A Comparative Examination of Child-Directed and ESL Student-Directed Speech

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Introduction

First language acquisition is often seen as the model of language learning. How infants acquire language fascinates linguists and language learners alike (Moskowitz,1978). As Gee put it, "Mastering a first language is one of the most successful learning feats humans ever pull off" (1994). For this reason, well-known SLA researcher, Stephen Krashen, and Spanish teacher, Tracy Terrell, based their second language acquisition approach, the Natural Approach, on infants' first language acquisition.

For example, Krashen's Input Hypothesis posits that "we acquire…only when we understand language that contains structure that is 'a little beyond' where we are now" (1989). In other words, learners must be exposed to language that is naturally simple enough for their understanding or that has been modified to be simple enough for their understanding. In connection with first language acquisition, Krashen then stated that "the input hypothesis is very consistent with what is known as 'caretaker speech,' the modification that parents and others make when talking to young children" (1989). Thus, 'caretaker speech,' or 'child-directed speech' (CDS), as it will be referred to in this paper, is the modified input that is used when interacting with a child.

However, modified input does not only occur in caretaker speech. Language modification occurs in situations where an interlocutor perceives a need to make their language more comprehensible for their audience. Commonly, language modification is also found when language users address language learners (foreigner-directed speech) and when language teachers speak with their students (student-directed speech). As Krashen put it,

"[Student-directed speech] is [foreigner-directed speech] in the classroom, the language of classroom management and explanation, when it is in the second language" (1989). Matsumoto explains that CDS, student-directed speech (SDS), and foreigner-directed speech (FDS) all share the following characteristics: they are "motivated by the speaker's desire to communicate to the listener," they have "similar linguistic adjustments/modifications…", and "the level of complexity of the speech is attuned to the level of the listener's language proficiency" (2010). While FDS will be referenced occasionally to give context to the current research, this review of literature will focus on CDS and SDS. To begin with, the first two terms will be defined in greater detail. Then, CDS and SDS will be compared in terms of repetition, vocabulary, prosody, rate, syntax, pragmatics, scaffolding, and social-affective factors.

The following questions will be addressed:

1) What does the current literature tell us about how child-directed speech (CDS) and student-directed speech (SDS) compare?
2) What do we know from current literature about how CDS and SDS contrast?
3) What are the teaching implications of the literature on these topics?
4) What research still needs to be done on this topic?

Review of Literature

Child-Directed Speech

It is widely accepted among linguists and SLA researchers that speech directed to children universally differs from speech directed to adults (Casillas et al., 2017). As Moskowitz put it, "...the language environments children inhabit are restructured, usually unintentionally, by the adults who take care of them" (1978). Colloquially, this speech has born the name of 'baby-talk,' 'motherese,' or 'parentese' however, the term 'child-directed speech' (CDS) better

reflects the fact that while "parents, especially the mother, are typically the primary caregivers and language providers for an infant… the theory does not necessarily exclude other people from being sources of language input for the infant" (Matychuk, 2005). Adults and children alike seem to have an innate knowledge of how to speak to children (Weppelman et al., 2003). There are many hypotheses about why this is. Many studies have found that the specific features of CDS promote language acquisition in babies (Golinkoff et al., 2015; Weisleder & Fernald, 2013). The features of this "distinct speech register" include "simplified vocabulary, the systematic phonological simplification of some words, higher pitch, exaggerated intonation, short, simple sentences, and a high proportion of questions (among mothers) or imperatives (among fathers)" (Moskowitz, 1978). Moreover, some have even gone as far as to say that the features extend past simply language learning but also enable emotional connection (Trainor & Desjardins, 2002). While variations exist across cultures and languages, appropriate to the contexts, many CDS features can be found cross-linguistically and cross-culturally (Fernald & Morikawa, 1993; Jones & Meakins, 2013). Nonetheless, researchers continue to investigate the various characteristics and implications of this grand phenomenon.

L2 Student-Directed Speech

Student-directed speech (SDS), colloquially known as 'Teacher Talk,' is by its own right its own unique register, particularly in a language learning context where the teacher provides linguistic input to their students and prompts linguistic output from their students (Dorval Suárez, n.d.; Nurpahmi, 2017). Because the teacher speaks with language learners, some compare SDS to FDS (Krashen, 1989). However, while there is some clear overlap between FDS and SDS, there are also many distinctions, particularly in purpose and functions. FDS is typically used to negotiate meaning or communicate a message, while SDS serves the purpose of

"questioning/eliciting, responding to students' contributions, presenting/explaining, organizing/giving instructions, evaluating/correcting" and "sociating/establishing and maintaining classroom rapport" (Malamah-Thomas, 1987, as cited in Nurpahmi, 2017). Furthermore, it is also thought that SDS can be compared to CDS in that they share characteristics such as "higher pitch, more exaggerated intonation, and careful enunciation, shorter sentences, and more frequent repetitions and questions…" (Anderson, 1978, as cited in Cazden, 1979). Nevertheless, research also suggests that the two modified speech registers have many idiosyncrasies that are incomparable (Cazden, 1979). The following sections will provide a comprehensive comparison of SDS and CDS.

A Linguistic Comparison

Repetition. According to Roh and Lee (2018), "functional aspects of repetition can be traced back to research on the socialization of children, for which repeated actions are critical." They reference a 1986 study by Schieffelin and Ochs, which found that caregivers used repetition to model language, and a 1994 study by Bennett-Kastor, which claimed that repetition was also used to teach vocabulary, grammar, and pragmatics. Importantly, caregivers' tendencies to use "a large number of verbatim repetitions" reduce their lexical variety, thus aiding with vocabulary acquisition (Genovese et al., 2019).

Comparatively, language teachers have also been reported to use frequent repetitions when speaking to their students. Roh and Lee cite a variety of studies that indicate repetition's multifaceted use in a second language classroom. These purposes include meaning negotiations (Robinson & Kevoe-Feldman, 2010; Schegloff et al., 1977; Sorjonen, 1996 as cited in Roh & Lee, 2018), increased learner comprehension and performance (Lyster, 1998a; Mackey & Philp, 1998; Oliver, 1998; Pica et al., 1987 as cited in Roh & Lee, 2018), "directing students' attention

to key concepts or linguistic forms, revoicing students' contributions, and providing a cohesive content thread" (Duff, 2000). Interestingly, in an L2 conversational exchange, repetition is used to repair and correct "problematic language use" (Robinson & Kevoe-Feldman, 2010; Schegloff et al., 1977; Sorjonen, 1996, as cited in Roh & Lee, 2018). Lee's analysis of a primary school teacher also found that teacher repetition could be used as feedback to their students about the correctness of their output (2003). Studies thus indicate that while repetition may be used in both CDS and SDS, the purposes for which they are used may differ.

Vocabulary. The literature reveals that vocabulary plays a pivotal role in CDS and SDS. In CDS, shorter words are typically used, as well as words that occur frequently in the language (Jones et al., 2023). Additionally, vocabulary that is more neighborhood-dense, meaning the words only differ by one sound (such as knot and knit), can usually be found in CDS (Coady & Aslin, 2003, as cited in Jones et al., 2023). According to Jones et al., "knowledge of similar sounding words scaffold the learning of a novel word " (2023).

Another important feature of CDS vocabulary is that of concreteness (Genovese et al., 2019). Venziano's study on French mothers' speech affirms that most CDS is situated in the "here-and-now," meaning that the caregivers mostly talk about concrete and present objects and events when talking to infants (Venziano, 2001). This explains the frequent use of present tense verbs. Venziano also discovered in their study that the amount of abstractness in the caregivers' speech increases as the child matures (2001). In addition, Genovese et al. explain that CDS has its own "typically and recurrent lexical features" (2019). These include "onomatopoeias such as 'bye bye', 'peekaboo,' 'am' for food in the Italian language, and animal sounds, " as well as nonsense words and diminutives (Genovese et al., 2019).

In SDS, Horst discovered through a corpus analysis of speech directed to 20 intermediate-high and advanced ESL students that "lexical frequency profiling indicated that nearly 98% of the 120,553 tokens in the corpus were accounted for by the 4,000 most frequent BNC families," referencing the BNC-20 Vocabprofile word lists (2010). Therefore, similar to CDS, high-frequency words were used in SDS. Likewise, Coxhead's analysis of three elementary school teachers in an EFL context found that teachers used high-frequency vocabulary, particularly at the beginning of the course (2017). Coxhead then indicates that the use of low-frequency academic vocabulary increased as the school year progressed. Also found in this study, Coxhead claimed that teacher talk was less complex than academic spoken or written text. Thus, "teacher talk serves as a bridge between everyday discourse and the academic register of school and the later vocabulary of higher studies" (Gibbons, 2006, as cited in Coxhead, 2017).

However, in contrast with CDS, SDS includes vocabulary that is typically only encountered in the classroom, or "classroomese," as McGovern and Wadden (1989) termed it. This special vocabulary could include stock phrases such as 'please sit down,' 'turn to page…', and 'take out a pencil.' Furthermore, ESL teachers use metalinguistic language (Horst, 2010). For example, teachers use words like 'verb,' 'noun,' and 'preposition' to talk about the language itself. This is a particular vocabulary that must be taught, and that is not typically encountered in CDS. Thus, CDS and SDS vocabulary have more differences than similarities.

Prosody. As Scwabb and Lew-Williams put it, a "particularly defining feature of CDS is its prosody," which includes its "higher pitch, exaggerated vowels, and final-word lengthening" (2016). Moreover, CDS intonation "differs from adult-directed speech in ways that influence children's language acquisition, such as exaggerated intonation" (Jones et al., 2023). Jones et. al.

also claim that the intonation is more pronounced, slower, and has "greater variability in pitch" so that children can better discriminate vowels and consonants (2023). A study with 7-month-old infants discovered that the infants were able to discriminate better word boundaries in CDS than in ADS (Thiessen et al., 2005). Another study conducted by Kuhl et al. (1997) asserted that mothers in various languages hyperextended their vowels. In this study, it was hypothesized that the expanded vowels aided in vowel discrimination, phonetic categorization, and infant imitation abilities.

In addition to aiding children with sound discrimination, CDS prosody has also been suggested to "communicate emotional information" as the "pitch and durational modifications of [infant-directed] speech appear to reflect the vocal expression of emotion" (Trainor & Desjardins, 2002). According to Trainor and Desjardins, "AD speech is typically less emotional" (2002). Additionally, Matychuk (2005) claims that "parents' use of higher pitch of voice, near that of children, lets their child know that they are talking to her."

The prosody of SDS is used for quite a different purpose. For instance, as explained by Roh and Lee, in an initiation-response-evaluation sequence frequently utilized by language instructors, the third turn is usually used to "address any problematic second turn by the student" (2018). Referencing Hellerman (2003), they explain that "when teacher repetition in the third turn matches the intonation and pitch level of the student's response in the second turn, the teacher's third turn was likely to be a positive evaluation" (Roh and Lee, 2018). The repetition, they explain, was likely to clarify the students' response for the rest of the class. In contrast, when the feedback was negative, "the intonation and pitch level of the repetition were observed to be different" (Roh and Lee, 2018). Thus, the distinct prosody was used for providing feedback rather than for increasing comprehension and sound discrimination, as it is with CDS.

Rate. Another defining characteristic of CDS is its slower rate. In 2012, Ko conducted a study by analyzing CHILDS corpus data for the CDS rate of sixteen parents addressing their infants ages 9 months-15 months and eighteen parents speaking with their pre-verbal children. They hypothesized that CDS would progress linearly as the child matured. Nonetheless, Ko's data suggested that there is no uniform linear pattern in CDS directed towards pre-verbal children. However, the data did suggest that "CDS rate was reset around the onset of child speech production, which rapidly accelerates until a certain point around the age of 2" (Koh, 2012). After this "breaking point," as Koh terms it, there is a great deal of variety among the CDS, and it is hypothesized that the adult adjusts their speech to the needs of the child.

Furthermore, a 2005 study indicated that FDS, which is related to SDS in many regards, was actually slower than CDS— the FDS average at 2.8 sps (syllables per second) and the CDS at 3.5 sps (Biersack et al., 2005). However, this study was limited in that it only measured the speech of two women. That being said, another study analyzing the properties of various registers observed the same results (Bobb et al., 2019). According to Griffiths (1990), however, far too few ESL teachers slow their speech to an appropriate rate for their learners. They suggest that a rate of 2.5 to 2.8 sps be used for lower-intermediate language learners "even when using simplified language" (Griffiths, 1990).

Syntax. Simplified syntax is typically found in both CDS and SDS. According to Mascowitz, in an infant's preverbal stages, adults talk to them in complex sentences. However, as soon as the child begins to say words, "they almost invariably speak to her in very simple sentences" (1978). Genovese et al.'s 2019 study affirmed Masowitz's assertion. They found that the MLU (mean length of utterance) progressively decreases when the child is between 3 months and 9 months, after which it begins to increase again. It is hypothesized that "a higher incidence

of one-word utterances emerges [to] reflect specific social functions used in object-naming contexts or to boost infants' communicative behaviors (Kaye, 1980; Henning et al., 2005 as cited in Genovese et al., 2019). Genovese et al. continue their study by classifying sentences into four types: preverbal productions, one-word utterances, simple utterances, and complex utterances. They found that "simple utterances followed by one-word utterances are the most frequent categories in [infant-directed speech] across age" and that "complex utterances are overall the least frequent category in infant-directed speech" (Genovese, 2019). These findings underline the caregivers' use of simplified syntax.

In comparison, in 1974, eight pre-service ESL teachers were taped during their classes at three points during their semester. Their speech was then syntactically analyzed and compared to the speech they used with peers. It was found that the ESL teachers used "shorter clauses, shorter T-units, and less subordination" (Gaies, 1977). Gaies also observed that teachers who taught lower-proficiency students used more simplified syntax than the teachers addressing more proficient users of a language (1977). Early's 1985 study confirmed Gaies' assertion that ESL teachers use shorter T-units. They found that when addressing native-speaking students, teachers used an average of 12.24 words per T-unit. Conversely, when addressing ESL students, the teachers used an average of 7.00 words per T-unit (Early, 1985).

Pragmatics. Pragmatics play a critical role in both CDS and SDS. In a 1979 study, mothers and teachers were both directed to instruct 4-year-old children how to play a game. The study concluded that there were more differences than similarities. For example, "the teachers gave a higher percentage of their questions, requests, and commands in indirect, moderated forms than did the mothers" (Hess et al., 1979). Hess et al. underscore that the mothers' comparative directness does not mean that they were more negative and that, in fact, "there was

little difference on the measures of negative effect, criticism, and praise" (1979). Likewise, mothers were found to give more explicit feedback to the children than the teachers. Another critical distinction between CDS and SDS found in this study was that mothers' questions, requests, and commands were framed in ways that elicited more "self-generated discursive responses" (Hess et al., 1979). In other words, mothers sought more complex responses from their children.

Hess et al. suggest that teachers may talk to children differently due to the "organizational context in which they work," teacher training materials that influence the development of the characteristics of indirectness and positivity, and finally, the affective bonds formed between the parent and child, which cannot be compared to a teacher-student relationship (1979). It should be noted that parenting and pedagogical styles have changed over the years, and more current research could suggest whether these claims continue to apply.

Another interesting aspect to consider is how CDS and SDS are used to provide pragmatic input for learners in a process called 'socialization' (Li, 2008). Socialization is the "process by which novices or newcomers in a community or culture gain communicative competence, membership, and legitimacy in the group" (Duff, 2007, p.310). According to Li, caregivers use metapragmatic input, meaning they teach the child what is linguistically appropriate in the language. They may use language to model and teach polite turn-taking, when to use various registers, express and interpret affective states, use speech acts, and use politeness phrases such as 'please' and 'thank you.'

Furthermore, Li indicates that teachers play an important role in socializing their students in the L2 because " the nature of discourse in the classroom, despite its special characteristics, reflects wider societal norms, values, and beliefs" (2008). Thus, language teachers are likewise

expected to demonstrate and convey pragmatics to their students. Citing a 1995 study by Falsgraf and Majors, Li explains that Japanese immersion teachers in the United States and American teachers differed in their directive styles and politeness features, "which revealed the teachers' explicit or implicit socialization efforts." Thus, the classroom contexts worked to be the "voice of a social role" (Poele, 1992, as cited by Li, 2008). Socialization thus plays a pivotal role in the pragmatic development of both children and language learners alike.

Scaffolding. Reflecting Vygotsky's zone of proximal development theory, the concept of scaffolding was first introduced in English through the observation of caregiver-child interactions. It was described by Bruner and Sherwood (1976) as caregiver intervention or by Wood et al. (1976) as "just-in-time adult assistance that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts" (as cited in Gonulal & Loewen, 2018). In a language learning context, Gonulal and Loewen define scaffolding as "specific just-in-time support that gives students the pedagogical push that enables them to work at a higher level of activity." Drawing a comparison between CDS and SDS, Walsh states that "scaffolding involves more than simply error correction. It is a skill similar to the one possessed by many parents when helping young children struggling to find the right word at a given moment" (2002).

In CDS, "children learn vocabulary best from language exchanges with adults who invite children to talk and then provide meaningful feedback on children's remarks, thereby scaffolding early linguistic and cognitive development" (Wasik & Jacobi-Vessels, 2016). Wasik and Jacobi-Vessels explain that scaffolded play, such as book reading, can be a powerful way to facilitate these language exchanges (2016). Moreover, Wasik and Jacobi-Vessels also affirm that it is not the quantity of CDS that is most significant, but rather the quality (2016). They reference

Hirsh-Pasek et al.'s 2015 study observing 60 low-income families over a 24-month period, which found that "the indicators of quality of the language exchange were better predictors of later language ability than the quantity of mothers' words during the interaction" (Hirsh-Pasek et al., 2015, as cited by Wasik & Jacobi-Vessels, 2016). This research confirms the importance of scaffolded speech in CDS.

Wasik & Jacobi-Vessels list various ways that caregivers can scaffold children's play to promote language development, including: "asking questions that invite extended responses and new inquiry, providing meaningful feedback…, defining words, creating opportunities for children to use vocabulary words they are learning, circling back to talk about children's ideas to provide repetition in language and concepts, and providing sufficient wait time for children to respond" (Wasik & Jacobi-Vessels, 2016). Interestingly, each of the above suggestions could also be considered foundational ESL teaching practices.

Social-Affective Factors. The social-affective functions of CDS are of critical importance in the child's development. Vygotsky's socio-cultural theory posits that language is social in nature (Vygotsky, 1978). Matychuk outlines its importance in the child's development by explaining that the caregiver' voice is used to "capture the child's attention", "to encourage exchanges," and to "convey affective values through melodic contours" (2005). The caregiver thus encourages turn-taking near the end of the second month, therefore initializing the child's ability to socialize (Matychuk, 2005). Underlying the importance of CDS' role, Preza and Hadley argue that "responsive and contingent interactions affirm a child's communicative power and create authentic moments of heightened engagement that support language learning" (2024). Another example of the power of CDS in creating a social and affective bond between the caregiver and child is the use of diminutives. Genovese et al. assert that these connote affection.

Other features that can convey affection and love in CDS are "lengthening pauses or segments when slowing down their speech rates" because they could "serve to soothe and maintain infant attention" (Biersack et al., 2005).

The social-affective features of language are also vital in the L2 classroom. Citing Donato (2004), Tsui explains that classroom discourse is, importantly, a co-construction between teachers and students (2008). Likewise, teachers often build relationships with their students through their interactions. For example, Patel conducts a study in her own classroom of "empathetic and dialogic interactions" (2023). They use specific strategies like paraphrasing students' comments to show understanding, "using remarks that convey a positive spirit and trust," and "using the plural forms which express partnership" (Patel, 20230. All of these strategies convey ways that teachers might use communication to build connections with their students.

Conclusion

Discussion

Many SLA researchers and pedagogues throughout the years have compared the experience of a second language learner to that of a child learning their first language. For example, Moskowitz explains that an adult who is learning a foreign language may feel uncomfortable, "overwhelmed, ignorant, and even childlike" (1978). She goes on to explain that "The experience of an adult listening to a foreign language comes close to duplicating the experience of an infant listening to the 'foreign' language spoken by everyone around her. Like the adult, the child is confronted with the task of learning a language about which she knows nothing" (Mascowitz, 1978). Mirroring this statement, Spielmann and Radnofsky (2001) assert that "Learning and using a foreign language poses a threat to one's ego. It makes people

vulnerable — particularly grown-ups who are accustomed to functioning perfectly well in their own language. For example, many beginning L2 learners resentfully report feeling 'infantilized' when they use the L2" (as cited in Ortega, 2020).

If second language acquisition is comparable to first language acquisition, a conclusion could thus be drawn that the input and scaffolding that both infants and language learners receive should be similar. Research indicates that, in many ways, they are. Both the caregivers and the language teachers use frequent repetitions in their speech. Simplified vocabulary, exaggerated prosody, and decreased rate are all also observed in CDS and SDS. Furthermore, researchers have documented a simplified syntax in the two modified registers, and caregivers and teachers alike play a pivotal role in the teaching and modeling of pragmatics. Finally, CDS and SDS both feature scaffolding and social-affective strategies that develop the children and language learners' abilities.

Nonetheless, CDS and SDS are also rather distinct in many ways. To begin with, CDS features a neighborhood-dense, short, and largely concrete lexicon, whereas SDS features high-frequency vocabulary, specialized classroom jargon, and metalinguistic language. Furthermore, the distinct prosody of CDS and SDS, while similar in many ways, functions differently. CDS prosody aids in children's discrimination of sounds and in communicating emotions and closeness. SDS prosody, on the other hand, is often used to give linguistic feedback. Pragmatically, the two are also distinct in that caregivers are usually more direct and teachers indirect. Finally, CDS functions to soothe and create an affective-social bond, whereas teachers use strategies to show empathy and understanding.

One might hypothesize that the many differences between CDS and SDS are largely due to the multifaceted nature of the caregiver's role, extending beyond mere linguistic instruction to

encompass the teaching of functional skills. In contrast, the language teacher's role primarily revolves around facilitating linguistic growth. Furthermore, a salient contract arises from the disparate starting points of language acquisition for children and second language learners. When children learn a language, they have no previous experience to draw upon. Conversely, second language learners bring a reservoir of linguistic experiences from their first language, which provides a rich backdrop for their new language learning experience.

Therefore, while the second language learner might feel like an infant, they, in fact, have many more affordances at their disposal than a baby does. This could be the reason for the fact that the language teacher does not use all of the same techniques as a caregiver. For example, a teacher may not need to use prosody that is as exaggerated as that of a caregiver because the second language learner can already discriminate between sounds. Conversely, a caregiver does not require all of the same techniques as a language teacher. For instance, the caregiver does not need to use classroom jargon. The vastly different contexts of the infant and the language learner demand distinct input and scaffolding.

Implications for Pedagogy and Research

Although the contexts differ significantly, caregivers and language teachers can potentially glean insights from each other. For instance, SLA teacher training materials might recommend that teachers follow the example of caregivers by employing simple, concrete vocabulary when interacting with low-proficiency language learners or incorporating greater prosodic variability to assist with word boundary discrimination when working with learners who speak distant languages. However, it should be noted that additional research is necessary to validate this suggestion. Furthermore, by emulating caregivers, language teachers could also explore methods to pose questions that prompt more expansive, discursive responses, thereby

encouraging more complex interactions. Similarly, caregivers could find it advantageous to utilize high-frequency vocabulary when communicating with their children.

It is also crucial for teachers to recognize that language learners are not infants and should be treated with appropriate respect. Applying certain features of CDS to SDS can potentially come across as patronizing or demeaning. For instance, employing onomatopoeic expressions commonly used with infants may overlook the maturity, background, and intelligence of language learners. Therefore, language teachers must ensure that their speech patterns prioritize comprehension while also demonstrating respect for their students' capabilities and dignity.

Teachers should carefully assess the learner context when considering their own SDS. The extent to which teachers adapt their language should be contingent upon factors such as the proficiency level of the language learners, with lower proficiency learners typically requiring a greater degree of modification. Future research ought to explore how the features of CDS and SDS influence language learning and compare the two approaches. Such investigations could offer valuable insights into optimizing SDS for language acquisition purposes.

References

Biersack, S., Kempe, V., & Knapton, L. (2005). Fine-tuning speech registers: A comparison of the prosodic features of child-directed and foreigner-directed speech. *Interspeech 2005*. https://doi.org/10.21437/interspeech.2005-46

Bobb, S. C., Mello, K., Turco, E., Lemes, L., Fernandez, E., & Rothermich, K. (2019). Second language learners' listener impressions of foreigner-directed speech. *Journal of Speech, Language, and Hearing Research*, *62*(9), 3135–3148. https://doi.org/10.1044/2019_jslhr-s-18-0392

Casillas, M., Amatuni, A., Seidl, A., Soderstrom, M., Warlaumont, A. S., & Bergelson, E. (2017). What do babies hear? analyses of child- and adult-directed speech. *Interspeech 2017*. https://doi.org/10.21437/interspeech.2017-1409

Cazden , C. B. (1979). Language in Education: Variation in the Teacher-Talk Register. In *Language in Public Life* (pp. 144–162). essay, Georgetown University Press.

Coxhead, A. (2017). Academic vocabulary in teacher talk: Challenges and opportunities for pedagogy. *Oslo Studies in Language*, *9*(3). https://doi.org/10.5617/osla.5845

Dorval Suárez, S. (n.d.). A Descriptive study of teacher talk. *Adquisición y Aprendizaje de Lenguas Segundas y Sus Literaturas.*

Duff, P. A. (2007). Second language socialization as sociocultural theory: *Insights and issues. Language Teaching,* 40(4), 309–319. doi:10.1017/S0261444807004508

Early, M.M., (1985). *Input and Interaction in Content Classrooms: Foreigner-Talk and Teacher-Talk in Classroom Discourse.* [Doctoral Dissertation, University of California]. Los Angeles ProQuest Dissertations Publishing, 1985. 8519091.

Fernald, A., & Morikawa, H. (1993). Common themes and cultural variations in Japanese and American mothers' speech to infants. *Child Development*, *64*(3), 637. https://doi.org/10.2307/1131208

Gaies, S. J. (1977). *A Comparison Of The Classroom Language Of Esl Teachers And Their Speech Among Peers: An Exploratory Syntactic Analysis*. [Doctoral Dissertation, Indiana University]. Indiana University ProQuest Dissertations Publishing, 1977. 7805570.

Gee, J. P. (1994). First Language Acquisition as a guide for theories of learning and pedagogy. *Linguistics and Education*, *6*(4), 331–354. https://doi.org/10.1016/0898-5898(94)90002-7

Genovese, G., Spinelli, M., Romero Lauro, L.J., Aureli, T., Castelletti, G., & Fasolo, M. (2019). Infant-directed speech as a simplified but not simple register: A longitudinal study of lexical and syntactic features. *Journal of Child Language*, *47*(1), 22–44. https://doi.org/10.1017/s0305000919000643

Golinkoff, R. M., Can, D. D., Soderstrom, M., & Hirsh-Pasek, K. (2015). (baby)talk to me. *Current Directions in Psychological Science*, *24*(5), 339–344. https://doi.org/10.1177/0963721415595345

Gonulal, T., & Loewen, S. (2018). Scaffolding technique. *The TESOL encyclopedia of English language teaching*, 1-5.

Griffiths, R. (1990). Facilitating listening comprehension through rate-control. *RELC Journal*, *21*(1), 55–65. https://doi.org/10.1177/003368829002100104

Hess, R. D., Dickson, W. P., Price, G. G., & Leong, D. J. (1979). Some contrasts between mothers and preschool teachers in interaction with 4-year-old children. *American Educational Research Journal*, *16*(3), 307. https://doi.org/10.2307/1162783

Horst, M. (2010). How well does teacher talk support incidental vocabulary acquisition?. *Reading in a Foreign Language* , *22*(1), 161–180.

Jones, C., & Meakins, F. (2013). The phonological forms and perceived functions of janyarrp, the gurindji 'baby talk' register. *Lingua*, *134*, 170–193. https://doi.org/10.1016/j.lingua.2013.07.004

Jones, G., Cabiddu, F., Barrett, D. J., Castro, A., & Lee, B. (2023). How the characteristics of words in child-directed speech differ from adult-directed speech to influence children's productive vocabularies. *First Language*, *43*(3), 253–282. https://doi.org/10.1177/01427237221150070

Krashen, S. D. (1982). *Principles and practice in Second language acquisition*. Pergamon Press.

Ko, E.-S. (2012). Nonlinear development of speaking rate in child-directed speech. *Lingua*, *122*(8), 841–857. https://doi.org/10.1016/j.lingua.2012.02.005

Kuhl, P. K., Andruski, J. E., Chistovich, I. A., Chistovich, L. A., Kozhevnikova, E. V., Ryskina, V. L., Stolyarova, E. I., Sundberg, U., & Lacerda, F. (1997). Cross-language analysis of phonetic units in language addressed to infants. *Science*, *277*(5326), 684–686. https://doi.org/10.1126/science.277.5326.684

Lee, S. (2003). An Analysis of Primary School ESL Teacher's Talk. *English Teaching*, *58*(1), 219–238.

Li, D. (2008). Pragmatic socialization. *Encyclopedia of language and education*, *8*, 71-83.

Matsumoto, H. (2010). Students perceptions about teacher talk in Japanese-as-a-second-language classes. *Journal of Second Language Acquisition and Teaching*, *17*, 53-74.

Matychuk, P. (2005). The role of child-directed speech in Language Acquisition: A case study. *Language Sciences*, *27*(3), 301–379. https://doi.org/10.1016/j.langsci.2004.04.004

McGovern, S., & Wadden, P. (1989). Overcoming the Classroomese Syndrome. *TESL Reporter*, *22*, 4-4.

Moskowitz, B. A. (1978). The Acquisition of Language. *Scientific American*, *239*(5), 92–109. http://www.jstor.org/stable/24955849

Nurpahmi, S. (2017). Teacher talk in classroom interaction. *ETERNAL (English, Teaching, Learning and Research Journal)*, *3*(1), 34–43. https://doi.org/10.24252/eternal.v31.2017.a4

Ortega, L. (2020b). *Understanding second language acquisition*. Routledge.

Patricia, D. A. (2000). Repetition in foreign language classroom interaction. *Second and Foreign Language Learning Through Classroom Interaction*, 121–150. https://doi.org/10.4324/9781410605498-13

Preza, T., & Hadley, P. A. (2024). Parent responsivity, language input, and the development of simple sentences. *Journal of Child Language*, *51*(1), 91–117. https://doi.org/10.1017/s0305000922000459

Roh, T. R., & Lee, Y.-A. (2018a). Teacher repetition as an instructional resource for classroom interaction: Three pedagogical actions in Kindergartens in an EFL context. *System*, *74*, 121–137. https://doi.org/10.1016/j.system.2018.02.008

Schwab, J. F., & Lew‐Williams, C. (2016). Language learning, socioeconomic status, and child‐directed speech. *Wiley Interdisciplinary Reviews: Cognitive Science*, *7*(4), 264-275.

Trainor, L. J., & Desjardins, R. N. (2002). Pitch characteristics of infant-directed speech affect infants' ability to discriminate vowels. *Psychonomic Bulletin & Review*, *9*(2), 335–340. https://doi.org/10.3758/bf03196290

Thiessen, E. D., Hill, E. A., & Saffran, J. R. (2005). Infant‐directed speech facilitates word segmentation. *Infancy*, *7*(1), 53–71. https://doi.org/10.1207/s15327078in0701_5

Tsui, A. (2008). Classroom discourse: Approaches and perspectives.

Vygotsky, Lev Semenovich, and Michael Cole. *Mind in society: Development of higher psychological processes*. Harvard university press, 1978.

Walsh, S. (2002). Construction or obstruction: Teacher talk and learner involvement in The efl classroom. *Language Teaching Research*, *6*(1), 3–23. https://doi.org/10.1191/1362168802lr095oa

Wasik, B. A., & Jacobi-Vessels, J. L. (2016). Word play: Scaffolding language development through child-directed play. *Early Childhood Education Journal*, *45*(6), 769–776. https://doi.org/10.1007/s10643-016-0827-5

Weisleder, A., & Fernald, A. (2013). Talking to children matters. *Psychological Science*, *24*(11), 2143–2152. https://doi.org/10.1177/0956797613488145

Weppelman, T. L., Bostow, A., Schiffer, R., Elbert-Perez, E., & Newman, R. S. (2003b). Children's use of the prosodic characteristics of infant-directed speech. *Language & Communication*, *23*(1), 63–80. https://doi.org/10.1016/s0271-5309(01)00023-4