to average	21	24	22	17
Slightly raised	2	0	1	6
High	1	0	1	2
Very high	1	1	1	0
Total	25	25	25	25

5.4.2 Results of Children's SDQ (Goodman, 1997) in the Subscales of Prosocial, Externalising, Internalising and Total Difficulties (n=25)

The results of the Prosocial subscale showed that most children (n=22) were rated with 'close to average' classification. The results of the Externalising subscale were obtained by calculating the total results score of Conduct Problems subscale and Hyperactivity subscale. The results showed that most children (n=22) were rated with 'close to average' classification. The results of the Internalising subscale were obtained by calculating the total results score of Emotional Problems subscale and Peer Problems subscale. The results showed that most children (n=16) were rated with 'close to average' classification. The results of the Total Difficulties subscale showed that most the children (n=22) were rated with 'close to average' classification. In summary, the results of the Prosocial, Internalising, Externalising, Total Difficulties subscales showed that most of the children was rated as 'close to average' or showing typical behaviour (see Table 5.14).

Table 5.14 Result of Children's Scores in Prosocial, Externalising, Internalising, and Total Difficulties Subscales of the SDQ (Heilmann *et al.*, 2010)

Classification for Prosocial	Prosocial score	Classification	Externalising score	Internalising score	Total Difficulties Score
Close to average	22	Close to average	22	16	22
Slightly lowered	1	Slightly raised	2	8	1
Low	0	High	0	0	0
Very low	2	Very high	1	1	2
Total	25	Total	25	25	25

5.4.3 Results of the Total Difficulties Subscale Distributed by age

The results of the Total Difficulties subscale showed that teachers perceived most children in the age group of 4-5 years and 5-6 years, as showing typical behaviour (see table 5.4.3). There was no information for children in the age group of 3 – 4 years since the SDQ (Goodman, 1997) were not returned.

Table 5.15 Results of the Total Difficulties Subscale Distributed by Age

	3 -5 years old	4 - 5 years old	5 - 6 years old	Total
Close to average	0	16	6	22
Slightly raised	0	0	1	1
Very high	0	1	1	2
Total	0	17	8	25

5.4.4 Results of the Total Difficulties Scale Distributed by Gender

The results of the overall SDQ (Goodman, 1997) score or the Total Difficulties Scale score, as distributed by gender, showed that there were 10 out of 12 boys who were rated with 'close to average' classification. The results for the girls showed that there were 12 out 13 girls who were rated with 'close to average' classification.

Table 5.16 Results of the Total Difficulties Scale Distributed by Gender

	Male	Female	Total
Close to average	10	12	22
Slightly raised	1	0	1
Very high	1	1	2
Total	12	13	25

5.4.5 Comparison between Total Difficulties Scale Results and Teacher Screening Results

The comparison between results of the total difficulties scale and teacher screening results showed that among the children with a no teacher concern (n=10), there were 9 out of 10 children (90%) rated with 'close to average' classification. As for the children with a teacher concern, there were 13 out of 15 children (86%) rated with 'close to average' classification. This result showed that most children with no teacher concern (9 of 10 children) and children with a teacher concern (13 of 15 children) were rated with 'close to average' classification. The table below describes the comparison between total difficulties subscales and teacher screening results.

Table 5-17 Comparison between Total Difficulties Subscale Results and Teacher Screening Observation Checklist

Teacher screening results			Total
	No concern	Teacher concern	
Close to average	9	13	22
Slightly raised	0	1	1
High	0	0	0
Very high	1	1	2
	10	15	25

5.5 Summary

This chapter described the Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) results of 144 Indonesian kindergarten children, Narrative Informal Assessment (Heilmann *et al.*, 2010), the Parent Questionnaire (Whitworth *et al.*, 1993) results (n=65), and Strengths and Difficulties Questionnaire (Goodman, 1997) results (n=25). The chapter also described the agreement between teacher concern and parent concern and the association between a teacher concern and children's socioemotional behavioural status.

The results showed that teachers had concerns about the speech and language abilities of more than half of the children in their classrooms. More specifically, there were 80 of 144 children (55.6%) who were rated by teachers as showing mild or moderate concern. Among the five language areas assessed, teacher had the most concerns, either mild or moderate concern, about children's Narrative skills, and the least concerns about children's Vocabulary skills.

In comparison with parent concern as indicated in the parent questionnaire (n=65), parents were concerned about 7 of 65 children (10%). This number is lower than results from teacher screening observation checklist as mentioned in the above paragraph. However, it is worth noting that there was no information about parent concern 79 children due to unreturned and/or incomplete questionnaires. With this missing data, the true number of children with parent concern was not available. Among the children with parent concerns (n=10), both parents and teachers had concerns for 7 children. Specifically, 5 children had mild rating concerns and 2 children had moderate rating concerns. Among the children with no parent concerns (n=58), 2 children had moderate rating concerns, 49 children had mild rating concerns, and 7 children had no teacher concerns. This comparison suggests that teachers reported more concerns about children's speech and language abilities than parents.

The result from the Narrative Informal Assessment (Heilmann *et al.*, 2010) showed that four of five children had a mean length of utterance below their chronological age, suggesting difficulties in expressive language skill. Similar to the pattern found from the teacher screening observation checklist general results, the most reported concern, either mild or moderate concern, for all five children who completed the narrative task is in Narrative and

Syntax skills. In agreement with the teacher screening observation checklist general results, the least reported concern is in Vocabulary and Comprehension skills.

In terms of teacher concern about children's socioemotional and behavioural status, the results from the teacher-rated SDQ (Goodman, 1997) showed that most children were rated as 'close to average'. The present study found no association between teacher screening results and children's socioemotional and behavioural status, as indicated from the SDQ (Goodman, 1997) results. However, the teachers only completed the SDQ (Goodman, 1997) for 25 of 144 children (17.4%); therefore, no conclusion could be made from the results.

6 Chapter 6: Kindergarten Teachers' Perspectives Regarding SLCN in Indonesia

6.1 Introduction

This chapter presents findings of focus groups conducted with 10 kindergarten teachers recruited from two schools in Jakarta, Indonesia. Both schools participated in phase 1 of the study. This chapter is organised into four sections. The first section provides an overall structure of the chapter, the second section describes the context of the focus group, the third section presents the data analysis from focus groups, and the fourth section presents the summary of the findings.

6.2 Context of the focus groups

Inclusive education is a recent widespread concept in Indonesia. It was first implemented legally through the issuance of Permendiknas in 2009 (Wahyuni, 2017). The concept of inclusive education regarding children with special educational needs in general, and children with SLCN is a new concept for most teachers who participated in the focus group discussion.

The researcher conducted two focus groups with ten kindergarten teachers. There were six participants in Focus Group 1, and four participants in Focus Group 2. All participants were female, and each had a bachelor's degree. On average, each teacher had over 8 years of experience teaching early years. There were new teachers (number 7, 8, 9) in Focus Group 2 who did not previously participate in phase 1 of the study. The participants came from a variety of educational backgrounds. None of the teachers had an early childhood education degree. Kindergarten teachers' recruitment in Indonesia is not based on a particular educational background and does not require a teaching certificate. As mentioned in the article published by the Ministry of Education and Culture in Indonesia, all preschool and kindergarten teachers, as a minimum, should have a bachelor's degree from any field of study (Paud, 2016). Therefore, it is uncommon for preschool and kindergarten teachers to have an early childhood education degree. The description of the participants is presented in the table 6.1 below.

Table 6.1 Description of Teacher Participants Across the Two Focus Groups

No	Focus Group	Background Education	Role	Experience Teaching Early Years
1	1	Communication	Classroom Teacher	8 years
2	1	English Literature	Classroom Teacher	3 years
3	1	Guidance Counselling	Classroom Teacher	38 years
4	1	Law	Classroom Teacher	9 years
5	1	English Literature	Classroom Teacher	5 years
6	1	Literature & Language	Classroom Teacher	3,5 years
7	2	Education Management	Classroom Teacher	3 months
8	2	Primary Years Education	Classroom Teacher	3 months
9	2	Economy	Classroom Teacher	3 months
10	2	Guidance Counselling	School Principal	19 years

6.3 Analysis of The Data from The Focus Groups

The following sections present the data from the two focus groups with 10 kindergarten teachers recruited from two schools. The aim was to investigate the thoughts, feelings, and beliefs of kindergarten teachers regarding SLCN in Indonesian kindergarten children. Participants in the two focus groups were asked a set of pre-determined questions. The thematic analysis, described in the methods section, was used to analyse the focus group data, and this resulted in five main themes, and their corresponding sub-themes (see Table 6.2). Examples of extracts from the data are included to illustrate the participants' views. Extracts in italics are additional words to clarify the sentences. Three dots at the beginning of an extract or between sentences represent sections where the full extract has been omitted for this thesis. The five main themes are:

1. Challenges in building a collaborative relationship with parents
2. Parents' lack of interaction with children as a cause of SLCN
3. Teachers need further knowledge and training in SLCN

4. Types of SLCN that draw teachers' attention
5. Various ways teachers support children with SLCN in the classroom

The table 6.2 provides a breakdown of the main themes with the corresponding main themes.

Table 6.2 Five Main Themes and The Corresponding Subthemes across the Two Focus Groups

No	Main themes	Subthemes
1	Challenges in a building a collaborative relationship with parents	1. Lack of cooperation from parents, 2. Parents' lack of awareness of SLCN 3. Fear of negative impact on the child
2	Parents' lack of interaction with children as a cause of SLCN	1. Parent role in speech, language, and communication development 2. Parent role in contributing to SLCN in their child 3. Reciprocal verbal interaction as a means to support children with SLCN
3	Teachers need further knowledge and training in SLCN	1. Teachers doubting their current knowledge and training 2. Teachers' desire for support from the experts 3. Confusing terminology in the field of children's speech, language, and communication
4	Types of SLCN that draw teachers' attention	1. Type of SLCN reported by teachers 2. Social behaviours observed in children with SLCN
5	Various ways teachers support children with SLCN in the classroom	1. Providing more attention and guidance to children 2. Using alternative means of communication with children 3. Doing extra activities to motivate children 4. Seeking support from colleagues or other professionals

6.3.1 Theme 1: Challenges in Building a Collaborative Relationship with Parents

This theme describes how teachers perceive the challenges in building a collaborative relationship with parents. These perspectives were shared by teachers across the two focus groups in the two schools. These subthemes below illustrate theme 1 in a more detailed manner:

1. Lack of cooperation from parents,
2. Parents' lack of awareness of SLCN
3. Fear of negative impact on the child

6.3.1.1 Theme 1: Subtheme 1: Lack of Cooperation from Parents

In both groups, parents' lack of cooperation was perceived as the primary obstacle in getting the support that the children with SLCN need. However, this lack of cooperation is perceived differently between the two groups. In group 1, parents' lack of cooperation was shown through their reluctance to admit their child's condition. Parents who did not accept their child's condition would hinder efforts, such as working together with teachers to confirm the child's SLCN and consulting with the experts, to support a child with SLCN. This perspective is illustrated by extract 9.02 below.

Extract 9.02:

YP04: "For me the main (*thing*) is there is an admission and there is (*an effort*) from parents to have consulted first with the experts."

"…so not only from the judgment of the teachers but (*also*) the true admission from parents. From this, (*the relationship*) may become more cooperative."

Meanwhile, in group 2, the lack of cooperation was shown in the way parents ignore the school rules. These extracts (16.04, 16.06, 16.12) illustrate the way teachers were lenient about parents breaking the rules of handphone because of the circumstances surrounding the response of a child with SLCN. Teachers were being lenient about the handphone rules because the child responded with a tantrum. Teachers saw this as the fault of parents who allowed the child to use handphones even in school. Extract 16.06 also highlighted the way teachers perceived the responsibility of managing a child with SLCN. The responsibility of

managing a child with SLCN was perceived as mainly the parents' responsibility. Similar to group 1 perspective, teachers in group 2 also viewed lack of cooperation as an obstacle to supporting a child with SLCN.

Extract 16.04:

BC01: ...it was difficult to get parents to cooperate. Every day (*they*) gave him handphone. Uh-huh. If the child forgot (*about the phone*), sometimes the parents (*would say*)," The handphone is in your bag, okay." The parents reminded him that his handphone was inside the bag. He learned (*in class*) while holding a handphone. I (*needed to*) call out (*the boy's full name*) several times until he (*would answer*)," Teacher."

Extract 16.06:

BC01: ...Moreover, sometimes I am in a bit of a difficult (*position*) too. I already spoke to the parents, "Mom, if possible don't give (*him*) handphone." Something like that. Because parents would demand that their children could (*do some skills*). Because they have been enrolled in school. Expensive fees. However, if the parents did not show any cooperation. This could not be done.

Extract 16.12:

BC04: I confiscated (*the handphone*) once, but he cried until he howled. Like someone – yes – (*he*) became the centre of attention of his friends. "What's wrong? What's the matter?" Something like that. To the point we called his mother, "How do we deal (*with this*), ma'am?" Something like that. This meant that he was very upset to be without handphone. Sometimes, during birthday celebrations, some children celebrate their birthdays in school, when their mothers are around, they will ask, "Mom, handphone, handphone," Something like that. The parents should (*say*), "Oh no, you are doing this now. If (*you play on your handphone*), you will not get (*to play*) a game, you will not get a goodie bag," Something like that. Automatically it should be the parents who provide direction eh so (*they*) will not remember (*to ask for*) handphone again. (*Parent should say*), "Yes you may (*have the handphone*) but later." But still, his mother gave him (*the handphone*). Even when there was a clown performing (*or*) other interesting activities, still there was no there was no (*engagement*), he kept to himself playing (*on his handphone*).

One teacher from group 2 suggested that working parents place all the responsibilities of supporting children with SLCN at the school. This responsibility was rejected by teachers preferring cooperation between parents and teachers. The 'red connecting thread' highlighted by a teacher in extract 19.18 meant that a shared responsibility was desired. A shared responsibility was viewed as parents supporting the children at home in the same manner as teachers supporting children with SLCN in school.

Extract 19.18:

BC04:" The majority (*of parents*) are working. So, they surrender (*the education of the child*) fully to the school. We cannot do this. There should be a cooperation, a red (*connecting*) thread between what is taught in school, with what (*is taught*) at home."

Meanwhile, a teacher from group 1 argued that the responsibility of developing children's speech, language, and development was more on the parents (extract 8.02). It was suggested that parents placed all responsibilities of educating the children, including supporting children with SLCN, on the school. Again, this suggestion was rejected with the teacher desiring for a more balanced responsibility between teachers and parents.

Extract 8.02:

YP02*:* "For me, it is more about the help of the family, I mean the one that should be more dominant (*in providing help*). Because for the children, their first education is from home. Parents should be able to teach (*their child*). Then after that, the children will be able to (*speak*) when they are sent to school. Supposedly it is like that. But sometimes most parents, some ah I mean, force everything (*to be taught*) in the school. That is wrong. There should be a balance between school and home."

Another reported challenge was the lack of trust from parents, as illustrated by extract 8.14 below. Lack of trust was viewed as one reason teachers could not get parents to collaborate with them. However, it is not clear whether trust, in this case, means trusting the teachers to support their child with SLCN or trusting the teachers to identify children with SLCN correctly. One teacher perceived parent cooperativeness as not making excuses (to deny a child's SLCN) and synchronising the support for a child with SLCN at home and school.

Extract 8.14:

YP06:" As someone who taught children with speech delay. For us, it is more about the trust from parents. So perhaps if parents, okay, trust (*us*), do not have many excuses or something. Always report their child's progress, the things taught at home by the parents.

...As long as there is, what's the word, a trust from parents and cooperation to report the child's progress. What is being taught at home by parents and perhaps we can do the same in school. "

6.3.1.2 Theme 1: Subtheme 2: Parents' Lack Awareness of SLCN

A common perspective among the teachers from the two groups was that parents were lacking awareness of SLCN. A teacher from school 1 suggested that work prevented parents from being aware or noticing that their child displays signs of SLCN. A view shared among teachers across the two groups was that lack of awareness was related to parents' unaccepting attitude. This view is illustrated by extract 12.04 and extract 19.25.

Extract 12.04:

YP04:"For me (parent awareness) is still low, maybe because they are busy. First of all, many parents are working parents. So, they may not notice. They may not be aware that their child actually has speech delay. They are busy working."

Extract 19.25:

BC01:" I think they don't know (what SLCN are). The most important thing that the child talks. Able to speak. (It does not matter) whether it is clear not, the important thing is the child talks.

Parents' lack of awareness about SLCN was displayed in their attitudes towards children with SLCN. Some parents in Focus Group 1 acknowledged their child possibly had SLCN but chose not to do anything about it, as illustrated by extract 12.08 below.

Extract 12.08:

YP05: "There are also the ones that (*say*), "Yes Miss, yes, yes, yes, yes, yes." Yeah, there are people like that."
Researcher: "What did parents' "yes" mean?"
YP05: "For me personally, their "yes" meant that they already knew, no need to talk about it. Yes, yes thank you (*but no thanks*)."

There was a general understanding that parents' lack of awareness regarding SLCN in children had caused them to show an unaccepting attitude. As viewed in extract 11.14, Teachers viewed parents' unaccepting attitude as the stumbling block towards getting access to support a child with SLCN. When parents were in denial about their child's SLCN, teachers chose not to pursue the matter further, consequentially, the child with SLCN would not get support.

Extract 11.14:
YP01:"So, it was the parents who became the obstacle to, (we) guessed there was something (wrong), but we wanted to work together, but the parents would not, (so we) let it be."

Some parents compared their child with other children and took comfort with the fact that other children were not speaking as well, as illustrated by extract 12.23 below.

Extract 12.23:
YP02: "It maybe because parents who think that other children his age are experiencing something similar. How do I say it? Oh, for example, my child is not yet able to speak. Maybe there is also a comparison. Oh, that child at her age is the same. Maybe it is something common."

Some other parents directly denied the possibility that they might have SLCN, as illustrated by extract 12.12 below.

Extract 12.12:

YP01: "When I spoke to them, yes, "There may actually be something wrong (with their child)." "…Their level of awareness is still low because (they) think that "There's nothing wrong with my child, nothing wrong."

It was argued that an unaccepting attitude was related to parents wanting to protect their image as good parents, as illustrated by extract 12.15. There was a feeling that it may reflect on their parenting and how they teach the child. Accepting that their child showed signs of SLCN might tarnish their (good parents) image.

Extract 12.15:

YP06: "It goes back to image, if there is something (wrong) with their child, it traces back to how parents teach their children. It is usual like that. Their image".

It was also suggested that an unaccepting attitude was related to avoiding feeling sad, as illustrated by extract 12.14. Parents continued to deny their child's condition to avoid feeling sad. The feeling of sadness was not further elaborated. However, the feeling of sadness might be related to possible stigmatisation of the child with SLCN. Feeling of sadness might also be related to the grieving of losing the child that they expect to be. Since sadness was not further elaborated, it is difficult to confirm the meaning of this feeling of sadness.

Extract 12.14:

YP01: "In Indonesia, if you have a child that is like, they may feel sad or something, (and say), "Nothing wrong with my child".

There were concerned that parents' unaccepting attitude kept children with SLCN from getting early intervention. A teacher suggested that early intervention was crucial in providing opportunities for the child for a catch-up of speech, language, and communication, as illustrated in extract 8.17.

Extract 8.17:

YP01: …if the parents are not in denial and able to work together with us, this child can get help, (get) early intervention." "…because from what I know about children who have

something special, if the treatment is early, (their problem) will subsequently be handled faster." "…so (the child) can help a development like a normal child. Even though it is not going to be the same but (this child) can (do it)."

Furthermore, early intervention was crucial in reducing the potential negative impact of SLCN. The same teacher showed concern about how parents' behaviour could be harmful to the child. A child with SLCN would inevitably be labelled by their peers. The label arose from the child's display of behaviours such as an inability to speak, speaking unclearly, inability to be still, or other misbehaviours. A real-life example of a child with SLCN being labelled was illustrated by extract 12.25.

Extract 12.25

YP01: "In reality if we are late in identifying, where actually the case is that it's a pity for the child. Because there will be labelling given to the child for example. If (they) cannot be still, (if they) misbehaved, something of the sort. If they cannot speak, (others will wonder)," How come he/she is not speaking yet? So (there is a labelling) from their friends as well. One student of mine who speak unclearly was once laughed at. During student page activity, he was being laughed at," His speech is not clear right?".

6.3.1.3 Theme 1: Subtheme 3: Fear of Negative Impact on the Child

One teacher in Focus Group 1 suggested that parents did not accept their child's SLCN out of fear that their child might be treated differently (possibly in a negative way). It was also suggested that parents were afraid that their child might have to undergo assessment that potentially had a negative impact. It was further suggested that the label might keep the child from progressing to a higher school level. Extract 12.21 below illustrates this perspective.

Extract 12.21

YP06: Fear in a sense that their children may be judged a certain way, examined in various ways or something of the sort. There is a fear that (the children getting) examined in various ways may affect his psychological (well-being). Or even when he wants to get to a higher level,

(the parents may fear) of the judgment of the children, they may not be accepted to a higher level.

Theme 1 describes teachers' challenges in building a positive relationship with parents of children with SLCN. This theme illustrates the teachers' views that parents' actions negatively impacted children's support with SLCN. Theme 1 also highlighted the teachers' views that parents lacked awareness about SLCN.

6.3.2 Theme 2: Parents' Lack of Interaction with Children as a Cause of SLCN

A recurrent theme amongst the teachers across the two groups was the belief that parents are responsible for the occurrence of SLCN in their children. The subthemes for theme 2 are:

1. Parent role in speech, language, and communication development
2. Parent role in contributing to SLCN in their children
3. Reciprocal verbal interaction as a means to support children with SLCN

These subthemes provide more details about the theme 2.

6.3.2.1 Theme 2: Subtheme 1: Parent role in speech, language, and communication development

The view that parents were primarily responsible for their children's speech, language and communication development was illustrated by extract 4.30, extract 8.02, extract 15.29, and extract 19.25. Mothers were suggested explicitly as the person with a primary role in children's speech, language and communication development. The parent's role is to model the 'correct' and 'clear' way of speaking to children as early as two years old. The perspective that parents were responsible for their children's speech development was echoed by another teacher in the same group. The teacher believed that children should have been able to speak by the time they entered school. Parents were also perceived to have a role in modelling the use of vocabulary words to their children. Teachers believed that parents had a more prominent role in developing their child's speech, language, and communication development as they are at home with their child. Parents were also perceived as lacking the

knowledge to recognise SLCN in children. It was suggested that parents' lack of knowledge caused them to miss how to best support their children's speech, language, and communication development. Support such as teaching the child to speak clearly, as opposed to, just speak, or modelling the 'correct' phrases, as opposed to, imitating children's baby talks. The extract 19.25 illustrates the use of baby talks of "*mau mimik*?" ("want sippy?"), and the use of the 'correct' phrase of '*minum'* ('drink'). It was suggested that parents' use of baby talk instead of 'correct' phrases caused SLCN in children.

Extract 4.30:

YP03: "Children get their first education from home, (from) parents, especially mothers. Well so ah we are as teachers become their formal education. The first education is home. The family. What I mean is that when children start their speech development when they are around two years old, more or less. Therefore, the parents have to be the model for the children. Giving correct examples. Parents should not imitate their children's words." "...we should still be speaking correctly, properly, clearly so children can see their model, their parents, having that kind of language. Even though children are in the development stage, in learning, in development stage in terms of speaking. So, it is up to us to use language correctly."

Extract 8.02:

YP02: " Because for the children, their first education is from home. Parents should be able to teach (their child). Then after that, the children will be able to (speak) when they are sent to school. Supposedly it is like that. But sometimes most parents, some ah I mean, force everything (to be taught) in the school. That is wrong. There should be a balance between school and home."

Extract 15.29:

BC01: "(He should have learned) vocabulary from his parents. Basically, the parents (should have been) more diligent in (giving him) practices because he (spent) more, more time at home than in school."

Extract 19.25:

BC01:" I think they don't know (what SLCN are). The most important thing that the child talks. Able to speak. (It does not matter) whether it is clear not, the important thing is the child talks. That's (what I get) from the parents. For example, we have a child who can speak, the parents get really excited even though (the child says)," Mau mimik." (" want sippy?") when it should be' minum' (' drink'). It comes from the parents' vocabulary. (I think) the parents are lacking (in knowledge)."

6.3.2.2 Theme 2: Subtheme 2: Parent Role in Contributing to SLCN in Children

Teachers across the two groups again brought up the perspective that the home environment was causing SLCN. Some teachers from group 2 suggested that a lack of attention to the child was the reason. The teachers suggested that parents who replaced attention with gadgets such as smartphones and iPads had caused children to have a speech delay. It was suggested that gadgets caused the child to ignore interactions with people. Parents were also viewed as enabling the excess use of gadgets. One teacher argued that advances in technology had caused the rise in the number of children with SLCN because children were using gadgets excessively, and parents did not set rules for the use of gadgets, instead, enabling it. Additionally, as previously discussed in the above paragraph, mothers were explicitly to blame for not doing enough to develop their child's speech, language, and communication. Extract 15.05, extract 19.34, and extract 19.36 below illustrates the parent role in contributing to SLCN in children, as perceived by teachers in the two groups.

Extract 15.05:

BC03: "Maybe (it is) something like this: not enough attention from the parents. When (we talk about) signs, (it is about) difficulties in expressing language and (there is a) delay in speaking. Some are like that. In the present day when children cannot sit still, (and) to calm them down, parents will automatically give them gadget. A handphone, right? Sometimes that is the cause which makes them have a delay in speaking, something like speech delay. As if they only care about their gadget. When we try talking to them, they will…, something like that. Also, the mom does not have the (good) sense in trying to train the child to speak."

Extract 19.34:

BC04:"...there are more (children with SLCN) in recent years. That's from my observation. Maybe it's due to the world (being) more high-tech. Everything is (technologically) sophisticated..."

Extract 19.36:

BC04:"...that is why we need to be smart in giving (the technology). Well actually, the point is that it is not wrong to introduce gadget or technology stuff of this current world, but it is still on the parents (who should have) a role. (Parents should say to their child)" This is the danger of playing this game too often."”

6.3.2.3 Theme 2: Subtheme 3: Reciprocal Verbal Interaction as The Means to Support Child With SLCN

Alongside the parent's role in developing their child's speech, language, communication, there was also a specific way, seen as pivotal, in supporting children with SLCN. This is referred to as reciprocal verbal interaction between parents and children. This perspective was shared amongst the teachers in group 2. It was suggested that reciprocal verbal interaction, or as the teacher termed it 'back-and-forth' speaking, would stimulate the child to speak, as illustrated by extract 15.15. Providing reciprocal verbal interaction was perceived as the role of the mothers.

Extract 15.15:

BC04: "Keep (speaking) back and forth. It is a process (for the back-and-forth) to happen because (the child) is not yet able to speak. Perhaps with the diligence of the mother in providing stimulation, the child will get used to (speaking)."

One teacher suggested that parents use open-ended questions to provide opportunities for reciprocal verbal interaction to children (extract 15.11). Another teacher suggested storybook reading by parents to encourage children to verbally respond (extract 19.15). The same teacher elaborated that parents should have guided their child to speak. There was a feeling that parents did not do these exercises because they were tired of working. Parents also seemed to be placing the full responsibility of teaching children how to speak, on the school

(extract 19.17). A perspective that was commonly shared among the teachers across the two groups. This subtheme highlighted the teacher perspective that parents should have a role in developing their child's speech, language, and development, and providing support for their child with SLCN.

Extract 15.11:

BC04:" When we can see a child has speech delay, we don't give (him/her) closed-ended questions which (require him/her to) answer by shaking (head) and nodding. We give open-ended questions, the ones that stimulate them to speak. So, essentially it is parents who should have a role (in this)."

Extract 19.15:

BC03:" If (the parents plan to) play (with their child), they should buy a children's book with lots of pictures. They should get (read) the story. Perhaps they tell the story first then they get the conclusion (of the story). That way, the child will definitely respond."

Extract 19.17:

BC03: "...read the storybook while the child is drawing. So (the story) will enter the child's ear, even when he struggles, how to say it, struggles to speak but as parents (they should) keep on guiding the child to train them to talk and train them to speak like "A! A!" something like that. Sometimes the parents get lazy. Maybe because they are tired. Tired from working, something like that. (They would say) let it be, he gets (the learning) from school."

Theme 2 describes teachers' views that parents were responsible for the occurrence of SLCN because of their lack of interaction with their children. Theme 2 illustrates teachers' view about parents' role in their children's speech, language, and communication development. This theme also underlined teachers' belief that reciprocal verbal interaction was useful in helping children develop their speech, language, and communication development.

6.3.3 Theme 3: Teachers Need Further Knowledge and Training in SLCN

Theme 3 describes the perspective that teachers lacked the knowledge and training to identify and support children with SLCN. This perspective was indicated by the discussions

about supporting children with SLCN among the teachers across the two focus groups. This theme is illustrated in more detail by the three subthemes below:

1. Teachers doubting their current knowledge and training
2. Teachers desiring support from the experts
3. Confusing terminology in the field of children's speech, language and communication

6.3.3.1 Theme 3: Subtheme 1: Teachers Doubting Their Current Knowledge and Training to Identify and Support Children with SLCN

A common view shared by some of the teachers from group 1 was their lack of knowledge and training in identifying and supporting SLCN in children. In their accounts, some teachers expressed the doubt of their knowledge and skills in identifying SLCN in children. The extract 1.09, extract 1.13, extract 2.07 and extract 3.19 below illustrated teachers' account on their observation about signs of a child with speech delay. Teachers viewed themselves as lacking in knowledge, and not understanding how to identify children with SLCN (extract 1.09 and extract 2.07). Even as teachers provided an observation of the child possibly identified with SLCN, such as being persistently quiet, observing others rather than engaging, having unclear speech, they explicitly said that they lacked the knowledge and understanding of SLCN. One teacher also suggested that a child not being able to understand (receptive problems) as possibly having a speech delay, as illustrated by extract 2.07 and extract 5.14. These teachers' accounts indicate the absence of adequate knowledge and training to identify and support children with SLCN.

<u>Extract 1.09:</u>

YP01: There were two children in the class. But I am not sure whether they could be categorised (as having speech delay)" "and he was quiet most of the time. Quiet most of the time, how to say it? (He only) looked at his friends. And he preferred to look at, be near his teachers like that. And then, eh after a while (being) in school, he finally started to speak. But (his speech) was not clear like that. But eh since I was lacking in knowledge about (speech delay)."

<u>Extract 1.13:</u>

YP01: … So, what was going on with this child I wondered? Eh – I was a bit, a little (wondering) whether this is speech delay? Something like that. Because (when we considered) her adequate age, and comparing (her) with the others who already talked a lot, right?

Extract 2.07:

YP04: "Whether he understood what we meant or not, (or whether) it could be categorised as speech delay or not, I too (didn't understand)."

Extract 5.14:

YP01: "…because the girl had a bit of difficulty understanding our words. So (I wondered if) this is actually just speech delay or if there is another factor."

Extract 3.19:

YP05: "I want to ask this first, before (I share). If a child is reluctant to speak, can we call it as speech delay?"

A teacher in group 1 felt that the lack of knowledge and training also extended to differentiate SLCN from other neurodevelopmental disorders such as autism spectrum disorder, as illustrated by extract 2.10 and extract 5.20.

Extract 2.10:

YP01: "… I also found two students like that. Well but (I was) yet able to identify whether it is speech delay, delay in speech or whether they (could be) categorised as autistic?"

Extract 5.20:

YP01: "Whether (they were included in) the category of speech delay or (if) there was anything else?"

Meanwhile, another teacher in group 1 questioned her ability to support child with cerebral palsy who also struggled to speak, as illustrated by extract 4.13.

Extract 4.13:

YP06:" (I have been) rather confused because cerebral palsy needs special treatment. Special in a sense that this child when responding to, when we ask ahh," Come on close the door." Or for example," Come on eh put your lunch box inside that bag," (she) understands, (she) responds. However, she has a little difficulty when we ask her to speak."

6.3.3.2 Theme 3: Subtheme 2: Teachers' Desire for Support from the Experts

Related to the previous subtheme, teachers in group 1 who felt they lacked the knowledge and training, also expressed a desire for support from the experts. There was a feeling that having support from the experts, such as a psychologist, would make teachers felt better (or felt confident) in supporting the children with SLCN in the classroom.

Extract 8.15:

YP01:" For me if we are confused because we are not the experts, we want support from the experts. For example, who can we talk to? Talk to a child psychologist? So, we feel better on how, the way we handle (the children) in the classroom."

Extract 8.17:

YP01: "Psychologists who...who don't always have to be standing by, maybe a visit once every three months. For example, we suspect this child (to be) a certain way, then we meet with the psychologist. Oh (our observation is confirmed to be) correct."

Interestingly, a teacher in group 2 felt that the parents needed support from the experts (in the form of a parenting class). Teachers in group 2 did not explicitly mention that they needed knowledge and training to identify and support children with SLCN.

Extract 17.02:

BC04: "Let's do parenting (class)." Uh-huh. (A parenting class) on how to manage (your child). It crossed my mind that I should look for it. Especially the problems in kindergarten are more on the speech. "That is why I have been looking for an expert, what do you call it, (who is) competent in speech delay. (The parents say), "That is fine, we can (attend the class) if it

comes from the school. It will be worthwhile because our basic knowledge is not yet, I mean (we) only learn (from) the information found in Ayah Ibu (magazine), from literature from google searching. But we have not yet been (able to speak) directly with the expert, a real source (of information). "

6.3.3.3 Theme 3: Subtheme 3: Confusing Terminology in the Field of Children's SLCN

Teachers used terms such as speech delay, language confusion, delay in speaking, difficulties in speaking during discussion about SLCN without clear differentiation between one term and another. The use of various terms to describe SLCN was present in all the teachers across the two focus groups.

Extract 2.04:

YP06: "So may be, what's the word, from the words they said, the ones that we didn't understand, are (the ones we can) identify as signs, oh perhaps eh they are having language confusion or speech delay."

Extract 14.05:

BC03: "There is (a child) in the playgroup class with difficulties in speaking, delay in speaking."

Extract 17.02:

BC04: "That is why I have been looking for an expert, what do you call it, (who is) competent in speech delay.

The need for knowledge and training to identify and support children with SLCN was described verbally by most teachers in group 1 through conversations about signs of children with SLCN, identifying children with SLCN, and having a psychologist visit the school every other month. Meanwhile, teachers' need for knowledge and training was viewed in group 2 as the need of the parents. It was not clearly expressed that teachers themselves need more knowledge and training to identify and support children with SLCN.

Theme 3 describes teachers' understanding of their limitations in the knowledge and training to support children with SLCN. Teachers understand the importance of having more knowledge and training, as well getting support from the experts. Teachers needing further knowledge and training in SLCN is also indicated by their use of various terms to describe SLCN without clear differentiation.

6.3.4 Theme 4: Type of SLCN That Draw the Teachers' Attention

The fourth theme describes the type of SLCN that draw the teachers' attention. Two subthemes illustrate theme 4 in a more detailed manner.

1. Type of SLCN reported by teachers
2. Social behaviours observed in children with SLCN

6.3.4.1 Theme 4: Subtheme 1: Type of SLCN reported by teachers

Most teachers across the two groups viewed speech difficulties as the tell-tale sign of SLCN. Saying the wrong sounds (as illustrated by extract 15.29), reducing the syllables of a word or inability to say a word with longer syllables (as illustrated by extract 1.11), and omitting a letter, usually a consonant, from a word (as illustrated by extract 1.11) were reported by teachers as signs of SLCN.

Extract 15.29:

BC01:"' Bu julu' (to say)' bu guru', but he (said)' bu julu' something like that."

Extract 1.11:

YP01: "…At the time she was yet able to say airplane ('pesawat'), she (instead) said it (as) 'wawat'. Ahh, eh (she) pronounced it wrongly a couple of times."

Extract 1.11:

YP01: "...And recently as well eh when she said (something) such as frugal ('hemat'), she said it (as) 'emat', there's, is, one (letter) eh which (went)...missing..."

It was also reported that unclear speech, incomplete words, and pronunciation problems were signs of SLCN, as illustrated by extract 2.05 and extract 4.25 below. The teacher did not attempt to make a differentiation between these three signs of SLCN.

Extract 2.05:

YP01: "...And when they speak, eh the words that come out are unclear, perhaps. Eh not not not complete or not clear or eh something like that."

Extract 4.25:

YP02:" It's just...about the pronunciation, sometimes she has to speak two or three times to be able to be understood by her teacher."

One teacher reported that struggling to pronounce the sounds of a longer word (a word with more than two syllables) was also the type of SLCN that came to their attention (as illustrated by extract 3.17).

Extract 3.17:

YP02: "Yes there are some (words pronounced) in reverse. However, when told to re...repeat what was said per syllable by the teacher, he was able to follow. When asked to to say 'jualan', (he was) able to say 'jualan', but when it was his tu-, ah to ahh say it himself, the word 'jualan', he was unable to (pronounce it). So (he) still (pronounces) the vocabularies in reverse. Some (children) are like that."

Another teacher reported types of SLCN as being silent, stuttering, and the inability to construct a sentence (sentence formation problems) observed in one child, as illustrated by extract 3.34. These different types of SLCN were considered together with no clear differentiation.

Extract 3.34:

YP06:"...When (he) responded or (when) we pointed at him. For example, we asked him to speak, he would eh eh eh eh, be silent or stutter or perhaps unable to construct a sentence."

While the types of SLCN as reported above was more about expressive difficulties, some teachers also reported receptive language difficulties as illustrated by extract 2.07 and extract 12.17. Repeating the teacher's words without knowing the meaning was seen as the type of SLCN that drew the teachers' attention. The unclear speech was also reported in the same child. There was a lack of mention of other behavioural signs seen in the same child that could lead to another possible identification, such as autism spectrum disorder.

Extract 2.07:

YP04: "What I have observed is some kind of repeat-ion perhaps? So (they) just say (the words), without knowing, without knowing the meaning. It can be like that. For example, he, (when) we said something, he repeated (the words) we asked."

Extract 12.17:

YP01: "Is it the one from last year? The one where the child was always repeating, and never, never answered any question. So, when we asked (him), he would keep repeating (the words we said), when he spoke, (it was) unclear."

6.3.4.2 Theme 4: Subtheme 2: Social Behaviours That Indicate SLCN

Behaviours such as being quiet, rarely speaking, observing friends (as opposed to interacting with friends), preferring to be near teachers, and taking the time before speaking were considered signs that drew the teachers' attention (as illustrated by extract 1.09 and extract 2.05 below). In addition to being quiet, other behaviours observed were not being able to produce words (sentence formation problem) and not being able to speak, as illustrated by extract 3.33.

Extract 1.09:

YP01: "...Quiet most of the time, how to say it? (He only) looked at his friends. And he preferred to look at, be near his teachers like that. And then eh after a while (being) in school, he finally started to speak.

Extract 2.05:

YP01: "The way I see it? Eh these people, these children. (They) rarely speak. They prefer to listen to their friends, when asked to speak they will be quiet.

Extract 3.33:

YP06:"...if (a child) has language difficulties (they will) tend to, they will be quiet, unable unable to produce (the words). They may want to speak but they are unable to speak."

One teacher viewed being silent but able to maintain attention as behaviours of children with SLCN (as illustrated by extract 6.04). Another teacher considered preference for close-ended questions which only required yes or no answer, or gestures as signs that a child might have SLCN (extract 15.09). Other behaviour such as a fear of loud sounds or noises was considered a sign that a child might have SLCN (extract 15.19).

Extract 6.04:

YP01: "… (Children with) speech delay, they are usually silent. They (are) still (able to maintain) attention..."

Extract 15.09:

BC04: "Questions that we ask (them) such as closed-ended questions (which requires) an answer of yes or no are preferred. Because, well, it is only (about) nodding and shaking (head)."

Extract 15.19:

BC04: "More about ah loud sounds, (they get) fearful. This child is not, not – actually not disruptive (but) perhaps he is used to silence or quiet atmosphere. When (they hear) mmmmm (imitating the sounds of plane) (they get) fearful right? That's how they are. They don't want (to hear) loud noises."

Theme 4 describes the types of SLCN that come to the teachers' attention. This theme underlines the types of SLCN such as speech difficulties and expressive language difficulties as that draw teachers' attention.

6.3.5 Theme 5: Various Ways Teacher Support Children With SLCN

Theme 5 describes the perspective of teachers about the various ways they supported children with SLCN. Four subthemes below illustrate theme 5 in more details.

1. Providing more attention and guidance
2. Using alternative means of communication
3. Doing extra activities to motivate the child
4. Seeking support from colleagues

6.3.5.1 Theme 5: Subtheme 1: Providing More Attention and Guidance

Giving more assistance, attention, and focus was seen as one way to support children with SLCN to understand the lessons delivered in the classroom, as illustrated by extract 5.0 and extract 5.02. Additional support was given when children were assigned tasks. Children were guided to complete the task from start to finish. It was also reported that children with SLCN often sought a repeated explanation to the teacher (as illustrated by extract 5.06).

Extract 5.0:

YP01: Ah for example, when we already delivered all the lesson, ah they, the two of them, we would assist them, we would assist again.

Extract 5.02:

YP01: In my class these children are given more attention. (They are) given more attention. We focus more on them.

Extract 5.06:

YP01: Uh huh so when they do worksheet, we will give attention, guidance until completion. Or when they, usually they don't understand, they will come again (to us), we will slowly assist them.

Another support was doing an additional explanation to the children. Teachers sat by the children for a one-on-one explanation. Another support was also in personalised, repeated

explanations where teachers made sure that children understood. The two extracts below illustrate this view.

Extract 6.13:

YP04: The way this child is. Because honestly to ask him (to be) in the class, in a classical (setting), he would not understand. So, we had to be one-on-one, so one by one. (We) had to really sit next to him for a repeat explanation.

Extract 10.04:

YP06: But for children with difficulties in language, even for instruction, they will need one-on-one (session), personal, we repeat, we underline the meaning that we want (to get across).

Support was also seen as putting in more effort to facilitate children's understanding of instructions and verbally express what was asked of them. One teacher's perspective of support was encouraging children to verbally express what was asked of them (extract 6.06). The same teacher also described the support as' being hard',' pouring out emotions' on the child who could not understand instructions. The teacher admitted that her commute to work which usually involved traffic jams impacted on her and how she manages her emotions.

Extract 6.06:

YP06: It means more efforts from the teachers. So maybe if the other children, okay, (are given) instructions once or twice, they will be able to receive it quickly but perhaps for children with speech delay, we ah need more time to make them understand the instructions. And maybe how they mmm what's the word? Come forward (to the class) and they need to express or something, we need time to keep pushing them to express what we ask of them.

Extract 11.04:

YP06:" Perhaps when we are teaching, we want, okay, sometimes I myself personally ahh (am being) human, (having) emotions, maybe (due to) tiredness, ahh being stressed, and worn out by the traffic jam that when (I) get to school (I) want it to, okay, be fun and happy. I like the children. But sometimes some children are like, once twice told – we told them, but they

didn't get it. So sometimes ahh to myself, don't want to...sometimes (I) direct it to the child," Come on, focus! Focus!" So sometimes (I am) hard (on them), pouring out emotions, (being) emotional to the child who perhaps had a bit of difficulty in understanding instructions. That's how I experienced it personally."

6.3.5.2 Theme 5: Subtheme 2: Using Alternative Means of Communication

One teacher opted to use pictures as an alternative means of communicating with children with SLCN, as illustrated by extract 5.22 below. Pictures were used in the context where the teacher could not get a verbal response from the child.

Extract 5.22:

YP04: In my class there was definitely more (attention given), we must focus. When we explained something (to the child) or (tried to) understand what he meant we must, ah (because even) with verbal means, it was not certain that (we would) get a response from this child. So there needed to be a use of symbolic (means) such as something that you suggested me. (By) using pictures or we used, created pictures.

6.3.5.3 Theme 5: Subtheme 3: Extra activities to motivate children with SLCN.

Teachers also devised extra activities outside of the scheduled school session to help children who were reluctant to come to school. One teacher explained that the preceding activities such as drawing and playing before the official school activities help children with SLCN to build a good mood.

Extract 19.06:

BC03:" We usually (do) things that he likes. If he likes drawing, we start by drawing. Before class (begins), the children will usually play first. This way (we can build) his mood, from waking up to getting to school, he usually gets lazy, (he) sulks, so (we let) him play first. After he gets cheerful again, we say to him, let's study."

6.3.5.4 Theme 5: Subtheme 4: Seeking Support from Colleagues

Meanwhile, another suggestion of providing support for children with SLCN was by seeking support from colleagues in school. This type of support was requested by teachers when they were no longer able to support the child with SLCN in the classroom (extract 14.14). Getting an external specifically dedicated person is seen as a way to support a child with SLCN. This way of supporting children with SLCN came from the belief that children with SLCN should not be placed with other typically developing children in the same classroom.

Extract 16.14:

BC01: For me, we can say that I specifically give him special attention. There were occasions when Ms D came inside (my class), Ms. R. came but there was no one that could handle him. However, if he is in a good mood, he is willing to follow (the activities).

Extract 13.31:

BC04: ... there are schools with (dedicated) special eh manpower who can really manage these children. Because (these children) cannot be handled by (only) one teacher, (they cannot be) mixed with other normal children.

Theme 5 describes the various ways teachers support children with SLCN in the classroom. Most teachers had similar ways of supporting children with SLCN in the classroom such as repeated explanations, more attention, and one-on-one guidance. One teacher asserted that the need for a specialist teacher to help children with SLCN. The same teacher also suggested that children with SLCN cannot be placed in the same class as typically developing children.

6.4 Summary of the findings

The focus groups showed that teachers perceived parents as the stumbling block in providing support for children with SLCN. As described in the first two themes, teachers experienced challenges in building a collaborative relationship with parents to support children with SLCN, and teachers viewed parents' behaviour as contributing to the occurrence of SLCN in their children. The negative way teachers perceived parents was rooted in the widespread belief

that SLCN is caused by a lack of stimulation in the home environments. Parents were seen as uncooperative with teachers, unaccepting of SLCN, and not putting in efforts to support children with SLCN. However, it is also possible that the widespread belief about a lack of stimulation as the cause of SLCN has made parents uncooperative, unaccepting, and not making sufficient effort with their own children. Parents are also concerned with the negative impacts of SLCN label on their child.

Some teachers in Focus Group 1 were aware of their need for further knowledge and training in SLCN and expressed a desired to get support from the experts while other teachers in Focus Group 2 did not explicitly mention this, as discussed in theme 3. Theme 4 describes the type of SLCN that drew the teachers' attention. It highlights speech difficulties and expressive language as the common signs that drew the teachers' attention. It is important to note that teachers did not attempt differentiating between one sign of SLCN from another. This is also related to teachers' lack of knowledge and SLCN in identifying SLCN, as discussed in theme 3. Theme 5 describes how teachers supported children with SLCN in the classroom. Some teachers implemented similar methods, while others considered an approach such as getting an external specialist teacher to support children with SLCN. Together these results provide important insights on how teachers perceived their role, and parents' role in supporting children with SLCN. These results highlight the lack of awareness among teachers and parents about children with SLCN.

7 Chapter 7: Discussion

7.1 Introduction

The present study examined the levels of SLCN in Indonesian-speaking kindergarten children aged 3 – 5 years old in Jakarta, Indonesia, according to a teacher screening tool. The number of children with a potential SLCN was estimated through an adapted Teacher Screening Observation Checklist originally developed by (Whitworth *et al.*, 1993). Teachers screened 144 children using the adapted Teacher Screening Observation Checklist. The potential of SLCN was indicated by a teacher concern, either mild or moderate, on at least one of the five language areas assessed, as described in Chapter 4: Research Methods section 4.6.1.

Five children with a teacher rating of moderate concern completed an informal, non-standardised narrative task, using the story 'Frog, Where Are You?' (Mayer, 1969) as the elicitation material. In addition, information about children's speech, language and communication history, parent concern, and family socioeconomic status were obtained from a parent questionnaire (for 65 of the 144 children who had completed teacher screening). Information about children's social, emotional, behavioural status was obtained from the teacher-rated Strengths and Difficulties Questionnaire (for 25 of the 144 children).

Teachers' perspectives regarding SLCN were then obtained from two semi-structured focus groups, with 10 teachers. The focus groups investigated teachers' perspectives on SLCN in kindergarten children in Indonesia. There were five themes identified from the focus groups:

1. Challenges in building a collaborative relationship with parents
2. Parents' lack of interaction with children as a cause of SLCN
3. Teachers need for further knowledge and training in SLCN
4. Types of SLCN that draw teachers' attention
5. Various ways teachers support children with SLCN in the classroom

This study addressed the following research questions:

1. What are the levels of SLCN in Indonesian kindergarten children, according to a teacher screening observation tool?

2. What is the feasibility of using a) an adapted Teacher Screening Observation Checklist (Whitworth *et al.* 1993) and b) a Narrative Informal Assessment (Heilmann, 2010) task to identify children with potential SLCN?

3. What are the perspectives of kindergarten teachers in Indonesia regarding SLCN?

The sections below consider the study results in relation to each research question.

7.2 Research Question #1: What are the levels of SLCN in Indonesian Kindergarten Children, according to a Teacher Screening Observation Tool?

The Teacher Screening Observation Checklist, initially developed in Australia (Whitworth *et al.*, 1993), has been adapted to be used for Greek kindergarten children (Okalidou & Kampanaros, 2001) and Nepalese primary school children (Thapa *et al.*, 2016) In the current study, the Teacher Screening Observation Checklist was adapted for the Indonesian kindergarten children population aged 3 – 5 years. During an initial pilot, a questionnaire was distributed to kindergarten teachers (n=10) in a private school in Jakarta, Indonesia, to obtain their thoughts about the content and the teacher screening observation checklist's usefulness. The kindergarten teachers in the pilot study thought that the Teacher Screening Observation Checklist's content and wording were appropriate for screening in Indonesian kindergarten children. The Teacher Screening Observation Checklist was then used to investigate the prevalence of SLCN of 144 Indonesian-speaking kindergarten children in Jakarta, Indonesia. The levels of concern around speech, language, and communication needs were examined in association with factors such as children's age, gender, and social-emotional behavioural difficulties, and parent concern (for a sample of 65 children) as indicated in the parent questionnaire.

All teachers were provided with training and additional discussion sessions before they conducted the screening. The training and discussion sessions were recommended by previous studies (Whitworth *et al.*, 1993; Thapa *et al.*, 2016) to enable teachers to identify children with concerning speech, language, and communication skills in comparison to expected development for their age. The training was initially planned to last two hours to cover information about:

1. An introduction to speech, language, and communication

2. Typical development of speech, language, and communication and normative distribution and variation in rate of development,
3. How to use the Teacher Screening Observation Checklist as an initial screen for SLCN in preschool children.

Upon teachers' requests, three additional discussion sessions were added, with each lasting for over three hours. The additional discussion sessions allowed the teachers to discuss and screen children for possible SLCN with more confidence. Each teacher therefore received four sessions totalling around 11 hours of training.

The present study found that 10 of 144 children (6.9%) had a teacher rating of moderate concern on at least 1 of the 5 speech and language areas (Articulation, Syntax, Narrative, Vocabulary and Comprehension), and 70 of 144 children (48.6%) had a teacher rating of mild concern on at least 1 of the 5 speech and language areas (Articulation, Syntax, Narrative, Vocabulary and Comprehension). Overall, the study found that 80 of 144 children (55.6%) showed some level of teacher concern on at least one of the five speech and language areas (Articulation, Syntax, Narrative, Vocabulary and Comprehension).

7.2.1 Estimated Number of Children with A Teacher Concern Regarding Potential SLCN

The current study is the first study that investigated the teacher concern regarding early speech and language skills of Indonesian kindergarten children aged 3;00 – 5;11 years old. The number of children with a teacher rating of moderate concern of SLCN (6.9%) is lower than the findings of (Okalidou & Kampanaros, 2001) who found teacher-estimated perception of communication impairment in Greek kindergarten children aged 4;8 – 5;8 years old was between 14.4% (n=676) and 18.7% (n=437). The present study's result is nearer the result of Thapa *et al.* (2016) who found teacher-estimated screening of primary school Nepalese children with speech-language impairment was 8.11%. It is important to note that both Okalidou & Kampanaros (2001) and Thapa *et al.* (2016) used the same teacher screening observation tool as the current study. The teacher screening observation tool or as the current study named it, the Teacher Screening Observation Checklist, was adapted from Whitworth *et al.* (1993) who used it for Australian reception year children aged 4 – 5 years

old. Whitworth *et al.* (1993) original study was aimed to find the usefulness of parent tool and teacher tool in screening children with SLCN and compared the results with those of speech-language therapists' assessment. The study found that the teacher tool had a higher accuracy in identifying children with potential communication impairments than the parent tool.

The disparity between the current study's result and Thapa *et al.* (2016) can be attributed to the different age group investigated. The current study examined kindergarten children in the age group of 3;00 – 5;11 years old, younger than the age group of Thapa *et al.* (2016) who studied primary school children in the age group of 5;00 – 11;11 years old. Meanwhile, the disparity between the current study's result and Okalidou & Kampanaros (2001) is interesting because the study investigated children in the age group of 4;8 – 5;8, an age group that is within the current study's age group. One likely explanation for this difference is that Okalidou & Kampanaros (2001) did not conduct any teacher training prior to conducting the screening, as recommended by Whitworth *et al.* (1993). Both Whitworth *et al.* (1993) and Thapa *et al.* (2016) highlighted the importance of teacher training in using the Teacher Screening Observation Checklist to increase understanding on how to identify SLCN in children.

The current study is in agreement with (Okalidou & Kampanaros, 2001) in terms of gender effect on the occurrence of SLCN. Both studies suggest an association between SLCN and the male gender. Conversely, the current study is not in agreement with Thapa *et al.* (2016) who found no association between SLCN and gender. However, as mentioned above, direct comparison between the current study and Thapa *et al.* (2016) is limited by the difference of in the age group of the child participants.

The number of children by the areas of concern in the current study showed that 2.8% had a teacher concern about Articulation, 3.5% about Syntax, 3.5% about Narrative, 3.5% about Vocabulary, and 2.8% children had a teacher concern in Comprehension. The current study results are compared with those of Okalidou & Kampanaros (2001) and Thapa *et al.* (2016) who used the same teacher screening observation tool. It is worth noting that Okalidou & Kampanaros investigated several speech, language, and communication areas such as Articulation, Expressive Language (grammar, expressing ideas and pragmatic), Receptive

Language (understanding), Dysfluency and Voice that are not all directly comparable with the current study. Thapa *et al.* (2016) examined several speech, language, and communication areas such as Articulation, Stuttering, Voice problems, Receptive Language problems (comprehension), Expressive Language problems (grammar, expressing ideas, and narrative) that are also not all directly comparable with the current study. The speech, language, and communication areas of the current study that are comparable with studies by Okalidou & Kampanaros (2001) and Thapa *et al.* (2016) are Articulation, Narrative, and Comprehension.

This current study result in Articulation (2.8%) is in agreement with Thapa *et al.* (2016) who reported an estimation of 2.95% for children with problems in Articulation. Conversely, the estimated number of Articulation problem is lower than Okalidou and Kampanaros (2001) who found that 6.9% had Articulation problem. The current study result in Narrative (3.5%) is lower than Thapa *et al.* (2016) who reported that 7.74% had Expressive Language problems (in which Narrative was included). The current study result in Comprehension (2.8%) is lower that Okalidou & Kampanaros who reported that 7.2% of children had problems in Receptive Language (in which Understanding/Comprehension was included) and Thapa *et al.* (2016) who reported that 4.97% of children had Receptive Language problems (in which Comprehension was included).

When teacher ratings of mild and moderate concern were combined, the current study found that teacher concern is the highest in Narrative skills (38.2%) and followed by Articulation (29.9%), Syntax (28.5%), and Comprehension (27.8%). Teachers had the least concern in Vocabulary skills (22.2%).

The current study is not able to discuss prevalence directly as there was no comprehensive assessment of speech and language skills conducted to diagnose SLCN or developmental language disorder. However, it is interesting to compare rates of teacher concern with international studies of prevalence of SLCN in similarly aged children, for example Tomblin *et al.* (1997), Norbury *et al.* (2016) and most recently, Pham *et al.* (2019). Tomblin *et al.* (1997) reported that 7.4% of kindergarten children aged 5 – 6 years old in the USA had specific language impairment, while Norbury *et al.* (2016) found that 7.58% of reception year children aged 4 – 5 years old in the UK had language disorder. Pham *et al.* (2019) found that 7% of kindergarten children aged 5 years old in Vietnam presented with developmental language

disorder. Both Tomblin *et al.* (1997) and Norbury *et al.* (2016) also found that the occurrence of SLCN is more prevalent in boys than girls, as also suggested the current study. This result is interesting since Tomblin *et al.* (1997) and Norbury *et al.* (2016) both employed a two-stage identification, the screening stage and the diagnostic stage, while the current study employed only a screening of children who possibly presented with SLCN.

The current study result is much lower than the prevalence reported by Oyono *et al.* (2018), using direct assessments by speech language therapist, who found that 17.1% of French-speaking Cameroon children aged 3 – 5 years old had speech and language disorders. The current study result is also lower than the number reported in a study conducted in Indonesia (Kesuma *et al.*, 2014) who found that 12.9% of kindergarten children aged 3 – 5 years old (mean age = 4.59 years old) in Palembang, Indonesia had specific language impairment. Kesuma *et al.* (2014) developed a Specific Language Impairment checklist informed by criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders-IV (American Psychiatric Association, 1994) and the International Classification of Diseases – 10 (The ICD-10, 1993). (Am The criterion for specific language impairment was answering 'no' on ‘more than one occasion' on items in the checklist (Kesuma *et al.*, 2014, page 23). Unfortunately, details about the checklist and how to use it were not available. The difference between the current study result and Kesuma *et al.* (2014) maybe due to the differences in data collection methods. Kesuma *et al.* (2014) employed interviews with parents and direct assessments of the children rather than teacher screening.

The current study’s result is somewhat surprising since national-scale developmental surveillance conducted in Indonesia (as previously discussed in section 4.2.6) found that SLCN were among the most common developmental difficulties in Indonesian-speaking children under five years, with an incidence number of 21% (IDAI, 2007). This disparity may be due teacher screening rather than direct assessment: teachers may be underestimating indicators of SLCN. Whitworth *et al.* (1993) concluded that the teacher screening tool was useful but also highlighted in their study that while teachers were able to identify 76% of children with a possible SLCN, they also missed 24% of children. Therefore, the validation of teacher screening result by direct assessments with speech language therapists is needed (Whitworth *et al.*, 1993).

The lower number of concerns about SLCN may also be related to the demographic background of participants. Approximately 54 of the 65 children (83.1%) in the current study were from a relatively advantaged socioeconomic background. Some studies have found an association between social disadvantage and early language development (Ginsborg, 2006; Law *et al*., 2011, 2019; Letts *et al*., 2012). Ginsborg (2006) found a significant association between the level of maternal education and the productive and receptive language of 3-year-olds. The study also found that differences in language abilities at the age of 6 years old were attributable to the quality of interaction between the mother and the child at the age of two.

Not dissimilar to the above study, Letts *et al*. (2012) found that maternal education as a function of measurement of SES was associated with lower language abilities for younger children. However, the association was found only with production abilities, and not comprehension abilities. Further, the association seemed to weaken for older children. Letts *et al*. (2012) suggested that rather than the SES itself, there are factors that possibly mediated the association between the SES and early language abilities. An earlier study by Hart & Risley (1999) showed that differences in children's language abilities may be attributed to the 'amount of talking' (1999, p.181) between parents and the children and not the SES determined by education and income.

Recent research showed language abilities of 2-year-olds (specifically expressive language development) are strongly correlated with proximal social factors such as parent-child interaction (Law *et al*., 2019). The study also suggests that the combination of children's language abilities at 15 months old and proximal factors may predict early language development. Regarding the present study, as previously mentioned in section 1.3, lack of stimulation from the home environment was cited as the primary cause of developmental difficulties in Indonesian children (Kementerian Kesehatan RI, 2012), therefore more research is needed to investigate the relationship between socioeconomic background and children's language abilities in the Indonesian population.

In summary, the current study found that teachers estimated 6.9% of children with a moderate concern in speech, language, and communication skills. Teachers also identified 55.6% of children with a concern, either mild or moderate, regarding speech, language, and communication skills. This result shows that SLCN is a high concern in Indonesian kindergarten children aged 3 – 5 years old. Moreover, teacher showed the highest concern for children's Narrative skills, and the least concern for children's Vocabulary skills. The current study found a large difference between the number of children with a moderate teacher concern regarding SLCN (n=10, 6.9%) versus the number of children with a mild teacher concern regarding SLCN (n=80, 55.6%). This may indicate that the teacher screening observation checklist cannot finely differentiate children's speech, language, and communication abilities. Ideally, levels of teacher concern would have been investigated further with detailed language assessment, but standardised assessments were not available in Bahasa Indonesia, the Indonesia language, and informal assessment (the narrative informal assessment task) proved logistically challenging (discussed further below).

While the present study was initially set up to investigate the prevalence of SLCN in Indonesian kindergarten children aged 3 – 5 years old, in practice, the study encountered significant challenges. The first challenge and perhaps the most important one was a lack of standardised assessments for speech and language in the Indonesian population. The scarcity of previous studies about speech and language in Indonesian children means that there is no legacy of knowledge to build upon for this study. The second challenge was that the present study focused on conducting a study about SLCN within educational settings. The only three studies about SLCN in Indonesia were conducted by paediatricians. This is the first study that investigated SLCN in the educational context in partnership with teachers. With these circumstances, the study decided to choose a screening tool that can be used by teachers to estimate the number of children with SLCN in their classrooms. The study started an adaptation of the teacher screening checklist that was originally used in English (Whitworth *et al*., 1993), and adapted in Greek (Okalidou & Kampanaros, 2001) and Nepalese (Thapa *et al.*, 2016) with good validity and reliability. The adaptation was in the form of translating the content of the original teacher screening observation checklist in English into Bahasa Indonesia. The present study managed to obtain the face validity of the teacher screening observation checklist through a pilot study. However, the study did not conduct validity and

reliability measurements for the adapted teacher screening observation checklist. Since there was no comprehensive assessment conducted to diagnose SLCN in children, the study was not able to discuss prevalence directly. Nevertheless, given the wealth of information gathered from the teacher screening observation checklist, the narrative informal assessment and the focus groups, the study was able to provide a general picture of teacher concern regarding children at risk with possible SLCN.

7.2.2 Result from the Narrative Informal Assessment (Heilmann *et al.*, 2010)

Due to the lack of standardised instruments to assess children's speech, language, and communication abilities available for Indonesian children, the current study used narrative informal assessment task (Heilmann *et al.*, 2010) with materials from the story titled 'Frog, Where Are You?' (Mayer, 1969) to obtain children's language samples. Language sampling has been recommended for assessing the language production of diverse cultural backgrounds (Heilmann *et al.*, 2010). Ten children with a teacher rating of moderate concern were invited for the Narrative Informal Assessment task, six children had parental consent; 5 children completed the narrative task, one child stopped in the middle of assessment. It is important to note that the Narrative Informal Assessment task had caused one school to withdraw from participating in the research. The school stated that stories that used animals as characters such as fables were against the school religious values.

Previous studies have argued that relatively short samples ranging from 35 – 65 utterances are adequate in recording children's expressive language use (Heilmann et al., 2008; Miller et al., 2006), while subsequent research suggests that short samples are suitable when the objective is to monitor children's progress or as a part of the comprehensive assessment protocols (Heilmann et al., 2010). It is recommended that a sample of at least 50 – 100 utterances be used to analyse children's expressive language abilities, especially when language sampling is the only method chosen to determine children's expressive language abilities (Heilmann et al., 2010). In keeping with the initial objective of the informal narrative assessment: to look for agreement with the teacher's concern of children's speech and language abilities, the present study followed the recommended length of samples consisting of 50 – 100 utterances per individual for analysis. None of the children who completed the

task produced a minimum sample of 100 utterances per individual to obtain the Mean Length of Utterance (Miller & Chapman, 1981). There are possible explanations for the low language samples. The first one is that narrative tasks require children to produce more complex utterances than conversations (Heilmann et al., 2016), while young children aged 3 – 5 years old (the age demographic of the current study) may not meet this demand. Another possible explanation is that more time may be needed in the assessment to establish a good rapport between children and the researcher. Children produce more complex utterances when they feel familiar with the assessor (Heilmann et al., 2016).

To obtain the Mean Length of Utterance (MLU), calculation was carried out informally by taking the total number of morphemes and dividing it by the total number of utterances. The results showed that four children (two males, two females) had MLU below the expected levels for their age, and one child (female) had MLU within the expected range for her age. This result suggests that four children with moderate concerns on at least one of the five speech, language, and communication areas also had a Mean Length of Utterance below expected levels for their age.

The Narrative Informal Assessment result suggest some agreement with the Teacher Screening Observation Checklist result for Narrative skills. Three of four children with MLU below the expected for their age also had a teacher rating of moderate concern in Narrative skills. However, this is very limited data, given the sample size, lack of comparison with children without a moderate teacher concern, and the limited language samples obtained. The results may only mean that these children's language knowledge might not be on par with the typical trajectory recommended by the MLU chart, which is not standardised in Indonesia.

7.2.3 Agreement Between Teacher Concern and Parent Concern

This section discusses the agreement between teacher concern as indicated in the Teacher Screening Observation Checklist and parent concern, as indicated in the parent questionnaire. The Teacher Screening Observation Checklist results showed that there were 80 of 144 children (55.6%) with a teacher concern (either mild or moderate), and there were 64 of 144

children (44.4%) with no teacher concern. The parent questionnaire results for 65 children showed 7 of 65 children (10.8%) had a parent concern (58 of 65 children (89.2%) had no parent concern). Based on this straightforward comparison, teachers reported more concerns regarding the children's speech, language, and communication skills (n=80 of 144 children, 55.6%) than parents (n=7 of 65 children, 10.8%). When only the number of children with teacher rating of moderate concern in SLCN is compared with the number of children with a parent concern, it showed that parents (n=7, 10.8%) showed more concerns than teachers (n=10, 6.9%). However, teacher concerns are not directly comparable with parent concerns because of two reasons. Firstly, the Teacher Screening Observation checklist differentiated between children with a teacher rating of mild concern and children with a teacher rating of moderate concern, meanwhile, parent concern did not differentiate between mild and moderate concern. The second reason, parent concern data was only available for 65 of 144 children (45.1%). There was no information for a further 79 children as the parent questionnaires were not returned or were incomplete.

For the 7 children (5 male, 2 female) who had parent concern, all 7 also had some level of teacher concern: 2 children (1 male, 1 female) had a teacher rating of moderate concern, and 5 children (4 males, 1 female) had a teacher rating of mild concern. Parents reported that their concerns about their children were about unclear speech, fluent talking, and difficulties in communicating with others. Among the 58 children with no parent concern, 2 children had a teacher rating of moderate concern, 49 children had a teacher rating of mild concern, and 7 children had no teacher concern. This result suggests that teachers reported more concerns about children's speech, language, and communication abilities than parents.

In summary, this result shows some agreement between teacher and parent regarding concern in children's speech, language, and communication skills; with teachers reported more concerns than parents. Although further research needs to ensure that teacher concern and parent concern can be directly compared. A recent study by Hendricks *et al.* (2019) showed that parents of children with SLCN were less likely to report concerns about their child. Parents were asked to indicate their concern in nine areas of speech, language, and communication skills which were receptive and expressive language, speech production, literacy, reading, comprehension, spelling, writing, and attention (Hendricks *et al.*, 2019). The

result showed that parents of children with SLCN were more likely to report concerns in three areas (comprehension, writing and attention), and reported fewer concerns in the other six areas. Hendricks *et al.* (2019) suggested that the reasons for this was that parents might not be aware of their children's SLCN.

7.2.4 Association Between Teacher Screening Results and Age, Gender, and Socioemotional Behavioural Status

In terms of age, 14 children were 3 – 4 years old, 32 children were 4 – 5 years old, and 34 children were 5 – 6 years old with a teacher concern (either mild or moderate) regarding potential SLCN. The statistical calculation suggested no association between a teacher concern in SLCN and age.

More males (n=46, 58%) than females (n=34, 42%) had a teacher concern, either mild or moderate, regarding potential SLCN. The statistical calculation suggested an association between a teacher concern in SLCN and the male gender. This result is supported by the international findings, which showed that SLCN is more common in males than females (Tomblin *et al.*, 1997; Okalidou & Kampanaros, 2001; Norbury *et al.*, 2016), although Thapa *et al.* (2016) who used the same teacher screening observation tool found no association between SLCN and gender.

The information about socioeconomic status was available for 65 children, as previously described in Chapter 5 section 5.2.7. Thirty-six children with a teacher concern (either mild or moderate) were all from an advantaged background (either middle SES or high SES). Two children with no teacher concern were from a disadvantaged background (low SES), 5 children with a no teacher concern were from middle SES, and 22 children with a no teacher concern were from high SES. Conversely, two children with a low SES had no teacher concern. However, it is important to note, although most children with known SES in the current study were from either middle or high SES (63 of 65 children, 96.9%), there was no SES information about 79 of participating children.

In terms of the social-emotional behavioural status, among 25 children with completed SDQ, 15 children had a teacher concern (either mild or moderate) in SLCN, 10 children had no teacher concern in SLCN. The results showed no difference of social-emotional behavioural status between children with a teacher concern in SLCN and children with no teacher concern in SLCN. Thirteen of 15 children with a teacher concern (either mild or moderate) in SLCN were rated as 'close to average'. Similarly, nine of ten children with no teacher concern were also rated as 'close to average'. This result is in contrast with the Kesuma *et al.* (2014) who found a strong association between behavioural disorder (as indicated in the SDQ) and SLCN in 1340 Indonesian kindergarten children aged 3 – 5 years old. Kesuma *et al.*, (2014) found that 15.1% of children in the sample presented with behavioural disorder. However, Kesuma *et al.*, (2014) may not be directly comparable with the current study since this study only had social emotional behavioural status of 25 of 144 children.

In summary, the current study found no association between a teacher concern in SLCN and age, socioeconomic status, and social, emotional, and behavioural difficulties. An association was suggested between a teacher concern in SLCN and gender, with more males had a teacher concern in SLCN than females. However, it is not possible to conclude the factors associated with a teacher concern in SLCN for several reasons, such as the low return rate of the parent questionnaires and teacher-rated Strengths and Difficulties Questionnaire. The current study only obtained the socioeconomic status of 65 of 144 children (45.1%) and the social, emotional, and behavioural status of 25 of 144 children (17.4%). Further research is needed to provide more evidence that reveals the factors associated with SLCN in Indonesian kindergarten children.

7.3 Research Question #2: What Is the Feasibility of Using A) An Adapted Teacher Screening Observation Checklist And B) A Narrative Task to Identify Children with SLCN

7.3.1 The Feasibility of Using a Teacher Screening Observation Checklist

Prior to the current study, any screening on SLCN in Indonesia have been conducted in medical contexts (IDAI, 2007). Community health centres conducted regular developmental

surveillance on children from 0 – 5 years old. However, information specifically for parents and the wider community about child development remains sparse (Kompas, 2014). Awareness about SLCN is also low (Kompas, 2014). To date, there has not been any screening of SLCN in kindergarten children that is conducted by education professionals.

The results demonstrated that the Teacher Screening Observation Checklist was feasible to use to identify children with a teacher concern regarding speech and language. The teachers were able to screen 144 children and rate children based on three categories namely, no concern, mild concern, and moderate concern. The results underlined that teachers had no concern about 64 children, showed mild concern about 70 children, and showed moderate concern about 10 children regarding their speech, language, and communication skills. The Teacher Screening Observation Checklist results showed some agreement with parent concerns. The Teacher Screening Observation Checklist results also showed that teachers indicated the most concern in children's Narrative skills. Very limited data suggests some agreement with the Narrative Informal Assessment task results.

In summary, the Teacher Screening Observation Checklist appears to be acceptable for teachers to use and is therefore logistically feasible for use as a screen in Indonesia with detailed training provided for teachers. However, follow-up studies are needed to measure the Teacher Screening Observation Checklist's reliability over time, and its validity in relation to standardised speech and language assessments for further use.

7.3.2 The Feasibility of a Narrative Informal Assessment Task to Identify Children with Speech, Language and Communication Needs

Results suggest that the narrative informal assessment task is not feasible nor appropriate for the children in this study, due to the limited language samples collected from the children. The narrative informal task also caused one school to withdrawn from participating in the research. The school said that the Frog story, the elicitation material for the narrative task, was not in accordance with the school religious (Islamic) values. The school explained that Islam does not allow for a story that contains pictures of animal characters as drawings of living beings are prohibited in Islam. It is worth noting that this was a religious school that

followed strict Islamic values. The five schools that participated in the current study were not affiliated with any religious values. Considering this circumstance, future studies that use Narrative Informal Assessment should seek elicitation materials that are appropriate for the diverse sociocultural population of the Indonesian kindergarten children.

Nevertheless, limited data also showed agreement between teacher concern and the result of the narrative informal assessment. Four of five children who completed the assessment produced MLU below their chronological age. All five children had a teacher rating of moderate concern in Narrative and Syntax skills. This limited data is supported by Bishop *et al.* (2017) who suggested that most children with SLCN had difficulties in narrative skills. This finding highlights the need for assessments of Articulation, Syntax, Narrative, Vocabulary and Comprehension in kindergarten children to be standardised rigorously in Indonesia.

7.4 Research Question #3: What Are the Perspectives of Kindergarten Teachers in Indonesia regarding SLCN in children?

The focus groups were conducted to address the general research question on how kindergarten teachers perceive SLCN in Indonesian-speaking children. Teachers' perspectives were explored through two focus groups of a subsample of teachers from phase 1. These teachers were from two different schools. There were 10 participating teachers (9 classroom teachers, 1 school principal) in the focus groups. Five themes were identified from the teachers' perspectives regarding SLCN in Indonesian-speaking children. These are:

1. Challenges in building a collaborative relationship with parents
2. Parents' lack of interaction with children as a cause of SLCN
3. Teachers need further knowledge and training in SLCN
4. Types of SLCN that draw teachers' attention
5. Various ways teachers support children with SLCN in the classroom

The subsections below discuss the results with more details.

7.4.1 Challenges in Building a Collaborative Relationship with Parents

In addressing the general research question about the teachers' perspectives towards SLCN in children, the study found that parents played a major role. Parents were perceived as an obstacle to providing support for children with SLCN. Parents were also perceived as causing SLCN through their behaviours (by a lack of support for child's speech, language, and communication, denying their child's SLCN, and allowing prolonged use of smartphones and iPads). Teachers reported that parents held teachers responsible for their children. Parents were perceived as lacking awareness about their child's needs. Parents' behaviours were perceived as obstacles in building a positive collaborative relationship with teachers to support children with SLCN.

The perspective that teacher and parent collaboration as being crucial to supporting children with special educational needs, in this case, SLCN, is supported by a study in Thailand (Sukbunpant *et al.*, 2013). However, the study asserted parents should follow teachers' suggestions on supporting children with SLCN in the classroom (Sukbunpant *et al.* 2013), while the current study found that teachers desired a more balanced relationship with parents. The current study also found that a lack of parental support was a factor that hampered access to support for children with SLCN. This finding was also reported by a study about written difficulties in upper primary school children in South Africa (Navsaria *et al.*, 2011) who perceived parents as lacking awareness of their child's learning and did not do anything to support their child's development. The lack of parental support kept teachers from doing more to help children with SLCN.

Another finding from the study is that parents were seen as in denial of their child's SLCN. Parents tried to downplay their child's SLCN by comparing their child's speech, language, and communication with those of other children. Parents also insisted that there was nothing wrong with their child. Parents' denial kept teachers from doing anything or providing access to support their child. There are several possible explanations for this finding. The first one is that parents saw a child's SLCN as reflections of their parenting skills. Teachers reasoned that parents were in denial because they wanted to protect their image of good parents. However, this explanation does not correspond with the teachers' perspective that parents placed full responsibility for teaching children, including teaching children how to speak, on the school or teachers. If parents' denial were to protect their good parents' image, it meant that parents

assumed the responsibility of teaching their children. Unfortunately, it will need a focus group study with parents to confirm this tentative explanation.

The second explanation for parents' denial, put forward by teachers in the focus groups, is the fear of possible stigma from the label of SLCN on their children. Parents might be concerned that their children would be seen and treated differently. Parents might be concerned that the label of SLCN might affect the decision to promote the child to a higher educational level. Reilly *et al.* (2014) in her study about the terminological debate over language impairment in children asserted that diagnostic labels are needed to get access for support, but also cautioned the negative impacts of diagnostic labels such as stigma and reduced expectations. Taking into account the Reilly *et al.* (2014) study, it can be argued that parents' fear may be justified. However, as Reilly *et al.* (2014) claimed, diagnostic labels will also help children with SLCN get the support they need. A third explanation for parents' denial is teachers perceived that parents were fearful that accepting their child's SLCN would lead to further assessments that would negatively impact their children's psychological well-being.

7.4.2 Parents' Lack of Interaction with Children as a Cause of SLCN

Teachers also viewed parents as responsible for SLCN in their children. This perspective stemmed from the belief that a lack of stimulation from the home environment, primarily parents, was the cause of SLCN. Teachers suggested that parental lack of attention and parental lack of effort in developing a child's speech, language, and communication abilities caused SLCN in children. Mothers were also viewed as having a unique role in developing speech, language, and communication in children. Teachers in the focus group perceived mothers as lacking the 'diligence' and the 'good sense' of teaching their children how to speak. A home environment that provides enough language stimulation was suggested to be one of the critical factors in children's language development (Desmarais, 2008). The maternal factor was shown to be related to language stimulation. Mothers with good mental wellbeing would provide language stimulation to their children (Prior *et al.*, 2008). Maternal mental wellbeing was positively connected to the development of expressive and receptive language in children (Harrison & McLeod., 2010). On the other hand, mothers who were depressed would not provide a language-enriching environment for their children (Prior *et al.*, 2008). However,

current research shows that risks for the occurrence of SLCN in children are a combination of genetic and environmental factors rather than maternal language input alone (Reilly *et al.*, 2007; Reilly *et al.*, 2010; Newbury & Monaco 2010; Harrison & McLeod, 2010, Collisson *et al.*, 2016).

Some teachers also suggested that parents did not provide adequate attention to their children because they were too busy working. Some teachers suggested that attention in the form of reciprocal verbal interaction was not given to the children. A study by Cunningham and Rosenbaum (2015) explained factors that influenced preschool children's speech, language, and communication development, and factors that influenced the risks for the occurrence of SLCN. Using a bioecological framework by Bronfenbrenner & Morris (2006), Cunningham and Rosenbaum (2015) explained the indirect influences of the environment outside of the home environment, such as parents' work, on preschool children's speech, language, and communication development. As suggested by the teachers in this study, parents who were too busy working would struggle to find the time and effort to engage in language-enriching interactions with their children, which influenced the children's speech, language, and communication (Cunningham & Rosenbaum, 2015). This view is also supported by a study by Marshal & Lewis (2014), which reported that early years practitioners believed that one of the factors that influenced speech, language, and communication development in children was adequate attention from the caregivers.

Furthermore, some teachers suggested that parents who were enabling an excess use of gadgets such as smartphones caused SLCN in children. Parents used a smartphone to calm their children so they could continue working. Studies on the digital media devices in US children (Wartella *et al.*, 2013; Kabali *et al.*, 2015) showed that mobile devices were used as a parenting tool to pacify children, mostly when parents were busy working. Some studies in the US and Italy have reported the harmful effects of prolonged use of media devices such as television, smartphones, and tablets (Schmidt *et al.*, 2008; Pagani *et al.*, 2010; Bozzola *et al.*, 2018). Children who were allowed to watch long hours of television missed out on activities that could otherwise be useful for their development (Schmidt *et al.*, 2008). Excessive use of media devices has also been associated with a reduction in verbal and nonverbal reciprocal interaction between parents and children (Pagani *et al.*, 2010, and Bozolla *et al.* , 2018). These

interactions were deemed necessary in stimulating the cognitive, language, and emotional development of young children (Glascoe & Leew, 2010). Although teachers' concerns about the excessive use of gadgets such as smartphones and iPad in children may be justified, it is not solely the factor contributing to the problems in children's speech, language, and communication.

7.4.3 Teachers Need Further Knowledge and Training in SLCN

Another key finding from the focus group is the teachers' perceptions that they needed further knowledge and training in SLCN. This finding was indicated by teachers' admission about their lack of knowledge to understand signs of SLCN in a child. This lack of knowledge and training in speech, language and communication needs was also indicated by their use of various terms to describe SLCN without clear differentiation between one term to another. As described in section 6.2 of the Methods chapter, the focus group consisted of six participants from one school (school 1), and four participants from another school (school 2). Among the four participants of school 2, three participants did not participate in the phase 1 of the research as these participants were newly employed in school 2. Therefore, they did not receive any training from the researcher, and they did not screen any children in their classroom.

The current study found that some teachers from school 1 showed an awareness of their need for more knowledge and training to identify and support children with SLCN. In a discussion about the identification of SLCN in children, teachers expressed doubt about their knowledge and skills to identify and support children with SLCN. Many teachers' perspective studies on SLCN in the UK highlight the teachers' need for more training and knowledge in identifying and supporting children with SLCN (Dockrell & Lindsay, 2001; Marshal *et al.*, 2002; Letts and Hall, 2003; Sadler, 2006; Mroz and Letts, 2008; Marshall and Lewis, 2014). Mroz (2006) reported that teachers believed in early identification of SLCN in children but had doubts about their ability to conduct the identification, a view that was also shared by some teachers in the focus groups.

Some teachers from group 1 also expressed a wish to have regular consultation with a visiting child psychologist, while teachers from school 2 wished for support in the form of inviting an expert in child development to provide a seminar for parents. Teachers from school 2 did not discuss their own need for more knowledge and training to identify and support children with SLCN. This is interesting because as previously mentioned above, three of the four teachers from school 2 were newly employed teachers who did not participate in the phase 1 of the study. Some teachers from school 2 expressed the need to organise seminars with an expert in child development and SLCN to help parents support their child. As suggested by Sukbunpant *et al.* (2013), in a study conducted in Thailand, teachers viewed themselves as having more authority in supporting children with special needs in school over parents. Teachers in school 2 might focus on improving parents' knowledge and awareness first, rather than their own. Parents were viewed as uncooperative and showing a lack of actions to fulfil their children's needs. Teachers possibly saw a seminar for parents as a tool to improve parents' knowledge and awareness about SLCN in children. When parents have the knowledge and awareness about SLCN, they may be more cooperative and proactive in supporting their children. One thing that teachers from both schools agreed on was the need for support from an expert in SLCN, in this case, a child psychologist.

7.4.4 Types of SLCN That Draw the Teachers' Attention

Teachers discussed several types of SLCN that draw their attention. Some teachers described children who produce the wrong sounds, reduce the syllables of a word, or who are unable to say a word with longer syllables, and omitting a sound (usually a consonant) from a word as the tell-tale signs that a child might have. Unclear speech or poor phonological awareness, incomplete words, and pronunciation problems were also described by some teachers. Another type of SLCN reported was struggling to pronounce the sounds of a longer word (a word with more than two syllables). Another teacher reported types of SLCN as being silent, stuttering (fluency problems), and the inability to construct a sentence (sentence formation problems). These different types of SLCN were considered together with no clear differentiation or recognition that they represented different types of disorder.

While the types of SLCN as reported above was more about expressive difficulties, some teachers also reported receptive language difficulties. Repeating the teacher's words without knowing the meaning (echolalia) was the type of SLCN that drew the teachers' attention. The unclear speech was also reported in the same child. There was a lack of mention of other behavioural signs seen in the same child that could lead to another possible identification, such as autism spectrum disorder. The finding that teachers in the current study considered speech-related difficulties as the tell-tale signs of SLCN is consistent with previous studies that asserted teachers and parents were more aware of problems related to speech than problems related to language (Silliman & Berninger, 2011).

7.4.5 Various Ways Teacher Support Children with SLCN

In Indonesia context where there is a lack of support for teachers in managing children with SLCN, teachers devised their own strategies in helping children with SLCN to follow the classroom activities. The strategies used by the teachers in the current study included providing more attention and guiding students to work on their tasks until completion, using an alternative means (such as pictures or drawing) to communicate with children, providing extra activities to motivate children, and seeking support from colleagues. These strategies were discussed in the context where children with SLCN needed to follow the academic activities in the classroom.

In implementing the strategy of providing more attention, teachers showed it through personalised and repeated explanations of instruction. One teacher specifically mentioned that children were asked to verbally express their understanding of the instruction. This type of strategies may be referred to as communication-facilitating behaviours which aim to encourage children to talk more. Justice *et al.* (2018) found that teachers' use of communication-facilitating behaviours was strongly associated with children's language development. When children were encouraged to talk more, they also received the signals about the reciprocal nature of communicating, which in turn, encouraged them talk more (Yoder & Warren, 1999). Teachers also mentioned that they made a physical arrangement to allow the teacher and the child with SLCN to sit side-by-side. The side-by-side seating

arrangement was beneficial when the teacher needed to guide a child with SLCN in working on their tasks to completion. Teachers also provided extra activities, usually done before school started, to motivate children with SLCN who were reluctant to be in the classroom. These extra activities included accompanying children to play and draw. Teachers perceived these extra activities as necessary in affecting the mood of children with SLCN. These strategies support a key element in classroom language environment: the language learning interactions with adults (Law *et al.*, 2019). In language learning interactions, children are given many opportunities for extended reciprocal communication with teachers, for example, during storybook reading (Law *et al.*, 2019). The strategies put forward by teachers in the current study aimed at providing ample opportunities for dyadic interactions between a child with SLCN and the teacher. Dickinson & Porche (2011) asserted that opportunities for language learning are enhanced in one-on-one interaction between children and adults.

Other ways teachers supported children with SLCN was through the use of alternative means of communication such as drawing and pictures to communicate with children with SLCN. In this context, teachers were helping children who could not express themselves with words. Finally, the strategies that teachers used in the current study included asking support from colleagues, usually teachers from other classrooms, and occasionally requesting an extra teacher, a special education teacher, to assist children with SLCN in the classroom.

Studies show that other strategies such as using advanced vocabulary, open-ended questions, challenging topics and supporting children's interests can enhance children's language development in the classroom (Whorrall & Cabell, 2016). However, teachers in the current study did not discuss such strategies in supporting children with SLCN in their classroom. Strategies used by teachers across the two focus groups reflected their current knowledge and training in SLCN. Mroz & Letts (2008) found that practitioners in the early settings, in this instance, teachers, employed strategies based on their current understanding and experience about children with SLCN.

7.5 Evaluation of Study Design

7.5.1 Strengths of Study Design

This study is the first study that examined SLCN in a context where there is no public awareness, no reliable services for assessment and treatment, no early intervention, very few speech-language therapists, and very little history of inclusive education. This is the first study that investigated the initial screening of children with SLCN using community samples, kindergarten children in the classroom, rather than clinically referred samples in medical settings. The study is also the first investigation about teachers' perspectives towards children with SLCN in Indonesia. There was no prior information available about teacher concern about early speech, language and communication skills and no research into the teachers' perspectives about children with SLCN in Indonesia before. The findings of the study contribute to our understanding of the estimated number of children with teacher concern in SLCN in Indonesia, the issues surrounding teacher screening, and the current perspectives of the teachers about SLCN in Indonesian kindergarten children.

A strength of the current study is the good sample size of children. The current study also employed multi-site data collection which provided diverse samples as well as collecting data from multiple sources through Teacher Screening Observation Checklist, parent questionnaire, and Strengths and Difficulties Questionnaire.

Another strength of the current study is that it adapted a teacher screening tool in a context of no standardised language assessments or published informal language assessment. Several studies compared the clinical utility of the teacher screen to estimate in children and found that it had higher sensitivity and specificity rate compared to parent screen (Whitworth *et al.*, 1993) and good validity and reliability (Okalidou & Kampanaros, 2001; Thapa *et al.*, 2016). The current study was the first study in Indonesia that adapted a teacher screening checklist observation checklist used in several international studies. By doing so, the results of the teacher screen on Indonesian kindergarten children could be compared with those of international studies.

The use of narrative informal assessment task also allowed for comparison of the language production between Indonesian preschool children in the current study, and children

speaking other languages. Although the current study could only obtain a low sample for the narrative informal assessment task, it nevertheless provided a snapshot of Indonesian preschool children's language production.

The mixed-methods used in this study allowed for a deeper and broader understanding of SLCN in Indonesian preschool children aged 3 – 5 years old in Jakarta, Indonesia. The mixed-methods approach in the current study employed a quantitative approach that examined teacher concern about Articulation, Syntax, Narrative, Vocabulary and Comprehension in kindergarten children for the first time in Indonesia and a qualitative approach using focus group discussion to explore the perspectives of preschool teacher about SLCN using focus groups. This mixed-methods approach allowed for intentional integration of both quantitative and qualitative approaches to creating a thorough understanding of SLCN in Indonesian kindergarten children.

The value of mixed-method study is underscored when using only one type of approach, quantitative or qualitative only, is not adequate to tell the whole story (Creswell & Plano-Clark, 2011). As outlined above, a mixed-methods study is advantaged by the integration between quantitative results and qualitative results. In the current study, the quantitative approach results, the prevalence of SLCN as estimated by the teacher screening observation checklist, informed the formulation of questions for the preschool teacher focus groups. Furthermore, the integration also took place after the focus group data were collected and analysed. The analyses of the prevalence of speech, language and communication needs in Indonesian preschool children were linked with the teacher perspectives, resulting in an in-depth understanding of the levels of SLCN in Indonesian preschool children (McKim, 2017). To reiterate, the strengths of the quantitative approach such as exact measurement with statistical calculation combined with a deep contextual understanding of the real world experiences represented in the qualitative approach generate a 'powerful mix' that elevate the analyses of the findings (Miles *et al.*, 2014).

7.5.2 Limitations of Study Design

A limitation of the study was the absence of validity and reliability data for the adapted teacher screening observation checklist to confirm its usability. The current study adapted the teacher screening observation checklist by translating the content and obtaining the opinions, through a short survey, of a small sample of kindergarten teachers in Jakarta about its usability (see the pilot study). Other studies conducted the adaptation by screening children at two different points of time with different teachers. These results were then compared to see its validity and reliability (Okalidou & Kampanaros, 2001; Thapa *et al.*, 2016). No assessments of children's speech and language skills were available (either standardised or informal) in Indonesia, so the current study is unable to compare teacher concern with empirical measurements of children's language skills.

Another limitation of the study is the use of narrative informal assessment task for Indonesian preschool children. The task has caused one school to decline to participate. The elicitation material used in the narrative informal assessment task, the story titled '*Frog, Where Are You*' was not in accordance with the school values. The school explained that they did not allow fable stories for children, as they were prohibited in their religious values. The story 'Frog, Where Are You' has been widely used in many languages as the elicitation material for the narrative language sampling task; thus, the current study opted to use it (Heilmann *et al.*, 2010). However, future studies should consider culturally adapting the elicitation material by selecting a widely used story in Indonesia. Further recommendation also includes a pilot study of a narrative language sampling task to ensure its usability in Indonesian preschool children. A further limitation was the low sample for assessing expressive language production using a narrative informal assessment task. During the assessment phase, of the ten children scheduled to be assessed, six children attended the assessment, three children did not show up for the assessment despite rescheduled dates, and one child had parents withdrew their consent. The current study also invited an additional sample of children with no concern and mild concerns for the narrative informal assessment task; none of these parents returned their consent forms.

The current study applies to one regional demography in Indonesia, children aged 3 – 5 years old, from a predominantly advantaged background in Jakarta. Future studies should consider a sample that reflects the very wide socioeconomic ranging backgrounds of the Indonesian

population for the purpose of generalisability. There was also a lack of representativeness of the focus group sample as the preschool teachers who participated in the focus groups were from two of the five schools that participated. Furthermore, of one school, three teachers were newly employed with among the newly employed, two teachers had less than six months of experience teaching preschool children. Therefore, their perspectives may not be representative of the views and experiences of Indonesian preschool teachers in general.

The current study also had missing data when attempting to examine social, emotional, and behavioural status, using teacher-rated Strengths and Difficulties Questionnaire. Among the five schools that participated, only a small number of teachers from one school returned the Strengths and Difficulties Questionnaire.

7.6 Implications of this study

The study's findings generated important practical and theoretical implications to investigating the levels of SLCN in Indonesian preschool children. This current study is the first study that conducted an initial teacher screening of children with SLCN in the classrooms. The current study is also the first study investigating the perspectives of kindergarten teachers regarding SLCN in children. It is possible that future research, build on the insights gained from the current study, show a greater focus on children with SLCN in the classrooms. The study may be a catalyst for further research in Indonesia to gain more evidence on the importance of communication supporting environment in kindergarten classrooms.

The study adds to the literature by providing a more comprehensive picture of teacher concern of SLCN in Indonesian kindergarten children through teacher rating in five speech and language areas, namely, Articulation, Syntax, Vocabulary, Narrative and Comprehension skills, narrative informal assessment, and parent concern. The study also extends to the field's knowledge by examining teachers' perspectives regarding SLCN in Indonesian kindergarten children. The main findings of the current study are 1) teachers are very concerned about the speech, language, and communication skills of 6.9% of children in their classrooms, and they have mild concerns about more than half of the children in the classroom. Most children from the current study were from advantaged backgrounds. Studies showed (Ginsborg, 2006; Law

et al., 2011) that children from a disadvantaged background (low SES) may have a higher prevalence of teacher concern, although further research in Indonesia's lower SES contexts is urgently needed. This finding also underlines the need for creating a communication supporting environment in the kindergarten classroom as studies show that SLCN will impact early literacy (Glogowska *et al.*, 2006) 2). The Teacher Screening Observation Checklist is useful to screen children at risk of having SLCN, and very limited data suggests an agreement with parent concern 3) the focus groups revealed that teachers needed further knowledge and training about SLCN, including discussion about the causes of SLCN, to foster collaborative relationships with parents.

7.6.1 Practical Applications of a Teacher Screening Tool to Identify Children with Speech, Language and Communication Needs in Indonesian-Speaking Children

The study presented the use of an adapted Teacher Screening Observation Checklist (Whitworth *et al.*, 1993) in screening Indonesian-speaking kindergarten children for possible SLCN, in the absence of standardised assessments for Indonesian population. The findings suggested that the Teacher Screening Observation Checklist can be used to measure teacher concern of SLCN in Indonesian kindergarten children, when accompanied by detailed training. The focus groups also indicated that teachers' strong engagement in learning about SLCN and how to support children with SLCN.

However, Whitworth *et al.* (1993) in her study, found that teacher screen is only accurate in identifying 76% of children, and may miss 24% of children in the population. It is important to know that the Teacher Screening Observation Checklist can screen children who are at risk reliably and that the teacher concerns correspond to the children's speech, language, and communication skills. Therefore, further research is needed to examine the reliability and validity of the Teacher Screening Observation Checklist. The availability of a reliable and valid teacher screening tool will be beneficial in screening SLCN in kindergarten children. Screening will lead to earlier identification of children who need support to meet their learning and

developmental needs. Screening will also provide data needed to raise the awareness about SLCN in Indonesian kindergarten children.

7.6.2 Implications for Educational Practice

The current study showed that teachers had a moderate-high concern about the speech, language, and communication skills of 7% of children in their classroom. This finding provides data that leads to the importance of widening the inclusive education practices in kindergarten schools in Indonesia. This finding also highlights the importance of creating a communication supporting environment in the classrooms as studies showed the link between early identified SLCN and literacy difficulties (Glogowska *et al.*, 2006).

The focus group revealed the need for the school communities to facilitate collaborative relationships. One of the first things that must be done is a discussion about the causes of SLCN as teachers believed that parents' behaviours caused SLCN in children. The focus group highlighted teachers' need for further knowledge and training in SLCN. Teachers also expressed the need for an expert (in Indonesia context, a child psychologist) to consult about supporting children with SLCN. The focus group also revealed teachers' engagement in creating strategies, despite a paucity in knowledge and skills, to support children with SLCN. In light of these findings, there needs to be in-house training in speech, language, and communication development and needs in children. Following that, it is recommended that there be a regionally mandated kindergarten curriculum with clear guidance on creating a communication supporting environment. Lastly, as revealed in the focus groups, there needs to be an emphasis on the collaboration between teachers and educational psychologists in supporting children's speech, language, and communication development and raising awareness about SLCN in school communities. Collaboration between teachers and the clinicians (the educational psychologists) is vital to successfully support children's speech, language, and communication development (Glover *et al.*, 2015).

7.6.3 Implications for the Indonesian Context

The current context in Indonesia includes a lack of awareness of SLCN, a lack of reliable services for assessment and treatment of SLCN, an absence of speech-language therapy training in universities, and no model of inclusive support teams in kindergartens. In light of this context, the teacher screening results showed teachers had a moderate concern for 7% of children in the classroom, and concerns, either mild or moderate, for 55.6% of children in the classroom underlined that SLCN is a significant problem in Indonesian kindergarten children. The study uncovered the need for a multidisciplinary inclusion team that consists of teachers, educational psychologists, and parents to support children with SLCN in the classrooms. The study highlighted the need for coordination between the teachers and the medical professionals, who have historically led the research and recommendation for SLCN in Indonesian children.

The study also revealed the need for establishing speech and language therapy training in universities to provide services and support for children with SLCN. This would increase capacity for speech and language therapists to support early speech and language skills in partnership with kindergartens, both by identifying children at risk of SLCN and by increasing communication supportiveness for the benefit of all children. Given the high concern of teachers over the children's speech, language, and communication skills, there needs to be a kindergarten curriculum that develops communication supporting environment in the classroom. Lastly, there needs to be public awareness-raising about SLCN in Indonesian children with leadership from the Ministry of Education and Culture and the Ministry of Health.

7.7 Directions for Future Research

Given the paucity of research into early SLCN in Indonesia, there is an urgent need to develop the findings of this thesis in future research. For example, future research should include a larger sample of preschool children in several cities in Indonesia that reflect the population's heterogeneity and wide socioeconomic disparities. A larger representative sample will allow the generalisability of the results and provide more robust evidence to support the establishment of provisional services in school communities. Future research could also consider SLCN longitudinally to examine children's diagnosis's stability in older children and

factors that contribute or hamper the diagnosis's stability, as well as examine risk and resilience factors and moderating and mediating factors (Reilly 2007, 2010). The longitudinal study would reveal factors that contribute to or impede the clinical diagnosis associated with SLCN.

Further research is needed to investigate the validity and reliability of the teacher screening tool in Indonesia, for example by comparing findings with direct language assessment, by running interrater reliability tests, and by examining stability of screen outcome over time.

Future research should include investigating children's speech and language profiles with SLCN and comparing them with those of typically developing children. Aside from examining the individual variations and their impacts on children, the investigation can serve as evidence in creating a kindergarten curriculum that supports the development of children's speech, language, and communication abilities through a communication supporting environment (Justice *et al.*, 2018)

Language sampling using informal conversations as elicitation materials in the child's multiple environmental contexts. Future studies should consider conducting language sampling in the classroom and at home. It is recommended that language sampling involves videotaping, in addition to audiotaping, to observe the child's non-verbal communication. In addition, there need to be focus groups for the parents to obtain their perspectives regarding SLCN and compare them with teachers' perspectives. Having the teachers and parents' perspectives will allow for a more comprehensive view and understanding of SLCN in children.

7.8 Conclusion

The present research aimed to examine the potential prevalence of SLCN in Indonesian kindergarten children, according to a teacher screening observation checklist. The second aim of this study was to investigate the thoughts, feelings, and beliefs of preschool teachers regarding SLCN in Indonesian preschool children. The Teacher Screening Observation Checklist was adapted from Whitworth *et al.* (1993) to screen Indonesian kindergarten

children aged 3 – 5. Further information about participating preschool children was collected through the parent questionnaire, a narrative language sampling task, and the teacher-rated Strengths and Difficulties Questionnaire. Agreement about the levels of SLCN between teachers, according to the teacher screening observation checklist, and parents, as indicated in the parent questionnaire, was investigated. Association between SLCN and factors such as age, gender, social, emotional, and behavioural status were examined. The feasibility of using the teacher screening observation checklist and the narrative language sampling task were examined through the analyses of the results and the teachers' perspectives. Lastly, main themes from the teachers' perspectives were identified and analysed in relation to the levels of SLCN in the study context.

The study has identified that teachers had moderate concern for the speech, language, and communication skills of approximately 6.9% of children (10 of 144 children) in the classroom. Teachers also showed mild concerns for 48.6% of children (70 of 144 children). In total, teachers showed concerns for 55.6% (80 of 144 children) of children for at least one of the five speech and language areas. This result suggests the importance of a communication supporting environment in the classrooms to enrich children's speech and language skills in Indonesia. It is important to note that most children in the study were from advantaged backgrounds and further research is needed to investigate the prevalence of SLCN in Indonesian kindergarten children from a broader socioeconomic range.

Meanwhile, the narrative language sampling task results showed that the children who completed the task (n=5) did not produce a minimum of 100 utterances to get a mean length of utterance. When the mean length of utterance was calculated liberally, by taking the total number of morphemes and dividing it by the total number of utterances, the results showed that four children had a mean length of utterance below their age, and one child had a mean length of utterance within her age. This very limited data showed that some agreement between the teacher screening results and narrative informal assessment.

The study found that teachers and parents showed agreement for seven children who showed possible SLCN. Among the seven children with a parent concern, two children had a teacher rating of moderate concern, and five children had a teacher rating of mild concern. There was little agreement between teachers and parents for 58 children with no parent concern.

Among the 58 children with no parent concern, two children had a moderate teacher concern, 49 children had a mild teacher concern, and only seven children with no parent concern had a no teacher concern. This result suggests that teachers reported more concerns about SLCN in children than parents. However, no conclusion could be made about teacher and parent agreement since there was no information for 79 children due to unreturned/incomplete parent questionnaires.

The study did not find any association between a teacher concern (either mild or moderate) in SLCN and age. However, an association between a teacher concern (either mild or moderate) in SLCN and the male gender was suggested. An association between a teacher concern in SLCN and social, emotional, and behavioural status could not be calculated due to a low return rate of teacher-rated Strengths and Difficulties Questionnaire (n=25, 17.4%).

The study also examined the feasibility of the teacher screening observation checklist and the narrative language sampling task to estimate the levels of SLCN in Indonesian preschool children. The result showed that the teacher screening observation checklist is useful in identifying children with teacher concern in SLCN. However, further research is needed to ascertain the reliability and validity of the teacher screening observation checklist.

Regarding the feasibility of the narrative informal assessment task, although there was no conclusion made due to the low number of samples, the result suggested that the narrative informal assessment task might not be appropriate for the children in the current study. The elicitation material of the task caused one school to decline to participate. The school explained that the Frog story categorised as a fable was not in accordance with the school values. Nevertheless, very limited data suggests some agreement with the teacher screening observation checklist results. Among the five children who completed the narrative informal assessment task, four children produced MLU below their expected age.

Teachers' perspectives regarding SLCN in Indonesian preschool children were also investigated. The teachers' perspectives revealed information not provided through the teacher screening observation checklist, supporting the advantage of a mixed-method approach (Creswell & Plano Clark, 2011; McKim, 2017; Miles *et al.*, 2014). A range of views and understandings related to how teachers perceived the parents' role, the need for training and collaboration with onsite experts (educational psychologists), strategies implemented to

support children with SLCN were identified. The overall finding from the focus groups indicated the teachers' lack of knowledge and training in SLCN, which hindered them in building a positive collaboration with parents and supporting children in the classrooms.

The current study is the first study to investigate the levels of potential SLCN using a teacher screening tool. The study is also the first to investigate how teachers perceive SLCN in kindergarten children. The study has also provided a deeper understanding of the lack of awareness about SLCN among parents and teachers. The insights gained from this study may help guide further research studies about SLCN in Indonesia's educational settings. This study lays the groundwork for future research into the development and the adaptation of a screening and assessment tool to estimate the levels of SLCN in Indonesian children. This study calls for an urgent increase in capacity to support for early speech and language skills in Indonesia. This would include increased awareness of SLCN for both educational professionals and parents as well as policies to develop communication-supporting classrooms for kindergartens led by the Ministry of Education and Culture and the Ministry of Health. In order to identify SLCN in young children, this study argues for locally developed and standardised assessments of speech and language skills specifically for Indonesian children. The study also argues that increasing collaborative support for children's speech and language skills is essential – parents and teachers must be supported to work together, with input from specialist professionals (such as educational psychologists and speech and language therapists) within the kindergarten team.

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Appendix A: Ethical Approval 2018

The University Of Sheffield.

Downloaded: 29/12/2020
Approved: 06/04/2018

Indri Hapsari
Registration number: 160224043
Human Communication Sciences
Programme: Full time PhD

Dear Indri

PROJECT TITLE: The prevalence of speech and language difficulties among preschool children aged 3-5 years old in Jakarta, Indonesia
APPLICATION: Reference Number 016945

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 06/04/2018 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 016945 (form submission date: 27/03/2018); (expected project end date: 01/10/2020).
- Participant information sheet 1037357 version 3 (15/01/2018).
- Participant information sheet 1038887 version 7 (01/03/2018).
- Participant information sheet 1038934 version 3 (20/01/2018).
- Participant information sheet 1040961 version 1 (01/03/2018).
- Participant information sheet 1040962 version 1 (01/03/2018).
- Participant information sheet 1042055 version 1 (27/03/2018).
- Participant information sheet 1042045 version 1 (27/03/2018).
- Participant consent form 1037358 version 6 (20/01/2018).
- Participant consent form 1038133 version 5 (20/01/2018).
- Participant consent form 1038132 version 5 (20/01/2018).
- Participant consent form 1040963 version 1 (01/03/2018).
- Participant consent form 1040964 version 1 (01/03/2018).
- Participant consent form 1042047 version 1 (27/03/2018).
- Participant consent form 1042046 version 1 (27/03/2018).

If during the course of the project you need to deviate significantly from the above-approved documentation please inform me since written approval will be required.

Your responsibilities in delivering this research project are set out at the end of this letter.

Yours sincerely

Emily Henderson
Ethics Administrator
Human Communication Sciences

Please note the following responsibilities of the researcher in delivering the research project:

- The project must abide by the University's Research Ethics Policy: https://www.sheffield.ac.uk/rs/ethicsandintegrity/ethicspolicy/approval-procedure
- The project must abide by the University's Good Research & Innovation Practices Policy: https://www.sheffield.ac.uk/polopoly_fs/1.671066!/file/GRIPPolicy.pdf
- The researcher must inform their supervisor (in the case of a student) or Ethics Administrator (in the case of a member of staff) of any significant changes to the project or the approved documentation.
- The researcher must comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data.
- The researcher is responsible for effectively managing the data collected both during and after the end of the project in line with best practice, and any relevant legislative, regulatory or contractual requirements.

Appendix B: Ethical Approval 2019

The University Of Sheffield.

Downloaded: 29/12/2020
Approved: 09/12/2019

Indri Hapsari
Registration number: 160224043
Human Communication Sciences
Programme: Full time PhD

Dear Indri

PROJECT TITLE: The prevalence of speech and language difficulties among preschool children aged 3-5 years old in Jakarta, Indonesia
APPLICATION: Reference Number 031009

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 09/12/2019 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 031009 (form submission date: 18/11/2019); (expected project end date: 01/10/2020).
- Participant information sheet 1070869 version 2 (18/11/2019).
- Participant consent form 1070871 version 1 (25/09/2019).
- Participant consent form 1072715 version 1 (18/11/2019).

If during the course of the project you need to deviate significantly from the above-approved documentation please inform me since written approval will be required.

Your responsibilities in delivering this research project are set out at the end of this letter.

Yours sincerely

Kate Chadwick
Ethics Administrator
Health Sciences School

Please note the following responsibilities of the researcher in delivering the research project:

- The project must abide by the University's Research Ethics Policy: https://www.sheffield.ac.uk/rs/ethicsandintegrity/ethicspolicy/approval-procedure
- The project must abide by the University's Good Research & Innovation Practices Policy: https://www.sheffield.ac.uk/polopoly_fs/1.671066!/file/GRIPPolicy.pdf
- The researcher must inform their supervisor (in the case of a student) or Ethics Administrator (in the case of a member of staff) of any significant changes to the project or the approved documentation.
- The researcher must comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data.
- The researcher is responsible for effectively managing the data collected both during and after the end of the project in line with best practice, and any relevant legislative, regulatory or contractual requirements.

Appendix C: Pilot Study

Pilot

Introduction

This report details the pilot study that was conducted as part of the development process of the Teacher Screening Observation Checklist to be used in Indonesian children aged 3 – 5 years old. The Teacher Screening Observation Checklist was originally developed and normed in Australian children by Anne Whitworth *et al.* in 1993 under the name Pre-Primary/Preschool Speech and Language Referral Checklist. The teacher checklist was used and adapted to local culture in a prevalence study of speech and language disorder among primary school students in Nepal (Thapa, 2016). The Teacher Screening Observation Checklist is a screening tool to identify children who may display signs of speech, language, and communication needs. It is comprised of two types of material. The first one is the Teacher Guidelines. The second one is the Teacher Screening Observation Checklist Form.

The Teacher Guidelines will be used as a reference for teachers in using Teacher Screening Observation Checklist. The guidelines describe the expected speech, language, and communication skills for 3 - 5-year-olds across eight different categories providing examples that would be seen in children who were “age-appropriate”, those who had “mild” needs, and those who may be considered to have “moderate or severe” needs (Whitworth *et al.* , 1993).

The Teacher Screening Checklist Form is a form to be completed by the teacher and covers eight separate categories: speech (phonology), grammar (syntax), expressing ideas (general expressive language), storytelling/narrative, vocabulary, understanding/comprehension, stuttering, and voice (Whitworth, 1993). Teachers will rate each child as having either “age-appropriate”, “mild" or “moderate or severe” needs across each of these eight categories based on the information provided in the Teacher Guidelines.

In preparation for the pilot study, the Teacher Screening Observation Checklist was translated into Bahasa Indonesia by the researcher and was back translated into English by a certified English translator who is a native speaker of Bahasa Indonesia and fluent in English. The translation process followed basic guidelines for translating surveys or questionnaires from one language to another language, in this case from English to Bahasa Indonesia. The process was as follows:

- Translation from English to Bahasa Indonesia by a native speaker of the target language (conducted by the researcher)
- Back-translation from Bahasa Indonesia to English by a certified English translator who is a native speaker of Bahasa Indonesia (conducted by a certified translator)
- Review of translation (conducted by the researcher and certified translator)
- Review of original questionnaire and back-translation (conducted by the researcher and certified translator)
- Resolving discrepancies and problems in the translation (conducted by the researcher as a translator and certified translator as back-translator) (Basic Guidelines for Translating Surveys)

The translation guideline above was used to acquire a translation in a target language that is accurate to the meaning of the original document and easy for teachers to use. This pilot study was conducted to see whether the translated-Teacher Screening Observation Checklist

is easy to understand and fulfils the expected speech, language, and communication skills of Indonesian children. The pilot was also conducted to see whether any changes should be made to the checklist before using it in the main study.

The pilot study aimed to evaluate the usefulness of the Teacher Screening Checklist (TSC) and assess whether the description of speech, language, and communication needs fulfils the expected speech, language, and communication needs of Indonesian children to the best of teacher participants' knowledge, and whether the checklist was easy or straightforward for teachers to use and complete.

Method

Participants

Ten teachers with experiences in teaching preschool children volunteered to participate in the tool pilot study. The information of the teacher volunteers was gathered from the background questionnaire they completed. The information is detailed below:

Experiences in teaching preschool children

- Year(s) of experience in teaching children aged 3-5 years old
- All 10 participants have taught children aged 3-5 years old for a minimum of 1.5 years.
- 6 participants have 1.5 – 4 years of experience in teaching children aged 3-5 years old.
- 4 participants have 8 – 15 years of experience in teaching children aged 3-5 years old.

Education background

All 10 participants had university education ranging from associate degrees to master's degrees.

- 4 participants have master's degrees in fields such as Education Psychology, Applied Psychology, Education, and Education Science.
- 5 participants have bachelor's degrees in Psychology, Education, Physical Education, English Education, and Music Education.
- 1 participant has an associate degree in Language.

Knowledge about the development of children aged 3-5 years old

- All 10 participants reported that they have adequate knowledge about child development
- 9 participants said that they gained knowledge about child development from training at work and reading articles.
- 8 participants said that they gained knowledge about child development from their formal education and general seminars they attended in the past.

Table 3. Summary of participants' background information

Participant ID	Years of experience	Educational background	Knowledge of child development				
			University education	Work training	General seminars	Articles	No knowledge
1	3	Master's degree in Educational Psychology	Yes	Yes	Yes	Yes	Blank
2	2.5	Bachelor's degree in Psychology	Yes	N/A	N/A	Yes	Blank
3	1.5	Bachelor's degree in Music Education	N/A	Yes	Yes	N/A	Blank
4	11	Bachelor's degree in Performance Education	Yes	Yes	Yes	Yes	Blank
5	10	Master's in Educational Science	Yes	Yes	Yes	Yes	Blank
6	4	Master's degree in Applied Psychology	Yes	Yes	Yes	Yes	Blank
7	15	Bachelor's degree in English Education	Yes	Yes	Yes	Yes	Blank
8	8	Master's degree in Education	Yes	Yes	Yes	Yes	Blank
9	4	Associate degree in Language Education	N/A	Yes	Yes	Yes	Blank
10	4	Bachelor's degree in Physical Education	Yes	Yes	N/A	Yes	Blank

Materials

Teacher Guidelines (Whitworth *et al.* 1993, appx A) was translated into Bahasa Indonesia by researcher. **Comment page** (see appendix B for comment page) was developed by researcher to gather information whether Bahasa Indonesia-translated Teacher Screening Checklist is easy for teachers to use and complete. The comment page contains three questions. The first question was aimed to ensure that all participants read the Teacher Guidelines and Teacher Screening Checklist. The second question was to ensure whether participants understood the use of the Teacher Screening Checklist. The second question also asked participants to give reasons for their answer. The third or last question asked whether the Teacher Guidelines under the column "age-appropriate" fulfils the expected speech, language and communication needs of 5-year-old Indonesian children to the best of the teachers' knowledge. A **background questionnaire** (see appendix B for background questionnaire) was developed by researcher to collect information about participants' years of experiences, educational background and current knowledge of child development.

Procedure

An e-mail (see appendix C for email correspondence) from researcher was sent to the principal of a school located in South Jakarta, Indonesia asking for volunteers to participate in piloting the tool. The principal was receptive to the request and agreed to participate in the tool pilot. Subsequent emails sent provided detailed instructions on what the teacher participants were asked to do with regards to the screening checklist, comment page and questionnaire. The completed comment page and questionnaire were sent back approximately three weeks after the first e-mail. As a token of appreciation, each teacher participant was given one chocolate bar to thank them for their participation.

Results

Response rate

The response rate is 100%. All 10 participants completed the comment page and the questionnaire.

Comment page

All 10 participants reported that they found the Teacher Guidelines and Teacher Screening Checklist to be easy to understand and useful in helping them to observe a child's speech and language development. Two participants added that the checklist is quite detail in describing speech, language and communication needs of children aged 5 years old. All 10 participants reported that they found the Teacher Guidelines for speech, language and communication needs of children under the category "age-appropriate" align with their understanding of expected speech, language and communication needs in 5-year-olds.

Comments about the usefulness and the use of the Guidelines and Checklist from the participants are detailed below:

"To evaluate development"
"To assess whether age-appropriate or not"
"To help with intervention"
"To know and analyse children's development"
"As diagnostic tool"
"To diagnose child"

“Guideline to observe child’s development”
Additional comments are detailed below:
“From my observation, most children (P3 class at Sekolah Cita Buana) can be categorized under age-appropriate but there are some who can fall under the categories of mild and moderate/severe”
“Some children are talkative during outdoor activities (compared to indoor activities), it is as if they are released from restraint”

Table 4. Summary of participants' background information

Comment page				
Participant ID	Easy to understand	Usefulness	Fulfil expected speech, language, and communication needs	Additional comment
1	Yes	Yes	Yes	To evaluate development, to assess whether age-appropriate or not, to help with intervention
2	Yes	Yes	Yes	To know and analyse children’s development, as diagnostic tool. Most children are (within the) age appropriate range, but some (have) mild or moderate (needs)
3	Yes	Yes	N/A	N/A
4	Yes	Yes	Yes	N/A
5	Yes	Yes	Yes	Checklist can be used to diagnose child’s development
6	Yes	Yes	Yes	Easy to understand and it is quite detailed
7	Yes	Yes	Yes	Quite detail
8	Yes	Yes	Yes	Checklist is used as a guideline to observe child’s development
9	Yes	Yes	Yes	Checklist is used to observe child’s development
10	Yes	Yes	Yes	Some children are talkative when doing outdoor activities as if they are released from restraint

Summary and conclusions

The Teacher Screening Observation Checklist was translated and developed to be used by teachers to identify Indonesian preschool children who possibly show signs of speech, language, and communication needs. Therefore, conducting this pilot study with Indonesia preschool teachers was a key element in ensuring that the wording in the translation is easy to understand, and the content fulfils the expected speech, language, and communication needs of children in Indonesia.

The range of participants' years of experience in teaching preschool children was quite diverse. Some have worked with children from 1,5 years to 4 years, some have worked with children from 8 years to 15 years. The teachers' level of education ranged from an associate degree to a master's degree with majority of the teachers graduated from psychology and/or educational background. All participants stated that they learned child's development through a variety of sources such as formal education (college/university), training at work, general seminars, and reading articles.

One of the aims of piloting the teacher screening checklist was that the translation should be worded in a way that could be easily understood by teachers who had little experience and knowledge of speech, language and communication needs. Results of the pilot study indicate that this aim was achieved, with all participants reporting that the teacher guidelines and teacher screening checklist were easy to understand and useful in identifying children who may display signs of speech, language and communication needs.

The results of the pilot study were positive. It was reassuring to discover that the teacher guidelines and screening checklist was easy to understand and perceived as useful in making the teachers feel better equipped to observe the speech, language and communication abilities of the children they are teaching.

The positive comments, received from all participants, indicate that the teacher guidelines and teacher screening checklist will provide a valuable reference for teachers to observe children's speech, language, and communication development.

Appendix D: Invitation Letters

Department of Human Communication Sciences
362 Mushroom Lane
Sheffield S10 2TS UK

Head of Department
Professor Patricia E Cowell
BA, MS, PhD.

Telephone: +44 (0) 114 222 2426
Fax: +44 (0) 114 222 2439
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Dear Parents,

RE: Research Study: The Prevalence of Speech and Language Difficulties among Preschool Children Aged 3-5 Years Old in Jakarta, Indonesia

My name is Indri Hapsari. I am a child clinical psychologist from Jakarta, Indonesia. I am currently completing my PhD in the Department of Human Communication Sciences, University of Sheffield, UK. My supervisors are Dr Judy Clegg and Dr Sarah Spencer who are speech language therapists, academics and researchers at the Department of Human Communication Sciences, University of Sheffield, UK.

With this letter, I would like to let you know that your child is invited to participate in a research study looking at speech and language difficulties among Indonesian children. This study aims to look at how common speech and language difficulties are among children aged 3, 4 and 5 years old. This study intends to examine the associations between speech and language difficulties with gender and background of the preschool children. This study will also explore the associations between speech and language difficulties and social, emotional and behavioural difficulties, school readiness and educational attainment. The study may be helpful in identifying how common speech and language difficulties are among preschool children in your child's school.

This research study is recruiting children aged 3-5 years old who are enrolled in schools in South Jakarta, Indonesia. I have enclosed a parent information sheet which contains an overview of the research study. You may keep this information sheet for references.

To participate in this research study, your child must meet the following criteria:

- They are Indonesian children whose mother tongue is Bahasa Indonesia
- They are between 3 years 0 month old to 5 years 11 months old
- They are currently enrolled in school.
- They have no known hearing impairment and/or neuro-developmental disorders such as autism, asperger's syndrome etc

The research study will be conducted in two stages, stage 1 and stage 2. In stage 1, each child participant will go through screening via teacher screening observation checklist. Stage 1 aims to screen children who may show signs of speech and language difficulties. In this stage, teachers will be asked to rate child participants in their class based on their past and ongoing observation of the children in school. They will be asked to rate each child as having either age appropriate, mildly delayed or moderate-severely delayed skills in speech and language. In this stage, children do not have to do anything but follow their usual school routine.

In stage two, if a child participant is found to display signs of speech and language difficulties from the screening checklist, they will be invited to participate in a direct assessment with the researcher. Once written parental consent is obtained, the child will be assessed by the researcher using an informal language samples measure. In this assessment, children will be told Frog, Where Are You? (Mercer, 1969) story by the researcher, then they will be shown wordless pictures from the story, and they will be asked to retell the story based on the wordless pictures of the story. The assessment will take approximately 20 minutes and will be conducted in a quiet room in the school. We would like to ask a teacher to accompany the child participant during assessment as well. All of the child's responses will be audio-recorded. In stage 2, we would also like to collect information about the behaviour of children who participate in a direct assessment. The information of these children's behaviour will be collected through Indonesian-adapted **Strengths and Difficulties Questionnaire** (SDQ). Teachers will be asked to complete Indonesian-adapted SDQ for all children who participate in a direct assessment. Children do not have to do anything but follow their usual school routine.

Please consider whether you would be happy for your child to participate in this study. If you agree for your child to participate, the school principal will send you a consent form and background information questionnaire that we have previously posted to your child's school. We would like your help to return the completed consent forms and background questionnaires to the school principal. We will collect the completed consent forms and background information questionnaires from the school principal when I visit the school.

If you would like further information, please contact me (e-mail: ihapsari1@sheffield.ac.uk) or the research study supervisors, Dr Judy Clegg (e-mail: jclegg@sheffield.ac.uk) and Dr Sarah Spencer (e-mail: sarah.spencer@sheffield.ac.uk).

Sincerely,

Indri Hapsari

Researcher

Department of Human Communication Sciences
362 Mushroom Lane
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Head of Department
Professor Patricia E Cowell
BA, MS, PhD.

Telephone: +44 (0) 114 222 2426
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http://www.shef.ac.uk/hcs

Dear Teachers,

RE: Research Study: The Prevalence of Speech and Language Difficulties among Preschool Children Aged 3-5 Years Old in Jakarta, Indonesia

My name is Indri Hapsari. I am a child clinical psychologist from Jakarta, Indonesia. I am currently completing my PhD in the Department of Human Communication Sciences, University of Sheffield, UK. My supervisors are Dr Judy Clegg and Dr Sarah Spencer who are speech language therapists, academics and researchers at the Department of Human Communication Sciences of The University of Sheffield, UK.

With this letter, I would like to invite you to participate in a research study looking at speech and language difficulties among Indonesian children. This study aims to look at how common speech and language difficulties are among children aged 3, 4 and 5 years old. This study intends to examine the associations between speech and language difficulties with gender and background of the preschool children. This study will explore the associations between speech and language difficulties with social, emotional and behavioural difficulties, school readiness and educational attainment. The study may be helpful in providing description on how common speech and language difficulties are among preschool children in your school.

This research study is recruiting children aged 3-5 years old who are enrolled in schools in south Jakarta, Indonesia. The research study is a two-stage process consisting of stage 1 and stage 2. In stage 1, children will go through screening via **teacher screening observation checklist**. Stage 1 aims to screen who may show signs of speech and language difficulties. In this stage, we would like to ask the teachers to rate the children in their class based on their past and ongoing observation of the children in school. Using the observation checklist, teachers will be asked to rate each child in their class as having either “age-appropriate”, “mildly delayed”, or “moderately-severely delayed” skills in speech and language. Teachers will be able to complete the screening checklist during school hours. In this stage, the children do not have to do anything but follow the usual school routine.

In stage 2, if a child is found to show signs of speech and language difficulties from the screening children, they will be invited to participate in a direct assessment conducted by the researcher. Once parental consent is obtained, the child participant will be assessed by the researcher using an informal language samples measure. In this assessment, the child participant will be sought for their assent and will be explained that they can stop anytime without any negative consequences. In this assessment, the child participant will be told a story Frog, Where Are You by the researcher, then they will be shown to look at wordless

pictures and be asked to retell a story based on the wordless pictures. The assessment will take approximately 20 minutes and will be conducted in a quiet room in the school. In this assessment, we would like to ask a teacher to accompany the child during assessment. All of the child's responses will be audio-recorded.

In stage 2, we also would like to collect information about behaviour of the children who participate in a direct assessment. The information of these children's behaviour will be collected through Indonesian-adapted **Strengths and Difficulties Questionnaire (SDQ).** We would like to ask the teacher to complete Indonesian-adapted SDQ for all children who participate in a direct assessment.

We will provide training for teachers on how to use the screening checklist and the Indonesian-adapted Strengths and Difficulties Questionnaire. In the training, we will disseminate written guidelines on how to mark the occurrence of speech and language difficulties in the screening checklist and how to complete the SDQ. The training will take approximately 40 minutes, preferably on a Friday afternoon at your school. We have enclosed teacher information sheet which contains an overview about the research study. You may keep this information sheet for references.

To participate in this research study, you must meet the following criteria:

- You are an Indonesian teacher
- You are preferably a teacher of language arts (Bahasa Indonesia)
- You have taught children in your class for a minimum of 6 months

Please consider whether you would agree to participate in this research study. If you agree to participate in this study, you can collect and complete a consent form we have already posted to your principal. We would like you to confirm your participation by returning the completed consent form to your principal one week after you collect it. At this point a convenient date in March 2018 will be arranged so I can visit your school to provide training on how to use the screening checklist and Indonesian-adapted Strengths and Difficulties Questionnaire.

If you would like further information, please contact me (e-mail: ihapsari1@sheffield.ac.uk) or the research study supervisors, Dr Judy Clegg (e-mail: jclegg@sheffield.ac.uk) and Dr Sarah Spencer (e-mail: sarah.spencer@sheffield.ac.uk).

Sincerely,

Indri Hapsari

Researcher

Appendix E: Information Sheet

Department of Human Communication Sciences
362 Mushroom Lane
Sheffield S10 2TS UK

Head of Department
Professor Patricia E Cowell
BA, MS, PhD.

Telephone: +44 (0) 114 222 2426
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Information sheet for parents of children participants

Prevalence of Speech and Language Disorders

This Information Sheet describes a research project at the University of Sheffield, which is investigating the estimates of prevalence of speech and language disorders in children.

Your child is invited to take part in this research project. This Information Sheet gives you information about the study. You can decide whether you would like to have your child take

part after reading this sheet. You can ask the researcher any questions you have about your child's involvement.

What is this project about?

The researchers are interested in finding out the prevalence of speech and language disorders in Indonesian children aged 3-5 years old who are enrolled in schools in South Jakarta. Prevalence refers to how 'common' speech and language disorders are found in these children.

Results from this project will contribute to further research on prevalence, which may result in an intervention technique to help remedy these conditions in children.

What would your child be asked to do?

Your child will be observed by teacher participants, preferably their own teachers, for occurrence of speech and language disorders. The observation will be recorded onto the TSLRC screening tool. Observation will be conducted during usual school hours so there will be no disruption towards your child's school daily activities.

Afterwards, a child that has undergone the screening process may be invited to be assessed by a speech language pathologist to ascertain the occurrence of speech and language disorders. During this activity, your child will need to attend a certain amount of time outside their school activities for assessment with the speech language pathologist.

Who can take part?

Participants will:

- be Indonesian children whose mother tongue is Bahasa Indonesia;
- be between 3 – 5 years old;
- be enrolled in a school at the time the screening and/or assessment is conducted;
- participants are not previously diagnosed with neurological, psychiatric and/or developmental disorders.

Will my child be paid?

No. Participation is voluntary. No rewards or compensation will be given for for taking part. No reimbursment for time or travel will be granted.

Can my child stop at any time?

Yes. Participants can withdraw from participating at any time, without giving a reason. There will be no negative consequences for doing so.

Where will the study take place?

The screening by teachers will be done in your child's classes. The subsequent assessment will be done at designated place in your child's school.

What information will be collected?

As your child's parents, you will be given a questionnaire that asks background information about your child's age, your child's previous health history and school-related achievement and/or issues. You will also be asked about your education, your profession and other socioeconomic status-related information. Your child will be observed by teacher participants, and your child may be subsequently assessed by speech language pathologist.

What happens to my child's data?

Electronic data will be kept securely in password protected storage locations. Paper materials will be kept in a locked filing cabinet in a secure office.

Results from this study will be used to create materials for another study on the same topic. Participants' responses will contribute to Indri Hapsari's PhD research. This research will be presented in conferences, published papers and a thesis, but participants will be anonymous in the presentation of results.

Will my child remain anonymous? Will my child's participation be confidential?

Yes. All the information that is collected about participants will be kept confidential. Participants will not be identifiable in any reports, publications or presentations of the data.

What are the potential risks or disadvantages of taking part?

There are no known risks to taking part in this study.

What are the potential benefits of taking part?

There are no direct benefits to you or your child. However, the data collected in this study will provide valuable information on how common the occurrence of speech and language disorders among children are aged 3-5 who are enrolled in schools in South Jakarta.

Has the project obtained ethical approval?

This project has received ethical approval from the Department of Human Communication Sciences at the University of Sheffield.

Who is funding the project?

Indonesia Endowment Fund for Education (Lembaga Pengelola Dana Pendidikan) is funding this research project.

Who is on the research team?

Indri Hapsari is a PhD student in the Department of Human Communication Sciences. Her project is supervised by Dr Judy Clegg and Dr Sarah Spencer, who are senior academics in the department.

Researcher: Indri Hapsari

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Supervisors: Dr Judy Clegg
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0114 22 22 450

Dr Sarah Spencer
sarah.spencer@sheffield.ac.uk
0114 22 22 411

How can I get more information or sign up to take part?

Please contact Indri Hapsari for more information or to arrange a time to take part in the study.

What if there is a problem or I need to make a complaint?

You can speak with Indri Hapsari or her supervisors under any circumstances.

If you would like to speak to someone unrelated to the research team, you can contact the Ethics Lead for the Department of Human Communication Sciences:

Prof Ray Wilkinson
ray.wilkinson@sheffield.ac.uk
0114 22 22 449

If you are not satisfied with the responses from these individuals, you can contact the Registrar and Secretary of the University of Sheffield:

Dr Philip Harvey
registrar@sheffield.ac.uk

Thank you for considering taking part in this study!

Department of Human Communication Sciences
362 Mushroom Lane
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Head of Department
Professor Patricia E Cowell
BA, MS, PhD.

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http://www.shef.ac.uk/hcs

Information sheet for teacher participants

Prevalence of Speech and Language Disorders

This Information Sheet describes a research project at the University of Sheffield, which is investigating the estimates of prevalence of speech and language disorders in children.

You are invited to take part in this research project. This Information Sheet gives you information about the study. You can decide whether you would like to take part after reading this sheet. You can ask the researcher any questions you have about your involvement.

What is this project about?

The researchers are interested in finding out the prevalence of speech and language disorders in Indonesian children aged 3-5 years old who are enrolled in schools in South Jakarta. Prevalence refers to how 'common' speech and language disorders are found in these children.

Results from this project will contribute to further research on prevalence, which may result in an intervention technique to help remedy these conditions in children.

What would I be asked to do?

Participants will be asked to attend a training session to use a screening tool to mark the occurrence of speech and language disorders in children in their respective classes.

Afterwards, participants will be asked to record the occurrence of speech and language disorders in children in their respective classes. This is based on day-to-day observation of the children.

Who can take part?

Participants will:

- be Indonesian teachers;
- be teachers who have taught children participants a minimum of 6 months;
- will have submitted their consent to participate in the study;
- will have completed teacher training to use the TSLRC as intended.

Will I be paid?

No. Participation is voluntary. No rewards or compensation will be given for for taking part. No reimbursment for time or travel will be granted.

Can I stop at any time?

Yes. Participants can withdraw from participating at any time, without giving a reason. There will be no negative consequences for doing so.

Where will the study take place?

The training will be located in a designated place in South Jakarta. The recording of occurrence of speech and language disorders using the TSLRC will be done in teachers' respective classes.

What information will be collected?

Participants will be asked background information about their age, their education and profession. They will then record occurrence of speech and language disorders in the TSLRC screening tools.

What happens to my data?

Electronic data will be kept securely in password protected storage locations. Paper materials will be kept in a locked filing cabinet in a secure office.

Results from this study will be used to create materials for another study on the same topic. Participants' responses will contribute to this PhD research. This research will be presented in conferences, published papers and a thesis, but participants will be anonymous in the presentation of results.

Will I remain anonymous? Will my participation be confidential?

Yes. All the information that is collected about participants will be kept confidential. Participants will not be identifiable in any reports, publications or presentations of the data.

What are the potential risks or disadvantages of taking part?

There are no known risks to taking part in this study.

What are the potential benefits of taking part?

There are no direct benefits to you. However, the data collected in this study will provide valuable information on how common are the occurrence of speech and language disorders among children aged 3-5 who are enrolled in schools in South Jakarta.

Has the project obtained ethical approval?

This project has received ethical approval from the Department of Human Communication Sciences at the University of Sheffield.

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What if there is a problem or I need to make a complaint?

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If you would like to speak to someone unrelated to the research team, you can contact the Ethics Lead for the Department of Human Communication Sciences:

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If you are not satisfied with the responses from these individuals, you can contact the Registrar and Secretary of the University of Sheffield:

Dr Philip Harvey
registrar@sheffield.ac.uk

Thank you for considering taking part in this study!

Appendix F: Consent forms

Parental consent form for child to participate

Prevalence of Speech and Language Difficulties among Preschool Children Aged 3-5 Years Old in Jakarta, Indonesia

Researcher:

Participant Number:_____

Information Sheet

	Please tick
I understand the **information sheet**	☐
I had a chance to ask **questions**	☐
I **give consent** for my child to participate	☐
Doing this will **NOT** affect any **support** I receive	☐
I can **stop** at anytime	☐
I **give permission** for the researcher to access my child's school records	☐

Confidentiality

The study will **NOT** use my **child's name**. ☐

Telling people about results

I understand the researchers will **talk** about results to other researchers. ☐

I understand my name or my child's name will **NOT** be used in presentations. ☐

I **agree** to for my child to take part in this study

_____

Name of Child Date Signature

_____

Name of Parents Date Signature

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Sheffield S10 2TS UK

Head of Department
Professor Patricia E Cowell
BA, MS, PhD.

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http://www.shef.ac.uk/hcs

Consent form for teacher participants

Prevalence of Speech and Language Disorders in Children

Researcher:

Participant Number:_____

Information Sheet

Please tick

I have read and understood the **information sheet** ☐

My questions have been answered ☐

I understand that my participation is voluntary. I am free to withdraw at any time, without giving a reason. There are no negative consequences for doing this. ☐

I understand that my responses will be confidential. I will not be identifiable in any report, publication or presentation of the data from this project. ☐

I understand that the results of this study will be used in future research ☐

I agree to take part in the above research ☐

Confidentiality

The study will **NOT** use my **name**. ☐

Telling people about results

I understand the researchers will **talk** about results to other researchers. ☐

I understand my **name** will **NOT** be used in presentations. ☐

I **agree** to take part in this research project

_____

Name of Participant Date Signature

_____

Name of Researcher Date Signature

Child Participant Information Sheet and Assent Form

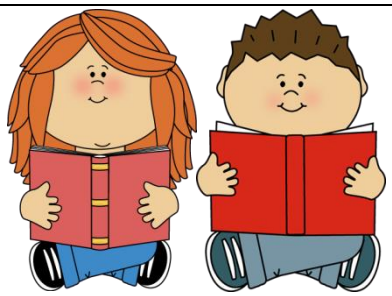
Project title : The Prevalence of Speech and Language Difficulties among Preschool Children Aged 3-5 Years Old in Jakarta, Indonesia

Name of Researcher : Indri Hapsari, S.Psi, M.Psi, Psikolog

Name of Child :

Participant number :

I'm doing some work looking at how many children have difficulties in talking. I'd like you to do some activities to help me. I will ask you to do two activities:

1. Look at some pictures and tell me what they are.	
2. Tell me a story from the pictures you see.	

Also...

I need to record your voice so I can remember what you say	

 I would like to do these activities.	 I would not like to do these activities.

Appendix G: Teacher Screening Observation Checklist and Guidelines

TEACHER SCREENING OBSERVATION CHECKLIST

FOR 3-YEAR-OLD CHILDREN

CHILD'S NAME: _____DOB:_____

ADDRESS:_____PHONE:_____

_____

SCHOOL:_____DATE COMPLETED:_____

TEACHER:_____

PLEASE USE *TEACHER SCREENING OBSERVATION CHECKLIST GUIDELINES* WHEN COMPLETING THIS CHECKLIST

Tick the appropriate rating for all 5 categories and comment if you wish	AGE APPROPRIATE	MILD DIFFICULTIES	MODERATE/SEVERE DIFFICULTIES
1. Speech/articulation			
2. Grammar			
3. Storytelling/Narrative			
4. Vocabulary			
5. Understanding/Comprehension			

TEACHER SCREENING OBSERVATION CHECKLIST

FOR 4-YEAR-OLD CHILDREN

CHILD'S NAME: _____DOB:_____

ADDRESS:_____PHONE:_____

_____

SCHOOL:_____DATE COMPLETED:_____

TEACHER:_____

PLEASE USE *TEACHER SCREENING OBSERVATION CHECKLIST GUIDELINES* WHEN COMPLETING THIS CHECKLIST

Tick the appropriate rating for all 5 categories and comment if you wish	AGE APPROPRIATE	MILD DIFFICULTIES	MODERATE/SEVERE DIFFICULTIES
1. Speech/articulation			
2. Grammar			
3. Storytelling/Narrative			
4. Vocabulary			
5. Understanding/Comprehension			

TEACHER SCREENING OBSERVATION CHECKLIST

FOR 5-YEAR-OLD CHILDREN

CHILD'S NAME: _____DOB:_____

ADDRESS:_____PHONE:_____

_____

SCHOOL:_____DATE COMPLETED:_____

TEACHER:_____

PLEASE USE *TEACHER SCREENING OBSERVATION CHECKLIST GUIDELINES* WHEN COMPLETING THIS CHECKLIST

Tick the appropriate rating for all 5 categories and comment if you wish	AGE APPROPRIATE	MILD DIFFICULTIES	MODERATE/SEVERE DIFFICULTIES
1. Speech/articulation			
2. Grammar			
3. Storytelling/Narrative			
4. Vocabulary			
5. Understanding/Comprehension			

TEACHER SCREENING OBSERVATION CHECKLIST

GUIDELINES FOR THREE-YEAR-OLD CHILDREN

To be used in conjunction with the Teacher Screening Observation Checklist

AGE APPROPRIATE	MILD DIFFICULTIES	MODERATE/SEVERE DIFFICULTIES
1. ARTICULATION - Becoming very intelligible in connected speech - Continued refinement of articulatory skills taking place - Mastering some consonant sounds (b, d, k, g, f, y)	- Usually intelligible in connected speech - may have difficulty with some consonant sounds (b, d, k, g, f, y)	- always difficult to understand - frustrated by inability to say sounds and words - may have difficulty with many consonant sounds (b, d, k, g, f, y)
2. GRAMMAR - Use four to five words in sentences - Start using imperative sentences (Please, close the door)	- Use four to five words in sentences occasionally - Never use imperative sentences	- Use very little words - puts word in the wrong order
3. STORY TELLING/NARRATIVE - Retell personal experiences such as going to the zoo, going to theme parks - Retells familiar stories - Names pictures in books	- able to tell you about personal experiences or retell a simple familiar story. Sentences may be simple with very little detail included. Poor sequencing. - Names pictures in books with help	- Unable to retell personal experiences or retell a simple familiar story - Gets frustrated with inability to retell experiences or stories - Doesn't name pictures in books

4. VOCABULARY - Identifies circle and square - Able to name 8-10 familiar things - Beginning of question-asking stage – asks mainly “what” and “who” questions -	- Identify circle and square with help - Able to name less than 8-10 familiar things - Rarely ask questions	- Unable to identify circle and square - Unable to name familiar things - Does not ask questions
5. UNDERSTANDING - Responds to commands involving two actions - Can answer a question such as what do you do when you’re sleepy? What do you do when you’re hungry? - Can answer simple “why” questions such as why did you cry?	- Responds to commands involving two actions with help - Can answer questions with guidance	- Doesn’t understand commands - Gives incomplete, irrelevant or no response to questions - Does not ask for clarification when failing to understand - poor listening skills

TEACHER GUIDELINES FOR FOUR-YEAR-OLD CHILDREN

To be used in conjunction with the Teacher Screening Observation Checklist

AGE APPROPRIATE	MILD DIFFICULTIES	MODERATE/SEVERE DIFFICULTIES
1. ARTICULATION - Very intelligible in connected speech - Most consonant sounds used consistently and accurately, - More errors present in certain consonant blends (eg. kh, ng, ny, sy)	- Usually intelligible in connected speech - Sometimes inconsistent and inaccurate use of most consonant sounds - struggles with consonant blends (eg. kh, ng, ny, sy)	- Often difficult to understand - Often inconsistent and inaccurate use of most consonant sounds - Unable to use consonant blends - Gets frustrated with inability to say sounds and words
2. GRAMMAR - Use four to seven words in sentences - Consistently use imperative sentences - Start using passive voice	- Use less than four words in sentences - Inconsistent use of imperative sentences	- Limited words in sentences - Doesn't use imperative sentences
3. STORY TELLING/NARRATIVE - Able to tell you about recent events or retell a simple familiar story. Sentences may be simple with very little detail included. Poor sequencing. - Only connect sentences with "and"	- Little experience with books Can't tell you about recent events or retell a simple familiar story - labels each picture, doesn't tell a story	- Unable to retell personal experiences or retell a simple familiar story - Gets frustrated with inability to retell experiences or stories - Name pictures in books with help
4. VOCABULARY - Defines four words in terms of use - Asks meaning of words - Tells long story accurately - Repeats days of week in sequence	- beginning to learn new vocabulary - sometimes difficult to follow	- frequent use of the word, "that". "this". - Difficult to follow - limited vocabulary

5. UNDERSTANDING - generally follows instructions and questions with some explanation - Answers simple "when" questions (eg. when do you sleep?) - Responds appropriately to "how often, how long" questions	- some difficulty following instructions - able to answer most questions although may have difficulty with why and how questions - inconsistent listening skills	- usually has difficulty following instructions - gives incomplete, irrelevant or no response to questions - does not ask for clarification when failing to understand - poor listening skills

TEACHER GUIDELINES FOR FIVE-YEAR-OLD CHILDREN

To be used in conjunction with the Teacher Screening Observation Checklist

AGE APPROPRIATE	MILD DIFFICULTIES	MODERATE/SEVERE DIFFICULTIES
1. SPEECH/ARTICULATION - uses most sound correctly - some difficulty with multi-syllabic words (eg. spaghetti) and consonant blends (splash) and some sounds (eg. rabbit, yellow)	- usually able to be understood - may have difficulty with some sounds eg. r, s.	- always difficult to understand - frustrated by inability to say sounds and words - may have difficulty with many sounds
2. GRAMMAR - uses longer sentences to express complex ideas - may make errors with some past tense endings eg. runned for ran - other occasional errors	- consistent pronoun errors - often confuses verb tense	- omits words and word endings - puts word in the wrong order - has difficulty forming questions - doesn't use "and" or join sentences
3. STORY TELLING/NARRATIVE - participates in shared book sessions - tells stories with a range of connecting words (e.g. "and then", "because", "when") - includes details (eg. descriptive language and direct speech)	- able to tell you about recent events or retell a simple familiar story. Sentences may be simple with very little detail included. Poor sequencing. - only connect sentences with "and"	- little experience with books - can't tell you about recent events - can't retell a simple familiar story - labels each picture, doesn't tell a story
4. VOCABULARY - large vocabulary - uses new vocabulary in sentences - interested in words	- beginning to learn new vocabulary - sometimes difficult to follow	- frequent use of the word, "that". "this". Difficult to follow - limited vocabulary
5. UNDERSTANDING - generally follows instructions and		

questions without needing further explanation - gives full answers to complex questions eg. "why?"	- some difficulty following instructions - able to answer most questions although may have difficulty with why and how questions - inconsistent listening skills	- usually has difficulty following instructions - gives incomplete, irrelevant or no response to questions - poor knowledge of concepts eg. in, on, under, size concepts - does not ask for clarification when failing to understand - poor listening skills

Appendix H: Parent Questionnaire

INFORMASI ORANGTUA

1. Apakah anda...?

□ Ibu
□ Ayah
□ Yang merawat anak.

2. Tuliskan tahun kelahiran anda.
   TAHUN 19 ☐

3. Pilih pendidikan terakhir anda di bawah ini.

□ Sekolah sampai SMA tapi tidak lulus
□ Memiliki ijazah SMA atau sederajat
□ Memiliki gelar D3 atau S1
□ Memiliki gelar profesional (seperti apoteker) atau gelar master (S2)
□ Memiliki gelar doktorat (S3)

□

4. Status pekerjaan. Apakah saat ini anda…?
□ Bekerja penuh atau paruh waktu
□ Wiraswasta
□ Ibu atau bapak rumah tangga
□ Pelajar
□ Tidak bekerja

5. Berikan gambaran penghasilan per bulan keluarga anda.
□ Di bawah 3 juta
□ Di antara 3 – 5 juta
□ Di antara 5 – 7 juta
□ Di antara 7 – 9 juta
□ Lebih dari 9 juta

INFORMASI ANAK

6. Berikan gambaran urutan kelahiran anak anda.
□ Anak pertama atau anak tunggal.
□ Anak kedua atau seterusnya

7. Apakah anak anda lahir ...
□ Kelahiran cukup bulan.
□ Kelahiran prematur.

8. Usia saat kata pertama diucapkan. Kapan anak mulai mengucapkan kata pertama?
□ Sebelum usia 12 bulan
□ Antara usia 12 – 18 bulan
□ Setelah usia 18 bulan

9. Usia saat kata kombinasi pertama diucapkan. Kapan anak anda mulai mengucapkan kalimat yang terdiri dari dua kata?
□ Antara usia 12 – 18 bulan.
□ Antara usia 18 – 24 bulan.
□ Setelah usia 24 bulan.

10. Apakah anak anda sebelumnya pernah terdiagnosa dengan ...
□ Gangguan pendengaran.
□ Gangguan bicara dan/atau bahasa
□ Gangguan perkembangan lainnya seperti autism, asperger, dan lain-lain.

KEMAMPUAN BICARA DAN BAHASA ANAK PADA TIGA BULAN TERAKHIR

Gambaran perkembangan bicara dan bahasa anak selama tiga bulan terakhir.

Lingkari jawaban yang menggambarkan perkembangan bicara dan bahasa anak.

1	Anak saya mengucapkan setiap kata dengan benar	Selalu	Biasanya	Terkadang	Tidak sering
2	Pengucapan kata anak saya tidak dapat dimengerti orang asing	Selalu	Biasanya	Terkadang	Tidak sering
3	Anak saya menggunakan gestur dan/atau suara sebagai pengganti berbicara	Selalu	Biasanya	Terkadang	Tidak sering
4	Anak saya enggan berbicara di depan orang banyak tapi mau berbicara dengan satu orang	Selalu	Biasanya	Terkadang	Tidak sering
5	Anak saya gagap	Selalu	Biasanya	Terkadang	Tidak sering
6	Anak saya membutuhkan pengulangan perintah atau pertanyaan karena tidak mengerti	Selalu	Biasanya	Terkadang	Tidak sering
7	Anak saya suka membicarakan mainan, gambar dan buku	Selalu	Biasanya	Terkadang	Tidak sering
8	Anak saya banyak bertanya	Selalu	Biasanya	Terkadang	Tidak sering
9	Anak saya kesulitan menyatukan kata-kata dan kalimat-kalimat menjadi sesuatu yang dapat dimengerti	Selalu	Biasanya	Terkadang	Tidak sering
10	Anak saya jarang berbicara dan tidak aktif berbicara	Selalu	Biasanya	Terkadang	Tidak sering

Apakah anda khawatir terhadap perkembangan bicara dan bahasa anak anda? Ya [ ] Tidak [ ]

Jika anda menjawab ya, apa yang menjadi kekhawatiran anda?

_____
_____
_____
_____
_____
_____

Apakah anak anda sedang menjalankan terapi bicara dan/atau bahasa? Ya [ ] Tidak [ ]
Jika ya, mohon sebutkan tempat terapinya._____
_____

Apakah anak anda pernah menjalankan terapi bicara dan/atau bahasa? Ya [ ] Tidak [ ]
Jika ya, mohon sebutkan berapa
lama._____
_____
Mohon sebutkan bahasa lain selain bahasa Indonesia yang dipergunakan di
rumah_____
_____
_____
_____
_____

Tanggal pengisian kuesioner. Tanggal: _____Bulan: _____Tahun: _____

PARENT/CAREGIVER INFORMATION

11. Are you...?
□ Mother of the child
□ Father of the child
□ Caregiver.

12. In what year were you born?
ENTER YEAR 19 ☐

13. What is the highest level of education you have completed?
□ Some high school, no diploma
□ High school diploma or the equivalent
□ Associate or Bachelor's degree
□ Professional or Master's degree
□ Doctorate degree

14. Professional or employment status. Are you currently…?
□ Full time or part-time employed
□ Self-employed
□ A homemaker
□ A student
□ Out of work

15. Describe your monthly family income.
□ Under 3 millions
□ Between 3 - 5 millions
□ Between 5 - 7 millions
□ Between 7 - 9 millions
□ Over 9 millions

CHILD INFORMATION

16. Describe the birth order of your child.
□ First born or only child.
□ Later born

17. Was your child born ...
□ Full term birth.
□ Premature birth.

18. Age of first word. When did your child start saying his/her first word?
□ Before 12 months old
□ Between 12 – 18 months old
□ After 18 months old

19. Age of word combination. When did your child start saying two-word sentences?
□ Between 12 – 18 months old.
□ Between 18 – 24 months old.

□ After 24 months old.

20. Has your child ever been diagnosed with ...
□ Hearing impairment.
□ Speech and/or language disorder
□ Neuro-developmental disorders such as Autism, Asperger's syndrome, etc.

CHILD'S SPEECH AND LANGUAGE ABILITIES FOR THE PAST 3 MONTHS

Think about how your child is talking now or over the past three months.
Circle the answer that best describes how your child talks.

1	My child says his/her words correctly	Always	Mostly	Sometimes	Not often
2	People who don't know my child find his/her speech difficult to understand	Always	Mostly	Sometimes	Not often
3	My child uses gesture and/or noises instead of talking	Always	Mostly	Sometimes	Not often
4	My child is reluctant to talk in a group but will talk to one person	Always	Mostly	Sometimes	Not often
5	My child stutters when he/she is talking	Always	Mostly	Sometimes	Not often
6	My child needs to have instructions and questions repeated because he/she doesn't understand them	Always	Mostly	Sometimes	Not often
7	My child enjoys talking about books, pictures and toys	Always	Mostly	Sometimes	Not often
8	My child asks a lot of questions	Always	Mostly	Sometimes	Not often
9	My child has trouble putting words or sentences together	Always	Mostly	Sometimes	Not often
10	My child says very little and isn't very talkative	Always	Mostly	Sometimes	Not often

Are you concerned or worried about the way your child talks? Yes [ ] No [ ]

If you answered yes, what concerns you?
_____
_____
_____
Is your child currently attending speech and/or language therapy? Yes [ ] No [ ]
If so,
where?_____
Has your child previously attended speech and/or language therapy? Yes [ ] No [ ]
If so, when?_____
Which other languages other than Bahasa Indonesia are spoken at
home?_____

_____
_____

Date questionnaire completed. Date: _____Month: _____Year: _____
Name of Parent/Carer:_____
Name of Child:_____
Name of Teacher:_____

Participant number:_____*

*filled by researcher

Appendix I: Strengths and Difficulties Questionnaire

Kuesioner Kekuatan dan Kesulitan Pada Anak

Untuk setiap pernyataan, beri tanda pada kotak Tidak Benar, Agak Benar atau Benar. Akan sangat membantu kami apabila andamau menjawab semua pernyataan sebaik mungkin meskipun anda tidak yakin benar. Berikan jawaban anda menurut perilakuanak itu selama enam bulan terakhir atau selama tahun ajaran ini.

Nama anak ..... Laki-laki/Perempuan

Tanggal lahir .....

	Tidak Benar	Agak Benar	Benar
Dapat memperdulikan perasaan orang lain	☐	☐	☐
Gelisah, terlalu aktif, tidak dapat diam untuk waktu lama	☐	☐	☐
Sering mengeluh sakit kepala, sakit perut atau sakit-sakit lainnya	☐	☐	☐
Kalau mempunyai mainan, kesenangan, atau pensil, anak bersedia berbagi dengananak-anak lain	☐	☐	☐
Sering sulit mengendalikan kemarahan	☐	☐	☐
Cenderung menyendiri, lebih suka bermain seorang diri	☐	☐	☐
Umumnya bertingkah laku baik, biasanya melakukan apa yang disuruh oleh orangdewasa	☐	☐	☐
Banyak kekhawatiran atau sering tampak khawatir	☐	☐	☐
Suka menolong jika seseorang terluka, kecewa atau merasa sakit	☐	☐	☐
Terus menerus bergerak dengan resah atau menggeliat-geliat	☐	☐	☐
Mempunyai satu atau lebih teman baik	☐	☐	☐
Sering berkelahi dengan anak-anak lain atau mengintimidasi mereka	☐	☐	☐
Sering merasa tidak bahagia, sedih atau menangis	☐	☐	☐
Pada umumnya disukai oleh anak-anak lain	☐	☐	☐
Mudah teralih perhatiannya, tidak dapat berkonsentrasi	☐	☐	☐
Gugup atau sulit berpisah dengan orang tua/pengasuhnya pada situasi baru, mudahkehilangan rasa percaya diri	☐	☐	☐
Bersikap baik terhadap anak-anak yang lebih muda	☐	☐	☐
Sering berbohong atau berbuat curang	☐	☐	☐
Diganggu, di permainkan, di intimidasi atau di ancam oleh anak-anak lain	☐	☐	☐
Sering menawarkan diri untuk membantu orang lain (orang tua, guru, anak-anak lain)	☐	☐	☐
Sebelum melakukan sesuatu ia berpikir dahulu tentang akibatnya	☐	☐	☐
Mencuri dari rumah, sekolah atau tempat lain	☐	☐	☐
Lebih mudah berteman dengan orang dewasa daripada dengan anak-anak lain	☐	☐	☐
Banyak yang ditakuti, mudah menjadi takut	☐	☐	☐
Memiliki perhatian yang baik terhadap apapun, mampu menyelesaikan tugas ataupekerjaan rumah sampai selesai	☐	☐	☐

Tanda tangan ..... Tanggal .....

Orangtua/Guru/Orang Lain (Jelaskan):

Terima kasih banyak atas bantuan anda

Strengths and Difficulties Questionnaire

2-4

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of the child's behaviour over the last six months or this school year.

Child's Name ..... Male/Female

Date of Birth.....

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	☐	☐	☐
Restless, overactive, cannot stay still for long	☐	☐	☐
Often complains of headaches, stomach-aches or sickness	☐	☐	☐
Shares readily with other children (treats, toys, pencils etc.)	☐	☐	☐
Often has temper tantrums or hot tempers	☐	☐	☐
Rather solitary, tends to play alone	☐	☐	☐
Generally obedient, usually does what adults request	☐	☐	☐
Many worries, often seems worried	☐	☐	☐
Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other children or bullies them	☐	☐	☐
Often unhappy, down-hearted or tearful	☐	☐	☐
Generally liked by other children	☐	☐	☐
Easily distracted, concentration wanders	☐	☐	☐
Nervous or clingy in new situations, easily loses confidence	☐	☐	☐
Kind to younger children	☐	☐	☐
Often argumentative with adults	☐	☐	☐
Picked on or bullied by other children	☐	☐	☐
Often volunteers to help others (parents, teachers, other children)	☐	☐	☐
Can stop and think things out before acting	☐	☐	☐
Can be spiteful to others	☐	☐	☐
Gets on better with adults than with other children	☐	☐	☐
Many fears, easily scared	☐	☐	☐
Sees tasks through to the end, good attention span	☐	☐	☐

Signature ..... Date .....

Parent/Playgroup leader/Nursery teacher/Other (please specify:)

Thank you very much for your help

Appendix J: Focus Group Preparation

FOCUS GROUP PREPARATION

Introduction

This focus group discussion intends to assess **the perception of the preschool teachers about speech and language difficulties in Indonesian children aged 3 – 5 years old**. The discussion will investigate topics related to their awareness, thoughts and feelings about:

- *Special education needs in general*
- *Speech and language difficulties*
- *Available support for teachers and parents to help these children succeed in the classroom*
- *Available support from school for children with speech and language difficulties*
- *Type of support needed for teachers and parents*
- *Type of support needed for children with speech and language difficulties*

The discussion will also investigate how *teachers perceive parents' awareness about their children's possible speech and language difficulties*.

Participants

Participants will be preschool teachers who were directly and indirectly involved in the researcher project titled "The Prevalence of Speech and Language Difficulties in Preschool Children Aged 3 – 5 years Old in Jakarta, Indonesia". More specifically the teachers from schools in Pasar Minggu, Jakarta, Indonesia. There will be 5 groups comprised of 4-6 participants.

Recruiting participants. The participants will be recruited using selective or non-purposive sample. The participants are chosen because they are deemed to have certain characteristics and experience that can provide information about the issues discussed in the focus group. These participants are called 'information rich' participants.

Participant consent

All participants will sign a consent form to participate in the focus group discussion. One copy of the informed consent will be given to participants and a second copy will be kept by the focus group moderator. Participants will be informed that audio-recording will be used for data collection. Participants will be informed that a moderator will run the focus group with one or two note-taker(s) seated further away from the focus group seating. Participants will be informed that they will be asked to complete a brief demographic questionnaire prior to participating in the focus group.

Demographic data

Information about all participants' professional experience and knowledge will be collected through Focus Group participant short questionnaire.

Moderator

The focus group will be facilitated by the researcher. The researcher will also conduct the note-taking and the audio-recording of the focus group.

Discussion guides

The format of discussion guide will follow an hourglass format.

1. Introduction → provides cognition
2. Opening questions and introductory questions →provides rapport.
3. Key topics and specific questions → provides data
4. Closing questions →provides closure
5. Post-discussion → provides information

Moderator's welcome, introduction and instructions to participants

Welcome and thank you for volunteering to take part in this focus group. You have been asked to participate as your point of view is important. I realize you are busy and I appreciate your time.

Introduction: This focus group discussion is designed to investigate your current thoughts and feelings about speech and language difficulties in preschool children, specifically in the pupils that you have interacted with. The focus group discussion will take between 30 - 45 minutes. May I tape the discussion to facilitate its recollection ? (if yes, switch on the recorder)

Anonymity: Despite being taped, I would like to assure you that the discussion will be anonymous. The tapes will be kept safely in a locked facility until they are transcribed word for word, then they will be destroyed. The transcribed notes of the focus group will contain no information that would allow individual subjects to be linked to specific statements. You should try to answer and comment as accurately and truthfully as possible. I and the other focus group participants would appreciate it if you would refrain from discussing the comments of other group members outside the focus group. If there are any questions or discussions that you do not wish to answer or participate in, you do not have to do so; however please try to answer and be as involved as possible.

Ground rules

- The most important rule is that only one person speaks at a time. There may be a temptation to jump in when someone is talking but please wait until they have finished.
- There are no right or wrong answers
- You do not have to speak in any particular order
- When you do have something to say, please do so. There are many of you in the group and it is important that I obtain the views of each of you
- You do not have to agree with the views of other people in the group
- Does anyone have any questions? (answers).
- OK, let's begin

Warm up

- First, I'd like everyone to introduce themselves. Can you tell us your name? In what way did you participate in the research? (a) I filled out the teacher screening observation checklist. B) I did not fill out the teacher screening observation checklist but I have taught children who participated in the research.

Introductory question

I am just going to give you a couple of minutes to think about special education needs in preschool children. Is anyone happy to share his or her experience?

Guiding questions

1. When you hear the term 'special education needs', what do you think about?
   Follow-up/Prompt questions:
   a. What does special education needs mean to you?
   b. If a child has special educational needs, how does this child present?
   c. What are the implications for the child if he/she has special educational needs?
   d. What support is available for children with special educational needs in your school?

Key topic: perception about speech and language difficulties in preschool children

1. Now, let's talk more specifically about speech and language difficulties, what does this term mean to you?
2. What would characterize a child with speech and language difficulties?
3. How are children diagnosed with speech and language difficulties? How are these difficulties identified?
4. How many children in your class have speech and language difficulties?
5. Can you describe some of their needs?
6. How do you support these children in your classroom?

7. What would be the implication(s) for the children themselves if they have speech and language difficulties?
8. Can you describe the implications for the schools if they have pupils with speech and
9. language difficulties?
10. What professionals are involved in helping children with speech and language difficulties?
11. Think back the time when you were teaching children with speech and language difficulties, what type of support from the school you wish you had to help these children succeed in the classroom?
12. How can parents support a child with speech and language difficulties?
13. What type of support is available for parents to help these children?
14. What do you think are the main challenges for children with speech and language difficulties to succeed in school?
15. What do you think are the main challenges in supporting the children with speech and language difficulties?
16. In your past observation, could you describe the level of awareness from parents regarding speech and language difficulties in children?

Key topic: perception about teacher screening observation checklist

17. Back in October 2018 we asked you use this observation checklist to describe the children that you work with (circulate the observation checklist form), have you got any comments about using this checklist? Were there any challenges to using the checklist?
18. What improvements could be made to the observation checklist?
19. Would you recommend using this checklist to describe children's speech, language and communication? Why/Why not?

<u>Concluding question</u>

- Of all the things we've discussed today, what would you say are the most important issues you would like to express about speech and language difficulties in Indonesian preschool children?

<u>Conclusion</u>

- Thank you for participating in this study.
- Your opinions will be a valuable asset to the study
- We hope you have found the discussion interesting
- If there is anything you are unhappy with or would like to discuss further, please see me after this.
- I would like to remind you that any comments featuring in this report will be anonymous

- Before you leave, please hand in your completed personal details questionnaire

Data collection

The focus group will be audio-taped and transcribed verbatim for analysis. Confidentiality will be strictly preserved.

Time and place for focus group

The focus group will be conducted after school. The duration of the focus group will be approximately between 30 - 45 minutes. The place will be an allocated room in the schools where teachers work.

Appendix K: Brief Questionnaire for Teachers

Participant Brief Questionnaire

***Please do not put any personal data such as your name, the school you work at, etc.**

1. What is the highest level of education that you have attained?

2. What is your education background?

3. How many years have you taught throughout your career?

4. How many years have you taught children aged 3;0 – 6;0 years?

5. I have obtained knowledge about the development of children aged 3;0 – 6;0 years from (feel free to checkmark more than one answer)…

   - Formal education ☐
   - Workplace training ☐
   - Seminars open to public ☐
   - Books or websites ☐
   - Others (please write the details)_____