

The sequential acquisition of L2 Spanish gender marking: Assignment and agreement

Irma Alarcón

INTRODUCTION

In Spanish, all nouns, whether their referent is animate or inanimate, are assigned either masculine or feminine gender. For animate nouns, gender is related to the idea of sex, and is thus considered natural or inherent gender. For example: *padre* (father) is masculine, and *madre* (mother) is feminine. When nouns, particularly inanimate ones, do not have natural gender, their gender assignment is strictly grammatical. The noun *espejo* (mirror) is masculine, which simply means the articles and adjectives it takes are masculine, as in *un espejo redondo* (a round mirror).

Nouns having natural gender can be classified as follows: nouns expressing gender with two different lexical items, such as *hombre* (man) and *mujer* (woman); nouns in which the masculine form ends in “-o” and the feminine form ends in “-a”, such as *hijo* (son) and *hija* (daughter); nouns with the feminine form ending in an “-a” but the masculine form ending in “zero”, such as *profesora* (female professor) and *profesor* (male professor); and, finally, nouns having one invariant form for both masculine and feminine, such as *joven* (young person) in which the article or adjective shows whether the referent is male or female, such as in *el/la joven* (the young man/the young woman).

Nouns bearing grammatical gender can also be classified as: nouns that end in “-o” for masculine and “-a” for feminine, such as *el almuerzo* (lunch), and *la lengua* (language); nouns that are either masculine or feminine depending on the modifying words they take, since there is nothing in the surface form or the meaning that serves as a clue for determining their gender, as in *la identidad* (the identity), and *un examen largo* (a long exam); nouns that end in “-o” but are feminine, and nouns that end in “-a” but are masculine, such as *la mano* (the hand), and *el día* (the day); ambiguous nouns that can be either masculine and feminine, such as *el lente* (the lens), and *la lente* (the lens); and finally, nouns that have one form, but change their meaning when used as masculine or feminine, such as *el capital* (the money), and *la capital* (the capital).

In Spanish, the noun determines the gender of the accompanying elements in the phrase (Roa, 1993, p. 44). Thus, identifying the gender of nouns, i.e., gender assignment, is fundamental for acquiring the Spanish gender system. The Spanish system requires that the marking of a noun be reflected overtly by the other components of the noun phrase or clause. This is done by providing appropriate elements that match the gender of the noun, i.e., gender agreement. Consequently, learners of Spanish need to acquire both gender assignment and gender agreement in their interlanguage systems to be able to communicate efficiently in the target language.

PREVIOUS STUDIES

Andersen (1984) examined both inherent and grammatical gender in oral production. In a case study of a non-instructed English-speaking learner of Spanish, he interviewed a twelve-year-old boy for an hour. His findings revealed that his subject marked inherent gender “overtly, clearly, and consistently, but that he disregards totally all other gender marking” (p. 80). His subject produced correctly marked nouns 95 times in a sample of 100 nouns, for example, *hermano* (brother) and *papel* (paper). However,

Anthony, the subject, did not show article-noun agreement, using only *un* and *la* with no marking for gender or number, such as in *un nena y un nene* (a girl and a boy), and *la ... esposas y la esposos* (the ... wives and the husbands). Furthermore, he used only the masculine unmarked form for quantifiers, determiners and adjectives. His subject also displayed the influence of English in certain contexts, including the possessive constructions *Brian amigo* (Brian's friend) and *él mamá* (his mother). According to the author, "transfer applies in these cases precisely because it leads to a semantically 'reasonable' and economical system" (p. 89), which was the kind of system his subject had: a very simplified Spanish system. In addition, Andersen considered whether the restricted system of gender his subject possessed was a liability, either for learning Spanish, or for communicating with native speakers. His findings showed that Anthony did have problems in both learning and communicating in his L2.

In a study of first-year Spanish learners, Finnemann (1992) reported the noun phrase agreement behavior displayed by three university freshmen during a period of six months. His data consisted of nine semi-guided conversation sessions taped in two-to-three week intervals. His results showed that "learners operate with default values in the acquisition of both number and gender agreement; each subject showed a preference for singular and masculine forms of modifiers" (p. 134). In addition, Finnemann found that number agreement improved far more quickly for all subjects than gender agreement. Gender agreement was found to be influenced by the properties of the referent: "all subjects showed a high rate of agreement with 'self' and with human female referents. On the other hand, nouns with ambiguous human reference ... were frequently treated as unmarked masculine" (p. 134). Furthermore, Finnemann claimed that "the individual's propensity to use the 'marked' form may be a revealing feature of the learner's basic cognitive acquisition strategy" (p. 134): meaning-oriented learners tend to use the unmarked forms, while form-oriented learners make more use of the marked forms (pp. 133-134).

In a different study, Fernández-García (1999) examined gender agreement in the noun phrase by intermediate second language learners of Spanish. The purpose was to determine "whether there would be any identifiable patterns in the gender agreement behavior of learners at this stage of acquisition of the language" (p. 6). The participants were seven native English-speaking university juniors, and the data were taken from one-hour tape-recorded interviews. Nouns and modifiers in a noun phrase were codified for errors in gender agreement. Nouns were categorized as gender marked, non-gender marked, or deceptively marked, and for the presence or absence of semantically marked gender. In addition, Fernández-García included (in)definite articles and adjectives as modifiers. Results revealed that most subjects performed better in masculine contexts. Furthermore, masculine forms were especially overused with indefinite articles and adjectives. Fernández-García also found that her subjects were more accurate with articles than adjectives, leading her to conclude that gender agreement with the article is acquired earlier than with the adjective. Rates of accuracy for -o/-a nouns were found to be higher than for non-overtly marked nouns. Also, the subjects performed better with nouns that were inherently marked for gender. Finally, according to Fernández-García, "the gender of the referent may play a role in gender agreement in adult second language acquisition" (p. 13).

An analysis of native Spanish children acquiring gender is offered in an experimental study done by Pérez-Pereira (1991). The purpose of his study was to “determine the relative importance of intralinguistic and extralinguistic clues, as evidenced by the ability of Spanish children to recognize the gender of a noun upon hearing it in a particular frame, and consequently, to establish the agreement of other variable elements accompanying it” (p. 571). In order to test these different clues in children aged 4-11, Pérez-Pereira used colored pictures of imaginary beings showing either natural or mixed gender, and bearing invented names with masculine, feminine, and unmarked endings. His experiment was designed to use different combinations of clues with twenty-two invented nouns. His results strongly reveal that children “rely on intralinguistic rather than extralinguistic information to recognize the gender of a noun and to establish gender agreement” (p. 588).

Hardison (1992) investigated the acquisition of grammatical gender in French to study the development of formal accuracy of L2 learners in assigning gender. She also examined the strategies learners use when establishing agreement. Her subjects were college students taking non-required French courses. The tasks involved selecting the appropriate article according to the gender of the noun they heard. Then they were asked to circle a number, on a scale from 1 to 4, representing the confidence with which each gender decision was made. Finally, they were asked to describe the strategies they used to assign gender. Her findings showed that “L2 learners utilize gender-noun ending correspondences in the language learning environment to formulate rules of association based on the most salient member of each phonetic ending category” (p. 304). Thus, the category [ad] was correctly associated with feminine gender, including *promenade* (walk) and *limonade* (lemon soda). The results of the study also demonstrated that “learners are processing cues indicative of gender and utilizing strategies similar to those used by native speakers” (p. 304), such as focusing on the noun ending, recalling previous experience with more familiar nouns, and using the article that “sounds best.”

Research done on the acquisition of gender in Spanish and other languages has focused either on the analysis of errors learners make in gender agreement (Andersen, 1984; Finnemann, 1992; Fernández-García, 1999) or on the clues and strategies learners use to identify the gender of a noun (Pérez-Pereira, 1991; Hardison, 1992). However, none of these studies has considered developmental acquisition of Spanish gender marking. This paper examines the acquisition of Spanish gender marking, including both gender assignment and gender agreement, by English-speaking learners of Spanish at four different levels: first-, second-, third-, and fourth-semester university Spanish. The purpose is to see how the length of exposure to Spanish affects the acquisition of Spanish gender marking.

PRESENT STUDY

The following research questions guided the study:

- 1) Does length of exposure affect acquisition of Spanish gender marking?
- 2) Is natural gender acquired before grammatical gender?
- 3) When do learners acquire deceptively and non-overtly marked nouns?
- 4) Do learners tend to overuse the unmarked masculine forms?
- 5) What is the relationship between the acquisition of gender assignment and gender agreement?

METHOD

Subjects

The 69 English-speaking learners of Spanish who participated in this study were enrolled in four different levels of Spanish courses at Indiana University: first-, second-, third-, and fourth-semester (S100, S150, S200, and S250, respectively). The distribution of the subjects by level is shown in Table 1.

Table 1: Subjects' distribution according to number and sex

Spanish Level	Number of subjects	Female / Male subjects
S100	15	6 F / 9 M
S150	20	9 F / 11 M
S200	17	12 F / 5 M
S250	17	11 F / 6 M
Total	69	38 F / 31 M

The subjects' linguistic learning experience in Spanish is fairly homogeneous, since it is restricted to Spanish as a foreign language, and since 97% of the participants in this study (67/69) had never studied in a Spanish speaking country. More important, most of the subjects in the higher-level courses had previously taken the lower-level classes, although a few of the subjects had tested out of some of the earlier courses. (See Appendix A for details.)

Materials and procedures

Data collection consisted of a two-part written test in which the subjects were first asked to indicate whether each given noun from a list of 24 nouns was masculine or feminine by writing the appropriate definite article - *el, la, los, las* - in front of the word (gender assignment). The second part briefly described 12 situations, and asked the subjects to write an appropriate adjective according to the context (gender agreement). See examples A and B for a sample of questions from parts I and II, respectively. The complete test is included in Appendix B.

Example A

Part I. Write *el, la, los* or *las* next to the corresponding word. If you don't know, write "?"

- 1) _____ *productos* (products-masculine)
- 2) _____ *día* (day-masculine)
- 3) _____ *nariz* (nose-feminine)

Example B

Part II. Write an appropriate adjective according to the situation.

- 1) *Mi compañera tiene 5 exámenes mañana. Está muy _____.*
(My classmate has 5 exams tomorrow. (She) is very _____).

2) *Carlos prefiere chicas con manos _____*.
 (Carlos prefers women with hands _____).

3) *Einstein creó la Teoría de la Relatividad. Fue un hombre _____*.
 (Einstein created the Theory of Relativity. (He) was a man _____).

The nouns included in the test were taken from the two textbooks learners were using in their college classes. These nouns were categorized as (1) Natural gender nouns that were either a) overtly marked (-o/-a endings): *el caballo* and *la vecina*, b) non-overtly marked (any other vowel or consonant endings): *el presidente* and *las mujeres*, or c) zero/-a alternation: *el adivinador* and *la escultora*; or (2) Grammatical gender nouns that were either a) overtly marked: *el almuerzo* and *la lengua*, b) non-overtly marked: *el examen* and *la nariz*, or c) deceptively marked: *el idioma* and *la mano*.¹

Noun categories and subcategories were equally distributed on the test, including feminine and masculine nouns, with singular and plural forms. The distribution of the nouns in each of these categories and subcategories is given in Tables 2 and 3.

Table 2: Noun categories and subcategories for gender assignment (part I)

Noun subcategories	Natural gender	Grammatical gender
Overtly marked (-o/-a ending)	caballo, <i>horse</i> (m/s) camarera, <i>waitress</i> (f/s) arquitectos, <i>male architects</i> (m/p) vecinas, <i>female neighbors</i> (f/p)	almuerzo, <i>lunch</i> (m/s) lengua, <i>language</i> (f/s) productos, <i>products</i> (m/p) tiendas, <i>stores</i> (f/p)
Non-overtly marked (-e/-C ending)*	presidente, <i>male president</i> (m/s) gente, <i>people</i> (f/s) tigres, <i>tigers</i> (m/p) mujeres, <i>women</i> (f/p)	examen, <i>exam</i> (m/s) nariz, <i>nose</i> (f/s) menús, <i>menus</i> (m/p) identidades, <i>identities</i> (f/p)
Zero/-a alternation	adivinator, <i>male psychic</i> (m/s) escultora, <i>sculptoress</i> (f/s) profesores, <i>male teachers</i> (m/p) directoras, <i>female directors</i> (f/p)	-----
Deceptively marked	-----	día, <i>day</i> (m/s) mano, <i>hand</i> (f/s) emblema, <i>seal</i> (m/s) idioma, <i>language</i> (m/s)

*-C = consonant

Table 3: Noun categories and subcategories for gender agreement (part II)

Noun subcategories	Natural gender	Grammatical gender
Overtly marked (-o/-a ending)	primo, <i>male cousin</i> (m/s) compañera, <i>female classmate</i> (f/s)	pelo, <i>hair</i> (m/s) ropa, <i>clothes</i> (f/s)
Non-overtly marked (-e/-C ending)	hombre, <i>man</i> (m/s) mujeres, <i>women</i> (f/p)	chiste, <i>joke</i> (m/s) habitación, <i>bedroom</i> (f/s)
Zero/-a alternation	pintor, <i>male painter</i> (m/s) diseñadora, <i>female designer</i> (f/s)	-----
Deceptively marked	-----	programas, <i>programs</i> (m/p) manos, <i>hands</i> (f/p)

¹ English glosses for these nouns are provided in Tables 2 and 3.

ANALYSIS AND RESULTS

Gender assignment

A. Natural gender assignment: individual word scores

The majority of S100 subjects (over 90%) assigned correct gender to all overtly marked nouns, for example *caballo* (horse) and *camarera* (waitress). This was not the case with non-overtly marked nouns, in which only *presidente* (president) was assigned correct gender by all subjects (100%). The nouns *gente* (people) and *tigres* (tigers) received low accurate gender marking rates of 27% and 47%, respectively. The word *mujeres* (women) was assigned correct gender by half of the subjects (53%). Two zero/-a alternation nouns, *escultora* (sculptress) and *profesores* (teachers-masculine), showed correct gender assignment by over 90% of the subjects. The word *adivinator* (psychic-masculine) was assigned correct masculine gender by 87% of the subjects, and *directoras* (directors-feminine) by 67% of them. Table 4 summarizes this data.

Table 4: S100 subjects' natural gender assignment

-o/-a ending	non-overtly marked	zero/-a alternation
caballo: 15/15 - 100 %	presidente: 15/15 - 100 %	adivinator: 13/15 - 87 %
camarera: 14/15 - 93 %	gente: 4/15 - 27 %	escultora: 14/15 - 93 %
arquitectos: 15/15 - 100 %	tigres: 7/15 - 47 %	profesores: 14/15 - 93 %
vecinas: 14/15 - 93 %	mujeres: 8/15 - 53 %	directoras: 10/15 - 67 %

S150 subjects were similarly proficient concerning overtly marked nouns: most of the subjects assigned gender correctly to these nouns. The non-overtly marked noun *presidente* was assigned correct gender by 100% of the subjects. Half of the subjects (10/20) identified both *mujeres*, and *gente* as feminine; and *tigres* was assigned correct gender by 80% of the subjects. Moreover, all nouns showing zero/-a alternation were assigned correct gender by over 90% of the subjects. See Table 5.

Table 5: S150 subjects' natural gender assignment

-o/-a ending	Non-overtly marked	zero/-a alternation
caballo: 20/20 - 100 %	presidente: 20/20 - 100 %	adivinator: 18/20 - 90 %
camarera: 20/20 - 100 %	gente: 10/20 - 50 %	escultora: 20/20 - 100 %
arquitectos: 19/20 - 95 %	tigres: 16/20 - 80 %	profesores: 18/20 - 90 %
vecinas: 20/20 - 100 %	mujeres: 10/20 - 50 %	directoras: 18/20 - 90 %

All S200 subjects assigned correct gender to all -o/-a ending nouns. Two non-overtly marked nouns, *presidente* and *tigres*, were assigned correct gender by over 90% of the subjects. The word *gente* shows a low accurate rate for gender assignment (41%), higher than S100 (27%), but lower than S150 (50%). However, *mujeres* was assigned correct gender by 76% of the subjects, a higher rate than the previous levels. Three zero/-a alternation nouns were assigned correct gender by 100% of the subjects, *escultora*, *profesores* and *directoras*. The noun *adivinator* was assigned correct gender by only 76% of the subjects, lower than the two previous levels. Table 6 shows this information.

Table 6: S200 subjects' natural gender assignment

-o/-a ending	Non-overtly marked	zero/-a alternation
caballo: 17/17 - 100 %	presidente: 17/17 - 100 %	adivinator: 13/17 - 76 %
camarera: 17/17 - 100 %	gente: 7/17 - 41 %	escultora: 17/17 - 100 %
arquitectos: 17/17 - 100 %	tigres: 16/17 - 94 %	profesores: 17/17 - 100 %
vecinas: 17/17 - 100 %	mujeres: 13/17 - 76 %	directoras: 17/17 - 100 %

Almost all of the S250 subjects assigned correct gender to -o/-a ending nouns. As seen in the other levels, the rate of accuracy for the non-overtly marked noun *presidente* was also 100%. In addition, the noun *mujeres* was also assigned correct gender by 100% of the subjects. The word *gente* was assigned correct feminine gender by 88% of the S250 subjects, double the S200 rate (41%). 82% of the subjects identified *tigres* as a masculine plural noun. Finally, S250 subjects behaved exactly as S200 subjects in zero/-a alternation nouns. Table 7 displays this data.

Table 7: S250 subjects' natural gender assignment

-o/-a ending	Non-overtly marked	zero/-a alternation
caballo: 17/17 - 100 %	presidente: 17/17 - 100 %	adivinator: 13/17 - 76 %
camarera: 16/17 - 94 %	gente: 15/17 - 88 %	escultora: 17/17 - 100 %
arquitectos: 17/17 - 100 %	tigres: 14/17 - 82 %	profesores: 17/17 - 100 %
vecinas: 17/17 - 100 %	mujeres: 17/17 - 100 %	directoras: 17/17 - 100 %

B. Grammatical gender assignment: individual word scores

Three out of four overtly marked nouns were identified correctly by over 90% of S100 subjects; the noun *almuerzo* (lunch) was assigned gender correctly by 80% of the subjects. Percentages of correct gender assignment for non-overtly marked nouns ranged from 27% for *identidades* (identities) to 73% for *menús* (menus). Rates for correct gender assignment for all deceptively marked nouns fall below 30%, with the nouns *mano* (hand), *emblema* (symbol), and *idioma* (language) having only 13% correct gender assignment each. This is shown in Table 8.

Table 8: S100 subjects' grammatical gender assignment

-o/-a ending	Non-overtly marked	deceptively marked
almuerzo: 12/15 - 80 %	examen: 10/15 - 67 %	día: 4/15 - 27 %
lengua: 14/15 - 93 %	nariz: 6/15 - 40 %	mano: 2/15 - 13 %
productos: 15/15 - 100 %	menús: 11/15 - 73 %	emblema: 2/15 - 13 %
tiendas: 15/15 - 100 %	identidades: 4/15 - 27 %	idioma: 2/15 - 13 %

S150 subjects performed similarly to S100 subjects when assigning correct gender to overtly marked nouns: most subjects (over 85%) were accurate. Non-overtly marked nouns show a wider range of correct gender assignment, from 20% for *identidades* to 90% correct gender assignment for *examen*. The deceptively marked noun *emblema* was not identified as masculine by any subject (0%). The noun *mano* was assigned feminine gender by only 5% of the subjects. These rates are lower than those of S100 for the same two nouns. But higher rates than S100 are found for *día* (70%) and *idioma* (20%). Table 9 displays this data.

Table 9: S150 subjects' grammatical gender assignment

-o/-a ending	Non-overtly marked	deceptively marked
almuerzo: 17/20 - 85 %	examen: 18/20 - 90 %	día: 14/20 - 70 %
lengua: 17/20 - 85 %	nariz: 11/20 - 55 %	mano: 1/20 - 5 %
productos: 20/20 - 100 %	menús: 18/20 - 90 %	emblema: 0/20 - 0 %
tiendas: 20/20 - 100 %	identidades: 4/20 - 20 %	idioma: 4/20 - 20 %

S200 subjects also performed better when assigning gender to -o/-a ending nouns, with over 90% correct gender assignment, than to the other categories. The non-overtly marked noun *identidades* had a lower rate than for S100 (27%) or S150 (20%), only 12% correct gender assignment. In the same category, though, *examen* was assigned correct gender by 100% of the subjects. The word *nariz* was identified as feminine by 47% of the subjects, and *menús* was assigned correct masculine gender by 94%. The rates for correct gender assignment of deceptively marked nouns ranged from 65% for *día* to 5% for *emblema*. This information is summarized in Table 10.

Table 10: S200 subjects' grammatical gender assignment

-o/-a ending	Non-overtly marked	deceptively marked
almuerzo: 17/17 - 100 %	examen: 17/17 - 100 %	día: 11/17 - 65 %
lengua: 16/17 - 94 %	nariz: 8/17 - 47 %	mano: 4/17 - 24 %
productos: 17/17 - 100 %	menús: 16/17 - 94 %	emblema: 1/17 - 5 %
tiendas: 17/17 - 100 %	identidades: 2/17 - 12 %	idioma: 6/17 - 35 %

Most S250 subjects assigned gender correctly to overtly marked nouns. For non-overtly marked nouns, though, their success was higher compared to S200 subjects in some cases, such as *nariz* (59%) and *identidades* (35%), but lower for nouns such as *examen* and *menús* (both 88%). As Table 11 shows, more S250 subjects identified the correct gender of deceptively marked nouns than at any previous level, *día* (94%), *mano* (35%), *emblema* (24%), and *idioma* (41%), although the latter three rates are low.

Table 11: S250 subjects' grammatical gender assignment

-o/-a ending	Non-overtly marked	deceptively marked
almuerzo: 17/17 - 100 %	examen: 15/17 - 88 %	día: 16/17 - 94 %
lengua: 15/17 - 88 %	nariz: 10/17 - 59 %	mano: 6/17 - 35 %
productos: 17/17 - 100 %	menús: 15/17 - 88 %	emblema: 4/17 - 24 %
tiendas: 16/17 - 94 %	identidades: 6/17 - 35 %	idioma: 7/17 - 41 %

C. Natural and grammatical gender assignment: group scores

Combining the results of the individual nouns in each subcategory reveals that subjects at each level assign gender correctly to -o/-a ending nouns in over 90% of the cases, for both natural and grammatical gender nouns. Non-overtly marked natural nouns show strong development, which extends from 57% (S100) to 93% (S250) of correct gender assignment by the subjects' fourth semester. Non-overtly marked grammatical nouns display weak development, with correct gender assignment reaching only 68% for the fourth semester subjects. Zero/-a alternation nouns show high rates of correct gender assignment, which increases in the first three levels, and stabilizes in S250. Deceptively

marked nouns also exhibit substantial development, but reach only 49% correct gender assignment by the S250 subjects. This is indicated in Table 12.

Table 12: Group scores for gender assignment according to noun subcategories

SPANISH LEVEL	NATURAL GENDER			GRAMMATICAL GENDER		
	-o/-a ending	non-overtly marked	zero/-a alternation	-o/-a ending	non-overtly marked	deceptively marked
S100 (15x24=360)	97 % (58/60)	57 % (34/60)	85 % (51/60)	93 % (56/60)	52 % (31/60)	17 % (10/60)
S150 (20x24=480)	99 % (79/80)	71 % (57/80)	93 % (74/80)	93 % (74/80)	64 % (51/80)	24 % (19/80)
S200 (17x24=408)	100% (68/68)	78 % (53/68)	94 % (64/68)	99 % (67/68)	63 % (43/68)	32 % (22/68)
S250 (17x24=408)	99 % (67/68)	93 % (63/68)	94 % (64/68)	96 % (65/68)	68 % (46/68)	49 % (33/68)

These results show that gender assignment improves at each level and that, at all levels, gender is correctly assigned more frequently to natural than to grammatical gender nouns. By the fourth semester, gender is correctly assigned to the former at a 95% rate, but to the latter at a rate of only 71%. This information, and the figures combining the two categories, is provided in Table 13.

Table 13: Scores for gender assignment according to natural and grammatical nouns

LEVEL	NATURAL	GRAMMATICAL	TOTAL
S100 (15x24=360)	79 % (143/180)	54 % (97/180)	67 % (240/360)
S150 (20x24=480)	88 % (210/240)	60 % (144/240)	74 % (354/480)
S200 (17x24=408)	91 % (185/204)	65 % (132/204)	78 % (317/408)
S250 (17x24=408)	95 % (194/204)	71 % (144/204)	83 % (338/408)

D. Gender assignment: preferred gender in cases of incorrect gender assignment

Natural gender nouns

When S100 subjects do not assign natural gender correctly, 72% of the time they assign masculine gender to feminine nouns (26/36). A similar situation is observed at the S150 and S200 levels, in which subjects tend to overuse the masculine forms with feminine referents at a rate of 70% (21/30) and 78% (14/18), respectively. In contrast, S250 subjects show a tendency to overuse feminine gender forms with masculine nouns at a rate of 70% (7/10).

Grammatical gender nouns

At all levels, rates for grammatical gender nouns reveal no striking preference for either masculine or feminine forms. Nonetheless, S100 subjects show the lowest preference for masculine forms with feminine referents, 41% (34/82). S150 subjects reflect no preference, since they use both masculine and feminine forms in the same proportion (50%). Both S200 and S250 subjects show the same behavior, with 54% of their incorrect responses assigning masculine forms to feminine nouns. See Table 14.

Table 14: Preferred gender forms according to natural and grammatical gender nouns

SUBJECTS	NATURAL GENDER		GRAMMATICAL GENDER	
	Femenine nouns assigned masculine gender	Masculine nouns assigned fememine gender	Femenine nouns assigned masculine gender	Masculine nouns assigned fememine gender
S100 (15 subjects)	72 % (26/36)	28 % (10/36)	41 % (34/82)	59 % (48/82)
S150 (20 subjects)	70 % (21/30)	30 % (9/30)	50 % (47/94)	50 % (47/94)
S200 (17 subjects)	78 % (14/18)	22 % (4/18)	54 % (38/71)	46 % (33/71)
S250 (17 subjects)	30 % (3/10)	70 % (7/10)	54 % (32/59)	46 % (27/59)

Gender agreement

A. Gender agreement: what learners produce

This section of the test showed a variety of responses. Subjects provided forms showing three types of agreement: 1) target-like agreement (TA), implying a completely native-like agreement in meaning and form, such as *diseñadora famosa, pelo negro*, and *manos pequeñas*; 2) grammatical agreement (GA), which refers to agreement where the adjectival form is native-like, but the meaning is not, such as in *primo contento* (happy cousin) for a context requiring *enojado* (angry), *mujeres contentas* (happy women) instead of *cansadas* (tired), and *pelo bajos* (small hair), for *corto* (short); and 3) invented word agreement (IA), consisting of an invented word reflecting correct agreement, as in *ropa expensitiva* for *ropa cara*, *primo alegre* for *primo alegre*, and *ropa confortadora* for *ropa cómoda*. Subjects also provided forms ending in -e or consonant that do not reveal gender: *pintor brillante*, *hombre inteligente*, and *manos grandes*. In addition, subjects produced forms without showing agreement, such as *compañera tenso*, *mujeres agobiado*, and *pintor moderna*. Subjects also responded with different appropriate answers, including adverbs or adverbial phrases, for example *chiste-más*, *programas-de la television*, and *diseñadora-en Los Angeles*. Some of the subjects' responses were nonsensical, as in *ropa-en el restaurante*, *hombre-realidad*, and *primo-muchos amigos*. Finally, some subjects opted for omitting a response.

Table 15 shows the distribution of subjects' responses by level. (For the percentages of subjects showing agreement for each individual noun, see Appendix C.) Rates for agreement (TA, GA, IA) are not very high, but they show steady improvement as level increases. The percentage of -e/-C ending nouns also increases by level, but these forms do not reveal gender agreement. Non-agreement forms remain stable along all four levels. The percentage of appropriate answers without an adjective is very low, and decreases at the S250 level. The percentage of nonsensical responses also decreases, from 22% (S100) to 8% (S250). Also, the percentage of omitted responses diminishes by the subjects' fourth semester: S100 subjects do not respond in 35% (64/180) of the cases, and S250 subjects omit responses in only 7% (15/204).

Table 15: Distribution of subjects' responses by Spanish level

LEVEL	Agreement (TA, GA, IA)*	Non-revealing	Non-agreement	Different appropriate response	Response without any sense	No response	TOTAL
S100	18 % (32/180)	12 % (22/180)	11 % (20/180)	2 % (3/180)	22 % (39/180)	35 % (64/180)	100 % (180/180)
S150	26 % (63/240)	19 % (46/240)	15 % (35/240)	3 % (8/240)	25 % (59/240)	12 % (29/240)	100 % (240/240)
S200	39 % (79/204)	20 % (41/204)	17 % (36/204)	2 % (4/204)	12 % (24/204)	10 % (20/204)	100 % (204/204)
S250	47 % (96/204)	21 % (42/204)	16 % (33/204)	1 % (2/204)	8 % (16/204)	7 % (15/204)	100 % (204/204)

* TA = target-like agreement; GA = grammatical agreement; IA = invented word agreement

B. Gender agreement: group scores according to noun categories and subcategories

Considering only forms that show agreement (TA, GA, IA), distribution by noun categories/subcategories reveals improvement at all levels, and for almost every noun subcategory. (The two exceptions are non-overtly marked natural nouns for S250 and non-overtly marked grammatical nouns for S200.). However, agreement rates for natural gender nouns, in general, are lower than the rates for grammatical gender nouns. Thus, by the subjects' fourth semester, correct agreement rates for overtly marked natural nouns (47%) are much lower than for overtly marked grammatical noun (82%); the rates for non-overtly marked natural nouns (38%) are also lower than for their grammatical counterparts (41%), though very close. Finally, zero/-a alternation nouns show only 26% agreement, and deceptively marked nouns show 47% agreement. These results are displayed in Table 16.

Table 16: Gender agreement according to noun categories

LEVEL	NATURAL GENDER			GRAMMATICAL GENDER		
	-o/-a ending	non-overtly marked	zero/-a alternation	-o/-a ending	non-overtly marked	deceptively marked
S100 (15x12=180)	7 % (2/30)	17 % (5/30)	13 % (4/30)	37 % (11/30)	13 % (4/30)	20 % (6/30)
S150 (20x12=240)	32 % (13/40)	18 % (7/40)	20 % (8/40)	42 % (17/40)	23 % (9/40)	23 % (9/40)
S200 (17x12=204)	41 % (14/34)	38 % (13/34)	32 % (11/34)	70 % (24/34)	18 % (6/34)	32 % (11/34)
S250 (17x12=204)	47 % (16/34)	38 % (13/34)	26 % (9/34)	82 % (28/34)	41 % (14/34)	47 % (16/34)

C. Gender agreement: distribution of agreement according to type and level

The distribution of the different types of agreement, TA, GA, and IA, is given in Table 17. There is clear improvement in the use of target-like forms (TA) with natural gender nouns. For grammatical gender nouns, target-like rates are higher and more consistent, moving from 90% in S100 to 97% at the S250 level. The rate of grammatical agreement (GA) in natural nouns decreases as level increases, from 64% in S100 to 21% in S250. But GA with grammatical gender nouns is strikingly low compared with that of

natural gender nouns, with a rate of 5% in S100 decreasing to 0% in S250. Rates for invented word agreement (IA) in both natural and grammatical nouns are fairly low, and completely absent with natural gender nouns by the subjects' fourth semester.

Table 17: Distribution of the different types of agreement

LEVEL	NATURAL GENDER				GRAMMATICAL GENDER			
	TA	GA	IA	TOTAL	TA	GA	IA	TOTAL
S100	36 % (4/11)	64 % (7/11)	0 % (0/11)	100 % (11/11)	90 % (19/21)	5 % (1/21)	5 % (1/21)	100 % (21/21)
S150	64 % (18/28)	32 % (9/28)	4 % (1/28)	100 % (28/28)	86 % (30/35)	6 % (2/35)	8 % (3/35)	100 % (35/35)
S200	74 % (28/38)	24 % (9/38)	2 % (1/38)	100 % (38/38)	93 % (38/41)	5 % (2/41)	2 % (1/41)	100 % (41/41)
S250	79 % (30/38)	21 % (8/38)	0 % (0/38)	100 % (38/38)	97 % (56/58)	0 % (0/58)	3 % (2/58)	100 % (58/58)

D. Gender agreement: overall gender agreement scores

Results for gender agreement demonstrate development at all levels with both natural and grammatical gender nouns. Nevertheless, as Table 18 displays, rates for agreement with natural gender nouns are lower than those for grammatical gender nouns, at all levels.

Table 18: Gender agreement: group scores according to natural and grammatical nouns

LEVEL	GENDER AGREEMENT		
	NATURAL	GRAMMATICAL	TOTAL
S100 (15x12 = 180)	12 % (11/90)	23 % (21/90)	18 % (32/180)
S150 (20x12 = 240)	23 % (28/120)	29 % (35/120)	26 % (63/240)
S200 (17x12 = 204)	37 % (38/102)	40 % (41/102)	39 % (79/204)
S250 (17x12 = 204)	37 % (38/102)	57 % (58/102)	47 % (96/204)

Although S250 subjects exhibit 37% agreement for natural gender nouns, thus showing no improvement over the S200 subjects, this can be accounted for by the high production (50%) of non-revealing forms (-e/-C ending words) the S250 subjects produced. See Table 19.

Table 19: Non-revealing forms with natural gender nouns

LEVEL	-o/-a ending	Non-overtly marked	zero/-a ending	Total
S100 (n=15)	17 % (5/30)	20 % (6/30)	13 % (4/30)	17 % (15/90)
S150 (n=20)	18 % (7/40)	38 % (15/40)	18 % (7/40)	24 % (29/120)
S200 (n=17)	24 % (8/34)	35 % (12/34)	15 % (5/34)	25 % (25/102)
S250 (n=17)	21 % (7/34)	50 % (17/34)	18 % (6/34)	30 % (30/102)

E. Gender agreement: preferred gender forms with incorrect gender agreement

With natural gender nouns, subjects at all levels tend to use more masculine adjectives with feminine referents than feminine adjectives with masculine referents. Subjects clearly prefer masculine over feminine forms when providing an adjective that does not agree with the referent. Table 20 reveals the same pattern with grammatical gender nouns. The results for natural and grammatical gender nouns are combined in Table 21, further clarifying the substantial tendency to use more masculine adjectives with feminine nouns than feminine adjectives with masculine nouns.

Table 20: Preferred gender forms according to natural and grammatical gender nouns

SUBJECTS	NATURAL GENDER		GRAMMATICAL GENDER	
	Feminine nouns with masculine adjectives	Masculine nouns with feminine adjectives	Feminine nouns with masculine adjectives	Masculine nouns with feminine Adjectives
S100 (15 subjects)	67 % (4/6)	33 % (2/6)	57 % (8/14)	43 % (6/14)
S150 (20 subjects)	79 % (11/14)	21 % (3/14)	71 % (15/21)	29 % (6/21)
S200 (17 subjects)	80% (8/10)	20 % (2/10)	73 % (19/26)	27 % (7/26)
S250 (17 subjects)	70 % (7/10)	30 % (3/10)	78 % (18/23)	22 % (5/23)

Table 21: Preferred gender forms with incorrect gender agreement

SUBJECTS	Feminine nouns with non-agreeing masculine adjectives	Masculine nouns with non-agreeing feminine adjectives
S100 (15 subjects)	60 % (12/20)	40 % (8/20)
S150 (20 subjects)	74 % (26/35)	26 % (9/35)
S200 (17 subjects)	75 % (27/36)	25 % (9/36)
S250 (17 subjects)	76 % (25/33)	24 % (8/33)

F. Gender agreement: deceptively marked nouns

Deceptively marked nouns, such as *programas* and *manos*, have been analyzed separately because, though they are not transparent for gender as are overtly marked forms, they mislead learners by bearing the opposite gender of what the overt markings usually suggest. Deceptive nouns ending in -a are masculine (*idioma*, for example), and those ending in -o are feminine (such as *mano*).

Table 22 shows how subjects responded to the noun *programas*. Rates for correct agreement are low, but there is steady improvement. The majority of S100 subjects tend to provide a non-agreeing adjective (33%), and target-like agreement is shown by 13% of the subjects (2/15). S150 subjects' responses were mainly divided into forms showing agreement (30%), non-agreement (25%), and nonsensical responses (25%). S200 subjects split essentially into target-like agreement (47%) and non-agreement (35%). Finally, S250 subjects' responses fall into three categories: target-like agreement, non-agreement, and nonsensical responses. These subjects show the highest TA rate (59%), and the lowest non-agreement rate (23%).

Table 22: Deceptively marked masculine noun: *programas*

CODING	S100	S150	S200	S250
Agreement (TA)	13 % (2/15)	25 % (5/20)	47 % (8/17)	59 % (10/17)
Agreement (GA)	0 %	5 % (1/20)	0 %	0 %
Agreement (IA)	0 %	0 %	0 %	0 %
Non-agreement	33 % (5/15)	25 % (5/20)	35 % (6/17)	23 % (4/17)
Not revealing	13 % (2/15)	15 % (3/20)	12 % (2/17)	0 %
Different answer	13 % (2/15)	5 % (1/20)	0 %	0 %
Nonsensical	13 % (2/15)	25 % (5/20)	6 % (1/17)	18 % (3/17)
No response	13 % (2/15)	0 %	0 %	0 %
TOTAL	100 %* (15/15)	100 % (20/20)	100 % (17/17)	100 % (17/17)

* The above percentages do not add up to 100% because of rounding error.

Results for gender agreement with the noun *manos*, when compared to *programas*, show higher rates for non-agreement responses at all levels except S100. S100 subjects had the highest rate of omission for this word (20%). In addition, the same percentage of S100 subjects (27%) provided forms with agreement (TA and GA) and non-agreement. 40% of S150 subjects' responses show non-agreement forms, and only 15% show agreement (TA); moreover, 35% of the subjects gave nonsensical responses. Compared to S150, S200 subjects show similar results for agreement and non-agreement responses: 18% agreement and 41% non-agreement. However, the number of nonsensical responses is much lower, only 6%. S250 subjects display the highest rate of TA forms, 35%, but the percentage of non-agreement forms is the same as S200, 41%. See Table 23 for a display of these data.

Table 23: Deceptively marked feminine noun: *manos*

CODING	S100	S150	S200	S250
Agreement (TA)	20 % (3/15)	15 % (3/20)	18 % (3/17)	35 % (6/17)
Agreement (GA)	7 % (1/15)	0 %	0 %	0 %
Agreement (IA)	0 %	0 %	0 %	0 %
Non-agreement	27 % (4/15)	40 % (8/20)	41 % (7/17)	41 % (7/17)
Not revealing	13 % (2/15)	5 % (1/20)	23 % (4/17)	12 % (2/17)
Different answer	0 %	0 %	6 % (1/17)	0 %
Non-sensical	13 % (2/15)	35 % (7/20)	6 % (1/17)	6 % (1/17)
No response	20 % (3/15)	5 % (1/20)	6 % (1/17)	6 % (1/17)
TOTAL	100 % (15/15)	100 % (20/20)	100 % (17/17)	100 % (17/17)

Relation between gender assignment and agreement

The relationship between gender assignment and gender agreement can be established by comparing results obtained for particular nouns, such as *mujeres* and *mano/s*, on both sections of the test. (See Appendix D for an analysis of other words.)

For *mujeres*, 53% of S100 subjects assigned correct gender, but only 13 % of them provided correct agreement with an adjective. The same tendency is observed in S150, in which 50% of the subjects assigned correct gender, but only 30% of them showed correct gender agreement. S200 subjects also show a higher rate for gender assignment, 76%, and a lower rate for gender agreement, 41%. Finally, 100% of S250 subjects assigned correct gender to *mujeres*, while only 65% of them provided appropriate agreeing adjectives. Table 24 summarizes these results.

Table 24: Gender assignment and gender agreement: *mujeres*

LEVEL	Gender assignment: <i>las mujeres</i>	Gender agreement: <i>... mujeres cansadas ...</i>
S100	53 % (8/15)	13 % (2/15)
S150	50 % (10/20)	30 % (6/20)
S200	76 % (13/17)	41 % (7/17)
S250	100 % (17/17)	65 % (11/17)

Table 25 demonstrates that the relation between gender assignment and gender agreement for *mano/s* is erratic. At the S100 and S150 levels, subjects were two to three times more likely to provide correct agreement than correct gender assignment. At the two higher levels, though, the correct assignment rate was higher (S200) or equal to (S250) the rate for correct agreement.

Table 25: Gender assignment and gender agreement: *mano/s*

LEVEL	Gender assignment: <i>la mano</i>	Gender agreement: <i>... manos pequeñas ...</i>
S100	13 % (2/15)	27 % (4/15)
S150	5 % (1/20)	15 % (3/20)
S200	24 % (4/17)	18 % (3/17)
S250	35 % (6/17)	35 % (6/17)

DISCUSSION

Gender assignment

Results support the hypothesis that acquisition of Spanish gender assignment is positively correlated with length of exposure to the input. Subjects in their fourth semester of college Spanish show higher rates of correct gender assignment, for both natural and grammatical gender nouns, than the less advanced learners. Nonetheless, only gender assignment of natural gender nouns has been acquired by the subjects' fourth semester (95% correct gender assignment). At that time, grammatical gender assignment is still developing in the subjects' interlanguage (71% correct gender assignment). These results confirm the notion that "semantics [inherent gender] seems to help second language learners to make correct gender assignments" (Fernández-García, 1999, p. 13). These findings are also consistent with those of other studies. In Andersen (1984), the subject performed better with inherent gender nouns than lexical (grammatical) gender nouns: "Anthony marks inherent semantic gender overtly and clearly..." (p. 86).

Of all the grammatical gender nouns, *nariz* and *identidades* (not overtly marked), and *mano* and *emblema* (deceptively marked), were the most problematic at all levels. Why these words? Three of them had been introduced early in S100, and *identidades* was encountered in S200. Input frequency is a factor. *Nariz* is infrequently used, since students tend to refer to other features when describing faces; *emblema* is an uncommon word, generally restricted to references to symbols; *identidades* was only encountered in an S200 lesson on cultural identity. The noun *mano* is frequently used, but is a feminine noun with a deceptively masculine ending. The most common deceptively marked nouns are almost always masculine.

Results concerning the tendency of subjects to assign either masculine gender to feminine nouns or feminine gender to masculine nouns reveal no preference. This behavior is observed at all levels. These results contradict findings in other studies, in which the masculine/unmarked form shows higher rates of preference than the feminine/marked form (cf. Andersen, 1984; Finnemann, 1992; Fernández-García, 1999).

Gender agreement

In addition to agreement and non-agreement forms, such as *compañera tensa* and *habitación sucio*, respectively, results in the gender agreement section of the test exhibit four types of unpredicted responses: non-revealing forms (*primo popular*); responses that are correct but are not adjectives (*ropa-regularmente*); nonsensical forms (*manos-extrovertidad*); and omissions. At all levels, however, agreement rates are higher compared to those for other types of responses. Moreover, agreement rates improved substantially from level to level, reflecting incremental development as exposure to the language increased.

Natural and grammatical gender agreement results reveal gender agreement is still developing in the subjects' interlanguage. Although development is evident at all levels in both natural and grammatical gender agreement, these rates are still too low (37% for natural and 57% for grammatical gender nouns) to claim that Spanish gender agreement has been acquired by the learners' fourth semester.

The natural gender nouns receiving the lowest rates of correct agreement were *hombre*, *compañera*, and *diseñadora*. For *hombre*, this is explained by the high rate of non-revealing adjectives produced by the learners for this specific noun. Why both

compañera and *diseñadora* show low rates of correct agreement is harder to understand. Both forms are overtly marked nouns, and gender assignment rates are high for -o/-a ending nouns. A possible explanation is that subjects do identify the referent nouns as feminine, but consider marking the adjectives as feminine unnecessary and, therefore, use the default masculine form of the adjective. This explanation reflects the claim that “a linguistic feature is more likely to be omitted when it is redundant to the meaning being conveyed, more likely to be produced when it transmits necessary information” (Littlewood, 1981, p. 151 quoted in Young, 1993, p. 77).

The grammatical gender nouns that show the lowest rates of accuracy are *habitación*, *programas*, and *manos*. The first noun is non-overtly marked for gender, but it is frequently encountered, and learners have reported using the “-ción” ending as a clue for feminine gender assignment (Alarcón, 2000). Thus, it is difficult to explain the low agreement accuracy rate found at all levels. The nouns *programas* and *manos* are deceptively marked. The former is masculine, and the latter is feminine, so it is not surprising that learners will incorrectly provide adjectives modifying these particular nouns. Nevertheless, by providing non-agreement forms, learners show they are following interlanguage rules of gender agreement. As Fernández-García (1999) commented: “... errors with nouns deceptively marked for gender also evidenced subjects’ tendency to relate these endings to a particular gender” (p. 13).

Results concerning the preference for either masculine or feminine forms show a substantial propensity for the unmarked masculine form: subjects tend to use more masculine adjectives modifying feminine nouns than feminine adjectives with masculine nouns. This finding is manifested at all levels, and is consistent with results of other studies. Andersen’s (1984) subject showed exclusive use of masculine forms for all determiners, quantifiers, and adjectives. Finnemann (1992) found that subjects displayed a preference for singular and masculine forms of modifiers. Subjects in Fernández-García’s (1999) study “performed better in masculine contexts” (p. 9).

Relation between gender assignment and agreement

When contrasting the results obtained by *mujeres* and *manos* in both gender assignment and gender agreement, it was found that gender assignment definitely precedes gender agreement. Subjects who had assigned gender correctly to a particular noun were unable to provide correct gender agreement for the same noun. This implies that if the learner has acquired gender agreement, then s/he has also acquired gender assignment.

CONCLUSION

Results demonstrate that length of exposure to the input does help learners to acquire gender marking, since there is evidence of incremental development from level to level. Natural gender assignment is acquired before grammatical gender assignment. Although neither natural nor grammatical gender agreement has been acquired by the end of the fourth semester of university instruction, the latter shows higher rates of agreement. In addition, non-overtly and deceptively marked grammatical nouns are not acquired after two years of college Spanish. Furthermore, learners tend to overuse the masculine forms only in gender agreement, not in gender assignment. Finally, and

contrary to what was predicted, it was found that learners who correctly assign gender to particular nouns do not necessarily exhibit correct gender agreement. However, learners who show correct gender agreement do show correct gender assignment.

Further research is required to replicate these findings. The two-part test design proved to be an efficient instrument for eliciting quick responses on both gender assignment and agreement. (The test took between 5 to 10 minutes). However, high rates of no response in part II may indicate subjects were not familiar with the vocabulary (even though the test nouns had been taken from their textbooks). Consequently, a screen word selection would be a necessary first step for deciding which words ought to be included on a revised instrument. This could be done, for example, by asking subjects to provide the English equivalents of given Spanish nouns, and including on the test only words with which a majority of the subjects were familiar. Another refinement of the instrument would be to use the selected words on both parts of the test. (On the instrument used in the present paper, only two words, *mujeres* and *manos*, appeared in both Parts I and II). This would allow for more accurately determining the relationship between assignment and agreement. A third step would be to incorporate an oral component that would also consider the gender acquisition of the selected words. This could be carried out through a semi-guided interview in which the researcher would use the selected nouns without giving clues of their gender when asking questions such as: *Cuando tu compañera tiene muchos exámenes ¿cómo está?* (When your classmate has lots of exams, how is (she)?). This three-part test could be given to Spanish learners at different levels in three separate sessions. The purpose of this new research project would be to continue investigating the sequential acquisition of Spanish gender marking by English-speaking university learners.²

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REFERENCES

- Alarcón, I. (2000). The sequential acquisition of Spanish gender marking. Unpublished manuscript, Indiana University, Bloomington.
- Andersen, R.W. (1984). What's gender good for, anyway? In R. Andersen (Ed.), *Second languages: A cross-linguistic perspective*, (pp.77-100). Rowley, MA: Newbury House.
- Fernández-García, M. (1999). Patterns of gender agreement in the speech of second language learners. In J. Gutiérrez-Rexach & F. Martínez-Gil (Eds.), *Advances in Hispanic linguistics: Papers from the 2nd Hispanic linguistics symposium* (pp. 3-15). Somerville, MA: Cascadilla Press.
- Finnemann, M.D. (1992). Learning agreement in the noun phrase: The strategies of three first-year Spanish students. *IRAL*, 30(2), 121-136.
- Hardison, D.M. (1992). Acquisition of grammatical gender in French: L2 learner accuracy and strategies. *The Canadian Modern Language Review*, 48(2), 292-306.
- Littlewood, W.T. (1981). Language variation and language acquisition theory. *Applied Linguistics*, 2, 150-158 (cited by Young, 1993).
- Pérez-Pereira, M. (1991). The acquisition of gender: What Spanish children tell us. *Journal of Child Language*, 18(3), 571-590.
- Roa, A. (1993). *Gramática castellana*. Santiago: Editorial Salesiana.
- Young, R. (1993). Functional constraints on variation in interlanguage morphology. *Applied Linguistics*, 14(1), 76-95.

APPENDIX A: SUBJECTS' INFORMATION

SPANISH CLASSES SUBJECTS HAVE TAKEN AT INDIANA UNIVERSITY

LEVEL	S100	S150	S105	S200	S250
S100 (n=15)	100% (15/15)				
S150 (n=20)	80 % (16/20)	100 % (20/20)			
S200 (n=17)	-----	-----	70 % (12/17)	100 % (17/17)	
S250 (n=17)	12 % (2/17)	18 % (3/17)	47 % (8/17)	94 % (16/17)	100 % (17/17)

SUBJECTS WHO HAVE STUDIED IN A SPANISH SPEAKING COUNTRY

LEVEL	NO	YES
S100	100 % (15/15)	---
S150	100 % (20/20)	---
S200	100 % (17/17)	---
S250	88 % (15/17)	12 % (2/17)

APPENDIX B: TEST

Please circle the appropriate information:

- 1) Sex: M or F
- 2) I've taken S100, S105, S150, S200, S250 at IU (including the class you are taking right now)
- 3) I have studied in a Spanish speaking country: Yes or No

***** Please answer the questions quickly, going with your first impressions *****

PART I. Write *el, la, los* or *las* next to the corresponding word. If you don't know, write "?"

- | | | |
|----------------------|----------------------|-----------------------|
| 1) _____ productos | 9) _____ menús | 17) _____ mujeres |
| 2) _____ día | 10) _____ vecinas | 18) _____ profesores |
| 3) _____ nariz | 11) _____ presidente | 19) _____ almuerzo |
| 4) _____ arquitectos | 12) _____ adivinador | 20) _____ identidades |
| 5) _____ tigres | 13) _____ tiendas | 21) _____ idioma |
| 6) _____ escultora | 14) _____ mano | 22) _____ gente |
| 7) _____ lengua | 15) _____ examen | 23) _____ directoras |
| 8) _____ emblema | 16) _____ camarera | 24) _____ caballo |

PART II. Write an appropriate adjective according to the situation.

- 1) Mi compañera tiene 5 exámenes mañana. Está muy _____
- 2) Carlos prefiere chicas con manos _____
- 3) Einstein creó la Teoría de la Relatividad. Fue un hombre _____
- 4) Carmen prefiere los hombres con pelo _____
- 5) Estudió en París. Hoy trabaja en Hollywood y es diseñadora _____
- 6) En la fiesta, Eduardo dijo un chiste _____
- 7) Los amigos de mi primo olvidaron su cumpleaños. Mi primo está _____
- 8) Me gusta comprar ropa _____
- 9) Después de correr 7 millas, muchas mujeres se sienten _____
- 10) "Seinfeld" y "Friends" son programas _____
- 11) Me encanta mi habitación en Teter porque es _____
- 12) "Guernica" es una pintura de Picasso. Este pintor era _____

APPENDIX C: GENDER AGREEMENT (Distribution of scores for individual words)

NATURAL GENDER NOUNS

S100 subjects who show agreement (TA, GA, IA)

-o/-a ending	non-overtly marked	zero/-a alternation
primo: 2/15 - 13 %	hombre: 3/15 - 20 %	pintor: 2/15 - 13 %
compañera: 0/15 - 0 %	mujeres: 2/15 - 13 %	diseñadora: 2/15 - 13 %

S150 subjects who show agreement (TA, GA, IA)

-o/-a ending	non-overtly marked	zero/-a alternation
primo: 6/20 - 30 %	hombre: 1/20 - 5 %	pintor: 4/20 - 20 %
compañera: 7/20 - 35 %	mujeres: 6/20 - 30 %	diseñadora: 4/20 - 20 %

S200 subjects who show agreement (TA, GA, IA)

-o/-a ending	non-overtly marked	zero/-a alternation
primo: 6/17 - 35 %	hombre: 6/17 - 35 %	pintor: 9/17 - 53 %
compañera: 8/17 - 47 %	mujeres: 7/17 - 41 %	diseñadora: 2/17 - 12 %

S250 subjects who show agreement (TA, GA, IA)

-o/-a ending	non-overtly marked	zero/-a alternation
primo: 6/17 - 35 %	hombre: 2/17 - 12 %	pintor: 5/17 - 29 %
compañera: 10/17 - 59 %	mujeres: 11/17 - 65 %	diseñadora: 4/17 - 24 %

GRAMMATICAL GENDER NOUNS

S100 subjects who show agreement (TA, GA, IA)

-o/-a ending	non-overtly marked	deceptively marked
pelo: 8/15 - 53 %	chiste: 3/15 - 20 %	programas: 2/15 - 13 %
ropa: 3/15 - 20 %	habitación: 1/15 - 7 %	manos: 4/15 - 27 %

S150 subjects who show agreement (TA, GA, IA)

-o/-a ending	non-overtly marked	deceptively marked
pelo: 15/20 - 75 %	chiste: 7/20 - 35 %	programas: 6/20 - 30 %
ropa: 2/20 - 10 %	habitación: 2/20 - 10 %	manos: 3/20 - 15 %

S200 subjects who show agreement (TA, GA, IA)

-o/-a ending	non-overtly marked	deceptively marked
pelo: 14/17 - 82 %	chiste: 5/17 - 29 %	programas: 8/17 - 47 %
ropa: 10/17 - 59 %	habitación: 1/17 - 6 %	manos: 3/17 - 18 %

S250 subjects who show agreement (TA, GA, IA)

-o/-a ending	non-overtly marked	deceptively marked
pelo: 17/17 - 100 %	chiste: 12/17 - 71 %	programas: 10/17 - 59 %
ropa: 11/17 - 65 %	habitación: 2/17 - 12 %	manos: 6/17 - 35 %

APPENDIX D: RELATION BETWEEN GENDER ASSIGNMENT AND AGREEMENT

Zero/-a alternation nouns: *adivinator* and *pintor*

LEVEL	Gender assignment: <i>el adivinator</i>	Gender agreement: <i>pintor creativo</i>
S100	87 % (13/15)	13 % (2/15)
S150	90 % (18/20)	20 % (4/20)
S200	76 % (13/17)	53 % (9/17)
S250	76 % (13/17)	29 % (5/17)

Overtly marked nouns: *camarera* and *compañera*

LEVEL	Gender assignment: <i>la camarera</i>	Gender agreement: <i>compañera preocupada</i>
S100	93 % (14/15)	0 % (0/15)
S150	100 % (20/20)	35 % (7/20)
S200	100 % (17/17)	47 % (8/17)
S250	94 % (16/17)	59 % (10/17)