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Emergent bilingual children during the silent period: A scoping review of their communication strategies and classroom environments

Pui Fong Kan , Morgan Jones, Christina Meyers-Denman and Natalya Sparks

University of Colorado Boulder, CO, USA

Corresponding author: Pui Fong Kan; Email: puifong.kan@colorado.edu

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Abstract

This scoping review aimed to investigate the communication strategies utilized by children who acquire a minority language (L1) and subsequently learn a community language (L2) during what is commonly referred to as the “silent period.” Electronic database searches were conducted using keywords such as “silent period” and “bilingual children,” resulting in the inclusion of 40 studies in the review. The findings revealed that emergent bilingual children utilize various communication strategies, including nonverbal communication, private speech, and their L1, to communicate within classroom environments. The findings shed light on the adaptability of emergent bilingual children during early stage of L2 acquisition. Furthermore, our review provides information about the classroom contexts such as teacher support and peer interactions where children develop their L2 skills. From a clinical perspective, recognizing these strategies and classroom contexts could significantly enhance the screening process for emergent bilingual children.

Keywords: silent period; bilingual; problem solving; communication strategies; classroom support

Introduction

Globally, the number grows of children acquiring a minority language (L1) at home and learning a majority language (i.e., community language) as a second language (L2) in a natural environment such as school settings (American Community Survey, 2019; Eurydice Report, 2020). During the early stage of L2 acquisition, many emergent bilingual children reportedly have no or limited expressive language in L2 or both L1 and L2 for a period of time. This period has been historically referred to as “silent period” (Clarke, 1989, 2009; Ervin-Tripp, 1974; Krashen, 1982; Tabors, 1987), “nonverbal period”, or “pre-production stage” (Robertson & Ford, 2008). Even though much of the foundational research on the silent period was conducted in earlier decades, the topic remains an area of interest and relevance, due to the increasingly diverse students in school. Notably, the term, “silent period,” remains a frequently referenced concept among early childhood

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practitioners when explaining the lack of expressive language in emergent bilingual children (Head Start Early Childhood Learning & Knowledge Center, 2022). The duration of the silent period varies enormously across studies, ranging from a few days to more than a year in previous studies (Clarke, 1989; DaSilva Iddings & Jang, 2008; Mfeka & Thomson, 2019; Saville-Troike et al., 1984). The silent period has been variously interpreted as children's refusal to use L2 (Itoh & Hatch, 1978) or an essential process for L2 acquisition, in which young children observe and learn in a new language environment (Bligh, 2014; Clarke, 1989). From a clinical perspective, a lack of expressive language could be a sign of language disorder (Leonard, 2009; World Health Organization, 2019) or a sign of selective mutism (APA, 2013; Bergman et al., 2002; Le Pichon & de Jonge, 2016). Distinguishing between the silence observed in typically developing emerging bilingual children and silence due to a disorder poses a challenge for clinicians and educators. Immigrant children and those who speak a minority language at home face a greater risk of both over-identification and under-identification concerning selective mutism and language disorders (Elizur & Perednik, 2003; Morgan et al., 2015; Samson & Lesaux, 2009; Toppelberg et al., 2005). Thus, there is a need for a deeper understanding of the 'silent period' experienced by emerging bilingual children.

Building upon this context, we conducted a scoping review following the framework proposed by Arksey and O'Malley (2005) to examine how typically developing emerging bilingual children navigate and interact with their new language (L2) environment. While it is generally agreed that the silence observed in typically developing emerging bilingual children stems from their unfamiliarity with the new language, the terms "silence" or "silent period" fail to fully capture the problem-solving efforts undertaken by these children as they navigate a new language environment. We thus aimed to employ a problem-solving framework (Bruner, 1973; Zelazo et al., 1997) to investigate L1-speaking children within L2 classroom environment. According to this framework, problem-solving in this context could involve understanding the communication challenge, planning alternative communication strategies, implementing these strategies (e.g., gestures), and evaluating the effectiveness of the chosen strategy. Through our scoping review, we seek to gain an understanding of how emerging bilingual children actively engage within this novel language context. Prior research suggests that children possess the capacity to adapt and employ alternative methods when faced with communication obstacles (Barnes et al., 2018; Lambert, 2001; Marulis & Nelson, 2021), underscoring that L1-speaking children can find alternative ways to convey their thoughts. The findings from this scoping review have the potential to shift the conventional perspective from exclusively focusing on their "silence" to appreciating their dynamic participation and problem-solving capabilities during the early stages of L2 acquisition.

An important question to explore pertains to the term "silent period" in isolation, as it overlooks the child's interaction with the immediate environment (e.g., language input, classroom support), which may play a significant role in facilitating language production for typically-developing children in a new language environment (Le Pichon & de Jonge, 2016). The Bioecological Systems Model (Bronfenbrenner & Morris, 2007) suggests that children's development arises from their ongoing interaction with their immediate context (e.g., parents, siblings, or teachers). Previous studies consistently underscore the important role of external factors such as the teacher's use of the child's L1 and nonverbal communication in shaping emergent bilingual children's language development (Chang et al., 2007; Langeloo et al., 2019). For example, Han (2010) analyzed data from the Early Childhood Longitudinal Study -- Kindergarten Cohort (ECLS-K) dataset, which included 14,853 kindergarten-age children from linguistically diverse backgrounds. The results

suggested that external factors such as school stability and a supportive teaching environment were associated with improved socioemotional skills and reduced problem behaviors. Several case studies further emphasize the positive impact of external support on children's expressive language in classroom settings (DaSilva Iddings & Jang, 2008; Karem & Hobek, 2022; Wilmes & Stry, 2018). It is important to note that, although external factors may play a significant role in children's language development, our scoping review primarily focuses on examining existing literature regarding children's communication strategies and the L2-speaking classroom contexts. Rather than establishing causal relationships, we focus on the contextual dimensions of support in the classroom environment where children use various communication strategies. This scoping review has the potential to provide valuable guidance for future research and to directly inform the enhancement of clinical practice.

Emergent bilingual children's communication during the "silent period"

Although the "silent period" of emergent bilingual children has been discussed in the literature (Bligh, 2014; Gibbons, 1985) and endorsed by early childhood educators, it is crucial to understand that the "silence" of typically-developing bilinguals does not imply the absence of communication. In a systematic review, Roberts (2014) examined 12 studies and found that the evidence supporting the existence of a "silent period" is extremely limited due to methodological weaknesses and unclear definitions. Specifically, the definitions of "silence" vary across studies, ranging from complete silence to producing single words. In some studies, the silent period was defined as the absence of expressive spoken language (Gibbons, 1985; Saville-Troike, 1988; Tse et al., 2021). Some studies considered children who communicate using nonverbal communication (e.g., gestures and facial expressions) or children who use their L1 as having a silent period (Karem & Hobek, 2022; Mfeka & Thomson, 2019). In contrast, some studies emphasized acquiring the syntactic rules as the foundation of knowing a language (Huang & Hatch, 1978). Thus, the silent period has been conceptualized as the absence of spontaneous utterances (Huang & Hatch, 1978; Mfeka & Thomson, 2019) or the lack of knowledge or use of syntactic rules (Tabors, 1987). These views suggest that children's participation in school activities such as singing, imitations, and saying their names, words, or phrases used in routines are counted as silence (Ervin-Tripp, 1974; Huang & Hatch, 1978; Mfeka & Thomson, 2019). Additionally, the silent period has been defined as a time period during which the child does not talk to a communicative partner in L2 settings (Saville-Troike, 1988) or does not verbally participate in whole-class discussions (Wilmes & Stry, 2018). According to these views, utterances such as private speech or repetitions are considered silence.

Of interest in this study are two crucial aspects of the "silent period": (1) the communication strategies of emergent bilingual children and (2) external factors (e.g., classroom learning environment). The initial phase of learning a new language in classroom settings poses cognitive challenges for emergent bilingual children. These children often find themselves in situations where they need to independently resolve communication challenges in L2-speaking classrooms, without much assistance (e.g., Saville-Troike, 1988; Tabors, 1987). To adapt to the new language environment, children must identify the problem, make plans, come up with alternative strategies, and evaluate the strategies' effectiveness. Successful problem solving relies on executive functioning skills, which are important for school readiness (Zelazo et al., 2016). While previous

studies on the silent period provide little information about L2 learners' problem representation, planning, and evaluation, many studies reveal that young emergent bilingual children use alternative communication strategies, including communicating in L1, private speech, non-verbal communication, self-rehearsal, and classroom participation (Bligh & Drury, 2015; DaSilva Iddings & Jang, 2008; Saville-Troike, 1988). These communication strategies can be seen as children's problem-solving efforts for communication when their L2 expressive language skills have not yet developed. Developmental factors such as their age at first exposure to L2 could also impact how they navigate this new linguistic environment, although these specific factors have not been thoroughly explored. For example, Saville-Troike et al. (1984) documented five emergent bilingual children's strategies in English contexts. These children (3;3 to 5;7) learned a minority language (Japanese, Chinese or Korean) as L1 and English as L2. During the first six months of learning L2 in classroom settings, these children engaged in simple routines, used nonverbal communicative behaviors, and repeated utterances in L2, even though they did not verbally interact with English-speaking adults. In addition, these children used L1 utterances to answer questions and make comments, suggesting a strategy to encode "thought" in a language available to them. Children's use of private speech has been linked to early social communication (Newman, 2018; Vygotsky, 2012) and various cognitive functions, including planning and problem solving (Benigno et al., 2011). In contrast, Alvarez et al. (2023) examined two Vietnamese-speaking students in a 5th-grade classroom, tracking their science practices and linguistic development throughout a year. Unlike younger peers with lower language and cognitive abilities, both participants employed diverse communication strategies for collaborative learning, including active observation, interaction, collaborative sense-making, verbal participation, gesture utilization, and effective use of written work.

Another important aspect of "silent period" is the classroom environment, where L1-children learn a new language. According to the Bioecological Systems Model (Bronfenbrenner & Morris, 2007), emergent bilingual children's early language development in L2 is affected by layers of contextual factors, including not only their immediate family but also classroom support, peer interactions, local community, the school system and socio-cultural values of the larger society. However, while emergent bilingual children's classroom environment has been documented in previous studies (Garcia, 2018; Surrain et al., 2023), limited research has directly examined children's classroom environments during the "silent period" in L2 acquisition. One critical question is how classroom environment affects the incremental changes of emergent bilingual children who experience a period of silence in their L2 learning environment. Consistent evidence indicates that high-quality instruction in school settings plays a significant role in emergent bilingual children's language outcomes, including their L2 expressive language skills (Dickinson et al., 2008; Langeloo et al., 2019; Marchman et al., 2016; Paradis, 2011; Sun et al., 2018; Wilmes & Siry, 2018). Previous research suggests that a positive and constructive classroom environment provides responsive linguistic support that could facilitate bilingual children's language development. For example, Gámez et al. (2017) found that teachers' syntactic complexity and gesture use in the classroom promote emergent bilingual children's vocabulary development in L2 (5- to 6-year-olds; $n = 226$). Some studies examined the language support in the classroom that is rooted in the theory of translanguaging, focusing on the "entire language repertoire" to interact with others (García & Lin, 2016) rather than using either L1 or L2. Consistently, Sun et al. (2018) examined the impact of internal and external factors on the vocabulary development of bilingual children in Singapore learning both English and ethnic languages. Results

showed that while both sets of factors influenced lexical knowledge in each language, external factors played a more significant role in explaining vocabulary knowledge in ethnic languages. Their findings revealed the critical role of exposure and input quantity in bilingual language development and highlights the need for attention to learning context. In a systematic review of interactions between bilinguals and teachers, Langeloo *et al.* (2019) found that teachers use specific instructional strategies (e.g., using children's home language, nonverbal communication, and classroom routines) to facilitate bilinguals' development and provide emotional support. More recently, Surraín *et al.* (2023) observed 10 Head Start preschool classrooms to investigate teacher code-switching and its impact on Spanish–English dual language learners (DLLs). They found that teachers flexibly used Spanish and English, with increased code-switching in small group contexts. DLL students participated more actively, spoke longer, and used more Spanish during small group interactions, indicating that teacher code-switching and small group instructional support DLLs' engagement in classroom conversations. These findings highlight the importance of such strategies for DLLs' language development in school settings.

The current study

The primary goal of this scoping review was to comprehensively examine the existing literature on the “silent period” experienced by emergent bilingual children during the initial phases of L2 acquisition. Drawing on the scoping review methodology (e.g., Arksey & O'Malley, 2005; Tricco *et al.*, 2018), the current study sought to explore the communication strategies employed by emergent bilingual children, moving beyond the traditional notion of silence. Furthermore, we investigated the classroom environment where L1-speaking children start to learn L2. Through this scoping review process, our goal was to identify the findings of previous research on children's initial stage of L2 acquisition. Importantly, we aimed to identify research gaps, guide future investigations, and inform the development of effective educational practices and language support programs.

Methods

In the current study, we adhered to the guidelines for scoping review by Arksey and O'Malley (2005) and Cochrane Public Health Group (Armstrong *et al.*, 2011). Following these guidelines, we adopted a five-stage methodological process which comprised of: (1) identifying the research question, (2) identifying relevant studies, (3) selecting studies for inclusion, (4) charting the data, and (5) collating, summarizing and reporting the results.

Identifying the research questions

Following the guidelines proposed by Arksey and O'Malley (2005) for scoping studies, we adopted an iterative approach to formulate our research question(s). As we familiarized ourselves with the relevant literature, we refined and expanded upon our research questions. In the initial phase, a trial search was conducted to gain a deeper understanding of key terms including (1) silent period and (2) bilingual language acquisition. Given our objective of comprehensively examining the literature on the initial stage of L2 acquisition in the classroom, we formulated the following preliminary research questions for this scoping study:

1. Which communication strategies have been documented in the literature during the early stage of L2 acquisition in emergent bilingual children?
2. What is the scope of classroom contexts described in existing literature for emergent bilingual children in the early stages of L2 acquisition?
3. What forms of language support or intervention have been reported in the literature within school settings that support emergent bilingual children's communication during the early stage of L2 acquisition?

Identification of relevant studies

The scoping review aimed to thoroughly investigate the research questions related to the silent period experienced by typically-developing emergent bilingual children. To ensure a focused search strategy, we identified specific parameters including determining the inclusionary criteria, selecting relevant databases for the search, devising a search strategy, and identifying key terms. These inclusionary criteria (see [Table 1](#)) direct the search and serve as guidelines during the screening and review of relevant articles and publications. The criteria were established based on the Participant-Concept-Context framework (Tricco et al., 2018). The review primarily focuses on typically developing emergent bilingual children who learn a minority language (L1) and a community language (L2) during childhood. Because of differences in silent period definitions (e.g., Roberts, 2014) and the significant variation in the duration of the silent period observed in previous studies (e.g., a few days to over a year; Clarke, 1989; Mfeka & Thomson, 2019), we operationally define the early stage of L2 learning as the first year of L2 learning in the classroom in this scoping review (see [Table 1](#)). In terms of context, the scoping review examined studies that focused on the presence and absence of verbal and non-verbal communication as well as participation in classroom settings where the community language (L2) was spoken. Additionally, to ensure inclusivity and broaden the scope of the search, we did not apply specific language criteria during the selection process. Accordingly, the keywords used for the scoping study included the two main components, "silent period" and "bilingual children" (see [Table 2](#)). In order to ensure a comprehensive search, the keyword "classroom/school context" was not utilized, as certain studies investigated both school and home settings, as well as teachers' strategies. The identification of school contexts was carried out during the screening process, based on the predefined inclusion criteria. In addition, we excluded unrelated key terms (e.g., "silent reading," "silent film," "silent movie," or "silent pause"). The keywords used in the search are shown in [Table 1](#). Since many studies on the silent period were conducted decades ago, we did not set the start year for the search. The queries for the search in the three search databases and the search results are summarized in [Appendix A](#).

The initial search for evidence sources involved the Cochrane Library, which comprises the Database of Systematic Reviews, Database of Abstracts of Reviews of Effects, and the Central Register of Controlled Trials. This search aimed to identify any previous reviews related to the topic. One systematic review by Roberts (2014) on the silent period during childhood was found. The subsequent step was to identify as many relevant studies as possible using several search databases, including *Web of Science*, *Pubmed*, and *PsycInfo*. Searches were conducted between May and June 2023, and a final search of literature was performed on June 13th 2023. These searches encompassed peer-reviewed articles and non-peer-reviewed publications (e.g., reports). Furthermore, pertinent articles were uncovered through manual examination of reference lists from expert

Table 1. Inclusion & Exclusion Criteria for Scoping Review

Criteria	Inclusion	Exclusion
Published year	All	No
Published Language	All	No
Type of article	Articles, dissertation, conference proceedings, books/book chapters with primary data	Editorial paper, commentary, book review, video, audio, literature review
Early stage of learning L2	Studies centered on children who are either in their ‘silent period’ or have experienced no more than one year of L2 learning in the classroom, as explicitly indicated in the study.	Studies that do not specifically focus on children in their “silent period” or that focus on children with more than one year of L2 classroom learning exposure.
Languages of the participants	Studies that examined children who learn a minority language (L1) at home and a community language as a L2 (e.g., English in the U.S.)	Studies that examined children who learn a community language at home and learn a language as a L2 in school
Age of the participant(s)	Studies that examined children from birth to 18 years old	Studies that examined individuals who are older than 18 years old
Participant characteristics	Studies that examined typically developing children (1) who learn a minority language (L1) at home from birth & a community language (L2) in school settings	Studies that examined bilingual children who (1) are simultaneous bilinguals, (2) have acquired a community language as their L1, or (3) have speech/language disorders, cognitive deficits, emotional–behavioral issues, neurological disorders, or learning disabilities.
Modality	Studies that examined spoken language or nonverbal communication	Studies that examined only written language
Context	Studies that reported emergent bilingual children’s interaction with teachers and/or peers in the classroom	Studies that do not provide information emergent bilingual children’s interaction with teachers and/or peers in the classroom.

Note: The early stage of learning the second language (L2) is operationally defined as a duration of up to one year within classroom settings in this study.

recommendations, books, dissertations, and other non-traditional sources. [Figure 1](#) illustrates the process of article selection.

Selection of studies

The database searches resulted in 8179 documents, with an additional 19 identified through manual examination. Rayyan (Ouzzani *et al.*, 2016), a web-based research collaboration platform equipped with intelligent features, was employed for deduplication and screening purposes. After removing duplicates, an initial screening of abstracts

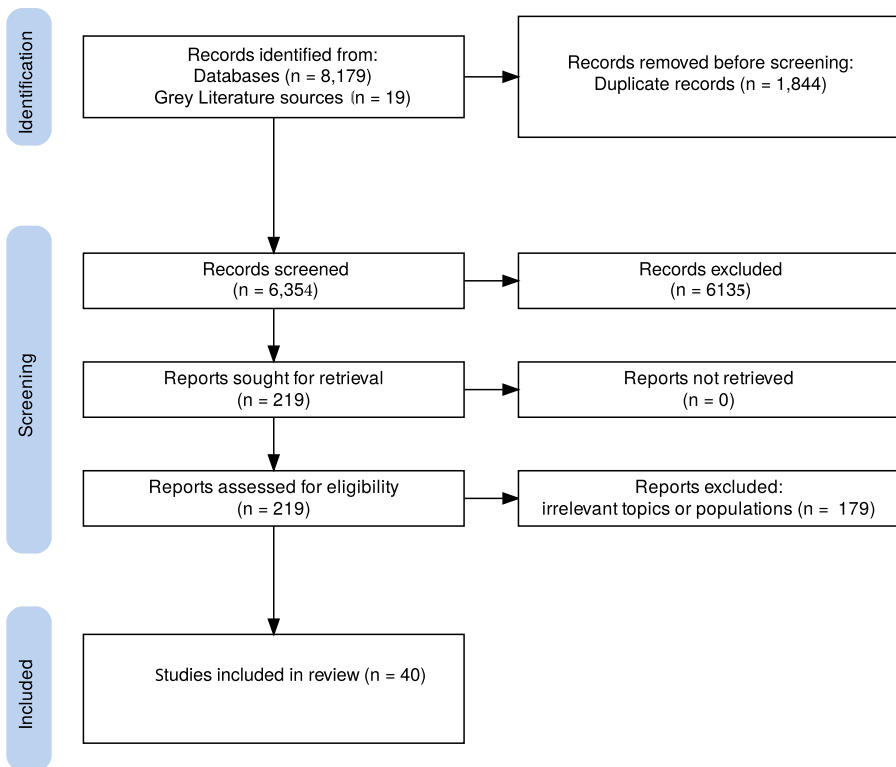


Figure 1. Flow diagram for article selection.

Table 2. Search term by category

Category Included	Keywords
Silent period	“silent period” or “silent” or “silence” or “silent stage” or “silent phase” or “initial silence” or “nonverbal period” or “pre-production stage” or “nonverbal” or “pre-production” or “receptive” or “participation” OR “mute” or “preproduction” or “pre productive” or “withdrawal” or “gestural” or “limited proficiency”
Bilingual language acquisition	“bilingual”, “second language”, “dual language”, “second-language”, “dual-language”, “multilingual”, “plurilingual”, “language learner”, “sequential bilinguals”, “immersion bilingual education”, “mother tongue”, “English as a second language”, ESL, “language acquisition processes”, “low communicative competence”, “emergent bilingual”

was conducted by two reviewers according to the eligibility criteria (see Table 1). Subsequently, both reviewers independently evaluated 219 full-text articles, addressing any disagreements through discussion and consensus. To ensure the accuracy of the screening process and address any potential discrepancies, a third reviewer was in place but was not needed in the end. After the full-text reviews, 40 studies were eligible for inclusion in this review. A total of 39 studies were published in English, and one study

(Manigand, 1999) was published in French. The study by Manigand (1999) was coded by a French–English bilingual translator.

Charting and collating the data

Data extraction was conducted for the scoping review by charting relevant information from the included studies using a coding form. Two independent coders initially conducted the extraction, with provisions in place for a third coder to address any discrepancies; however, these disagreements were effectively resolved by the initial coders during the review process. The data charting categories included various aspects of publications, such as author information, publication year, and the country where the data were collected. Additionally, it included study details such as the study design, sample size, participant characteristics (e.g., age, L1, L2). The charting also considered the criteria for participant inclusion and exclusion, the study's objectives, and the significant findings obtained. Four studies included in the analysis (e.g., Chaparro, 2023) compared typically developing emergent bilingual children with children who are not the target of this scoping review (e.g., monolinguals, bilinguals with language disorders). In such studies, only typically developing emergent bilingual children who meet the specified inclusion criteria were coded.

The coding form was structured into three distinct categories, including (1) participant characteristics, (2) communication strategies, (3) the classroom environment, and (4) strategies/programs aimed at facilitating children's communication in classroom settings. In terms of participant characteristics, the coding form guided coders to identify children's demographics, including their age, L1/L2, socioeconomic status (SES), and educational settings. Due to the notable differences in learning contexts, the coding distinguished between studies that examined infants (under 2 years old), preschool (3 – 5 years old), Kindergarten and elementary school (6 – 12 years old), and middle school and high school (13 – 18 years old). Additionally, following a problem-solving framework, the form was structured for the identification of whether the included studies documented children's awareness of communication breakdowns (problem representation), their planning process, their communication strategies (e.g., gestures) in L2 settings, and whether the studies provided information about how children evaluated the effectiveness of their strategies. In addition, we coded whether the included studies documented children's emotional-behavioral skills. Furthermore, the coding form also included questions about children's classroom environment, such as teachers' strategies and peers' involvement. We also identified whether an intervention strategy was used to facilitate L1-speaking children's communication in the classroom.

In accordance with the recommendations of Arksey and O'Malley (2005), we conducted a collaborative analysis to discern recurring themes and patterns of the data from the identified studies. This collaborative analysis involved the active participation of the 1st and 2nd authors, followed by a consensus-seeking process with the 3rd and 4th authors. To guide our analysis, we employed a dual theoretical framework approach, incorporating The Bioecological Systems Model (Bronfenbrenner & Morris, 2007) and a problem-solving framework (Bruner, 1973; Zelazo et al., 1997). The numerical analysis focused on summarizing the scope, characteristics, and distribution of the included studies.

Results

The included studies were conducted between 1978 to 2022, using a variety of qualitative and quantitative research methods. While research on the “silent period” began in the 1970s, it remains a subject of ongoing inquiry. The duration of the included study ranges from 1 month to multiple years. These studies were undertaken in various geographic locations. The highest number of studies was conducted in the United States (17 studies), followed by England (4 studies) and Sweden (4 studies). Additionally, there were studies from Australia, Hong Kong, Israel, Luxembourg, France, the Netherlands, New Zealand, South Africa, and Switzerland. In the included studies, 4 studies examined children under 3 years old, 19 studies children from 3 to 6 years old, and 10 studies children older than 6 years old (age range: 6;0 to 12;0). Additionally, 1 study examined children from toddlers to school-age children, 3 studies examined both toddlers and preschool children (age range: 1;3 – 4;6), and 3 studies focused on both preschool and school-age children (age range: 3;3 – 13;0). The total number of participants reported across all studies is 779. Across the included studies, a variety of methods was used to investigate language development and communication in children. These methods include video recordings, field notes, interviews (e.g., focus-group and teacher interviews), observations in various contexts, standardized tests (e.g., Peabody Picture Vocabulary Test), nonstandardized tasks (e.g., imitation tasks), audio recordings, and ethnographic field notes, classroom documents, rating scales, parent and teacher questionnaires, elicited translations, diary entries, audio-visual recordings, and photographs.

The characteristics of the participants

Table 3 summarizes the characteristics of the participants across the included studies. Of the 779 participants, 54 children were excluded in this scoping review due to reasons such as being monolingual, learning a majority language as L1, or having been reported in another study included in this review (see Table 2). As a result, 725 participants across studies were included in the current scoping review (see Table 3). Regarding SES backgrounds, 34 of the 40 included studies did not explicitly describe participants’ SES backgrounds. One study examined children from low socioeconomic backgrounds, while two others focused on children from high socioeconomic backgrounds. Additionally, two studies investigated children from low to middle-class backgrounds. The included studies examined children from diverse home language backgrounds, such as Hakka, Swedish, English, Spanish, German, French, Arabic, Suryoyo, Latvian, Tamil, Farsi, Japanese, Punjabi, Kurdish, Somali, Vietnamese, Samoan, Hawaii Creole, Pahari, Portuguese and so on. The community languages (L2) included Swedish, English, Luxembourgish, German, Dutch, French, Hebrew, and Cantonese. These children were from various education settings, including preschools, kindergarten, reception classrooms for refugees and immigrants, bilingual programs, laboratory schools, nursery schools, primary schools, and diverse international settings such as British, French, and Hebrew classrooms.

The included studies in this scoping review have provided some information about changes in children’s L1 and L2 skills over time. Although most studies did not directly test children’s L1, there was evidence (e.g., following instructions; responding to questions correctly) suggesting that many participants across studies could understand and speak L1 at the beginning of the studies (e.g., Chaparro, 2023; Huang & Hatch, 1978). For example, Cekaite (2007) documented how a Kurdish-speaking child, Fusi, learned

Table 3. Characteristics of Included Studies

Included Study	N of the study	N included in the scoping review	Age at the beginning of the study	SES	Home Language (L1)	Community Language (L2)	Research design	Study duration	Study location	Methods for studying silence
1. Björk–Willén & Cromdal (2009)	46	46	3;0 – 5;0	NR	Hakka, Swedish, English, Spanish, German, French, Arabic, Suryoyo, Latvian, Tamil, or Farsi	Swedish, English, and Spanish	Qualitative	Not specified	Australia and Sweden (corpora data)	Audio–video recordings, transcripts
2. Bligh (2014)	3	3	3;0 – 4;0	NR	Japanese; Punjabi; Japanese & French	English	Qualitative	3 yrs	England	Direct observation, field notes, interviews, vignettes
3. Cekaite (2007)	1	1	7;0	NR	Kurdish	Swedish	Qualitative	1 school year	Sweden	Video–recordings of classroom interactions & activities
4. Cekaite (2012)	1	1	7;0	NR	Somali	Swedish	Qualitative	1 year	Sweden	Field notes, video recordings, classroom documents, teacher interview, child interview
5. ¹ Chaparro (2023)	24*	19	Kindergarten age (approx. 5;0 – 6;0)	NR	Spanish	English	Qualitative	1 yr 6 mos	United States	Direct observation, audio–video recording, interviews, vignettes
6. ² Clarke (1989)	4*	1	3;8	NR	Vietnamese	English	Qualitative	11 mos	Australia	Video recordings sessions at school
7. DaSilva Iddings & Jang (2008)	1	1	5;0	NR	Spanish	English	Qualitative	9 mos	United States	Field notes, interviews

Table 3. (Continued)

Included Study	N of the study	N included in the scoping review	Age at the beginning of the study	SES	Home Language (L1)	Community Language (L2)	Research design	Study duration	Study location	Methods for studying silence
8. Day (1981)	5	5	1st grade (approx. 6;0 – 7;0)	Low-to-middle class	Samoan, Hawaii Creole	English	Qualitative	3 weeks	United States	Audio–video recordings, Hawaii Creole English Repetition Test (HCERT), Standard English Repetition Test
9. ³ De Oliveira et al. (2016)	23	3	Kindergarten age (approx. 5;0 – 6;0)	NR	Spanish, Mandarin	English	Qualitative	9 mos	United States	Audio–video recordings, two tests of verbal performance, the Hawaii Creole English Repetition Test (HCERT) & the Standard English Repetition Test
10. ⁴ Dominguez & Trawick-Smith (2018)	8	4	3;6 – 4;10	NR	Spanish, Mandarin	English	Qualitative, Quantitative		United States	Video recordings, behavioral analysis
11. Drury (2007)	3	2*	Not specified (approx. 3;0 – 5;0)	NR	Pahari	English	Qualitative	1 school year	England	Audio recordings in nursery & the home; observations; teacher & parent interviews
12. ⁵ Drury (2013)	1	1	4;0	NR	Pahari	English	Qualitative	1 school year	England	Audio recordings in nursery & the home; direct observations; teacher &

Table 3. (Continued)

Included Study	N of the study	N included in the scoping review	Age at the beginning of the study	SES	Home Language (L1)	Community Language (L2)	Research design	Study duration	Study location	Methods for studying silence
										parent interviews
13. Ervin–Tripp (1974)	31	31	4;0–9;0	NR	English	French	Qualitative	NR	Switzerland	Comprehension tests, imitation, elicited translations, diary, audio recordings
14. Fernández (2014)	1	1	7;0	NR	Portuguese	Luxembourgish and German	Qualitative	1 school year	Luxembourg	Audio–video recordings, classroom artifacts, field notes, direct observations, parent interview, child interview, teacher interview, teachers, & children
15. Gibbons (1985)	47	47	4;7–11;9	NR	Unknown, but participants were from European, Asian, Arab, and other ethnic backgrounds	English	Quantitative	1 time survey	Australia	Teacher survey
16. Hayes & Matusov (2005)	3	3	Kindergarten age (approx. 5;0 – 6;0)	NR	Spanish, English	English, Spanish	Qualitative	1 year	United States	Teacher interview, classroom observation
17. Huang & Hatch (1978)	1	1	5;1	NR	Taiwanese	English	Qualitative	4.5 mos	United States	Direct observations

Table 3. (Continued)

Included Study	N of the study	N included in the scoping review	Age at the beginning of the study	SES	Home Language (L1)	Community Language (L2)	Research design	Study duration	Study location	Methods for studying silence
18. Itoh & Hatch (1978)	1	1	2;6	Low-to-middle class	Japanese	English	Qualitative	6 mos	United States	Direct observations; audio recordings during play situations
19. ⁷ Karem & Hobek (2022)	6*	3	3;9 – 5;2	NR	Japanese, Mandarin	English	Single-subject design	11–14 weeks	United States	Audio–video recordings & observations
20. Karniol (1990)	1	1	1;10	High	English	Hebrew	Qualitative	1 yr 2 mos	Israel	Diary
21. Klenk (2004)	1	1	5;0	NR	Spanish	English	Qualitative	8 mos	United States	Audio recordings; field notes, photocopies of artifacts
22. Krupa–Kwiatkowski (1998)	1	1	6;3	High	Polish	English	Qualitative	3 mos	United States	Audio–video recordings, records of behavior
23. Kultti (2014)	10	10	1;7–2;11	NR	NR	Swedish	Qualitative	not specified	Sweden	Video recordings & transcriptions
24. ⁸ Kultti (2015)	41	41	1;0 –3;0	NR	Danish, Hebrew, Korean, Malaysian, Norwegian	English	Qualitative	six weeks	Australia	Video recordings, teacher interpretation
25. Le Pichon & de Jonge (2016)	1	1	4;3	NR	Berber	Dutch	Qualitative	1 month	Netherlands	Teacher interviews, observations, video recordings of classroom behavior

Table 3. (Continued)

Included Study	N of the study	N included in the scoping review	Age at the beginning of the study	SES	Home Language (L1)	Community Language (L2)	Research design	Study duration	Study location	Methods for studying silence
26. Manigand (1999)	11	11	School age	NR	Turkish	French	Qualitative	Not specified	France	Direct observations across various school contexts
27. Martín–Bylund (2018)	1	1	3;0–4;0	NR	NR	Swedish, Spanish	Qualitative	One videorecording	Sweden	Transcription, video recording
28. Meyer et al. (1994)	4	4	3;0	NR	Korean	English	Qualitative	1 school year	United States	Video recordings, transcriptions, teacher interviews
29. Mfeka & Thomson (2019)	302	302	School age	NR	Zulu, Xhosa	English	Quantitative	4 yrs	South Africa	Language Assessment (the Acquisition of Oral English Skills Test); audio–recorded verbal responses; observations
30. ^a Sachs (1972)	14*	4	1;11 – 13;6	NR	Spanish/German; Chinese; Korean; Spanish/German	English	Qualitative	Not stated	United States	Interviews, audio recordings of spontaneous conversation & reading; parent evaluations of participants' performance in their native language & English, parent report of language environment
31. Saville–Troike (1988)	9	9	3;3 – 8;3	NR	Chinese, Japanese, Korean	English	Qualitative	6 mos	United States	Audio–video recordings in classrooms

Table 3. (Continued)

Included Study	N of the study	N included in the scoping review	Age at the beginning of the study	SES	Home Language (L1)	Community Language (L2)	Research design	Study duration	Study location	Methods for studying silence
32. Saville–Troike et al. (1984)	20	20	7;0–12;0	NR	Japanese, Korean, Hebrew, Spanish, Icelandic, Polish	English	Qualitative	1 school year	United States	Audio–video recordings, classroom observations
33. Schwartz et al. (2019)	14	14	2;5 to 3;5	NR	Hebrew, Arabic	Hebrew, Arabic	Qualitative	7.5 mos	Israel	Classroom observation, audio–video recordings, transcriptions, teacher interviews, parent interviews, field notes
34. ¹⁰ Tabors (1987)	15*	7	2;9 – 4;2	NR	Japanese, Portuguese, Russian, Korean, Taiwanese	English	Qualitative	6 mos	United States	Field notes, classroom observation
35. Tse et al. (2021)	112	112	3;4 –5;0	NR	Tagalog, Hindi, Indonesian, Nepali, Urdu, Vietnamese, Thai, & others, Rab: Punjabi, Urdu	Cantonese	Quantitative	4 yrs	Hong Kong	Learning Progression Framework test, observation, field notes
36. Vine (2006)	1	1	5;0	NR	Samoan	Maori, English	Qualitative	9 hrs	New Zealand	Transcription, audio–video recordings
37. Wilmes & Siry (2018)	1	1	10;0–11;0	NR	French	German	Qualitative	6 mos	Luxembourg	Video recording, classroom artifacts, teacher interview, child interview

Table 3. (Continued)

Included Study	N of the study	N included in the scoping review	Age at the beginning of the study	SES	Home Language (L1)	Community Language (L2)	Research design	Study duration	Study location	Methods for studying silence
38. Winitz et al. (1995)	1	1	7;6	Low	Polish	English	Qualitative	6 yrs 8 mos	United States	Northwestern Syntax Screening Test, Peabody Picture Vocabulary Test, home & school observation
39. Yamat et al. (2013)	3	3	6;0	NR	Malay	English	Qualitative	6 mos	England	Parent interview, teacher interview, classroom & home observations
40. Yip & Matthews (2006)	6	6	1;3–4;6	NR	Cantonese, English	Cantonese, English	Qualitative	1 yr 3 mos to 4 yrs 6 mos	Hong Kong	Audio–video recordings of interactions with research assistants, MLU

Note. Yrs = years Months = mos; NR = not reported

School-aged = 6 years old or older.

¹In Chaparro (2023), 5 children out of the initial 24 participants were English-only speakers. These children have been omitted from the present scoping review. As such, our attention was directed towards the remaining 19 children who primarily spoke Spanish at home. Drury (2013) provide detailed information about the language development of a single participant, who is among the three participants reported in Drury (2007).

²In Clarke (1989), three students were excluded due to not undergoing the silent period and they were not the focus of the study.

³In De Oliveira et al. (2016), among the 23 students, only three children were recent arrivals with limited second language (L2) skills. This scoping review focuses on the experiences of these three children.

⁴In Dominguez and Trawick-Smith (2018), four students were excluded due to being monolingual L2 speakers.

⁵Drury (2013) provide detailed information about the language development of a single participant, who is among the three participants reported in Drury (2007).

⁶In Gibbons (1985), individual home languages were unknown. However, Gibbons (1985) reported information related to participants' ethnicity: European (n = 25), Asian (Korean noted), (n = 16), Arabic (n = 4), other (n = 2).

⁷In Karem & Hobek (2022), three students were excluded due to being monolingual L2 speakers.

⁸In Kultti (2015), the case studies focused on 2 of the 5 participants.

⁹In Sachs (1972), ten students were excluded as they were not in the silent period or had less than a year of L2 exposure.

¹⁰In Tabors (1987), eight students were excluded due to being monolingual L2 speakers.

Swedish (L2) in a Swedish immersion classroom. Fusi did not understand Swedish initially and relied on other Kurdish-speaking children in the class to translate for her.

In contrast, children in the included studies had limited L2 skills at the initial stage of L2 acquisition, but their L2 skills improved over time. For example, Drury (2013) documented the L2 learning process of a 4-year-old child whose home language was Pahari (L1) and school language was English (L2) in London, UK. The child had limited L2 expressive language initially. By the end of the four terms, she could name shapes and occasionally used complete sentences but could not speak English fluently.

Communication strategies during the “silent period”

Table 4 presents a summary of the findings related to children’s communication strategies within L2 classroom settings. While the coding form utilized a structured problem-solving framework that encompassed components such as awareness, planning, communication strategies, and evaluation within L2 learning environments, only a handful of studies provide some information about children’s problem representation, planning, and evaluation. For example, Saville-Troike (1988) provides some preliminary information about L2 learners’ problem-solving processes. One child said he knew other children knew a different language and would not learn his L1, so that he would learn theirs (Problem representation). Some children would practice what they were planning to say prior to using it (Planning), and one child swapped from their L1 to the L2 when their first communication attempt failed (Evaluation). Thus, the focus of Table 4 centers on children’s communication strategies and their associated emotional and behavioral challenges in the context of L2 classrooms.

As shown in Table 4, all included studies described some forms of communication strategies used by the participants in the classroom settings. These strategies include nonverbal communication (e.g., using gestures), use of L1, interacting with peers and teachers, observing and imitating others, using the L2 language itself, and seeking assistance when needed. Furthermore, various forms of participation exhibited by children in L2 classroom settings were identified across studies. Some children engaged actively (e.g., Chaparro, 2023; Drury, 2007), where they followed routines and actively participated in classroom activities. Some children were described as involved in peripheral participation, in which learners engage minimally in classroom activities (Bligh, 2014). Others were described as practicing silent participation, actively engaging in classroom activities without extensive verbalization or use of the target language (e.g., Huang & Hatch, 1978; Kultti, 2015). Furthermore, other studies (Klenk, 2004; Le Pichon & de Jonge, 2016) highlighted whispering as a form of engagement, while Manigand (1999) emphasized participation in small group contexts. Additionally, some attempted to use simple lexical items in their L2 communication (e.g., Saville-Troike, 1988).

We also explored the similarities and differences in communication strategies between preschool children (under 6;0) in preschool settings and school-age children (older than 6;0) in more complex classroom environments across the included studies. Both age groups appear to use similar strategies frequently, such as nonverbal communication (e.g., gestures, facial expression), participation, or use of L1. In studies involving preschool children, children tend to use gestures and their L1 to seek help from peers or teachers who were proficient in both languages, as well as for engaging in private speech and rehearsal. Similarly, studies that examined elementary school children (e.g., Hayes & Matusov, 2005), showed they utilize gestures, facial expressions, and code-switching

Table 4. Children’s Communication Strategies in Included Studies

Included Study	Age at Beginning of the Study	Nonverbal communication	Use of L1	¹ Participating in activities	² Interaction	³ Observation, Imitation, and/or rehearsing	Use of L2	Seeking assistance	Emotional-behavioral challenges
1. Björk–Willén & Cromdal (2009)	3;0 – 5;0	Yes	Yes	Following routines	—	Participating in activities, imitation	Yes	—	—
2. Bligh (2014)	3;0 – 4;0	Yes	Yes	Peripheral participation	—	Mimicry	—	Use of a mediator	—
3. Cekaite (2007)	7;0	Yes	—	Silent participation	Engaging in dyadic interactions, peer interaction	Peer interaction, rehearsing	Single words	—	shifting from assertiveness to cooperation as she progresses
4. Cekaite (2012)	7;0	Yes	—	—	Peer interaction	Observation of class activities, imitation	—	Seeking assistance from peers	negative affective responses; emotional frustration and agitation; noncompliance
5. Chaparro (2023)	Kindergarten age (approx. 5;0 – 6;0)	—	Yes	Active co-participant	—	—	Yes	—	—
6. Clarke (1989)	3;8	Yes	—	—	Attempts to establish, willingness to join social activities,	—	Whispering	—	—
7. DaSilva Iddings & Jang (2008)	5;0	Yes	—	Attempts to participate in activities	—	Activity repetition, intentional routines	—	—	—
8. Day (1981)	1st grade (approx. 6;0 – 7;0)	Yes	Yes	—	—	Repeating corrections	Yes	—	—
9. De Oliveira et al. (2016)	Kindergarten age (approx. 5;0 – 6;0)	Yes	Yes	—	Peer collaboration,	—	Yes	Negotiating meaning and clarification	—

Table 4. (Continued)

Included Study	Age at Beginning of the Study	Nonverbal communication	Use of L1	¹ Participating in activities	² Interaction	³ Observation, Imitation, and/or rehearsing	Use of L2	Seeking assistance	Emotional-behavioral challenges
10. Dominguez & Trawick-Smith (2018)	3;6 – 4;10	Yes	Yes	—	Peer interaction, attempts to initiate conversation with peers	Observation of peers' play	Yes	—	—
11. Drury (2007)	Not specified (approx. 3;0 – 5;0)	Yes	Yes	Active participation	—	Practicing and rehearsing	Yes	Use of a mediator	—
12. Drury (2013)	4;0	Yes	Yes	Participation in familiar activities	—	Observation and imitation,	—	Use of a mediator	crying and seeking comfort from family members. Self-soothing behaviors (e.g., finger-sucking)
13. Ervin-Tripp (1974)	4;0–9;0	Yes	Yes	—	—	Repetition for emphasis	Using fillers, code-switching, circumlocution in L2	Asking for clarification	—
14. Fernández (2014)	7;0	Yes	—	—	Peer interaction,	Imitation, watching peers	Yes	Seeking assistance from teachers/peers who were proficient in both languages.	could become “aggressive” when trying to communicate
15. Gibbons (1985)	4;7–11;9	Yes	—	—	—	Routines	Use memorized set phrases in L2	—	—
16. Hayes & Matusov (2005)	Kindergarten age (approx. 5;0 – 6;0)	Yes	Yes	—	—	Repetition	Yes, code switch	Looking to others for cues	—
17. Huang & Hatch (1978)	5;1	—	—	Silent participation in activities	—	Imitation of L2 speakers both verbal & nonverbal, private speech & self-rehearsal	—	—	—

Table 4. (Continued)

Included Study	Age at Beginning of the Study	Nonverbal communication	Use of L1	¹ Participating in activities	² Interaction	³ Observation, Imitation, and/or rehearsing	Use of L2	Seeking assistance	Emotional-behavioral challenges
18. Itoh & Hatch (1978)	2;6	Yes	Yes	—	Peer interaction	Repetition, mimicry	One-word, circumlocution	—	—
19. Karem & Hobek (2022)	3;9 – 5;2	Yes	—	—	Peer interaction	—	Use of single words or phrases as their L2 improved	—	—
20. Karniol (1990)	1;10	Yes	Yes	—	—	Repetition, rehearsal strategies	—	—	—
21. Klenk (2004)	5;0	Yes	Yes	Participation in reading activities, communicating with 'safe' topics	Contextualized language use	Repetition, mimicry private speech	Whispering	—	Withdrawn during class
22. Krupa–Kwiatkowski (1998)	6;3	Yes	Yes	—	Initiate interactions with his peers using simple phrases in L2	Imitation, use of a pseudo language	Memorized chunks of L2 phrases	—	withdrawn, hesitant, anxious
23. Kultti (2014)	1;7–2;11	Yes	Yes	Performing an act silently, solo play	Attention getting strategies	Observation	—	Guiding people nonverbally such as taking their hand	—
24. Kultti (2015)	1;0 –3;0	Yes	Yes	Silent participation	Attention getting strategies	Observation	—	—	—
25. Le Pichon & de Jonge (2016)	4;3	Yes	Whispering	—	Showing and sharing objects	—	Gradual progression to full sentences	Responding to communicative cues	Anxious
26. Manigand (1999)	Elementary school–age (approx. 6;0 – 12;0)	—	Yes	Participation in small group contexts	Socializing with L1 peers	Observation	—	—	—

Table 4. (Continued)

Included Study	Age at Beginning of the Study	Nonverbal communication	Use of L1	¹ Participating in activities	² Interaction	³ Observation, Imitation, and/or rehearsing	Use of L2	Seeking assistance	Emotional-behavioral challenges
27. Martin–Bylund (2018)	3;0–4;0	Yes	—	—	—	—	—	—	—
28. Meyer et al. (1994)	3;0	—	Yes	Participation in group activities	Collaborative interactions	Observation, imitation	Yes	—	—
29. Mfeka & Butchart & Thomson (2019)	School age	Yes	—	Class participation	—	—	—	—	—
30. Sachs (1972)	1;11 – 13;6	Yes	—	—	—	—	—	—	—
31. Saville–Troike et al. (1984)	3;3 – 8;3	Yes	Yes	—	—	Mimicry, repetitions, sound play, non–speech vocalizations	—	—	—
32. Saville–Troike (1988)	7;0–12;0	Yes	Yes	Memorized routines	—	Mimicry, private speech, rehearsal, sound play	—	—	—
33. Schwartz et al. (2019)	2;5 to 3;5	Yes	Yes	—	—	Watching peers,	Yes	Seeking assistance from bilingual teachers/peers	Signs of frustration when not understood
34. Tabors (1987)	2;9 – 4;2	Yes	Yes	—	Engaging in dyadic interactions	Mimicry, private speech	—	Seeking interaction with peers and teacher	Withdrawn in the classroom
35. Tse et al. (2021)	3;4 –5;0	Yes	Yes	—	—	Sound play	—	—	—
36. Vine (2006)	5;0	Yes	—	—	Seeking interactions with teacher, attention getting strategies	Imitation, watching	Yes	—	—

Table 4. (Continued)

Included Study	Age at Beginning of the Study	Nonverbal communication	Use of L1	¹ Participating in activities	² Interaction	³ Observation, Imitation, and/or rehearsing	Use of L2	Seeking assistance	Emotional-behavioral challenges
37. Wilmes & Siry (2018)	10;0–11;0	Yes	Yes	Silent participation	—	Mimicry, repetition, uses provided language structures to repeat phrases	—	—	—
38. Winitz et al. (1995)	7;6	Yes	Yes	Silent participation, parallel play	—	—	—	—	—
39. Yamat et al. (2013)	6;0	Yes	Yes	Silent participation, parallel play	—	Observation, following others	—	—	—
40. Yip & Matthews (2006)	1;3–4;6	—	Yes	—	—	—	One-word responses	—	—

Note.
¹participation includes a range of behaviors, including active engagement in classroom activities, peripheral involvement with minimal engagement in activities, abd silent engagement in activities with minimal verbalization.
²interactions encompass various forms of communication and engagement with peers and teachers such as attempts to establish connections.
³Observation refers to the act of attentively watching and listening to others without actively participating in verbal communication. Imitation involves mimicking or copying the speech and language patterns of others. Rehearsal refers to practicing and mentally reviewing language skills internally, which may include vocalizing, whispering, or silently articulating them.

between their L1 and L2. However, older children tend to employ more complex strategies when facing challenges in advanced classroom activities. For example, Wilmes and Siry (2018) examined the experiences of a school-age emergent bilingual child named Teo (aged 10;0 to 11;0) in a science classroom setting. As this child engaged in the tasks and formed interaction rituals with his group members, he began initiating conversations with teachers in German (L2). In contrast to younger children in other studies, Teo demonstrated a more strategic use of language to actively participate in science activities in the classroom.

Table 4 also summarizes children's emotional and behavioral challenges in L2 classroom settings. While most studies did not explicitly describe these challenges, 9 studies identified a range of emotional and behavioral responses among the children. These challenges include feelings of frustration and agitation, displaying noncompliance, seeking comfort through crying, relying on self-soothing behaviors like finger-sucking, potentially becoming aggressive when trying to communicate, and exhibiting withdrawn, hesitant, and anxious behaviors. These behaviors illustrate the complex interaction of emotions and responses that children might exhibit in various L2-speaking situations. For example, in Cekaite (2012), the child's emotional challenges due to their limited L2 proficiency led to negative affective responses, resistance towards tasks, and the development of an identity as an "unwilling" student. These emotional challenges appear to affect the child's interactions with teachers, peers, and the academic environment, thereby shaping their overall classroom experience. Interestingly, as children spent more time in the program, there were noticeable improvements in their emotional challenges. For example, Cekaite (2007) documented that the child shifted from assertiveness to cooperation as she progressed.

Classroom contexts

In this section, we present the results regarding the classroom environments of L1-speaking children during the initial phase of L2 acquisition (see Appendix B). The results reveal a range of observed classroom environments across studies. Most studies reported that teachers employed children's L1 as a means of providing support and scaffolding during structured activities, such as multimodal learning experiences and nonverbal communication to reinforce instructions (e.g., Bligh, 2014; Cekaite, 2007). Additionally, a variety of teaching strategies was reported, including structured activities, structured discussions, role-playing exercises, and language-rich interactions through storytelling and discussions. Furthermore, peers' involvement in emergent bilingual children's language learning was documented across studies. Peers' involvement was characterized by cooperative and collaborative interactions, peer collaboration, and individual assistance during pull-out activities (e.g., Chaparro, 2023, Fernández, 2014). These findings underscore the importance of a flexible and supportive classroom environment in promoting language development, where both teachers and peers play integral roles in facilitating L1-speaking children's communication and learning.

Classroom environment or intervention reported in the literature

Majorly, included studies do not explicitly employ specific methods or programs for this purpose. Ten studies were designed to examine the effect of specific methods (e.g., teacher talk, peer-mediated approach) on children's communication in L2-speaking contexts.

Interventions in L2 classrooms primarily revolve around a few key thematic areas. The first major theme is about interaction techniques to improve communication. “Affective Stances” helps students become more interested in L2 (Cekaite, 2012). Another method, “Teacher-Student Conversation,” uses talking strategies to help with communication (Hayes & Matusov, 2005). The “Guided Language Practice” is about one-on-one sessions between a student and an L2 tutor (Klenk, 2004). Lastly, the “Interactional Activities Using Nonverbal Cues” shows that nonverbal communication can help students participate more in class (Kultti, 2014).

The second theme focuses on increasing children’s participation. The “Classroom Activities as Mediator” method makes students take part more by using planned classroom activities (DaSilva Iddings & Jang, 2008). “Peripheral Participation” helps students move from just listening to joining in class discussions (Fernández, 2014). The “Peer-mediated Intervention” matches bilingual students with monolingual peers for talking practice. For example, Karem and Hobek (2022) used the Invite-Play-Talk strategy to train peers to invite L1-speaking children to play, engage in cooperative play activities, and communicate with each other during play. After the program, they started talking and replying more.

The third theme “Teaching Approaches” incorporates a range of tools and methods tailored for L2 instruction. Using the “Code Switching” method, teachers mix languages to help grow vocabulary and improve communication (de Oliveira *et al.*, 2016). “Game-based Learning” approach was used to leverage the immersive nature of video games for effective L2 instruction (Mfeka & Thomson, 2019). Additionally, “Targeted Individual Support” provides one-on-one L2 tutoring, emphasizing vocabulary growth and better communication skills (Tse *et al.*, 2021).

Discussion

The purpose of this scoping review was to provide an overview of the existing literature on the “silent period” in typically-developing emergent bilingual children during the early stages of L2 acquisition. Although “silent period” has been widely used to describe children’s limited L2 production at the initial stage of L2 acquisition, how children communicate during the “silent period” is poorly understood. One critical aspect of young children’s L2 acquisition is their ability to cope with the communication challenges in L2 settings. In this study, we theorized that children’s problem-solving efforts are important for their ability to communicate in a new language (L2) environment. Guided through the problem-solving framework (Bruner, 1973; Zelazo *et al.*, 1997), we aimed to shift the focus from children’s “silence” during the initial stage of L2 acquisition to their communication strategies and the external support they receive.

One important aspect of this review is the synthesis of the communication strategies documented in the included studies. Typically-developing emergent bilingual children are not “silent.” Rather, they employ a range of communication strategies (e.g., nonverbal communication and active participation) when immersed in L2-speaking environments. From the clinical perspective, children’s communication strategies described in the included studies are sharply different from the characteristics of selective mutism, which is distinguished by the failure to speak in specific situations (e.g., school) but the ability to speak in other situations (e.g., home; APA, 2013; Bergman *et al.*, 2002) or from those in language disorders which involve difficulties in language production across environments and impacting both languages (Bishop *et al.*, 2017; Leonard, 2009; Paradis, 2017). In the

following sections, we address each research question by first providing a summary of the key findings and identify research gaps in the existing research and suggest potential directions for further investigation.

Research Question 1: Which communication strategies have been documented in the literature during the early stage of L2 acquisition in emergent bilingual children?

All included studies documented the communication strategies employed by children, including the use of L1 and nonverbal behaviors (see Table 4), although the majority of studies did not offer insights into the awareness, planning, and evaluation abilities. Our investigation revealed an array of communication strategies (e.g., nonverbal communication, participation) used by emergent bilingual children during the early stage of L2 acquisition. Several included studies indicated that children's expressive language does not appear all at once but emerges incrementally (Cekaite, 2007; Ervin-Tripp, 1974; Gibbons, 1985; Saville-Troike, 1988; Tse et al., 2021). These findings align with existing literature on young children's capacity to generate alternative solutions to problems (Barnes et al., 2018; Lambert, 2001; Marulis & Nelson, 2021). The findings suggest that typically-developing children do not remain entirely "silent" during the "silent period" as traditionally perceived. From a clinical perspective, the absence of these strategies could serve as an indicator for identifying children in need of further assessment.

Several critical research gaps in the early stage of L2 acquisition are noted. First, although the included studies documented children's communication strategies (e.g., private speech), little is known about children's awareness of the communication barrier in L2 settings, alternative solution planning, or evaluating their communication strategies. Research has shown the link between children's problem-solving growth and school readiness (Webster-Stratton & Reid, 2004). The research gaps suggest a new line of research on the associations between children's problem-solving processes, communication strategies, and expressive language development in L2 settings. The results could lead to a better understanding of the developmental factors contributing to individual differences in young L2 learners' school readiness. Second, although we found common communication strategies among preschool and school-age children in L2 environments, subtle distinctions emerged when factoring in developmental nuances. Older children, presumably drawing from their richer language experiences in their L1 and greater cognitive abilities, appear to demonstrate a more sophisticated approach to L2 communication. Yet, the absence of direct comparisons within a single study makes it challenging to draw a conclusion about age-related differences in communication strategies within L2 environments. This gap underscores the need for more comprehensive investigations directly comparing communication strategies across different age groups in the early stage of L2 acquisition. Third, the included studies have highlighted the significance of L1 support by teachers and peers in the L2 classroom environment (refer to Table 4). Future research in this area has the potential to provide valuable insights into strategies and approaches that can effectively facilitate the maintenance of the home language alongside second language acquisition. Lastly, a limited number of studies has reported on children's emotional and behavioral challenges in L2 settings. Their emotional-behavioral responses might be considered as unique communication strategies, which range from expressions of frustration and noncompliance to seeking comfort through self-soothing behaviors. These behaviors highlight the intricate interplay between emotions and the ways L1-speaking children might communicate in a second language (L2) setting. Thus,

further research in this area is needed to gain deeper insights into the complex interactions and relationships between children's emotions, behaviors, and their communication strategies in a second language (L2) setting. Such insights could have a profound impact on improving educational approaches for young L2 learners and enhancing their school readiness.

Research Question 2: What is the scope of classroom contexts described in existing literature for emergent bilingual children in the early stages of L2 acquisition?

Existing literature shows that structured classroom activities, interactive learning experiences, and language-rich interactions are used in the classrooms for emergent bilingual children. Many of the included studies, using various qualitative analytic methods, provide detailed descriptions of the supportive classroom environment, such as L1 support in the classroom and enriched teacher-student interactions (e.g., Chaparro, 2023; Kultti, 2014; Wilmes & Siry, 2018). The observed classroom environments for supporting L1-speaking children within L2 classrooms encompass a wide array of strategies. These strategies include teachers employing structured activities, engaging students in multimodal learning experiences, fostering peer collaboration, and integrating multilingual resources into the educational landscape. Collectively, these aspects contribute to a rich and dynamic classroom environment for emergent bilingual learners.

While the existing literature provides information about emergent bilingual children's classroom environments, it also reveals critical research gaps that warrant further investigation. First, in the classroom settings, findings from the included studies suggest that teachers' support and peer interactions may have positively influenced children's communication. For instance, teachers frequently employed the child's L1 as a communicative support method, aligning with previous research emphasizing the significance of high-quality teacher-child interactions in well-organized classrooms for later academic readiness (Langeloo *et al.*, 2019; Webster-Stratton & Reid, 2004). To address these gaps, future studies should focus on pinpointing specific details regarding teachers' use of L1 to support children's problem-solving efforts and foster their active participation in the classroom. Second, the included studies have documented the significant roles played by peers. Peers frequently play important roles in facilitating the communication of emergent bilingual children within L2 classrooms, such as: assisting L2 learners in their communication during collaborative activities; and providing models for imitation. Young children spend significant time interacting with their peers at home and in school settings (Kan *et al.*, 2020). The interactions offer opportunities for emergent bilingual learners to practice their collaborative skills to reach common goals with limited adult involvement. It is possible that peer interactions facilitate the participation of L2 learners in the classroom settings and provide L2 learners with practice opportunities to use their verbal and nonverbal communication strategies. However, there remains a significant lack of empirical evidence regarding the specific contributions of peers to the development of emergent bilingual children's communication strategies during their early stages of L2 learning. Further research dedicated to exploring the precise role of peers in facilitating these essential aspects of communication will offer valuable insights into how to effectively support children during this crucial phase of L2 acquisition. Third, despite some studies highlighting the role of education programs, such as two-way immersion programs, in the language development of young L2 learners (Choi *et al.*, 2018; Shen *et al.*, 2022), there remains a notable gap in the literature concerning the

examination of the impact of such programs on L1-speaking children's language production during the early stage of L2 acquisition. This gap underscores the need for further exploration into the effectiveness of specific education programs, especially during this critical phase of language development. Lastly, according to the context of the ecological model of human development (Bronfenbrenner & Morris, 2007), the support for children's language development within the school setting could be affected by the dynamics between the home-community environment and the school. Parents predominantly speaking an L1 at home often lack guidance on how to assist their children in the L2 classroom, leading to uncertainty and potential challenges. Future studies are needed to address this knowledge gap and offer practical insights for parents and educators.

Research Question 3: What forms of language support or intervention have been reported in the literature within school settings that support emergent bilingual children's communication during the early stage of L2 acquisition?

While most included studies did not explicitly employ specific interventions, a subset of the included studies explored the effects of distinct approaches, such as routine classroom practices and peer-mediated strategies, on children's communication in L2-speaking contexts. Broadly, the studies explored three themes: (1) improving communication via interaction techniques such as direct teacher-student conversations and nonverbal cues; (2) enhancing classroom participation through methods like peer-mediated interventions; and (3) diverse teaching approaches like code-switching and game-based learning for tailored L2 instruction. The findings of these studies align with prior research on the impact of classroom intervention on bilingual children's communication (Egert et al., 2021; Méndez, 2014; Rojas, 2021).

Majorly, emergent bilingual children, often characterized as "silent," find themselves navigating L2-speaking environments with minimal assistance, expected to acquire the new language organically. These studies on classroom strategies underscore the critical importance of establishing a strategically designed, language-rich environment to support children in the early stages of learning L2 within a classroom setting. The potential use of these strategies such as routine classroom practices (e.g., DaSilva Iddings & Jang, 2008) and peer-mediated interventions (e.g., Karem & Hobek, 2022) can provide consistent language input and structure and create a supportive social context for language development. However, it is important to acknowledge that the subset of included studies primarily consisted of case studies with small sample sizes. These findings may not represent the diverse experiences of emergent bilingual children in various L2-speaking contexts.

While the intervention strategies appear promising, several significant research gaps warrant further investigation. First, given the reliance on case studies in the existing literature, it's crucial for future studies to adopt varied research designs to ensure broader generalizability of findings. Second, while current outcome measures provide some insights, future studies could seek to use valid assessment tools to measure the efficacy of the interventions. Third, due to the longitudinal dynamics of the early stage of L2 acquisition, there is a need for future studies that track these developmental changes over extended periods. Lastly, while this scoping review underscores the value of these targeted classroom strategies, there is a clear need for more systematic investigations. One possible approach is to employ a framework (e.g., problem-solving framework) to explore methods aimed at helping children understand that there are multiple ways to

communicate with each other and encouraging them to use various alternative communication strategies (e.g., gestures) in classroom settings.

Limitations

There are several limitations to this scoping review. One notable limitation of this scoping review is the potential language bias. The search process, primarily conducted through databases such as PubMed, may have unintentionally biased the inclusion of studies published in English. This limitation could be attributed to the search databases' functionality or the prevalence of English-language publications in the field, potentially resulting in a language bias that excluded relevant studies published in other languages or sources not indexed in these databases. Another limitation relates to the potential for publication bias. Although efforts were made to encompass both peer-reviewed and non-peer-reviewed sources, it is possible that some relevant studies with non-significant findings may not have been published or were not accessible during the search period. This could lead to an overrepresentation of studies with positive or significant outcomes in the review. Additionally, the review focused on typically-developing emergent bilingual children within educational settings and employed an operational definition of the early stage of L2 learning, specifically within one year of L2 learning in the classroom. This operational definition may have excluded some studies that did not explicitly describe children's L2 learning stage. Lastly, unlike systematic reviews, scoping reviews typically do not conduct a formal quality assessment of the included studies. Consequently, the strength of the findings may vary across studies, potentially impacting the overall reliability of the review's conclusions.

Conclusion

In conclusion, this scoping review attempted to address the often-misunderstood phenomenon of the "silent period" in typically-developing emergent bilingual children during the early stages of L2 acquisition. Drawing upon the problem-solving framework, we explored the problem-solving abilities inherent in these young learners and their capacity to modify in L2 environments. Contrary to the notion of complete silence, our findings revealed that these children employ a variety of communication strategies, such as nonverbal cues, silent participation, the use of their L1, and rehearsal. These strategies not only challenge the traditional perception of the "silent period" but also underscore the active engagement of these children with their L2 environments. Moreover, through the scoping review, we have identified the importance of supportive language learning environments, which could be crucial for emergent bilingual children's language development. Our scoping review has identified significant research gaps in children's communication strategies and classroom support. From an educational and policy perspective, these findings offer early childhood practitioners a clearer perspective on "silent period" and the process of language acquisition in emergent bilingual children. The knowledge about children's communication strategies during early stage of L2 acquisition can guide pedagogical practices, enabling educators to develop environments that are more supportive of bilingual children's unique communication needs. At a policy level, emphasizing the importance of preserving L1 during L2 acquisition and the value of structured classroom activities and language-rich interactions can spearhead curriculum development and teacher training programs focused on emergent bilingual children.

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