Pathways of Development in Child Heritage Speakers' Use of Spanish Demonstratives

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Scholars have argued that restricted language input slows language acquisition, but the pathway of development may remain the same. The current study investigated the influence of amount of Spanish input on Spanish demonstrative usage among 19 U.S. child heritage speakers, ages 3;4–8;7. Demonstratives are among the first grammatical features to emerge in children's language, but we know little about their acquisition by heritage speakers. Previous research shows that monolingual Spanish-speaking children rely heavily on *este/esta* 'this' and only later learn to vary between demonstrative forms, using *este/esta* primarily for proximal referents and *ese/esa* 'that' for distal referents. As such, we hypothesized that child heritage speakers who experience restricted Spanish input would rely on *este/esta* for a prolonged period of time. 586 demonstratives were elicited during a puzzle completion task and were coded for referent location (proximal, distal). Contrary to our hypothesis, less Spanish spoken at home negatively correlated with proportion of *este/esta*-usage. Children exposed to abundant Spanish in the home patterned like adult monolingual Spanish speakers, producing *este/esta* for proximal referents and *ese/esa* for distal

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referents. By contrast, children who experienced restricted input in Spanish produced mostly *ese/esa*, regardless of spatial location of the referent. The results suggest that restricted input in Spanish yields a developmental trajectory with overgeneralization of *ese/esa* rather than *este/esta*. Importantly, we argue that the identification of two groups of child heritage speakers who exhibit different developmental pathways lends itself to differentiated instruction in the heritage language classroom.

Introduction

Numerous studies have found that children who experience restricted input acquire some features of grammar more slowly as compared to children who experience more input (Montrul, 2016; Silva-Corvalán, 2014). While restricted input may slow acquisition of grammar, an open question is whether the pathway of development is the same regardless of amount of input (Gathercole, 2007). The current study investigates the effect of amount of input on heritage language development by analyzing Spanish demonstratives produced by 19 U.S. child heritage speakers, ages 3;4–8;7. Previous research shows that monolingual Spanish-speaking children produce *este/esta* 'this' first and only rarely use *ese/esa* 'that' up to 36 months of age (Rodrigo et al., 2004). If restricted input yields a slower but qualitatively similar pathway of development, then demonstrative use among child heritage speakers who experience restricted Spanish input may manifest as reliance on *este/esta* for a prolonged period of time.

In order to investigate this hypothesis, child heritage speakers participated in a puzzle completion task that prompted them to produce demonstratives referring to puzzle pieces. The puzzle pieces were located either near the child or further from the child and closer to the experimenter. The results of the study show that instead of relying on *este/esta*, children who experienced restricted Spanish language input tended to produce *ese/esa* for both proximal and distal referents. In contrast, children with abundant input patterned like monolingual Spanish-speaking adults, using *este/esta* for proximal referents and *ese/esa* for distal referents. Thus, the results indicate that the restricted-input children do not necessarily follow the same pathway of development as children with abundant input. While a full explanation for this pathway is beyond the scope of the current article, we surmise that crosslinguistic influence may play a role,

especially since corpus studies of child English have found that distal *that* is among one of the most frequent words produced by English-speaking toddlers and is also produced earlier than proximal *this* (González-Peña et al., 2020).

Having identified two groups of child heritage speakers whose linguistic behavior differs sharply provides a useful context in which to apply differentiation in the heritage language classroom. While it is difficult to tailor lessons to each individual student's level and needs, differentiating between two groups is much more feasible. The results from the current study suggest that in the case of demonstratives and very likely other grammatical structures, differentiating between child heritage speakers who experience abundant Spanish input in the home and those who do not is a promising approach that can promote continued language learning among both types of children.

Slower but Same Pathway of Development?

Gathercole (2007) has argued that bilingual children follow the same pathways of grammatical development as monolingual children, but do so at a slower pace due to differences in amount of input experienced in each language. Indeed, there are abundant examples that support the conclusion that restricted input leads to slower acquisition of grammar (Cuza & Miller, 2015; Montrul & Sánchez-Walker, 2013; Shin, 2018; Silva-Corvalán, 2014; Ticio, 2015). For example, Gathercole (2002a) investigated acquisition of grammatical gender by 212 Spanish-English speaking bilingual children in Miami. Approximately half were in second grade and half were in fifth grade. At Grade 2, there were significant differences among the children: children enrolled in dual language programs and children whose home language was predominately or entirely Spanish outperformed children enrolled in English immersion programs and children whose home languages included both Spanish and English. However, by Grade 5 differences among the bilingual children had mostly disappeared (see also Montrul & Potowski, 2007). Gathercole interprets this finding as evidence that children who experience restricted input eventually catch up; after experiencing sufficient exemplars, they, too, acquire the grammatical patterns of their language.

While restricted input may result in slower acquisition of some grammatical features, an open question is whether children follow a similar pathway

of development as they acquire their grammars. Gathercole (2007) argues that bilingual children's acquisition process is qualitatively similar to that of monolingual children. She writes that "input can play a critical role in the pacing (but not order) of the development of structures" and that the order or pathway of development is determined by structural complexity rather than amount of input (p. 232). Indeed, in a study of English mass and count nouns, Gathercole (2002b, 2007) finds that monolingual English-speaking children and bilingual Spanish-English speaking children follow the same order of development. For example, they all acquire simpler combinations like *many* + plural count nouns earlier than more complex combinations like *much* + mass nouns.

The proposal that input affects rate but not order of development provides a clear and testable hypothesis for the acquisition of demonstratives. Since studies of monolingual Spanish-speaking children find that they produce proximal demonstrative *este/esta* 'this' earlier than *ese/esa* 'that', children who experience restricted input in Spanish should follow the same path of development, relying first on proximal *este/esta,* possibly for a protracted period of time relative to monolinguals, and only later acquiring *ese/esa.*

DEMONSTRATIVES

Demonstratives are among the first grammatical features to emerge in child language (Diessel, 2006; Diessel & Coventry, 2020) and are thus an ideal feature for investigating early language development. Spanish has three groups of demonstratives that inflect for number and gender, as shown in Table 1.

Although Spanish is considered to have three groups of demonstratives, as shown in Table 1, *aquel/aquella*, which is typically used to refer to objects far

Table 1.   Spanish Demonstratives

	Masculine Singular	Masculine Plural	Feminine Singular	Feminine Plural
Group 1	*este*	*estos*	*esta*	*estas*
Group 2	*ese*	*esos*	*esa*	*esas*
Group 3	*aquel*	*aquellos*	*aquella*	*aquellas*

from both the speaker and the addressee, is rare in oral discourse (Zulaica-Hernández, 2012). The current paper focuses on demonstrative use in the interactional space between speaker and addressee. As such, we will refer to demonstratives *este/esta* and *ese/esa* as proximal and distal,[1] respectively, in order to highlight the relative difference between these forms with respect to distance from the deictic center. Spanish demonstratives are inflected for both gender and number, as shown in Table 1. Spanish also has a neuter demonstrative *esto/eso/aquello* to refer to propositions. While the masculine and feminine demonstratives can function as either pronouns or determiners, the neuter demonstratives function only as pronouns (e.g., Shin & Vallejos, under review).

Spanish-speaking adults' demonstrative selection depends on both spatial and intersubjective factors. *Este/esta* is generally produced for referents very close to the speaker, whereas both *este/esta* and *ese/esa* are used for referents further away from the speaker and closer to the addressee (Coventry et al., 2008; Jungbluth, 2003; Shin et al., 2020). Adult speakers also manipulate their demonstrative selection to convey meanings that metaphorically extend physical distance to the intersubjective domain. For example, in contexts of intersubjective misalignment, such as misunderstandings regarding intended referents or lack of joint attention, speakers may employ proximal demonstratives which helps the addressee shift attention to the intended referent (Shin et al., 2020).

Children produce demonstratives in English and in Spanish before the age of two, but there are crosslinguistic differences with respect to which demonstratives emerge first (Diessel & Coventry, 2020; Fenson et al., 1994; González-Peña et al., 2020; Rodrigo et al., 2004). Studies have shown that young monolingual Spanish-speaking children's demonstratives primarily consist of proximal *este/esta*. In a longitudinal study spanning 12 months, Rodrigo et al. (2004) investigated gestural and verbal deixis in eight monolingual Spanish speaking children, who were videotaped while engaged in every day routines with their mothers. Four children's ages spanned 12 to 24 months during the study; the other four spanned 24 to 36 months of age. Results showed that children used pointing first, followed by the gradual introduction of

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[1] Demonstratives *ese/esa* are often referred to as 'medial' to distinguish these from distal *aquel/aquella*.

demonstrative terms. Further, proximal demonstratives (*este/esta*) were produced at four times the rate of their counterpart distal forms during this age range. In a corpus study of 92 transcripts of seven Spanish-speaking children, whose ages ranged from 18 to 24 months of age, González-Peña et al. (2020) found that over 70% of the transcripts analyzed included productions of the proximal demonstrative *este*. In contrast, less than half of the transcripts included productions of *ese*. Moreover, *este* was among the top 20 most frequent words in the corpora, whereas *ese* was not.

In contrast to the findings for Spanish, studies of English-speaking children indicate that they produce distal 'that' earlier than proximal 'this' (Diessel & Coventry, 2020; Fenson et al., 1994; González-Peña et al., 2020). In addition to analyzing Spanish-speaking children's demonstratives, González-Peña et al.'s (2020) corpus study analyzed demonstratives produced by 59 monolingual English-speaking children, ages 18 to 24 months of age. The results show that over 70% of the English-speaking children's transcripts included 'that', whereas less than 60% included 'this'. In addition, 'that' was the 4th most frequent word of all words in the corpora, whereas 'this' was the 16th most frequent word. Similarly, Diessel and Coventry's corpus study (2020) found that 10 English-speaking children, whose ages ranged from 1;2 to 2;0, produced more distal than proximal demonstratives. They also found differences across languages: like English-speaking children, Dutch-speaking children produced more distal than proximal demonstratives, whereas Hebrew-speaking children and Japanese-speaking children produced more proximal than distal demonstratives. González-Peña et al.'s (2020) study provides some insight into these crosslinguistic differences. Their analyses of child-directed speech showed significant correlations between the demonstratives produced by caregivers and children, suggesting that frequency of forms in the input is the source of the order in which demonstrative forms emerge. That is, it is likely that Spanish-speaking children produce more proximal *este* than distal *ese* and English-speaking children produce more distal 'that' than proximal 'this' because their caregivers also show these same patterns of use.

While corpus studies have documented production of demonstrative forms by age two, comprehension studies have shown that full mastery of the contexts in which different demonstrative forms are used takes longer to develop (Chu & Minai, 2018; Clark & Sengul, 1978). Tanz (1980) studied comprehension of English 'this' and 'that' among children ages 2;6–5;3. In this study children were

seated across from the experimenter, with two plates in front of them and a penny hidden under one of the plates. The experimenter introduced two puppets that provided hints regarding the location of the penny. The hints included phrases with demonstratives such as "This plate has a penny under it". Tanz found that the youngest children consistently selected the plate close to the puppet when prompted with "This plate . . .", but until the age of 4 they were at chance finding the penny under the plate further away from a puppet that used distal 'that'. In sum, children produce demonstratives early and the particular demonstrative forms they produce appear to differ depending on frequency of those forms in the input. At the same time, mastering the functions or meanings associated with different demonstrative forms is more protracted in development.

To date we know little about how demonstratives are acquired during heritage language development. One study of child heritage speakers of Spanish found that 6–8-year-olds used demonstratives similarly to adults, producing mostly *este/esta* to refer to proximal referents and *ese/esa* to more distal ones, but that 3–5-year-olds did not adhere to a single pattern (Shin & Morford, 2021). However, the study included only a small number of participants, and it did not compare child heritage speakers who experience abundant input in Spanish to those who experience restricted input. The current study aims to fill that gap by addressing the relationship between amount of Spanish input and demonstrative development.

The Current Study: Child Heritage Speakers' Demonstratives

The current study investigates the following research question: Does amount of input influence child heritage speakers' pathway of demonstrative development? Given that monolingual Spanish-speaking children rely on proximal demonstratives during the earliest stage of demonstrative development (González-Peña et al., 2020; Rodrigo et al., 2004), we explore the research question by testing the hypothesis that child heritage speakers rely on proximal demonstrative *este/esta*, regardless of spatial location of the referent. If heritage speakers demonstrate sensitivity to spatial distance, we hypothesize that children with abundant input will be more likely than children with restricted input to use *este/esta* for proximal referents and *ese/esa* for distal referents.

Participants & Method

The current study included 19 children, ages 3;4–8;7, in New Mexico. The children were selected to participate in the study if their families reported speaking Spanish in the home. Caregivers were asked to answer six questions to gauge the amount of English and Spanish input that the child is exposed to; these questions are presented in Table 2. Each question was followed by five options, and each option was assigned a score ranging from 0 *all English*, 1 *more English than Spanish*, 2 *same amount of both languages*, 3 *more Spanish than English*, to 4 *all Spanish*.

The average score was then calculated for each child and was used to operationalize 'restricted' and 'abundant' Spanish input. Since 2 is the median between 0 and 4, children with language background scores between 0 to 1.99 were considered 'restricted-input' children (N = 7), while those with scores between 2 and 4 were considered 'abundant-input' children (N = 12). No child's language input score was lower than 1, which is not surprising given that only children whose caregivers reported speaking at least some Spanish in the home were selected for participation in the study. As such, the language input scores of the restricted-input children ranged from 1 to 1.99. Likewise, only three children had language input scores over 3, indicating that even the children with abundant input in Spanish were not learning their heritage language in a monolingual setting. Nevertheless, the two groups had significantly different language input scores as revealed by an independent samples t-test, $t(17) = 5.15$, $p < .0001$. It is also worth noting that the categorization into restricted and abundant groups holds across all questions regarding language in the home. The one question that yielded divergent results was Question 4 regarding languages used at school. Here the average was low for both restricted and abundant groups (1.25, 1.71, respectively), suggesting that the children are generally exposed to more

Table 2.   Background Questionnaire: Language Input Questions

1. How much English and Spanish are used in your home?
2. Think about the adults that live in your home. Which language(s) do caregivers use at home?
3. Think about all the children that live in your home. Which language(s) do other children use at home?
4. Which language(s) are used at your child's school?
5. Which language(s) do adults in your home use when speaking to your child?
6. Which language(s) do other children living in your home speak to your child?

English than Spanish at school. Nevertheless, even if we exclude this item for calculating the children's average language input scores, the categorization of the children into restricted and abundant input remains the same.

Standardized assessments were used to measure the children's Spanish and English receptive vocabulary skills. All children completed the Spanish Test de Vocabulario en Imágenes Peabody (TVIP; Dunn et al., 1986) and the English Peabody Picture Vocabulary Test (PPVT; Dunn & Dunn, 2007), both of which are normed for age. Children's age (expressed in months) positively correlated with their English PPVT scores [$r = .57$, $p = .01$], but there was no significant correlation between age and Spanish TVIP scores [$r = .42$, $p = .08$]. Thus, the general profile of the children in the current study is one in which Spanish vocabulary scores are maintained across age, whereas English vocabulary scores are significantly higher among older children (see also Shin et al., 2019). This pattern is consistent with the common experience of increased exposure to English and decreased exposure to Spanish with age, and in particular with the onset of schooling, among Spanish-speaking children in the U.S. (Castilla-Earls et al., 2019). Indeed, the responses to the language input question that asked about Spanish use at school indicated that English was the dominant language used in school for the majority of children.

Demonstratives were elicited during a puzzle completion task consisting of 24 trials. Children sat across from an experimenter with an empty puzzle board between them. In addition, a cord separated the puzzle space so that 13 puzzle pieces and the puzzle board were on the participant's side and 12 puzzle pieces were on the experimenter's side (see Figure 1). At the beginning of the experiment, the researcher explained the rules: children could not touch the puzzle pieces and could not reach across the cord. The experimenter then asked a series of questions to elicit demonstratives, such as "*¿Ves el dinosaurio rojo? ¿Qué pieza tiene su ojo?*" Do you see the red dinosaur? Which piece has its eye?' If necessary, the participant was reminded that they could not touch the puzzle pieces, and was encouraged to verbally respond to the experimenter's questions. Children's responses were transcribed, and all utterances that included demonstratives *este/esta* or *ese/esa* (N = 615)[2] were coded for spatial distance,

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[2] Not all responses included demonstratives and some responses included multiple demonstratives. Each demonstrative produced was coded as a separate token.

Experimenter side

Participant side

Figure 1.   Puzzle Completion Task

that is, whether the puzzle piece selected by the child was on the participant's (proximal) or the experimenter's (distal) side of the puzzle. Since our focus here is on the distinction between *este/esta* and *ese/esa* used to refer to objects in the interactional space, we set aside gender and number and henceforth use *esta* as shorthand for *este/esta* and *esa* as shorthand for *ese/esa*. We also set aside the children's use of gestures to signal referents since our primary focus is on children's differentiation between *este/esta* and *ese/esa*, but we note here that almost all the demonstratives co-occurred with manual gestures.[3]

Results

Since the earliest stage of demonstrative development in monolingual Spanish is characterized by overreliance on proximal demonstratives, it was hypothesized that children with less exposure to Spanish input would rely more on *esta*, regardless of the location of the puzzle piece. To test this hypothesis each child's percent of *esta* out of their total number of demonstratives (*esta + esa*) produced was calculated and plotted relative to their language background questionnaire score (Figure 2). The results showed the mirror opposite of the hypothesized

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[3] Analyses of 9 abundant-input and 2 restricted-input children's data show that 99% of their demonstratives co-occur with a manual pointing gesture.
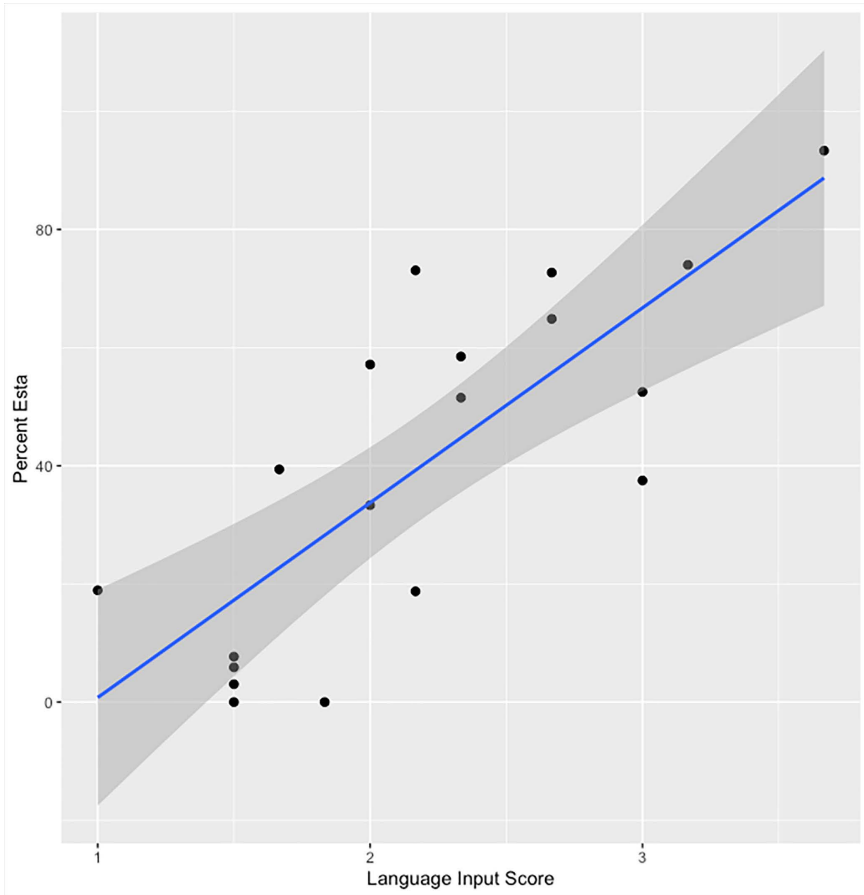
Figure 2.   Percent *esta* by Language Input Scores

path of acquisition. The more Spanish input, the higher the percent of proxi-mal *esta* used by the children in the puzzle task [$r = .78$, $p < .0001$].[4] In fact, six of the seven children whose language background scores were between 1 and 1.99 and who were thus considered restricted-input children produced

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[4] The correlation remains robust if the mean input score for each child is only based on languages used in the home and excluding the item regarding languages used at school [$r = .72$, $p < .001$].

proximal *esta* less than 20 percent of the time. Said differently, they produced distal *esa* over 80 percent of the time.

Although the results in Figure 2 contradict the hypothesis that restricted-input children would rely on *esta* more than abundant-input children, we must consider the possibility that these children tended to produce *esa* because they produced demonstratives more often when pointing to distal puzzle pieces, i.e., pieces on the experimenter's side of the puzzle. To check whether restricted-input children's reliance on *esa* holds for both proximal and distal puzzle pieces, we present both abundant-input and restricted-input children's percent of *esta* and *esa* usage by puzzle piece location. As illustrated by Figure 3, abundant-input children varied their demonstrative usage according to puzzle
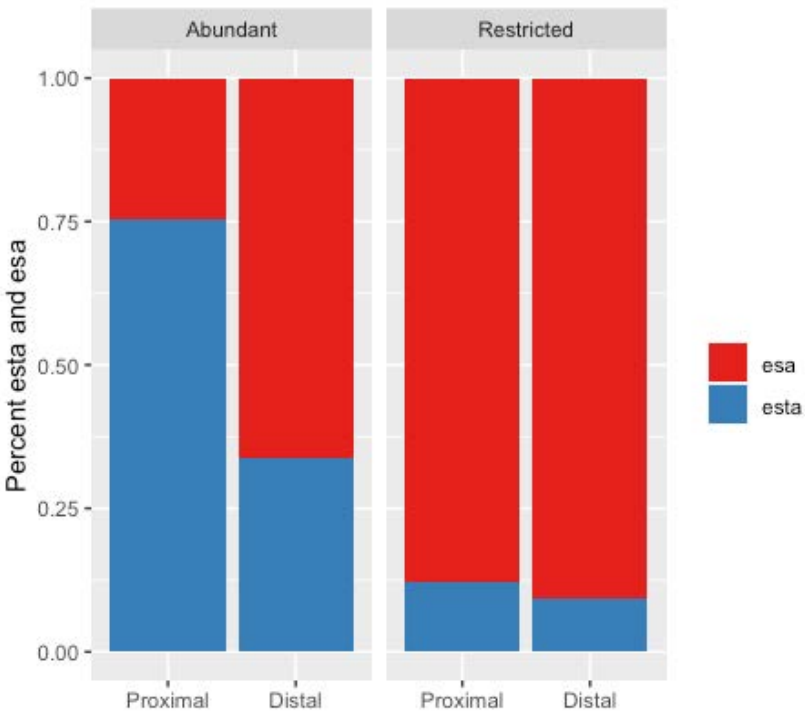

Figure 3.   Percent *esta* and *esa* for Proximal and Distal Puzzle Pieces, Abundant and Restricted-input Children

piece location; they produced *esta* 75.6% (170/225) of the time to refer to pieces on the participant's side, and *esa* 66.2% (100/151) of the time to refer to pieces on the experimenter's side of the table. In contrast, restricted-input children tended to produce *esa* to refer to pieces on both the participant's side of the puzzle (87.9%, 116/132) as well as and the experimenter's side (90.7%, 97/117). That is, whereas child heritage speakers exposed to abundant input in Spanish clearly differentiated between proximal and distal space by means of demonstrative selection, children who experienced restricted input in Spanish did not.

The results in Figure 3 support the conclusion that restricted-input children relied on *esa* for both proximal and distal puzzle pieces. At the same time, given
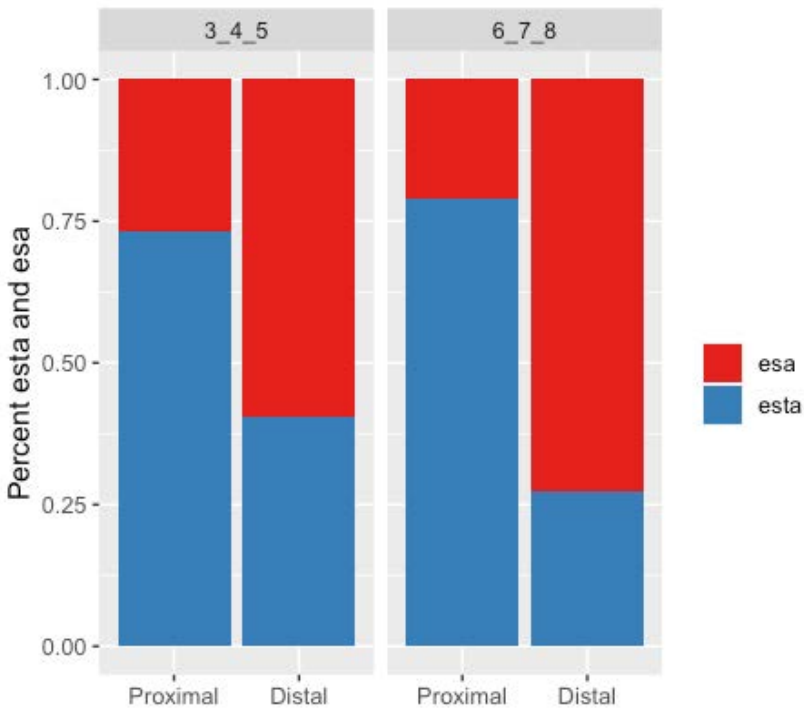

Figure 4. Percent *esta* and *esa* for Proximal and Distal Referents, Abundant-input Children, Ages 3–5 and 6–8

Shin and Morford's (2021) finding that some of their youngest participants relied on one demonstrative only, it is possible that only younger children rely on *esa* regardless of spatial distance. As such, the children's demonstrative use for proximal and distal puzzle pieces was analyzed yet again, but this time the children were divided into two age groups: those whose ages ranged from 3 to 5 years and those whose ages ranged from 6 to 8 years. Figure 4 shows that both 3–5 and 6–8-year-old abundant-input children used *esta* for proximal referents (3–5: 73.1%, 98/134; 6–8: 79.1%, 72/91) and *esa* for distal ones (3–5: 59.5%, 44.74, 6–8: 72.7%, 56/77). In contrast, both 3–5 and 6–8 year-old restricted-input children relied on *esa* for proximal referents (3–5: 86.3%, 44/51; 6–8: 88.9%, 64/67) and distal referents (3–5: 82.5%, 33/40; 6–8: 95.5%, 64/67) alike, as illustrated by Figure 5.
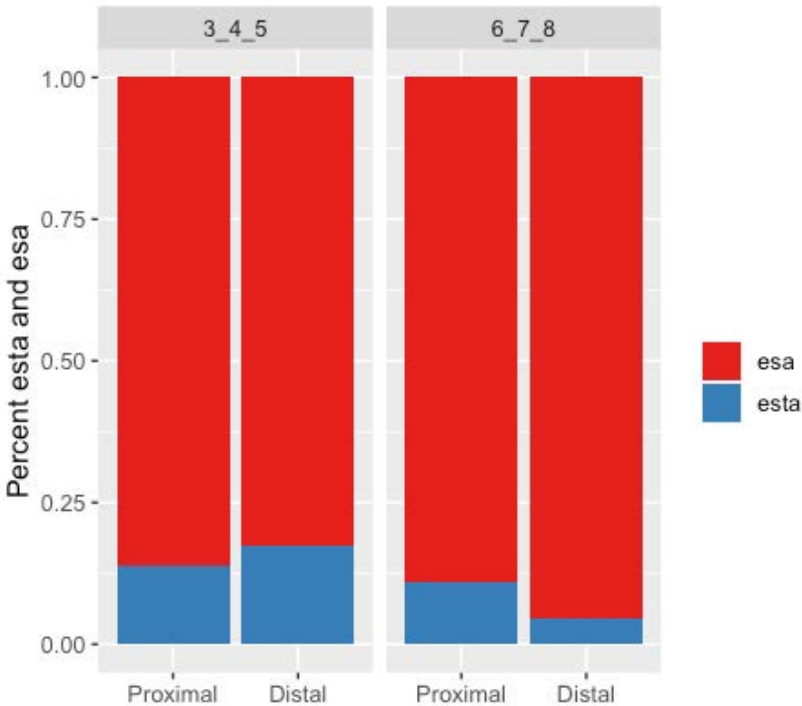

Figure 5. Percent *esta* and *esa* for Proximal and Distal Referents, Restricted-input Children, Ages 3–5 and 6–8

Discussion

Our study aimed to investigate whether child heritage speakers who experience restricted input in Spanish follow the same, but slower path of demonstrative development found among monolingual children. Given that previous research shows that children tend to rely on proximal demonstratives at the earliest stages of development, the same, but slower path of development should manifest as an overreliance on *esta* rather than *esa.* As such, the study tested the hypothesis that child heritage speakers who experience restricted input would rely on proximal demonstrative *esta* both when referring to objects near to them and to objects further away and closer to their addressee. The results of our study showed the mirror opposite of what was predicted. Children who experience restricted Spanish input in the home relied primarily on *esa*, regardless of the location of the referent, while children who are exposed to abundant Spanish in the home produced *esta* for proximal referents and *esa* for distal referents (Figure 3). This stark difference between restricted and abundant-input children held across age groups (Figures 4 and 5), which supports the conclusion that amount of Spanish input is an important predictor of demonstrative development. Further, our study contradicts the idea that restricted input results in a slower, but similar pathway of development (Gathercole, 2007). Instead, the results are better captured by models of heritage language development that can account for qualitatively different pathways of development. For example, Pérez-Cortes et al. (2019) and Putnam and Sánchez (2013) argue that the developing heritage grammar is shaped not only by amount of input, but also language activation and the influence of structural features from the non-heritage language and, as such, distinct pathways are to be expected (see also Scontras et al., 2018). The findings of the current study are a reminder of the importance of interrogating the diverse linguistic contexts in which languages are acquired, and exploring how language acquisition is influenced not only by the target language, but also the other languages to which children are exposed.

In the current study, the restricted-input children's pathway of development raises the question of why children who experience restricted Spanish input rely on *esa* to refer to objects in the interactional space. The answer is beyond the scope of the current article; however, one possible explanation is that the demonstrative system of children exposed to restricted input in Spanish is influenced by the other language(s) they are learning, and in this case,

English. As mentioned earlier, corpus studies show that distal 'that' is one of the most frequent words produced by English-speaking toddlers and it is produced earlier and more frequently than proximal 'this' (Diessel & Coventry, 2020; González-Peña et al., 2020). To investigate the possiblity that child heritage speakers' use of Spanish demonstratives is influenced by their English demonstratives, it is necessary to analyze their use of demonstratives in both languages. If they overwhelmingly rely on 'that' in English to refer to puzzle pieces both near and far from them, it is possible that they transfer this strategy to Spanish and, as such, rely on *esa* in Spanish.

It is also worth noting that our study has focused on children's language production. As noted earlier, however, comprehension studies find that, even though English-speaking children produce 'that' more frequently than they produce 'this', they do not master the full meaning of these demonstratives and how they contrast in usage until much later (e.g., after four years of age in Tanz's 1980 study). Future research that includes comprehension and production tasks in both languages spoken by child heritage speakers would not only help document the developmental trajectories associated with demonstratives, but would also illuminate the intricacies involved in learning not only the demonstrative forms, but also the contexts in which they are used and the meanings they convey.

Beyond documenting the important effects of input, the current study's identification of two groups of child heritage speakers who employ starkly different strategies for demonstrative usage has important pedagogical implications. In the following section we argue that our findings have translational value, as they lend themselves to a strategy for differentiation in the heritage language classroom.

Pedagogical Implications

This study shows that child heritage speakers who experience restricted input follow a different path of development as compared to abundant-input children. This finding underscores the need to take these differences between types of child heritage speakers into careful consideration when designing lessons and curricula for them. Although there is no one-size-fits-all solution or method that can cater to the needs of all individual students and conditions that intertwine in the learning environment, educators have tools at hand that can help

them improve their teaching by embracing student diversity. One way educators have attempted to accommodate diverse student needs is through *differentiation* (Tomlinson, 2014). Differentiated instruction involves employing and adapting a variety of teaching techniques so as to reach a wide variety of students within the same classroom. Successful differentiation depends on deeply understanding students and their needs. As Tomlinson and Cunningham Eidson (2003) write, "If, as teachers, we increase our understanding of *who* we teach and *what* we teach, we are much more likely to be able to be flexible in *how* we teach" (p. 3). Some studies find that differentiation improves academic success. As Elsbree et al. (2014) comment, students are more successful when instructional practices include differentiation that takes into account differences in culture, experiences, and learning styles.

While many educators understand and embrace the need to differentiate, some educators argue it does not work (e.g., Delisle, 2015). For example, Schmoker (2010) writes that differentiated instruction "seemed to complicate teachers' work, requiring them to procure and assemble multiple sets of materials." In a nationwide survey of teachers, Farkas and Duffett (2008) report that 83% of teachers find it 'somewhat' or 'very' difficult to implement differentiated instruction on a daily basis (p. 65).

Attempting to teach different lessons and prepare different activities to meet each individual student's needs is indeed a daunting, if not impossible, task. At the same time, the need to reach students from diverse backgrounds is undeniable. The current study, while very narrow in focus, suggests that research that helps identify characteristics of groups of learners could potentially aid in differentiated instruction. The identification of unique developmental pathways for abundant-input children and restricted-input children suggests that, at least for some linguistic structures such as demonstratives, differentiated instruction could take into consideration two types of children (abundant versus restricted input) rather than planning different lessons or activities for each individual child. This may ease the burden of differentiation. If we can identify trends across sub-groups of learner types, we can promote differentiation within the classroom in a way that is likely to be more feasible to teachers.

While a pedagogical goal is to promote continued language development among both restricted and abundant-input child heritage speakers, it is also crucial that all heritage speakers feel validated and that teachers actively work to promote linguistic pride rather than linguistic insecurity. As Zentella (2017)

writes: "Linguistic insecurity breeds rivalries based on who speaks Spanish or English more fluently, or which variety of Spanish or English is more correct, pitting generations, classes, and ethnic groups against each other. At its worst, not only the dialects are belittled, but the speakers and the communities they come from as well." (p. 35) In addition, linguistic insecurity can lead to language loss among heritage speakers (Ravindranath Abtahian & McDonough Quinn, 2017). Keeping this in mind, the teacher's goal should be to expose children to more linguistic forms without labeling the language they already use as incorrect. In the case of demonstratives, we envision first identifying children's own usage of demonstratives by means of a simple and quick demonstrative selection task after which children are paired together to play a game that allows for practice with demonstrative forms. For the demonstrative selection task (Figure 6), children are told to imagine the finger in the picture is their own and then asked to select which demonstrative they would use. Teachers can then use the children's answers to create student pairs who will work together. Since classes will vary in terms of students' demonstrative selection, teachers should devise their own criteria for creating student pairs. For example, a teacher might choose to pair (i) a child who varies between *esta* and *esa* based on the distance between the finger and the animal with (ii) a child who does not vary between forms or a child who varies but does not differentiate between forms based on the location of the finger in the pictures.

After pairing children who differ in their demonstrative use, the pairs play a game like the one presented in Figure 7. For this game, children are instructed to roll the dice, and then use a demonstrative and an animal name before moving forward to the appropriate square. They are also provided with the option to include locative forms, as in *este aquí es un mono* 'this one here is a monkey'.

Figure 6. Demonstrative Selection Task

Figure 7. Demonstrative Board Game

No specific demonstrative is required to move ahead in the game; instead, children are provided with the words *este, esta, ese, esa, este aquí, esta aquí, ese allí,* and *esa allí* as options to choose from.

After children play the demonstrative board game, the pairs of students can create a smaller version of the game including the animals of their choice. Two copies of the game should be created so that each student can bring the game home to play with their families. Our research on monolingual adults in Mexico and bilingual adults in New Mexico demonstrates that adult speakers tend to rely heavily on *este/esta* for proximal referents, whereas they vary between *este/esta* and *ese/esa* for referents further away (Shin et al., 2020; Shin & Morford, 2021). Thus, we anticipate that adult family members will vary between *este* and *ese* in the board game. By writing down family members' responses, children's attention will be drawn to the variety of demonstratives employed. This way, all learners can make developmental gains despite their different strategies of demonstrative usage. Since advancing in the game is not dependent on producing particular demonstratives and all options are viable, children are provided with an opportunity to hear and use Spanish demonstratives in a way that does not inadvertently deem one type of usage as more correct or better than another.

Conclusion

In this study demonstratives were elicited from child heritage speakers of Spanish by means of a puzzle completion task to investigate whether children who experience restricted input in the heritage language follow the same, but slower pathway of development as children exposed to more input in Spanish. Based on previous research showing that Spanish proximal demonstratives are produced earlier than distal ones, it was hypothesized that child heritage speakers who experience restricted Spanish input would rely on *esta* for a prolonged period of time. The results showed the opposite. Restricted-input children relied on *esa* to refer to both proximal and distal contexts, whereas children exposed to abundant Spanish input produced *esta* to refer to proximal puzzle pieces and *esa* to refer to distal ones. Overall, the findings indicate that input in the heritage language may lead to unique patterns of acquisition, that is, the pathway of development may be qualitatively different when input is restricted versus when input is abundant. Future research is needed to explain why

restricted-input children relied on the distal demonstrative rather than the prox-
imal one, but we suspect that the ubiquity of English *that* may play a role.
Another remaining question is at what age the restricted-input children begin
to distinguish between *esta* and *esa* in the interactional space. Although the
older restricted-input children in our study relied heavily on *esa*, both mono-
lingual adults in Mexico and bilingual adults in New Mexico almost always pro-
duce *esta* to refer to proximal referents and vary between *esta* and *esa* to refer
to distal referents (Shin et al., 2020; Shin & Morford, 2021). This suggests that
at some point the children will rely less heavily on *esa,* too. It remains to be seen
at what age that happens.

Future research should also examine whether other areas of the grammar
develop in unique ways during bilingual language acquisition. One way to inves-
tigate this question would be to study the order of acquisition of morphemes
across languages. For example, research has shown that the progressive
morpheme—*ing* is one of the first morphemes to emerge among monolingual
English-speaking children, whereas the regular past tense—*ed* is acquired later
(Brown, 1973; De Villiers & De Villiers, 1973). In contrast to English, past tense
morphemes are one of the earliest-acquired morphemes in Spanish, whereas
progressive forms emerge later (Anderson, 1994; Bedore et al., 2012; Gather-
cole et al., 1999; Kvaal et al., 1988). Padilla's (1978) study of English language
samples produced by Spanish-English bilingual children in the U.S. indicates
many similarities across monolinguals and bilinguals in English morpheme
orders. Interestingly, however, the English regular past tense was one of the earli-
est morphemes to emerge among the bilinguals. It is possible that the rich verb
morphology of Spanish boosts bilingual children's acquisition of English verb
morphology and thus results in a different order of acquisition of English mor-
phemes (see also Silva–Corvalán, 2014, pp. 316–317).

In addition to informing research on bilinguals' pathways of development,
the results of this study can inform pedagogical choices for teaching child heri-
tage speakers. The identification of two groups of child heritage speakers
increases the feasibility of differentiated instruction. Rather than tailoring les-
sons to meet each individual child's needs, lessons can be designed with two
groups of children in mind, those who experience abundant input in Spanish
and those who experience restricted input. Research that identifies developmen-
tal pathways for each of these two learner types will help contribute to the
development of pedagogical tools for the instruction of child heritage speakers.

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