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Is grammar instruction beneficial for heritage language learners?

Dative Case marking in Spanish

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Authors' note

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Abstract

Spanish heritage speakers have been shown to have incomplete knowledge of dative case marking with both animate direct objects (also known as differential object marking (DOM) or *a-personal*) and dative experiencers with *gustar*-psych verbs in oral and written modes (Montrul 2004, Montrul and Bowles, in press). In general, Spanish objects that are animate and specific are obligatorily marked with the preposition “a” (*Juan conoce a tu hermana* “Juan knows your sister”). Other objects are unmarked (*Juan compró un perro* “Juan bought a dog”, *Juan escuchó la radio* “Juan listened to the radio.”). *Gustar*-type psych verbs take dative experiencers obligatorily marked with the dative preposition *a* and a dative clitic (*A Juan le gusta el rugby* “Juan likes rugby”). This study investigated the effects of instruction on DOM and *gustar*-verbs for heritage language learners. A total of 45 2nd generation Spanish heritage speakers participated in the study, completing a pre-test, instructional treatment, and a post-test. The instructional treatment consisted of an explicit grammatical explanation of the uses of “a” followed by three practice exercises, for which participants received immediate, explicit feedback (including negative evidence). Results of the pre-test confirmed that heritage language learners’ recognition and production of *a* with animate direct objects and dative experiencers is probabilistic, as compared with a baseline group of 12 native speakers of Spanish. But post-test results revealed highly significant gains in both intuitions and production, suggesting that instruction containing both positive and negative evidence facilitates classroom heritage language acquisition, as it does second language acquisition, at least in the short-term.

1. Introduction

Several studies have documented the loss and/or incomplete acquisition of key grammatical features in adult Spanish heritage speakers, including gender agreement in nouns (Lipski 1993, Montrul, Foote and Perpiñán, in press) tense, aspect and mood (Lynch 1999, Montrul 2002, 2007, Silva-Corvalán 1994), and null subject pronouns (Montrul 2004a, Silva-Corvalán 1994). Incomplete acquisition in heritage speakers is most likely due to reduced input and use in the heritage language. Furthermore, most heritage speakers in the United States are schooled in English, and do not receive formal instruction in the heritage language until high school or college. With the recent significant and steady growth of the Spanish-speaking population in the United States, the face of traditional postsecondary Spanish as a foreign language has changed dramatically, particularly in geographical areas where the Latino population was previously non-existent. Today more than ever, traditional Spanish classes for speakers with no previous knowledge of the language have been accommodating the heritage speaker, a student with a very different linguistic profile, academic experience, and needs. Naturally, this situation presents serious challenges for both teachers and students, amply discussed by Valdés (1997, 2001), Potowski (2002), and Carreira (2003, 2007).

Recent studies have also shown that in certain grammatical areas including lexical-semantics, nominal and verbal agreement, and clitic pronouns, Spanish heritage speakers have some advantages or seem to “know more” than proficiency-matched L2 learners (Montrul 2005, 2006, Montrul, Foote & Perpiñán, in press), probably due to the fact that they received exposure to Spanish and used the language since childhood. At the same time, studies also report that many low to intermediate proficiency heritage speakers appear to experience difficulties in some of the same grammatical areas that are problematic for adult L2 learners of Spanish (Lipski 1993,

Montrul 2004b). Even if early age of acquisition grants certain advantages to the heritage speaker with structures that are early acquired in childhood, these may be offset by an additional significant difference between the heritage speaker and the L2 learner: namely, experience with formal classroom language instruction. Additionally, some heritage speakers speak local varieties but when they come to the classroom they are schooled in the standard variety. Since many heritage language learners have much less experience with the standard language in an instructed setting than typical L2 learners, this situation may place the heritage speaker at a disadvantage, particularly in the shared classroom.

If, like L2 learners, heritage language (HL) learners have gaps in their linguistic knowledge, but unlike L2 learners, HL learners have less experience with formal language instruction, the question we investigate in this study is whether instruction in a formal setting in adulthood is beneficial to bring about knowledge of language that was either never developed or was acquired but subsequently lost at some point in childhood. Can focused instruction with negative evidence, found to be useful in L2 acquisition, also help heritage language learners (re)acquire that knowledge rapidly? More specifically, how responsive will heritage language learners be to such explicit instruction? Except for Song, O'Grady, Cho and Lee's (1997) study with Korean heritage language learners and Potowski, Jegerski and Morgan-Short's (in press) study with Spanish heritage language learners, there is virtually no research on the role of negative evidence in heritage language instruction at the college level.

The small-scale study reported here is the first step in a larger, ongoing research program investigating the role of explicit instruction in classroom-based L2 and HL acquisition. This particular study was designed to assess the effects of instruction on dative case marking with animate direct objects (Differential Object Marking (DOM) or *a-personal*) and dative

experiencers with *gustar*-type verbs in heritage language learners. Montrul and Bowles (in press) showed that two different groups of Spanish heritage speakers of low to advanced proficiency in the language displayed unstable knowledge of dative marking in these constructions in both production and grammaticality judgment tasks. The present study follows up on these results by focusing on the effects of instruction in a group of heritage language learners in the classroom. A similar study focusing on intermediate-level L2 learners of Spanish is reported in Bowles and Montrul (in press, under review). The study used a classic pre-posttest design to investigate the efficacy of an online instructional treatment on L2 learners' production and grammaticality judgments on structures requiring dative marking. The instructional treatment consisted of an explicit grammatical explanation of the uses of the preposition *a* followed by three practice exercises, for which participants received immediate, explicit feedback (including negative evidence). Results indicate that both recognition and production of *a*-marking improved significantly after the instruction, suggesting that at least in the short term explicit instruction facilitates classroom heritage language (re)acquisition.

2. Theoretical Issues in Instructed SLA Research

A main goal of instruction in second language acquisition (SLA) is to make sure that linguistic goals are met, and that L2 learners move forward in their interlanguage development. Of particular interest in instructed second language acquisition is understanding exactly how teaching helps learners restructure their grammars throughout the learning process. One central question in instructed acquisition is determining what types of linguistic input are most beneficial for second language learners. One main difference between acquisition by very young children—both monolingual and bilingual—and L2 acquisition by adults is that child acquisition

takes place primarily in a naturalistic setting. The child is exposed to naturally occurring exemplars of language in the input, and does not typically receive explicit instruction or explicit information about grammaticality. Many researchers argue that negative evidence—information regarding the impossibility of certain linguistic structures in the language being acquired—is not necessary and perhaps not even consistently available for bilingual and first language acquisition (Pinker 1989). However, research on L2 acquisition, especially in immersion contexts, has suggested that positive evidence alone may not be sufficient for the acquisition of certain L1-L2 contrasts or structures that are not present in the L1 (Trahey & White 1993, White 1989, 1991); for discussion, see Lightbown (1998) and Long (1996). That is, L2 learners may benefit from occasional form-focused instruction. Potowski (2007) suggests this as well, in a dual immersion context.

Form-focused instruction can involve providing learners with explicit information before or during exposure to L2 input, by means of either grammatical explanation or negative evidence in the form of corrective feedback (Sanz & Morgan-Short 2004). Much research has investigated the role of explicit grammatical explanation or rule presentation in second language acquisition, generally finding it beneficial (Alanen 1995, Carroll & Swain 1993, de Graaf 1997, DeKeyser 1995, N. Ellis 1993, Nagata 1993, Nagata & Swisher 1995, Robinson 1996, 1997, Rosa & Leow 2004a, 2004b). As far as corrective feedback is concerned, in both cognitive psychology and second language acquisition, feedback has been directly linked to the process of hypothesis formation and testing, which has been shown to facilitate restructuring and system learning (Rosa & Leow 2004b, Rosa & O'Neill 1999). Furthermore, Russell and Spada's (2006) meta-analysis synthesizes the research on corrective feedback to date, finding overall support for the effectiveness of explicit corrective feedback for L2 acquisition of morphosyntax, as does R.

Ellis, Loewen, and Erlam's (2006) review of studies. This finding suggests that even if negative evidence is not *crucial* for acquisition of some features of L2 grammar, it does *facilitate* grammatical restructuring by speeding up the process of acquisition.

Even though heritage language learners and L2 learners are different in many ways, it is important to find out whether they also share some similarities, and how these similarities may prove advantageous in the classroom. We acknowledge that L2 learners and heritage speakers are two different learner populations, but at the same time, it is our position that some theoretical questions and methods from second language acquisition (SLA) can be profitably extended to the HLA field, at least as a starting point. Given the robust base of research showing that explicit instruction is beneficial in L2 acquisition (e.g., Norris & Ortega, 2000; Ellis, 2006), we raise the question of whether it is also beneficial in the heritage language classroom.

Song, O'Grady, Cho and Lee's (1997) study of case markers and word order with Korean child heritage speakers attending Sunday schools suggests that instruction makes a difference in heritage speakers as well. On a pre-test, the children had significant problems interpreting OSV word orders. A set of instructional materials and activities focusing on sentences with OSV and SVO orders, where case markers are crucial for interpreting who is doing what, was designed. Furthermore, the children received explicit information about case markers in Korean with different kinds of sentences. The children performed several activities in class using these structures. During all activities, the teacher provided corrective feedback when errors were made. Children received this training for 50 minutes of class for two weeks after the pretest. The children then took a post-test, followed by a delayed posttest nine weeks later. Results showed highly significant gains with comprehension of OSV sentences (from 25% accuracy on the pre-test to 63% on the immediate post-test and sustained retention nine weeks later). More recently,

Potowsky, Jegerski and Morgan-Short (in press) evaluated the role of two types of instruction (traditional and input processing) in the acquisition of the Spanish imperfect subjunctive in adult college-level L2 learners and heritage speakers. They found significant improvements in comprehension, production and grammaticality judgments in the two groups, regardless of type of instruction. Yet, the overall gains were greater for the L2 learners than for the heritage language learners.

To further explore the question of whether grammar instruction is beneficial to heritage language learners, we extend current theoretical issues in instructed SLA to the heritage language acquisition situation. Our goal is to measure heritage language learners' outcomes in dative-marking as a result of instruction containing both positive and negative evidence through explicit rule presentation, practice and feedback.

3. Dative Marking in Spanish

Spanish has structural accusative and dative case, as evident from the pronominal object clitic system. Indirect objects are marked with the dative preposition *a*, and optionally doubled by a dative clitic, as in (1).

- (1) Roberto (le) regaló un anillo *a* Patricia.
 Roberto (her) gave a ring to Patricia
 'Roberto gave Patricia a ring.'

Like many languages with overt case markers, such as Hindi and Yiddish, Spanish also marks some direct objects with the dative marker *a* but not others. For Aissen (2003), it is objects which must be distinguished from subjects on semantic and pragmatic prominence scales that typically receive overt case marking. Example (2) shows that animate and specific direct objects, both noun phrases and strong pronouns, are marked with the dative preposition *a*.

- (2) Marina busca *a* la mujer/ busca *a* ella. *animate, specific*
 Marina looks for to the woman/to her
 'Marina looks for the woman/her.'

Dative marking of these direct objects is an instance of Differential Object Marking (DOM)

(Aissen, 2003; Leonetti, 2004; Lidz, 2006; Torrego, 1998). All other direct objects (animate, non-specific (3); inanimate, specific (4), and inanimate, non-specific (5)) receive no marking.

- (3) Marina busca una mujer. *animate, non-specific*
 'Marina looks for a woman (any woman).'
- (4) Marina busca la casa. *inanimate, specific*
 'Marina looks for the house.'
- (5) Marina busca una casa. *inanimate, non-specific*
 'Marina looks for a house.'

However, there are several counterexamples to the generalization that only specific, animate objects are marked with the preposition *a* in Spanish. First, nonspecific negative quantifiers like *nadie* "nobody" always require *a* (*No vi a nadie*. "I didn't see anybody."). Second, inanimate objects can be marked with the preposition *a* if the subject is also inanimate (*La calma precede a la tormenta*. "The calm precedes the storm."). Third, with animal direct objects, use of the preposition *a* is optional (*Mató el/al mosquito*. "He/she killed the mosquito."). Based on a crosslinguistic comparative study, Aissen (2003) notes that in many languages DOM is characterized by a great deal of apparent fuzziness, and Spanish DOM is no exception to this observation. The exact semantic, syntactic and pragmatic conditions regulating when accusative objects should be marked with the dative preposition *a* are quite complex and not entirely clear in the linguistics literature (Leonetti, 2004; Torrego, 1998; Zagana, 2002). According to Torrego (1998), definiteness, specificity, aspect, topicality, agentivity, and affectedness, in addition to other pragmatic notions, determine when objects are marked in Spanish.

In addition to DOM, Spanish exhibits other instances of dative case, such as ditransitive predicates and *gustar*-type psych verbs with dative experiencers. In Spanish indirect object constructions, the dative preposition is also obligatory and clitic doubling is optional, regardless of the animacy of the indirect object, as shown in (6).

- (6) Juan (le) mandó dinero a su madre/a su escuela.
 Juan her/it sent money to his mother/to his school
 'Juan sent money to his mother/to his school.'

Finally, the dative preposition is also obligatory with dative experiencers in *gustar*-type psych verbs, regardless of animacy, as in (7) and (8). Experiencers of psych-verbs have inherent dative case checked within a prepositional phrase in subject position.

- (7) A Juan le gusta el helado
 to Juan him like ice cream
 'Juan likes ice cream.'
- (8) Al gobierno le gusta que los ciudadanos paguen sus impuestos.
 to the government it likes that the citizens pay their taxes
 'The government likes citizens to pay their taxes.'

To summarize, the distribution and precise application of DOM presents a certain degree of fuzziness within and across languages according to Aissen (2003), and for this reason she claims that principles underlying DOM are not part of the core grammar. Given the semantic complexity and ambiguity with respect to its use, how is dative *a*-marking acquired in Spanish? Its acquisition is certainly challenging, since there is significant variability in the system, and learners need to figure out how to extract the precise syntactic, semantic and pragmatic constraints that regulate the distribution and polyfunctionality of the preposition *a*. Furthermore, learners have to acquire the structural and distributional differences between the dative preposition in DOM and the dative preposition in other contexts, such as in indirect object and dative experiencer constructions described above. Given the complex distribution of “a” marking

in the language, how are the DOM phenomenon and other aspects of object expression, including dative marking, acquired in Spanish?

4. Acquisition of Spanish DOM and other instances of dative case marking

It appears that clitic pronouns are early acquired in normally developing Spanish monolingual children, since by age two they already produce accusative and dative object clitics (Domínguez, 2003; López Ornat, 1994). Adult-like behavior is not instantaneous, however. Some studies have reported incidence of clitic/object omission errors (Fujino & Sano, 2002), and gender agreement errors with accusative clitics in two-year old children (Domínguez, 2003). There is virtually no research on the L1 acquisition of DOM, with the exception of a recent study by Rodríguez-Mondoñedo (2006). Rodríguez-Mondoñedo conducted an analysis of the spontaneous production of four Spanish-speaking children (between the ages of 0;9 and 2;11) from the CHILDES data base (López Ornat, Linaza, Montes, and Vila corpora). All sentences containing V-O structures were analyzed. From a total of 991 exemplars, the children made a total of 17 errors (8 cases of *a* present but not required, and 9 cases of *a* omitted when required with animate, specific objects). This amounts to a 98.38% accuracy rate with DOM before age 3. Therefore, this study suggests that monolingually-raised Spanish-speaking children acquire the semantic constraints on the distribution of this preposition with direct objects easily and quickly and, at least in unambiguous cases like in (2), have an adultlike grammar very early. We are not aware of any studies of the L1 acquisition of dative marking in *gustar*-psych verbs.

The situation for L2 acquisition of dative marking is strikingly different, however, especially when the learners' L1 does not mark direct objects the way Spanish does. English-speaking L2 learners of Spanish initially have problems producing and understanding clitic

pronouns (VanPatten & Cardiero 1993), although they eventually learn them (Duffield and White 1999). DOM is very difficult for English-speaking L2 learners of Spanish to acquire (Bowles & Montrul, in press; Farley & McCollam, 2004; Guijarro-Fuentes & Marinis, 2007; Johnston, 1995; VanPatten & Cadierno 1993). Perhaps this difficulty is partially due to the polyfunctionality of the dative preposition *a*, which as explained, also appears with ditransitive verbs that take indirect objects (*Juan le dio un libro a Pedro* ‘Juan gave a book to Pedro’), and with *gustar*-type psych verbs (*A Juan le gusta este libro* ‘Juan likes this book’). English-speaking L2 learners also have notorious difficulty with dative marking of dative experiencers with *gustar*-psych verbs, producing and accepting them with nominative case as in English (Bowles under review, Montrul 1998).

If clitics as overt case markers and DOM are early acquired in monolingual acquisition and apparently present few difficulties for 3-year old children, one would expect early bilinguals to be as successful in acquiring DOM and other instances of inherent dative case as well. Although to our knowledge there are no available published data from simultaneous bilingual children on these grammatical constructions, research on adult early bilinguals suggests otherwise.¹ Luján & Parodi (1996) and Silva-Corvalán (1994) independently observed that Spanish-English bilinguals from Los Angeles had robust control of the accusative and dative

¹ We looked at the transcripts of an oral narrative task performed by monolingual children from Mexico and bilingual Spanish-English children attending a dual immersion school in Chicago (ages 6 to 11) reported in Montrul & Potowski’s (2007) study of gender agreement. Accuracy on production of *a* with animate direct objects was as follows: the monolingual children from Mexico who produced animate direct objects (n = 15) were most accurate (95% accurate), the sequential bilingual children (with Spanish acquired first, n = 20) second-most accurate (62.9% accurate), and the simultaneous bilingual children (n = 16) were by far the least accurate (32.8% accurate on object marking). Among the simultaneous bilinguals, 10 children never marked animate direct objects in required contexts (0% accuracy), while 4 children always produced *a* in required contexts (100% accuracy). The other 2 children omitted *a* in at least one of the required contexts produced, one performing at 75% accuracy and the other at 50% accuracy. Among the sequential bilinguals, 6 exhibited no marking whatsoever (0% accuracy), 11 always marked animate, specific objects (100% accuracy), and the remaining 3 occasionally omitted *a*, ranging from 33% to 75% accuracy. These results suggest that unlike age-matched monolingual children who produce *a* marking in required contexts reliably, some bilingual children may never acquire object marking, while others may lose it later on. Ideally, longitudinal data is required to address these possibilities.

clitic system, but omitted the dative preposition *a* with animate, human direct objects in clitic doubling constructions (**Lo veo la niña* “him/it I see the girl”). These findings were further confirmed by Montrul (2004), who also found that intermediate and advanced proficiency adult Spanish heritage speakers possessed solid knowledge of accusative and dative clitics and their placement with respect to the finiteness of the verb, behaving like a monolingual native speaker control group in this respect. However, unlike the monolingual native speakers, the Spanish heritage speakers omitted dative *a*-marking on animate direct objects in oral production (percentage omission advanced $M = 6\%$, percentage omission intermediate $M = 21.3\%$). This suggests that DOM in these speakers was either incompletely acquired in childhood or was acquired and subsequently lost due to contact with English. Montrul and Bowles (in press) further confirmed these findings. They tested a group of 69 heritage speakers and their findings showed that in oral production, omission rates of *a*-marking averaged 29%, ranging from 10% in advanced proficiency speakers to 50% in low proficiency speakers. At the same time, these speakers were found to rate ungrammatical sentences (without dative marking) such as **Juan conoce mi hermana* “Juan knows my sister” as acceptable, with mean ratings between 3.5 and 4.0 on a 5-point scale (where 1 = totally unacceptable and 5 = totally acceptable). Thus, it appears that DOM represents a significant gap in heritage language learners’ knowledge, even for those with advanced proficiency in the language. As for other instances of dative case, Toribio and Nye (2006) showed that a group of Spanish heritage speakers displayed high omission rates of *a*-marking in dative experiencers with *gustar*-type verbs.

Montrul and Bowles (in press) concluded that erosion of this dative marker could be due to its lack of perceptual salience on the one hand, and transfer from English, the dominant language in these speakers, on the other hand. On many counts, dative *a*-marking has low

perceptual salience. When produced after a verb of the first conjugation in the present indicative, for example, *Llama a Juan* “He calls Juan”, the sequence of two [a] sounds (one from the verbal ending and one for the marker) is reduced to one, possibly somewhat lengthened ([a:]), and thus the preposition is practically inaudible in speech. In the preterite past tense, as in *Vio a Juan* “He saw Juan”, the vowel is diphthongized with the vowel of the verb ending (/oa/ or /ua/). (Plural verbal forms ending in a consonant, e.g., *hablamos* “we speak, we spoke”, do not present this problem.). Furthermore, this marker has limited communicative value because its omission does not interfere so much with communication, and as we have shown, is likely to go unacquired by intermediate English-speaking learners despite its frequency in the Spanish input.² Therefore, on theoretical, methodological and pedagogical grounds, dative *a*-marking is an ideal structure to investigate in a classroom study.

5. Experiment

5.1 Research question

If heritage speakers tend to omit overt dative case marking in Spanish with both DOM and *gustar*-psych verbs, does explicit instruction with focus on form and practice (with explicit feedback and negative evidence) help instructed heritage language learners distinguish between grammatical and ungrammatical sentences with inherent dative case marking?

5.2. Participants

The initial pool of participants consisted of 12 Spanish native speakers from different Spanish-speaking countries (baseline group) and 86 heritage language learners enrolled in five sections of Spanish for heritage speakers classes in a metropolitan university in Chicago. We

² The omission of this marker interferes with communication in cases like *Llamó a Juan* “He called Juan” vs. *Llamó Juan* “Juan called”, where the omission of the marker changes the argument structure of the predicate. This is the case of some intransitive verbs that can be optionally transitive.

agree with an anonymous reviewer that heritage language learners are different from full native speakers. However, native speakers with full command of the language were included as the baseline group for two main reasons. First, we tested this group to confirm our assertion that fully competent native speakers do not typically omit the object marker marker in production and have determinate judgments on grammatical and ungrammatical sentences exemplifying core cases of differential object marking, as well as the use of the preposition with ditransitive and psychological verbs. Second, due to the impracticality and difficulty of obtaining longitudinal data spanning several years from the same speakers, it is common in experimental research on language attrition to use control groups of monolingual speakers of the same age to assess the degree of incomplete acquisition and or language loss in bilinguals (Seliger, 1996, Montrul, in press).

Unfortunately, because of subject attrition common in classroom research, about half of the heritage speaker participants did not complete both the pre- and posttest and the instructional treatment, leaving about 45 participants for data analysis. 82% of these 45 speakers were of Mexican descent, born in the United States to Mexican-born parents, while the rest had relatives (parents) from other Latin American countries (Puerto Rico, El Salvador, Guatemala and Mexico), also born to Spanish-speaking parents. All of them were exposed to Spanish in the home, and 25% to both English and Spanish. All participants were schooled in English in Middle and High School, while 8 attended elementary schools with some Spanish instruction (including bilingual programs). These heritage speakers self-rated their proficiency on a scale ranging from 1 to 5, where 5 = native-like and 1 = non-native like. The mean rating in Spanish for this group was 3.75. All participants also completed a Spanish Proficiency test, consisting of a vocabulary (20 points) and a cloze section (30 points). The mean scores (maximum 50) and age information

for the participants appear in Table 1. The mean, standard deviation and ranges for the heritage speakers show large variability in this group, indicating that their proficiency in the language varies significantly.

TABLE 1

Sample size, age at testing, age of first exposure to Spanish, and mean scores on the Spanish proficiency test for native speakers and heritage language learners.

<i>Groups</i>	N	<i>Mean age and range at testing</i>	<i>age of first exposure to Spanish</i>	<i>Proficiency Scores (max = 50)</i>		
				M	(SD)	range
Native speakers	13	24.5 (26-47)	birth	48.23	(1.58)	46–50
Heritage speakers	45	20.6 (18-26)	birth	37.81	(5.45)	23–49

5.3. Tasks used in the Pre and Post tests

An elicited written production task (PT) and a written grammaticality judgment task (GJT) were used to elicit participants' knowledge of DOM and dative experiencers. Two versions of the two tasks were prepared, one for the pre-test and one for the post-test, differing only in the order of the sentences.

The PT consisted of 25 target sentences. Participants were given three words—a noun, a verb in the infinitive, and another noun—and were instructed to write a complete sentence with the three words given by adding all the grammatical elements they considered necessary (articles, prepositions, inflections, etc). All sentences were scored for grammaticality, but only those for which learners attempted the targeted structure were counted in the analysis presented here. Five sentences targeted transitive verbs with inanimate objects, as in (9), and another five targeted sentences with animate objects, as in (10). Another 10 sentences targeted indirect objects (11) and dative experiencers (12) (5 of each), while the remaining five sentences were fillers.

(9) Transitive verb: animate

Prompt: estudiante / visitar / profesora
 student visit professor

expected response: El estudiante visitó **a** la profesora
 ‘The student visited the professor.’

(10) Transitive verb: inanimate

Prompt: Patricio / visitar / Museo del Prado
 Patricio visit del Prado Museum

expected response: Patricio visitó el Museo del Prado
 ‘Patricio visited the del Prado Museum.’

(11) Ditransitive verbs

Prompt: Armando / enviar / amiga / flores
 Armando send friend flowers

expected response: Armando (le) envió flores **a** su amiga.
 ‘Armando sent flowers to her friend.’

(12) Gustar-type verbs

Prompt: Juan / gustar / Patricia
 Juan like Patricia

expected response: **A** Juan le gusta Patricia/ Juan le gusta **a** Patricia.
 ‘Juan likes Patricia.’

The grammaticality judgment task (GJT) had a total of 75 sentences, 20 of which targeted the *a-personal*, as shown in (13)-(16). (See Appendix for all sentences). Of those sentences, 10 were grammatical (types (13) and (16)) and 10 were ungrammatical (types (14) and (15)). There were an equal number of sentences with animate and inanimate direct objects. The same instrument (with the sentences arranged in a different order) was used for the pre-test and the post-test.

- | | | |
|------|---|--------------------|
| (13) | <i>Marisa conoce a mi hermana.</i>
'Marisa knows my sister.' | animate (with a) |
| (14) | <i>*El jefe escuchó la secretaria.</i>
'The boss listened to the secretary.' | animate (no a) |
| (15) | <i>*Juan visitó a la biblioteca.</i>
'Juan visited the library.' | inanimate (with a) |
| (16) | <i>El hombre escuchó el partido de fútbol en la radio.</i>
'The man listened to the soccer game on the radio.' | inanimate (no a) |

Another 25 sentences in the GJT targeted the preposition *a* with ditransitive verbs (types (17) and (18)), ungrammatical double object constructions (19), and psych verbs, as in (20) and (21). The remaining 30 sentences were fillers.

- | | | |
|------|--|-----------------------------------|
| (17) | <i>Ángela envió regalos a su novio.</i>
'Angela sent gifts to her boyfriend.' | indirect object (with a) |
| (18) | <i>Teresa <u>le</u> devolvió el dinero a Pepe.</i>
'Teresa returned the Money to Pepe.' | dative clitic doubling (with a) |
| (19) | <i>*Estela dio María el libro.</i>
'Estela gave Maria the book.' | double object construction (no a) |
| (20) | <i>A Juan le gusta Patricia.</i>
'Juan likes Patricia.' | Experiencer-V-Theme (with a) |
| (21) | <i>*Mi mamá le gusta Pavarotti.</i>
'My mother likes Pavarotti.' | Experiencer-V-Theme (no a) |

Participants were instructed to rate each sentence on a scale of 1 (totally incorrect) to 5 (totally correct) and to mark 3 (unsure) only when they were unable to make a firm judgment about a given sentence. For the heritage language learners, both the pre-test and post-tests took place during regular class time in a computer lab.

5.4 Instructional Intervention

During the period of the study, the *a-personal* (DOM) and dative experiencers with *gustar* verbs were not formally presented in class, and related coursework did not focus on these structures. To evaluate the effect of formal instruction on these structures, we designed an instructional intervention focusing on the uses of the preposition *a* with different verbs. The instruction was administered one week after the pre-test and consisted of an explicit grammatical explanation of the *a-personal* with transitive verbs, indirect objects with ditransitive verbs and dative experiencers with *gustar* verbs, followed by a practice exercise in which immediate, explicit corrective feedback was provided. The intervention contained both positive and negative evidence. Specifically, the grammatical explanation provided learners with positive evidence about *a-personal*, ditransitive verbs and *gustar*-psych verbs in the form of grammatical sentences with animate and inanimate direct objects, as well as indirect objects and dative experiencers in Spanish. In addition, it provided negative evidence by alerting the learners about the contrast between Spanish, which requires *a*-marking in these constructions, and English, which does not differentially mark objects on the basis of animacy, allows double objects, and has nominative experiencers. Below is an excerpt of the explicit information on DOM provided to learners:

From the perspective of an English speaker, the "a" appears to be an “extra” word. From the perspective of a Spanish speaker, the "a" is required, and to not use it is an error. So you could never say “Conozco María” in Spanish.

After reading the grammatical explanation, learners completed a 20-item practice exercise online for each of the three constructions (DOM, indirect objects and dative experiencers with *gustar*-type verbs). The practice exercises were a different format from the grammaticality judgment task used as the pre-test and post-test. Each item consisted of one

sentence with a drop-down menu immediately preceding the object, from which the learners chose either *a* or \emptyset . Of the 20 items, 10 had animate objects and 10 had inanimate objects. Following each response, participants received immediate, explicit feedback that (a) indicated whether or not their response was correct and (b) provided a metalinguistic explanation, as shown in Figure 1. Participants were allowed to review the explanation and complete the practice task as many times as necessary to achieve 80% accuracy, following the standard procedure and accuracy criterion already established for all on-line assignments in the course.

FIGURE 1
Examples of explicit feedback provided during instruction

(1) Veo a / \emptyset Carolina.

Correct! You need to put an “a” before *Carolina* because *Carolina* is a person (animate).

(2) Busco a / \emptyset el libro de Pablo.

Sorry! You do not need to put an “a” before *el libro de Pablo* because *book* is inanimate. Try again!

5.5. Results

The magnitude of the change after the instructional treatment is assessed by comparing results of the pre-test and the post-test PTs and GJTs. It is common in longitudinal classroom experiments to experience significant attrition in the initial participant pool from pre-test to post test, and this study was no exception. Many heritage language learners who were present for the post-test did not take the pre-test. Furthermore, because the instructional module was assigned as homework, some of the learners in the original pool either did not complete the assignment or did not achieve 80% accuracy. Several others who completed the pre-test and homework assignment were not present in class when the post-test took place. And due to some technical

difficulties in the computer lab where the testing took place, post-test data for some subjects were lost. Hence, a total of 45 participants completed either the PTs or the GJTs. Since we were only left with two heritage language learners who completed the pre- and post-test but not the instructional treatment (one of low proficiency and one of advanced proficiency), we were unable to include a control group of uninstructed heritage language learners to assess more directly the effects of the instructional treatment, as we had originally planned.³

The results of the production task are, likewise, based on two groups of heritage language learners tested on two occasions: the uninstructed group (n =16) consisted of learners who completed the pre-test but did not complete the instructional module or the post test, while the instructed group (n =16) were learners who only completed the instructional intervention and the post-test. For these 32 participants, we were left with only one measure for each participant for the production task (pre-test or post-test), instead of two measures (pre-test and post-test) as originally planned. We again acknowledge that this is not ideal, but reiterate that circumstances beyond our control did not allow us to carry out the full original experimental design.

Since the native speakers performed at 100% accuracy, their results on the PT need not be reported further. Accuracy on this task for the heritage speakers was calculated as follows. We calculated the percentage of target structures elicited (with dative a-marking) (86%), the percentage of other structures provided (grammatical or ungrammatical) (9.5%), the percentage of non responses (4.5%), the percentage of correct use of *a* depending on verb and object (72.5%), and the percentage of fully grammatical sentences produced (72%). The statistical

³ Our study of L2 learners (Bowles & Montrul, in press, under review), which uses the same tests as in this study, includes a control group of learners who did not complete the instructional treatment. This study shows that the uninstructed group made no gains, while the instructed group did. We are currently working on a replication of these two studies with much larger sample sizes so that we can include control groups of uninstructed learners for the two populations (L2 learners and heritage language learners).

analysis only compared the percentage of accurate production of *a* by verb and object type.

Figure 2 shows accuracy on dative *a*-marking by structure and group.

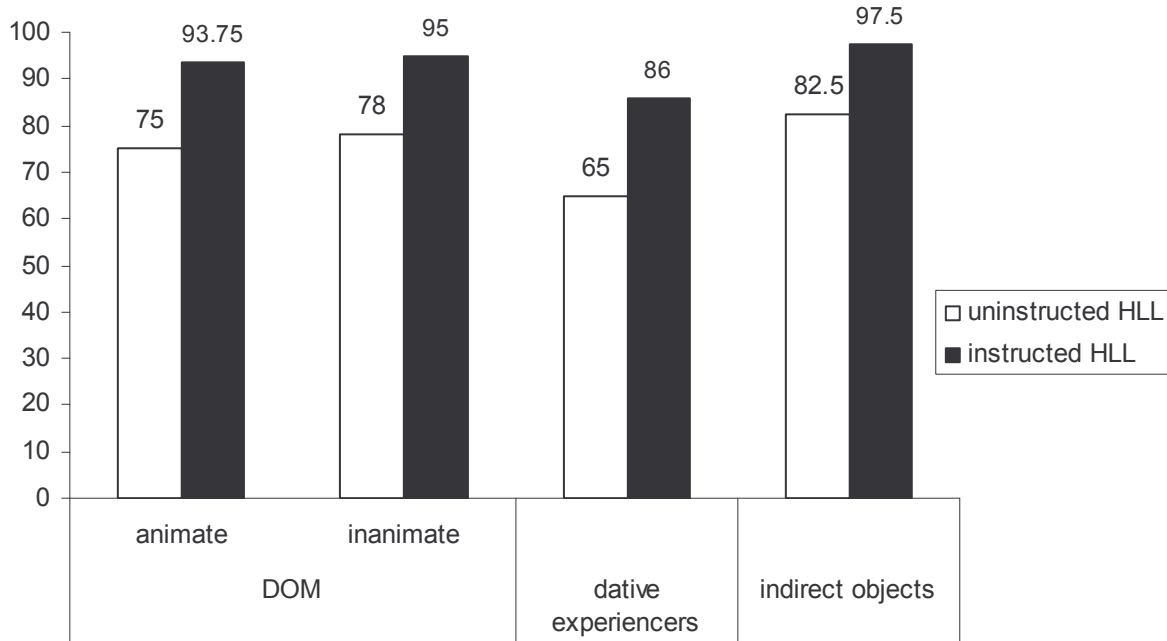


FIGURE 2

Percentage accuracy of dative case marking with the preposition *a* by group.

To ensure that the participants in the instructed and uninstructed groups were at the same level of proficiency, we first ran a *t*-test on the proficiency scores of the two groups. Results indicated no differences between the proficiency scores of participants in the instructed ($M = 38.06$, $SD = 5.13$) and uninstructed ($M = 37.18$, $SD = 5.04$) groups $t(30) = -.486$, $p < .890$.

Then a one-way factorial ANOVA with group as the between-subjects factor and sentences as the within-subjects factor was run. Results showed a main effect for group ($F(1,30) = 9.425$, $p < 0.005$), indicating that the instructed heritage language learner group ($M = 93.1$, $SD = 9.05$) was more accurate than the uninstructed group overall ($M = 75.2$, $SD = 21.2$) at producing *a*-marking in obligatory contexts (Cohen's $d = 1.09$). Paired contrasts (equal variances

assumed), further showed that the instructed group was significantly more accurate than the uninstructed group with *all* sentence types: DOM animate $t(30) = -2.406, p < 0.022, d = 0.85$; DOM inanimate $t(30) = -2.621, p < 0.014, d = 0.92$; dative experiencers $t(30) = -2.195, p < 0.032, d = 0.77$; indirect objects $t(30) = -2.007, p < 0.054, d = 0.71$.

The results of the GJT are based on the results of the 13 participants who completed the pre-test, obtained 80% accuracy on the homework exercises, and were present for the post-test. We first compared the mean acceptability ratings of the baseline control group and the 13 heritage language learners on the pre-test. Results of a factorial ANOVA showed significant main effects for group ($F(1,23) = 8.061, p < 0.0008$) and for sentences ($F(8,23) = 153.618, p < 0.0000$), as well as a significant group by sentences interaction ($F(1,23) = 135.411, p < 0.000$). The main effect for group and the group by sentences interaction indicated that the heritage language learners assigned lower acceptability ratings to grammatical sentences and higher acceptability ratings to ungrammatical sentences than the native speaker baseline group. These mean acceptability ratings can be seen in Figure 3 for DOM sentences, Figure 4 for indirect objects and Figure 5 for *gustar*-type verbs and dative experiencers.

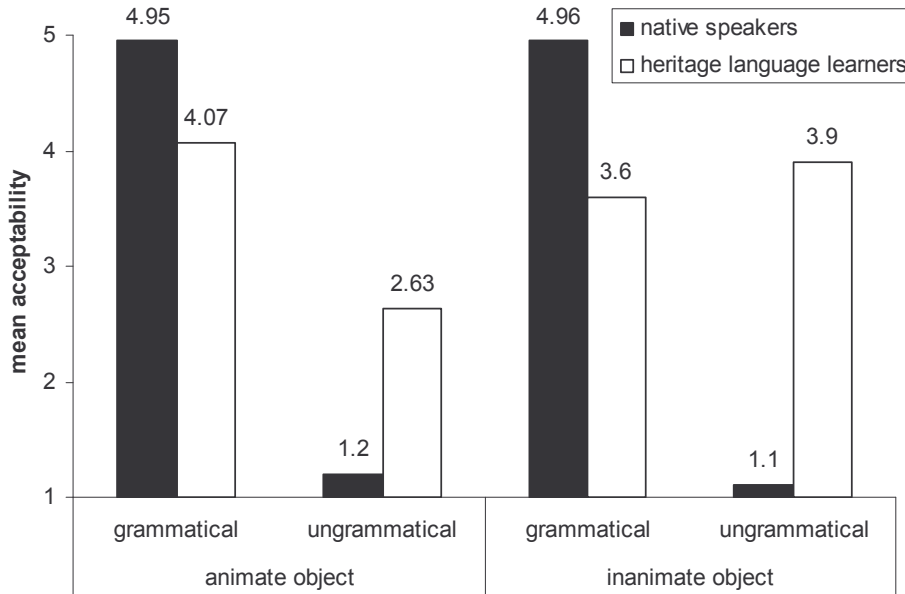


FIGURE 3
Native speakers' and heritage language learners' acceptability ratings on sentences with differential object marking (DOM) in the pre-test.

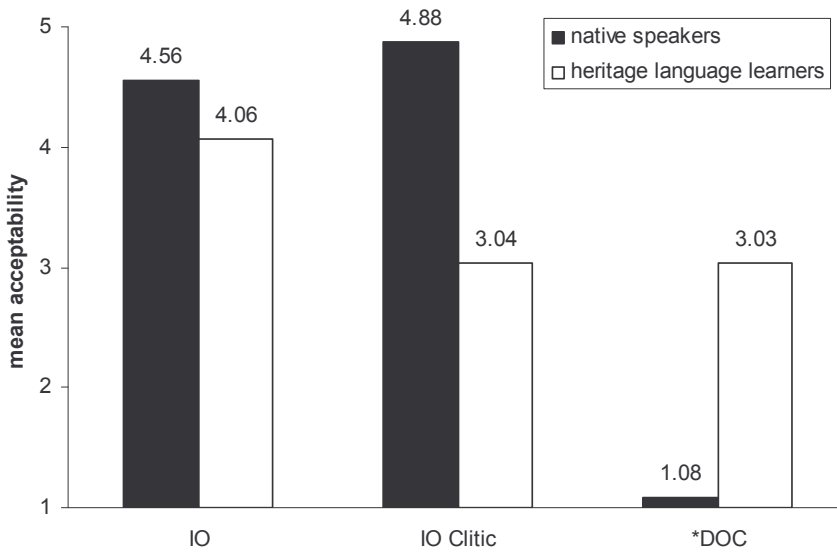


FIGURE 4
Native speakers' and heritage language learners' acceptability ratings on sentences with indirect objects in the pre-test.

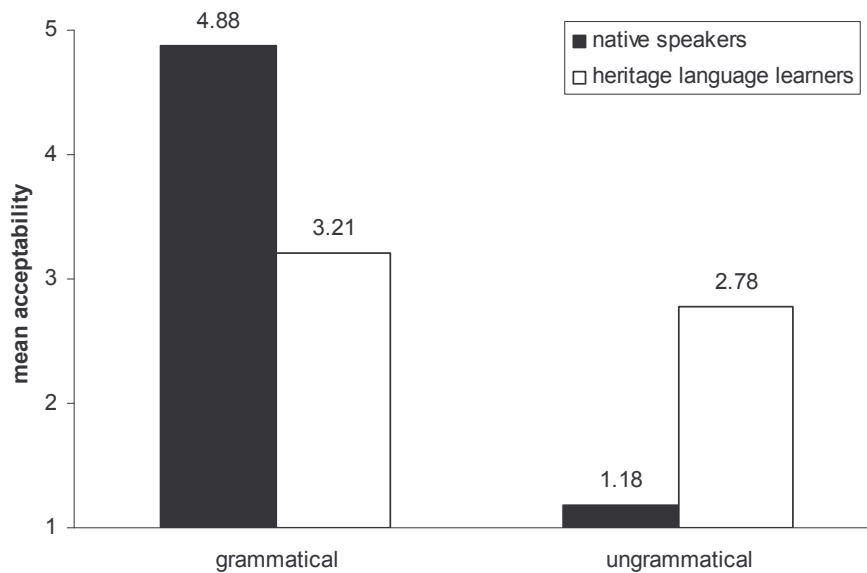


FIGURE 5

Native speakers' and heritage language learners' acceptability ratings on sentences with dative experiencers in the pre-test.

In essence, these results confirm that heritage language learners' judgments on the use of the dative preposition *a* are unstable and indeterminate not only with cases of DOM but with other instances of dative case as well, such as indirect objects and *gustar*-type psych verbs.

To determine what effect instruction had on heritage language learners' grammatical knowledge, we first conducted a factorial repeated measures ANOVA with 2 within-subject variables: sentences (9 types) and time (pre-test, post-test). Results showed a main effect for sentences ($F(8,12) = 29.467, p < 0.0001, \eta_p^2 = .711$) and a sentences by time interaction ($F(1,12) = 29.513, p < 0.0001, \eta_p^2 = .711$). This interaction indicates that there were significant changes (i.e., improvements) on the different sentence types in the two tests from pre- to post-test, and the measures of association (partial eta squared or η_p^2) were well above .500. Taken as a whole, these results suggest that the instructional treatment was effective.

To further investigate the magnitude of the changes that occurred in the nine sentence types, we conducted paired-samples *t*-tests. If the instructional treatment had a positive effect,

we expect the ratings of grammatical sentences to increase and the ratings of ungrammatical sentences to decrease on the acceptability scale from pre-test to post-test. Figure 6 shows the contrast between the pre-test and post-test GJT ratings for grammatical and ungrammatical sentences with animate and inanimate direct objects. (In Figures 6, 7 and 8 we have included the native speakers for visual comparison only.)

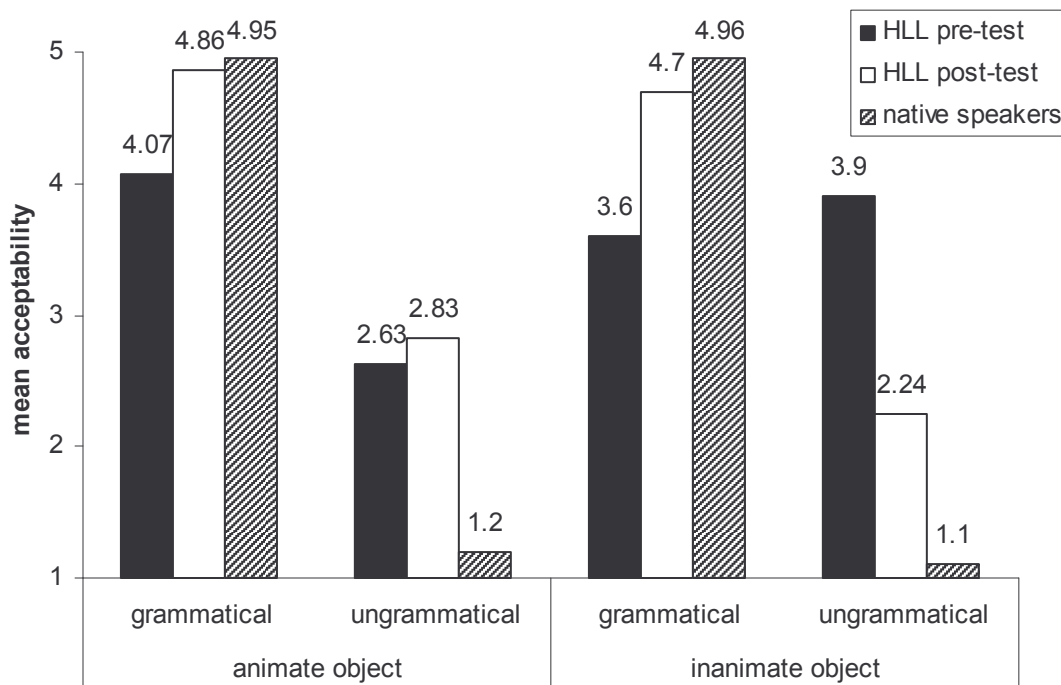


FIGURE 6

Heritage language learners' pre-test and post-test GJT ratings for grammatical and ungrammatical DOM sentences with animate direct objects

For the grammatical sentences marked with DOM (*a-personal*) the instructional treatment was effective, since there were significant changes in acceptability between the mean pre-test and post-test ratings ($t(12) = -4.282, p < 0.001$). In fact, the increase in acceptability from pre- to post-test was .79 points on a 5-point scale, and a measure of effect size confirms that this change was very large (Cohen's $d = 1.93$). However, the instruction was less effective for the ungrammatical sentences (those missing *a-personal*). The heritage language learners assigned

slightly higher acceptability ratings to these sentences on the post-test than on the pre-test, but the .23 point increase in ratings was not significant ($t(12) = -.778, p < 0.452$).

Figure 6 also shows the contrast between grammatical and ungrammatical sentences with inanimate objects, and for these sentences, the treatment was very effective. The acceptability ratings for grammatical sentences (without *a-personal*) increased significantly from pre- to post-test by 1.1 points ($t(12) = -5.588, p < 0.0001, d = 2.01$). At the same time, ratings also decreased significantly for the ungrammatical sentences with inanimate objects (with *a-personal*) (by 1.64 points) ($t(12) = 5.209, p < 0.0001, d = 1.91$).

Looking more globally, we see that at the time of the pre-test, heritage language learners assigned statistically similar ratings to both grammatical and ungrammatical sentences with inanimate objects (pre-test inanimate grammatical $M = 3.6$, inanimate ungrammatical $M = 3.9$, $t(12) = -1.586, p < 0.124$). After the treatment, however, the heritage language learners discriminated between the two sentence types, and the difference was significant: post-test inanimate grammatical $M = 4.7$, post-test inanimate ungrammatical $M = 2.4$, $t(12) = 5.832, p < 0.0001, d = 1.79$).

Significant changes from pre- to post-test also occurred with indirect objects, especially with higher acceptance of clitic doubled indirect objects (an increase of 1.82 points, $t(12) = -6.052, p < 0.0001, d = 2.68$) and lower acceptance of the ungrammatical double object construction in Spanish (a decrease of 1.57 points, $t(12) = 5.902, p < 0.0001, d = 2.24$). These results are shown in Figure 7.

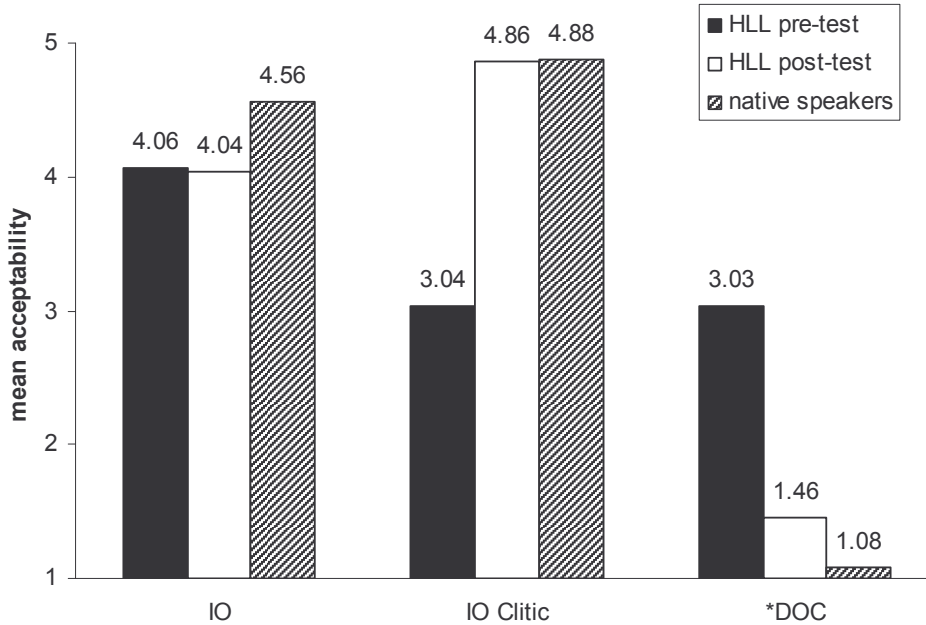


FIGURE 7

Heritage language learners' pre-test and post-test GJT ratings for grammatical and ungrammatical sentences with indirect objects

Last, Figure 8 shows changes in *gustar*-type verbs and dative experiencers obligatorily marked with *a*. The pre- and post-test changes were also significant both with grammatical (an increase of 1.23 points, $t(12) = -3.411$, $p < 0.005$, $d = 1.36$) and ungrammatical sentences (a decrease of 0.77 points, $t(12) = 7.193$, $p < 0.0001$, $d = 2.85$).

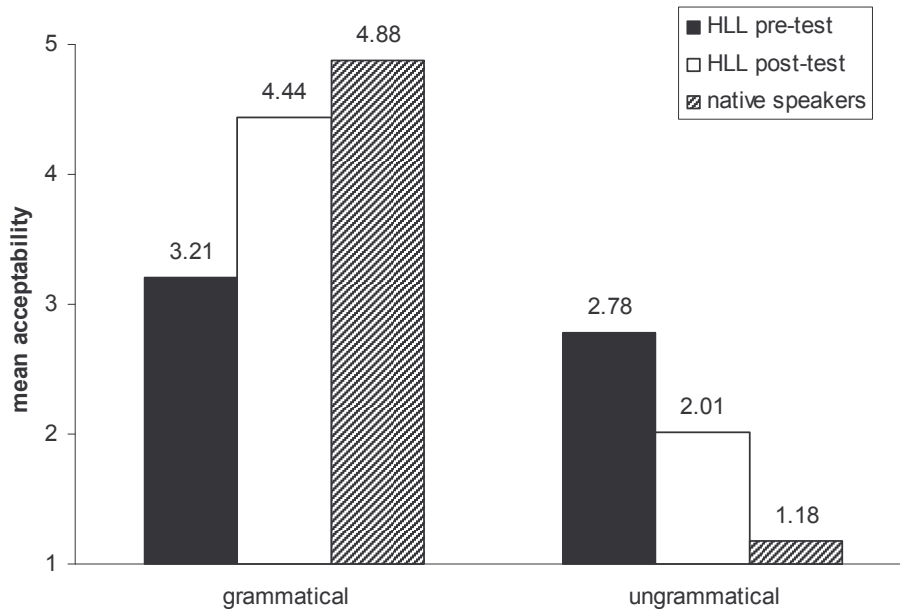


FIGURE 8
Heritage language learners' pre-test and post-test GJT ratings for grammatical and ungrammatical sentences with dative experiencers.

Taken together, these results show that the heritage language learners' ability to rate seven of nine sentence types improved after the instruction, as indicated by the large effect sizes (Cohen's d and partial eta squared above .50). This suggests that the instruction was effective on the intended targets.

6. Discussion

Recent research on the linguistic abilities of Spanish heritage speakers has revealed that these bilinguals do not mark animate, specific direct objects with the preposition *a* to the same extent that native speakers with full command of the language do (Montrul 2004, Montrul & Bowles, in press). Furthermore, Spanish heritage speakers also accept ungrammatical double object constructions in Spanish and dative experiencers without dative marking with *gustar*-type psych verbs (Montrul & Bowles, in press; Toribio & Nye, 2006). Because dative *a*-marking with

these structures is not always perceptually salient and English does not mark experiencers and animate direct objects like Spanish does, the purpose of our study was to investigate whether explicit instruction on dative *a*-marking would help instructed heritage language learners notice this gap in their linguistic knowledge. The learners completed a pre-test consisting of a PT and GJT and then one week later, they worked through an online instructional module that included explicit rule presentation, practice and feedback on the uses of the preposition *a* in Spanish with all of these constructions. Immediately after the instruction, they completed another version of the production task and the GJT as a post-test to determine whether instruction had affected their knowledge of dative case marking.

Unfortunately, we were unable to carry out the original full experimental design due to subject attrition and technical problems. As a result, we were unable to examine the results of the two tasks on the same learners, and we were unable to include a control group of uninstructed heritage language learners for the two tasks. Although we still found a statistical effect for instruction, the generalizability of our findings and their potential implications must be taken with extreme caution at this point, for those reasons.

Results from both the PT and the GJT indicate that instruction seems to have improved heritage language learners' sensitivity to *a*-marking in Spanish overall. The production task showed significant differences between those learners who completed the instructional module and those who did not, and there were substantial improvements in accuracy with obligatory *a*-marking in all of the sentence types. Similar improvements were evident in the GJT. On the pre-test, the heritage language learners differed significantly from the baseline group of Spanish native speakers, but the post-test revealed significant gains for the heritage language learners in most of the sentence types. As ratings for grammatical sentences increased from pre-test to post-

test, ratings for ungrammatical sentences decreased. However, where the instruction was apparently less effective was precisely with animate, specific direct objects marked with the preposition *a*. Even after the instruction, some heritage language learners continued to accept ungrammatical sentences without the dative preposition in the GJT, as seen from the non-significant results between the pre-test and post-test. But in the PT, there were improvements, so the results of the two tasks differed with respect to this structure. This suggests that, at least for this particular sentence type, more focused instruction and practice may be necessary, since the influence from English, the majority language, may be quite strong in this regard. In addition, of all the structures tested, this is the one that is most different from English. Alternatively, according to recent syntactic analyses (Torrego 1998), difficulty with animate, direct objects may also be related to the syntactic complexity involved. This certainly needs to be investigated in more detail. In general, our results suggest that claims about the efficacy of negative evidence and explicit corrective feedback on L2 morphosyntax hold true for heritage language reacquisition as well.

These results are highly suggestive regarding the positive role of explicit instruction in the heritage language classroom, confirming previous findings by Song, O'Grady and Cho (1997) and Potowsky, Jagerski and Morgan-Short (in press). Nonetheless, care must be taken in interpreting the findings, given the small-scale nature of this study, the short length of the instructional treatment, and the extent of subject attrition experienced. Furthermore, it is impossible for us to ascertain solely on the results of an immediate post-test whether heritage language learners *retain* gains with regard to *a*-marking with DOM, indirect objects and dative experiencers. In other words, we do not know whether the heritage language learners' grammatical systems were restructured *permanently* as a result of the instruction. Will heritage

language learners forget what they learned about dative *a*-marking three or more weeks down the road? Our next step in this project is to replicate this study with a larger sample size of heritage language learners, a control group of uninstructed learners, and a delayed post-test, ideally as much as six months after the immediate post-test. The learners tested in this study were all enrolled in Spanish for heritage speaker classes. Since we are interested in ascertaining how heritage language learners perform in regular L2 classes, in our future work we would also like to compare the magnitude of gains made by L2 learners and HL learners who appear to be at the same level of morpho-syntactic proficiency in Spanish. Are gains made by L2 learners greater than those made by heritage language learners, as Potowski, Jegerski and Morgan-Short found for the imperfect subjunctive? And furthermore, will the two types of learners retain acquired grammatical knowledge to the same extent?

Since the instruction in our study contained a variety of sources of information about the targeted structures, including positive and negative evidence, explicit rule presentation, and explicit metalinguistic feedback, it is not possible to determine the individual contributions of each to the learners' gains. In other words, positive evidence, negative evidence, and explicit feedback were not isolated as independent variables. Rather, they were all conflated as components of explicit instruction. In future studies we will also attempt to investigate the separate effects of each component in order to determine which, if any, are essential for HLA, and what similarities there are with SLA.

6. Conclusion

Although the post-test results of the heritage language learners are still not native-like, it seems that these learners do benefit from explicit instruction, including negative evidence and

feedback, in the classroom. Therefore, unlike in L1 and bilingual child acquisition, negative evidence plays a role in L2 acquisition and it also seems to play a role in heritage language reacquisition, at least in the short-term. Some focus on form may prove beneficial in the heritage language classroom.

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APPENDIX

Target sentences included in the Grammaticality Judgment Task (pre-test and post-test)Differential Object Markinganimate (with *a*-marking)

Marisa conoce a mi hermana.
 El estudiante visitó a la profesora.
 Mi hermano escuchó a Pedro en la fiesta.
 Jorge ama a Carolina apasionadamente.
 Mi hermana vio a Carmen ayer.

*animate (no *a*-marking)

*Pedro conoce el chef.
 *El jefe escuchó la secretaria.
 *Patricia invitó mi madre a su graduación.
 *Mi abuela ama todos sus nietos.
 *Mi padre vio mi hermano ayer.

*inanimate (with *a*-marking)

*Juan visitó a la biblioteca.
 *La profesora conoce a libros interesantes.
 *Mi madre ama a las pinturas de Dalí.
 *Joaquín vio a la última película de Batman.
 *Teresa escuchó a la sonata en B menor.

inanimate (no *a*-marking)

Patricio visitó el Museo del Prado.
 El juez conoce las leyes de la empresa.
 Julián ama los autos de carrera.
 Cecilia vio la exposición de arte contemporáneo.
 El hombre escuchó el partido de fútbol en la radio.

Indirect objectsindirect objects (with *a*)

Ángela envió regalos a su novio.
 Julia devolvió las llaves del coche a Elena.
 La profesora enseñó la foto a los estudiantes.
 La niña confió el secreto a su amiga.
 Andrés pidió un préstamo a su padre.

dativc clitic doubling (with *a*)

El fugitivo le envió un telegrama a un amigo.
 Teresa le devolvió el dinero a Pepe.

El arqueólogo le enseñó la piedra a los científicos.
 Juan le confió un secreto a su hermano.
 María le pidió consejos a su abogado.

*Double Object Construction (no *a*)

- *Armando envió una amiga flores.
- *Estela devolvió María el libro.
- *La profesora enseñó el estudiante la lección.
- *Francisco confió su madre un secreto.
- *Carlos pidió su novia un favor.

Clitic left dislocation (with *a*)

A su jefe le envió chocolates Paula.
 Al niño le devolvió el juguete Pablo.
 Al reportero le enseñó la nota el testigo.
 Al médico le confió su salud Andrea.
 A su esposo le pidió perdón Laura.

*Clitic left dislocations (no *a*)

- *Un amigo le envió una tarjeta Juan.
- *Susana le devolvió el plato Isabel.
- *El arquitecto le enseñó el dibujo la cliente.
- *Su general le confió la vida Enrique.
- *Su primo le pidió Raquel dinero.

Gustar-type psych verbs

Experiencer-V-Theme (with *a*)

A Juan le gusta Patricia.
 A mi madre le fascina Luciano Pavarotti.
 A Roberto le molesta su vecino.
 A Julia le encanta Brad Pitt.
 A mi jefe le interesa este candidato.

Experiencer-V-Theme (no *a*)

- *Luisa le gusta Mauricio.
- *Mi hijo le fascina Cristina Aguilera.
- *Marcos le molesta su hermana.
- *Rosa le encanta Johnny Depp.
- *Mi padre le interesa este político.

Theme-V-Experiencer (with *a*)

Julio Boca le gusta a mi abuela.
 Pavarotti le encanta a mi mamá.
 Este autor le interesa a la profesora.

Celine Don le molesta a mi marido.
Ese deportista le fascina a mi hermano.

Theme-V-Experiencer (no a)

- *Britney Spears le gusta Julio.
- *Plácido Domingo le fascina mi suegro.
- *Sponge Bob le molesta José.
- *Tom Cruise le encanta Nuria.
- *Este futbolista le interesa mi padre.