


SOCIETAL FACTORS IN THE ACQUISITION OF PORTUGUESE AS A HERITAGE LANGUAGE

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Resumo: Este artigo apresenta resultados de um estudo conduzido com falantes universitários de português como língua de herança no sul da Flórida. O estudo analisou a produção do Futuro do Subjuntivo nesses falantes por meio dos resultados da avaliação da proficiência e testes gramaticais comparando-os a um questionário sociolinguístico que os participantes preencheram. Ao longo dos anos, uma das investigadoras coletou relatos de alunos universitários de que, durante entrevistas profissionais com possíveis empregadores, os alunos relataram que esses empregadores sinalizaram o uso do futuro do subjuntivo como um marcador para um alto nível de proficiência. Ao longo dos anos, observações (não empíricas) em sala de aula e relatos de alunos levaram as investigadoras a levantar a hipótese de se fatores socioculturais poderiam explicar porque é que alguns falantes de herança desenvolveriam o futuro do subjuntivo mais facilmente do que outros alunos. O estudo utilizou análise qualitativa de conteúdo para examinar se havia circunstâncias biográficas na história de aquisição do português dos participantes que pudessem explicar o desenvolvimento mais fácil desse traço gramatical. A discussão aqui proposta busca compreender as circunstâncias socioculturais que possibilitaram a aquisição e o desenvolvimento do português como língua de herança considerando diversos fatores. Os resultados deste estudo reafirmam a importância do amplo acesso à língua de herança nas idades iniciais, das atitudes familiares, e do desenvolvimento da leitura e escrita como determinantes da quantidade e qualidade de insumo linguístico no desenvolvimento da língua de herança. Ressalta-se que os falantes de herança que desenvolveram maiores índices de proficiência tiveram condições de amplo acesso à língua de herança, como serem bilíngues sequenciais e terem ambos os cuidadores falando português no ambiente familiar. Além desses fatores, a participante que mostrou domínio do aspecto gramatical em questão participou de aulas para o desenvolvimento da leitura e escrita, por uma a duas horas por semana durante vários anos. Isso pode indicar a importância do papel de escolas comunitárias, educação bilíngue e esforços familiares para o desenvolvimento da leitura e escrita na língua de herança como cruciais para o desenvolvimento de aspectos gramaticais complexos.

Palavras-chave: Língua de Herança. Português. Falantes de Herança. Sociolinguística. Aquisição Linguística.

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Abstract: Throughout the years, one professor collected students' anecdotal accounts that during professional interviews with possible employers, students reported employers signaled using the future of subjunctive (FS) as a marker for a high proficiency level. Throughout the years, (non-empirical) classroom observations and students' anecdotal accounts led the investigators to hypothesize if sociocultural factors could explain why some heritage speakers (HS) would develop FS more easily than other students. The present study was conducted in a small Portuguese program with heritage speakers of Portuguese at the university level. To evaluate these students' production this study used three types of assessments: an oral interview and a written task (conducted by the instructor to establish the participant's proficiency level), and a written self-reported sociolinguistic questionnaire. The study used content qualitative analysis to examine if there were biographical circumstances in the history of participants' Portuguese acquisition that could explain the easier development of that grammatical feature. The proposed discussion here is to understand the relationship between Heritage Language (HL) acquisition and input/output opportunities, as well as how sociocultural factors contribute to speakers' variance (Armon-Lotem et al. 80). This study reaffirmed that the roles of the home, school, and community should be valued and taken into consideration when discussing HL development (Park et al 224-230). This study especially observed that the participants with better performances had ample language exposure in the early years, such as being sequential bilingual, and both caregivers speaking Portuguese at home. A noteworthy conclusion of this study is that further research should consider the role of literacy as an important factor in complex grammatical features in HL acquisition (Schwartz 410). This study collected and analyzed data on Portuguese college-level HLL aiming to understand the circumstances enabling them to maintain and develop their HL at higher proficiency levels. The results may help researchers, teachers, and the broader community to expand the discussion of the societal factors affecting HL acquisition and understand the HL acquisition of Portuguese in the U.S. context.

Keywords: Heritage Languages. Portuguese. Sociolinguistics. Language Acquisition.

1 Introduction

This study aims to deepen the discussion of Heritage Speakers (HS) of Portuguese in K-16 school settings in the U.S. and to emphasize the necessity of recognizing these learners' specific needs. A report from the Immigration Policy Institute (Waters and Batalova) found that Portuguese speakers were just over one percent of the immigrant population in the United States in 2019. In 2022, the Brazilian Ministry of Foreign Relations estimated that 1,315,000 Brazilians lived in the U.S., and 300,000 of them were in Florida (Ministério das Relações Exteriores). These numbers are based on Brazilians' use of the U.S. consulates and only represent Brazilian-Portuguese speakers, not including other varieties of Portuguese. The study reported here took place in Miami, where, according to the United States Census Bureau (U.S. Census Bureau, 2015), Portuguese is the fourth most-spoken language at home. Moreover, in this region, a considerable number of Brazilian and Latin American headquarters demand professional bilingual Portuguese speakers.

The present study was conducted in a small Portuguese program with heritage speakers (HS) of Portuguese at the university level. One of the investigators taught at this university for 16 years and observed that some Portuguese HS developed future subjunctive (FS) more quickly than others. Throughout the years, (non-empirical) classroom observations led one of the investigators to hypothesize that sociocultural factors could explain why some HS would develop FS more easily than other students.

The definition of a heritage language (HL) highlights the demographic and sociological contexts of simultaneous or sequential bilinguals that acquire a language in a minority context (Flores et al. 796), meaning that the language broadly used in the society is different from the one spoken at home (Montrul 5). A HL is used with restrictions, such as in a community and/or family setting. Heritage language learners' (HLLs) acquisition is usually characterized by asymmetrical exposition patterns of input, which may be ample in the first years of the child's life; however, it ends or dramatically reduces after the child enters school (O'Grady et al. 223). Zyzik (18-30) summarized the typical attributes of a HL speaker as: to have early exposure to the HL in the home, to have some proficiency in the HL (being bilingual to some degree) and having ethnic/cultural connection to the HL. Lynch (27) noticed these learners tend to display higher oral proficiency and increased intercultural proficiency but lesser metalinguistic and grammatical awareness than second language learners (L2). Noteworthy, although we think about HLLs as a group, they will show a wide variety of proficiency levels in different vocabulary domains and language skills.

Research (Polinski 410, Montrul 328) recognizes that heritage language learners (HLLs) differ from monolingual, second language, and foreign language learners. These differences demand specific curriculum designs and materials appropriate for each of these different learners in educational settings. The precise nature of an effective instruction for HLL has been recently the field focus (Carreira and Kagan 155).

Regarding the specific sociological context of HL in the U.S., it is crucial to highlight that ideological discourses related to monolingualism and misconceptions regarding bilingual language acquisition may impede parents from making conscious choices regarding HL maintenance and development at home. Boruchowski (176) noticed that in Miami schools, common misconceptions regarding learners' HLs also impeded teachers from valuing and using learners' HLs inside classrooms.

The study presented in this article responds to Zyzik (18-30) observation that while research has documented what HLLs know, it lacks discussion on how. This study collected and analyzed data on Portuguese college-level HLL aiming to understand the circumstances enabling them to maintain and develop their HL at higher proficiency levels. The results may help researchers, teachers, and the broader community to expand the discussion of the societal factors affecting HL acquisition and understand the HL acquisition of Portuguese in the U.S. context. This study used qualitative data content analysis, combining grammatical tests regarding the Future Subjunctive (FS), self-reported demographics, and sociolinguistic surveys, to explain possible aspects contributing to Portuguese acquisition by HLL.

2 HL Acquisition

This study's theoretical framework understands that children acquire language in successive developmental stages, and it is well-documented that some specific language structures are acquired later than others (Tsimplici 286). Also, that HS tend to follow qualitatively similar paths and developmental milestones of monolingual children (Bayram et al 1). This study also understands that performing a grammatical property requires speakers to gain a "critical mass" to trigger acquisition (Flores 253; Gathercole 226; Unsworth 140). Considering these frameworks, this study maintains that the linguistic competence of HS carries many features that characterize a native language, although with particularities of acquiring a language in a multilingual setting, such as cross-linguistic influence, fluctuation of input/output, and its sociolinguistic context.

Interestingly, Polinski and Scontras (6) highlighted that HS tend to struggle with similar grammatical aspects that L2 learners and monolingual children, such as the absence of structure and forms that are infrequent. These researchers (5) explain HL acquisition based on the divergences between HS and monolingual native speakers' linguistic abilities considering three aspects of HL acquisition: asymmetrical language input/output ("divergent attainment" 5), language attrition, and transfer. Other scholars use a different paradigm, portraying that HL acquisition has its own nature since it happens naturally in early childhood (Cabo et al. 42-45; O'Grady et al. 223; Unsworth 104). Despite these disparate perspectives on HL acquisition, there is an agreement that differences related to quantity and quality of input and sociolinguistic factors explain fluctuations in HL acquisition (Paradis and Gruter 5).

Beaudrie and Loza (7) summarized how HLLs proficiency levels outcomes are shaped by linguistic, educational, sociolinguistic, cultural, and affective experiences. Some factors, such as age of onset of bilingualism (Bylund 306), whether one or two parents use the HL, and family language policy are more determinant than others. Armon-Lotem et al (80) considered distal factors, the language status in the community and access to native speakers, which may contribute but not determinately. Noteworthy, Schwartz (410), Banasiak and Olpińska-Szkielko (59), and Rothman (384-387) case studies settled the opportunity for literacy development accounted as a larger factor in maintaining and the variance in HL proficiency.

In the U.S., Fishman (20) observed that HLs usually follow a pattern of three generations of language erasure. The first generation of immigrants is usually bilingual in the heritage and the dominant language in the society, but the third generation is monolingual in the dominant language. The purpose of this study is to evaluate what sociocultural factors could contribute to learners developing a high level of proficiency in their HL considering the U.S. sociolinguistic context.

3 The Future Subjunctive in Portuguese

This study analyzed the use of the Future Subjunctive (FS) tense by college-level HLLs of Portuguese in Miami considering the history of participants' language acquisition. In Portuguese, the FS is a verb tense used in subordinate clauses that indicates conditions, plans, or events in the future. According to Givón (133), the FS belongs to the categories of possibilities in the future including non-factual concepts such as wishes projected and expressed at the moment of speaking.

The FS in Portuguese dates to the Latin *futurum exactum*. This tense is used in conditional clauses such as *Se chover não vou sair* / 'If it rains I am not going out,' temporal clauses *Quando eu chegar em casa vou tomar café* / 'When I get home I will have some coffee,' and embedded clauses following *que* with future meaning such as *O primeiro que chegar, vai preparar o almoço* / 'The first one to arrive will fix lunch.' If the verb is regular, the FS will have the infinitive form (*Se eu estudar mais vou passar no exame* / 'If I study harder, I will pass the exam.' If the verb is irregular, it will have the forms from the first-person plural of the preterit (example: *fizemos – fizer*), and then the first-person ending (-mos) or the third-person plural (-em) (*Se eu fizer/ If I do*).

Bagno (566) observed that there is a decline in the use of the subjunctive mode, particularly the present tense in regional oral varieties, such as Northeast of Brazil. In this region, there is a preference for use of the indicative mode in the situations in which the subjunctive mode would have been used. Although linguists have observed the decline of the subjunctive use in some social contexts, Bagno affirmed this mode is widely encountered in monitored registers, especially in written contexts. The present, past, and future of subjunctives are frequently used in written formal standard Portuguese, but the FS is widely produced in written and oral Portuguese in the standard

variety of the language. According to Perini (207), the past and future subjunctive are part of the spoken standard Portuguese in Brazil, although the present subjunctive use is declining.

Speakers are constantly planning, organizing, and talking about the future. A young monolingual native speaker is expected to approach college entrance by being able to use the FS, even in informal situations. For college students, the use of this verb tense is crucial in diverse circumstances such as communicating with professors, delivering an oral presentation, and/or writing a paper, or interviewing for a job.

Macedo (98) analyzed the FS in native-spoken-Brazilian. Comparing fourth and eighth graders showed that although they acquired the regular forms, the irregular verbs are not totally mastered by eighth graders. There is frequent regularization of these irregular morphological forms in the speech of eighth graders. De Bittencourt (129) remarked that the use of irregular forms as a grammatical feature is usually mastered by the end of high school years.

Portuguese HS in South Florida live in a specific context of Portuguese, Spanish and English as language in contact. It is important to highlight that in English, there is no FS, which equates with the use of the present tense in subordinate clauses, and in Spanish, the FS equates to the use of the present tense of the subjunctive. Historically, the future subjunctive decreased oral and written Spanish use in the modern language (López-Barrios 130). Usually, the FS is effectively expressed by the presence of a subjunctive. To exemplify the usage of the FS in Portuguese and to compare it to Spanish and English, here are some examples, using regular and irregular verbs:

- *Orações adverbiais condicionais* (conditional adverbial clauses)
Se chegar antes do jantar, eu aviso você.
‘Si llego antes de la cena, te aviso.’
‘If I arrive before dinner, I will let you know.’
- *Orações adverbiais temporais* (temporal adverbial clauses)
Quando tiver mais dinheiro, ele vai viajar pelo mundo.
‘Cuando tenga más plata, el viajará por el mundo.’
‘When I have more money, I will travel around the world.’
- *Orações adjetivas (relativas)* (relative adjectival clauses)
Só entrarão no hospital os que tiverem permissão escrita.
‘Solamente los que tengan permiso por escrito entrarán en el hospital.’
‘Only those with written permission will be able to enter the hospital.’

Related to the use of subjunctive mode by Portuguese HLLs, Silva (1-20) conducted an important study comparing the perception and production of the three forms of the subjunctive (present, past, and future) in Portuguese between HL and non-HL. Her study was conducted in the United States, in Massachusetts, which had a large presence of immigrants from both continental Portugal, the Portuguese islands, Cape Verde, and Brazil, concluding that teachers should use differentiated instruction to teach this grammatical feature to HS. The study reported in this article focused on understanding the sociolinguistic features that could explain the acquisition and production of the FS among South Florida HS, where Portuguese-speaking immigrants in the past 15 years have been predominantly Brazilian.

4 Language Variety and Language in Contact

This study's theoretical framework recognizes language as a dynamic entity presenting many varieties due to local and societal features. As Leeman and Serafini (58-59) have pointed out, languages vary across space, social groups, communities of practice, context, and time. Although in this study we consider HLLs' production in relation to Brazilian Portuguese spoken and written language standards, it is crucial to acknowledge that this comparison does not carry or indicate value among language varieties. We acknowledge Critical Language Awareness discussions of hegemonic discourses that only value standard varieties. As Pierre Bourdieu (45) observed, some ways of communication have more credibility in our society than others. If we research the history of a language, such as English, Spanish, or Portuguese, we can observe that what we call standard is not a neutral or a "good" variety of that language. The variant of one particular group of people has been legitimized and institutionalized over time by mechanisms of power such as official documents, political debates, and public education. This language historically became the most valued in the "language market," accepted or taken for granted in a wide range of social, cultural, and linguistic domains or contexts. As researchers, it is crucial to notice the ideological idea of standard as a "neutral" and "proper" manner of speaking and writing and discussing what it means to be linguistically efficient in different situations.

The participants in this study have grown as bilinguals (simultaneous or sequential) in Miami, and this study considers bilingualism as a complex phenomenon observed from the perspective of its users and their social reality. Polinsky and Scontras (10) considered that HL grammar development is dynamic and undergoes changes over a lifespan. As Valdés (414) pointed out, HL can be seen as a local variety that differs from the standard language, partly by the particular input that HLL is exposed to and partly by the consequences of the language-in-contact phenomenon. Despite acknowledging and valuing HL as a language variety, in this study, we use as a reference the language acquisition development of a Brazilian native speaker of Portuguese. It is crucial to highlight that this study did not intend to analyze to what extent the coexistence of English, Portuguese, and Spanish in this region shaped participants' grammatical features. Furthermore, we acknowledged that Portuguese and Spanish are typologically similar, and, in Miami, Spanish has a greater number of speakers.

In this study, we will relate college-level HS' oral production with monolingual speakers of Brazilian Portuguese as a possible way to understand the relevance of input/output and sociolinguistic circumstances in HS language acquisition. This study takes the information about monolingual native speakers of Brazilian Portuguese as a baseline to analyze college-level HLLs' production of FS. One limitation of this study is not to focus on the extent to which the language in contact phenomenon could explain participants' results.

5 Methodology

This study used qualitative content methodology to analyze the participant's production (oral and written) of the Future Subjunctive (FS) grammatical feature and related it with a self-reported sociolinguistic questionnaire that examined the circumstances of Portuguese acquisition by the HLLs. The study used two tools to establish proficiency levels: an oral interview conducted by the instructor and a written task. The historical sociolinguistic questionnaire was adapted to Portuguese from Montrul's (10-18) English/Spanish questionnaire. Previous studies on bilingual children based on questionnaires demonstrated the effectiveness of this method in providing an overview of the child's linguistic background (De Houwer, 413-414; Ferreira, 5-7; Jouët-Pastré, 6-19; Montrul 10-18).

The present study was conducted in a small Portuguese program with heritage speakers of Portuguese at the university level. One of the investigators taught at this university for 16 years and observed that some Portuguese HS developed FS more quickly than others. Throughout the years, (non-empirical) classroom observations led one of the investigators to hypothesize that sociocultural factors could explain why some heritage speakers would develop FS more easily than other students. The university professor invited participants to participate in the study and collected questionnaires following the university's International Review Board (IRB) requirements. One author collected data to avoid social disability bias; the other analyzed it. The non-professor investigator used qualitative content analysis to identify patterns and grouping elements within the data. By comparing students' biographical, social, and learning backgrounds, researchers could discuss and understand some of the factors contributing to Portuguese HL acquisition.

A study conducted by Ferreira (1-10) with students from different varieties of Portuguese at a college in the northeastern part of the U.S. observed the challenges of defining proficiency levels comparing students from Portugal, Azores, Madeira, Cape Verde, and Brazil. Defining proficiency levels is an arbitrary and complex task, especially when students come from different language varieties. In contrast, this challenge regarding Portuguese variants was not expected because in this study, all participants spoke Brazilian Portuguese.

In this small study we used qualitative content analysis (Ivankova and Creswell, 137) to identify patterns and grouping elements within the sociocultural questionnaire (Appendix 1) data. To avoid social disability bias, one author collected the data, and the other author analyzed it. This study evaluative procedures follow:

- Each student participated in an 8–10-minute oral interview conducted by the researcher to assess proficiency in Portuguese, including questions designed to prompt answers in the FS.
- After that, participants performed a written task consisting of two production activities: (a) a controlled activity with verbs in the infinitive form (cloze) and (b) a semi-controlled activity to be completed by participants with no verbs given.
- The next activity involved grammatical judgment and correction. The participants did not have a limit of time to finish the tasks (the tasks are attached at the end of this paper, in Appendix 2).

The students took approximately 30/40 minutes to complete all tasks. The tasks were done individually with the researcher. The participants had to either be in college or had finished college; had to be no older than age 30; had either been born in the U.S. or arrived before age 8; and had at least one Brazilian parent. Of the nine participants in this study, seven were females and two were males. Participation in this research involved no more than minimal risks, such as spending time to answer the questions. Concerning the data collection, the participants signed a consent form. Related to the dissemination of findings, for ethical and confidentiality purposes, we used pseudonyms to respect participants' privacy. This study only took a snapshot of participants' production and analyzed it based on their historical input/output Portuguese opportunities to understand the particular context of HLLs acquisition. It is beyond this investigation's objective to explain why participants make these specific choices. The researchers divided HL proficiency levels based on Montrul's (10-18) sociolinguistic questionnaire scale. She distinguished HL speakers according to five levels:

1. A HL that understands but cannot speak.
2. A person that understands and speaks with great difficulty.

3. Someone that understands and speaks with some difficulty in terms of vocabulary and grammar.
4. A person that understands and speaks comfortably, with little difficulty in vocabulary and grammar.
5. A person with native-like command.

This research used these five proficiency levels to place students in positions related to the appropriate usage of the Future Subjunctive (FS). We used color code to identify participant's proficiency level in each table.

6 Results

This section presents results from the oral and written tests as well as a summary of the sociocultural questionnaire.

6.1 Proficiency levels

This study used two tools to establish proficiency levels: an oral interview conducted by the instructor and a self-assessment based on Montrul's (10-18) sociolinguistic questionnaire. The following table shows participants' general proficiency level, their performance on the oral interview, and their command of the targeted grammatical feature (FS). Note that participants are organized and color coded by proficiency level.

Table 1. Criteria for students' assigned proficiency.

Grammatical Feature	Ana (5)	Lelan (5)	Ledo (5)	Sel (4)	Kati (4)	Ange (4)	Tali (4)	Iná (3)	Beti (3)
Vocabulary	5	5	5	4	4	4	4	3	3
Past tense Ind (Perfect/Imperfect)	5	5	5	4	4	4	4	2/3	2/3
Gender Agreement	5	5	5	5	5	5	5	2/3	2/3
1st person agreement	5	5	5	5	5	5	5	2/3	2/3
FS Regular Verbs	Y	Y	Y	Y	Y	N	N	N	N
FS Irregular Verbs	N	N	N	N	N	N	N	N	N
Present Ind instead FS	N	N	Y	N	N	N	N	Y	Y

In the oral interview, the vocabulary proficiency of Ana, Ledo, and Lelan was consistent with native-speaker command (level 5). Sel, Kati, Ange, and Tali showed inconsistencies in vocabulary and the use of past tense, which led them to be classified as level 4. Iná and Beti, classified as level 3, showed inconsistencies in vocabulary, past tense use, and gender agreement. Moreover, at level 3, both participants used the present of indicative instead of the FS. Interestingly, the main differences between levels 5 and 4 related to vocabulary and the use of Preterit Perfect and Imperfect, while level 3 related to the previously mentioned differences, and to gender and verb agreement in the first-person as well. Noteworthy, no participant showed FS constructions with irregular verbs, not even at level 5. Interestingly, of all seven participants who reached levels 5 and 4, five of them used the FS with regular verbs and two did not use any construction with FS.

In the self-assessment sociolinguistic questionnaire, students rated their own proficiency in English and Portuguese according to the following scale: 1 – poor, 2 – needs work, 3 – good, 4 –

very good, and 5 – native-speaker command. We observed that all participants rated their English with a score of 5 (native-speaker command). Two participants (Ana and Lelan) rated their Portuguese proficiency as a score of 5, which was consistent with the researcher's assessment. The other seven participants rated their Portuguese proficiency a score of 4 or 3. Most participants somewhat understood their proficiency level, but there were some discrepancies. One participant who rated herself a score of 4, was rated a score of 3 by the researcher, and another who self-assessed as a score of 5, was classified as a score of 4 by the researcher.

6.2 Students' production in a controlled writing activity

The results indicated that, as far as the usage of the FS is concerned, there are three groups according to a continuum ranging from consistent use to absence: (a) a group which used regular forms of the FS (Ana and Lelan); (b) a group which used FS inconsistently (one to five answers out of 12: Ledo, Ange, Tali, Sel, Kati, and Iná); and (c) one participant (Beti) who did not use the FS. This last instance presented some examples of the regularization of the present indicative, the form most frequently used. Furthermore, as highlighted before, in South Florida, Spanish and Portuguese are in contact with English, which uses the present tense in subordinate clauses. This study did not aim to examine, within this data set, what role the influence of languages in contact played in the participants' choices.

6.3 Student's production in the semi-controlled writing activity

In this activity the participants were given a main clause and were asked to produce and write the second clause (a condition) on their own. Mostly regular verbs were used, thereby avoiding the morphological complexity of irregular verbs. Similarly to the previous activity, results indicated three groups. Ana, Ledo, and Lelan consistently used the standard form; Sel, Ange, Kati, Tali used it sometimes; and Iná and Beti used it highly inconsistently. Noteworthy, Ledo expressed all five sentences in the FS in accordance with the standard language, including two irregular verbs that are morphologically more complex. The use of present indicative was absent in Ana, Ledo, and Lelan but occurred in the other six participants. The results of this activity indicated that as the proficiency level goes down, the present indicative has been used instead of the FS.

6.4 Grammatical judgment activity

For this activity the three groups' results remained similar with one exception. Ana and Lelan continued showing appropriate judgments, while Sel, Ledo, Tali, and Kati showed some appropriate judgments. Iná, Beti, and Ange had one each. At this time, Ange who showed some use of the grammatical features before, now moved to the group that almost did not use them. This table showed that Ana and Lelan were the only participants who sustained a proficiency level 5 in all instruments analyzed (oral interview, controlled grammatical activity, semi-controlled grammatical activity, and grammatical judgment activity). Ledo performed between level 4 (controlled and grammatical judgment) and 5 (oral interview and semi-controlled). Ange, Sel, Kati, and Tali performed between level 4 and 3. Iná and Beti fluctuated between 3 and 2.

Table 2

Students' scores in the grammatical tasks

Name	Gram Judg.	Semi-control	Controlled	Oral Interview
Ana	5	5	5	5
Lelan	5	5	5	5
Ledo	4	5	4	5
Sel	4	4	4	4
Kati	4	3	4	4
Ange	3	4	4	4
Tali	4	3	4	4
Ina	3	2	3	3
Beti	3	2	3	3

6.5 Socio-linguistic questionnaire

The sociolinguistic questionnaire compiled information connecting 30 aspects of the participants' life related to HL use. The written questionnaire investigated family language policies and the value attributed to the HL in daily life, including participants' opportunities of formal education (mainstream schools or community-based HL schools) in the HL. The questions also captured opportunities of being exposed to native input by traveling to Brazil, and access to extra-curricular literacy activities that offered Portuguese input-output. Although there is much information captured in this inquiry, it is important to highlight that this type of questionnaire does not represent specific measures of quantity and quality of input that the participants were exposed to. This type of questionnaire offers an overall understanding of how the HL was valued, and what were the possible situations for input/output that the students were exposed to. Considering this limitation, the following table shows the most relevant sociolinguistic aspects considered in this analysis:

Table 3

Participants' Familial Self-reported Sociolinguistic History

History and Family	Ana (5)	Lelan (5)	Ledo (5)	Sel (4)	Kati (4)	Ange (4)	Tali (4)	Iná (3)	Beti (3)
Level of education	3	3	2	2	2	3	1	2	1
Born	BR	BR	US	BR	IT (until 17)	BR	US	US	US
Years lived in BR	5 and 1/2	0-8		0-5		0-6			
Mother origin	BR	BR	BR	BR	BR	BR	BR	BR	BR
Father origin	BR	BR	US	BR	IT	BR	AR	NOR	CUB

Mother spoken languages	PO SP EN	PO SP EN	PO EN	PO	PO EN IT	PO	PO	PO SP EN	PO SP EN
Father spoken languages	PO SP EN	PO SP EN	EN	PO EN	PO IT EN	PO	SP	EN NW GER	PO SP EN
Siblings	N	Y	N	Y	Y	Y	Y	Y	Y
History and Family	Ana (5)	Lelan (5)	Ledo (5)	Sel (4)	Kati (4)	Ange (4)	Tali (4)	Iná (3)	Beti (3)
What language siblings spoke		EN		PO EN	PO EN	PO EN	PO EN SP	EN	EN
What language grandparents spoke	PO	PO	PO EN	PO	PO IT	PO	PO SP	PO	PO
Year started EN	5.5	8	0	5	3	6	3	0	0
Year started PO	0	0	0	0	3	0	2	0	0
Simultaneous bilingual	N	N	Y	Y	Y	N	Y	Y	Y
Most heard lang at home 0-5	PO	PO	PO EN	PO	PO IT	PO	PO EN SP	PO EN	PO SP
Lang most spoken by caregivers to student	PO	PO	PO EN	PO EN	PO IT	PO	PO	PO EN	PO SP
Lang most spoken by student to caregivers	PO	PO	PO EN	PO EN	PO IT	PO	PO	PO EN	PO SP
Parents' encouragement to speak PO	Y	Y	Y	N	Y	Y	Y	Y	Y
Parent read PO before elementary	Y	Y	Y	N	Y	Y	Y	Y	Y
Daycare before 5	Y	Y	Y	N	Y	N	Y	Y	N
Daycare or Homecare spoken lang	PO	PO	PO EN	PO (GM)	EN	PO (M)	EN	EN	SP
Watch TV in PO	Y	Y	Y	Y	Y	Y	Y	N	Y

Level of education: entered college 1/ college unfinished 2/ college grad 3; Languages: PO (Portuguese)/ EN (English)/ SP (Spanish)/ IT (Italian)/ GER (German)/ NOR (Norwegian); M (Mother) / F (Father) / GM (Grandmother)

Noteworthy, participants classified with diverse proficiency levels started Portuguese when born: Ana, Lelan, Ledo (proficiency level 5), Sel and Ange (proficiency level 4), and Ange and Ina (level 3). Significantly, Ana, Lelan, Sel, and Ange were sequential bilinguals, meaning they had ample input/output to Portuguese because they lived in Brazil during early childhood (at least until they were five years old). While Ledo (proficiency level 5), Kati and Tali (level 4), and Ina and Beti (level 3) were sequential bilinguals, with unusual exposition patterns to the HL and even more limited input/output opportunities after entering mainstream schooling (O'Grady et al. 223). The following table summarizes opportunities for Portuguese input/output after participants started mainstream school (K-12) in English, including with whom they customarily used their HL and if they participated in formal Portuguese classes.

Table 4
 Participants' Self-reported Portuguese Input/Output Over School Years by Context

	Ana (5)	Lelan (5)	Ledo (5)	Sel (4)	Kati (4)	Ange (4)	Tali (4)	Iná (3)	Beti (3)
PO Elementary (6-10 years old)									
With whom	M F Fr O	M F S Fr	M	MFSFr	M S	M F S	M F S	M	M F O
Elem in EN	Y	Y	Y	Y	Y	Y	Y	Y	Y
PO classes through Elem	Y	N	N	N	N	N	N	N	N

PO Elementary (6-10 years old)									
Hours PO teaching/week	2h/week	0	0	0	0	0	0	0	0
PO-speaking friends at school	N	N	Y	N	N	N	N	Y	N
Lang spoken with friends		EN	PO EN	EN	EN		EN	PO EN	PO EN
PO Middle school (11-13 years old)									
With whom	M F Fr O	M F	M	M F S	M S	M F S	M F S	M	M F O
Middle in EN	Y	Y	Y	Y	Y	Y	Y	Y	Y
PO FL at school	Y	N	N	N	N	N	N	N	N
Hours PO teaching/week	2h/week	0	0	0	0	0	0	0	0
PO speaking friends at school	N	Y	Y	N	N	N	Y	N	Y
Lang spoken with (?) friends	EN	EN	PO EN		EN		EN		PO EN SP
PO High school (13-17 years old)									
With whom	M F Fr O	M F Fr	M	M F S	M S	M F S	M F S Fr		M F O
High in EN	Y	Y	Y	Y	Y	Y	Y	Y	Y
PO at school	Y	N	N	N	N	N	N	N	N
Hours PO teaching/week	0	0	0	0	0	0		0	0
PO speaking friends at school	NO	Y	Y	N	N	N	Y	N	Y
Lang spoken with(?) friends		PO EN	PO EN		EN SP		PO		PO EN SP

The comparison between participants classified as proficiency level 5 (Ana, Lelan, and Ledo) self-report is noteworthy in this table. The main difference relates to Ana's parents offering her Portuguese classes during elementary and middle school years for two hours/week. Both Ledo and Lelan reported speaking Portuguese with both caregivers, while only Ledo's mother spoke Portuguese. Curiously, Ledo reported traveling to Brazil every year and spending time there from one to six months. In the following section, we delve into the data from participants' grammatical activities, level of proficiency, and the sociolinguistic questionnaire. This analysis provides insights into the participants' language acquisition journey. We then conclude with insights into societal factors that can significantly contribute to HL acquisition and propose themes for future research.

7 Discussion

Regarding the FS, in the semi-controlled activity, the use of FS was consistent in Ana, Ledo, and Lelan (classified as proficiency level 5), while the present indicative occurred mostly in the other six participants. The results of participants classified as levels 4 and 3 indicated the use of present indicative instead of the FS, a tendency observed as participants' proficiency level goes down. In the grammatical judgment activity, only two participants who maintained level 5 did not use the present of indicative instead of FS. In the controlled activity, the group with proficiency level 4 presented some use of FS, but the present indicative was the form most frequently used. We observed that all participants, except Ana (who sustained a proficiency level 5 in all activities) used the present of indicative instead of FS in some sentences. Also, all participants opted for the regularization of irregular verb forms both in the controlled and semi-controlled activities.

Comparing the results of the oral interview, the grammatical activities, and the information provided in the sociolinguistic questionnaire, we observed that the students with the highest proficiency level 5 (Ana, Lel, and Ledo) in the researcher's evaluation were the ones who reported more input/output opportunities in the sociolinguistic questionnaire. Considering Ana and Lelan, the overall combined most relevant factors for these high-level participants' performance were:

- Being sequential bilingual, meaning having ample input in the HL during the first years.
- Having both caregivers speaking the HL and Portuguese being the language most used by caregivers at home.
- Having the opportunity to use Portuguese in a daycare or homecare before entering mainstream schooling.

Interestingly, over the years when participants were immersed in English-only mainstream school (ages 6-17 years old), most students with proficiency levels 4-5 had both parents speaking the HL, with opportunities to use the HL with siblings and friends. Furthermore, Ana, who achieved the native-like target feature in all tests reported, had had formal classes in Portuguese to develop literacy skills for two hours per week from 6-13 years old.

Our data analysis led us to confirm that HL acquisition is related to the amount and quality of input to which HS are exposed. Particularly, not only quantitatively, but also the quality of input. Considering all the sequential bilinguals, this study confirms, Schwartz (410), Banasiak and Olpińska-Szkielko (59) previous observation that the variables that most contributed to bilingual children's competence were parent's language management, families' attitudes toward HL, and literacy development in their HL. Similarly, in a study comparing the use of inflected infinitives of Brazilian and European Portuguese, Rothman (384-387) concluded that literacy in the HL had also affected the acquisition of this property.

Continued parental HL input seems specifically important once children start schooling in the majority language, although it may not necessarily guarantee children's continuing HL development (Bayram et al 2). Another factor to be considered is the societal status of the minority language (Gathercole 226), which can interfere with children's perception of the value of maintaining the HL. Thinking of this factor specifically, we believe that in the US context, the dominant ideological monolingual discourse could affect HL development because it can interfere with the family dynamic and the learner's willingness to maintain the language.

The student that most sustained the native-like performance in all grammatical features presented three optimal factors: being a sequential bilingual, both caregivers speaking the HL at

home, and taking Portuguese classes to develop literacy for two hours/week from elementary to the end of middle school years. This highlights that the quantity and quality of language input/output are significant in HL acquisition.

8 Limitations

This study only took a snapshot of participants' production and analyzed it based on their historical sociolinguistic factors of input/output Portuguese opportunities to understand the particular context of HL acquisition. It is beyond this investigation's objective to explain why participants make these specific choices. In the context of HL research and education, it is crucial to recognize language as a dynamic entity presenting many varieties due to local and societal features. As Leeman and Serafini (58-59) have pointed out, languages vary across space, social groups, communities of practices, context, and time. Although we consider HLLs' performance relative to native Brazilian Portuguese spoken and written language standards, it is crucial to acknowledge that this comparison does not indicate value among language varieties.

9 Conclusion

The conclusions presented here are preliminary due to the small number of participants. However, this study confirms tendencies that recent research related to HL acquisition has reached. This study reaffirmed that HL acquisition is affected by input/output conditions. Consequently, results indicated that participants (at the college level) who did not perform the grammatical property analyzed would require more time to gain the "critical mass" needed to trigger acquisition (Gathercole 226; Unsworth 182-190; Flores 252-260). Considering the overall results we observed that some sociolinguistic factors contributed to the higher-level proficiency participants' performance, such as being sequential bilingual, having both caregivers speaking the HL and Portuguese being the language most used by caregivers at home, as well as having the opportunity to use Portuguese in a daycare or homecare before entering mainstream schooling.

This study reaffirms that the roles of the home, school, and community should be considered when discussing HL development (Park et al. 224-230). This study especially observed that the participants with better performances had ample language exposure in the early years as sequential bilinguals. This result may indicate the importance of HL use at home between caregivers and children in sequential bilinguals. However, another conclusion of this study indicated that using a minority language at home, although it is crucial to language maintenance, may not be sufficient for the acquisition of complex grammatical features. Research in HL acquisition has highlighted that caregivers' input alone may not guarantee native-like language development (Bayram et al. 2).

These results shed light on possible contributions to the roles of schools, private teachers, and community—based programs in helping minority children maintain and enhance their HL development, even if they meet one-to-two hours weekly. This study indicates that efforts to develop HL literacy could be crucial for the quality of input on HL acquisition. Further research should consider the role of literacy in HL acquisition of complex grammatical features as an essential factor (Schwartz 410; Banasiak and Olpińska-Szkielko 59; Rothman 384-387). Looking toward future research, it is worth deepening the discussion of macro sociolinguistic factors' influence on HL development. For example, future research should consider how the macro-society value of bilingualism affects heritage language development. It would be recommended to explore the

language acquisition of children with the same family conditions but live in different ideological contexts. For example, one could compare how and if the predominant monolingual discourse in U.S. society affects language development compared to European societies where multilingualism is at least recognized.

Declaration of Interest

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