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GENDER, NUMBER, NOUNS & ADJECTIVES

A Study of Grammatical Agreement in Second Language Learners of Arabic & Spanish

A Thesis Presented

by

Anne-Marie Marguerite Poulos

to

The Graduate School in Partial Fulfillment of the

Requirements

for the Degree of

Master of Arts

in

Hispanic Languages and Literature (Hispanic Linguistics)

Stony Brook University

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Abstract of the Thesis

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A Study of Grammatical Agreement in Second Language Learners of Arabic & Spanish

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This thesis investigates the causes of gender and number agreement errors in learners of both Arabic and Spanish as second languages. Data was collected from each of these groups during beginner level language courses at a university. There were a total of eight tests. The first six were adjective selection activities focusing on a specific noun phrase or sentence structure. The last two were written tests, elicited by images, where students had to produce their own nouns and adjectives.

The common first language (L1) of the majority of participants is English, which lacks adjective agreement and does not have the parameter of (grammatical) gender while Spanish and Arabic do. Therefore, a basic assumption was that participants would make frequent agreement errors. Eight specific hypotheses about these error patterns were made and tested. Results showed that there are three main sources of adjective agreement errors in both Arabic and Spanish; internal (from the noun morphology), external (interference of other nouns) and errors due to L1 transfer (such as the lack of marking agreement).

Dedication

This thesis is dedicated to second language learners everywhere. You are an inspiration and my motivation.

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List of Abbreviations

A Adjective

ACC Accusative

AP Adjective Phrase

CR Consciousness Raising

f./FEM Feminine

h. Human

IL Interlanguage

L1 First Language

L2 Second Language

m./MASC masculine

N Noun

n.h nonhuman

NP Noun Phrase

NL Native Language

O Object

P Preposition

p./PL Plural

PP Prepositional Phrase

s./SING singular

SLA Second Language Acquisition

TL Target Language

TPR Total Physical Response

UG Universal Grammar

V Verb

VP Verbal Phrase

Arabic transliteration symbols

Transcription	Arabic Letter	English Equivelent
a	1	short a as in father
aa) ·	long a
i	O	i as in hit
ii	<i>ي</i> ث	long i
и	૽	u as in noodle
ии	و	$\log u$
b	ب	b as in boy
t	ت	t as in two
θ	ث	th in three
dz	E	j in Jorge
\hbar		voiceless pharayngeal fricative, a raspy h sound
x	ح خ	voiceless veler fricative, similar to the German or Hebew ch
d	7	d as in dad
ð	خ	th in the
r	J	similar to the Spanish or Italian r
z	j	z as in zoo
S	<u>س</u>	s as in Sue
ſ	ش ش	sh as in shoe
Ş	ص	emphatic s
d	ض	emphatic d
ţ	ط	emphatic <i>t</i>
Ŏ	ظ	emphatic th, close to thy
ç	ع	voiced pharayngeal fricative (produced deep in the throat)
Y	غ	voiced velar fricative (like the Frenchor Hebrew <i>r</i>)
f	ف	f as in foot
\overline{q}	ع ف ق ك	voiceless uvular stop, like k but deeper in the throat
\bar{k}		k as in keep
l	ل	like the Spanish or Italian <i>l</i>
m	م	m as in mom
n	ن	n as in new
W	و	w as in wow
h	٥	h as in how
?	ç	voiceless gluttal stop, as in <i>uh-oh!</i>
y	ي	y as in yes

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Chapter 1

INTRODUCTION

As both a learner and now a teacher of Arabic and Spanish as second languages, I have always been fascinated with the topic of grammatical agreement. Perhaps this is because it appears to be lacking in English, my first language, and the first language of the majority of learners I have taught or worked with. I recall years ago, while still learning these languages, I would ponder in amazement about how, with two different origins and two different writing systems, Arabic and Spanish could have so much in common. For example, both languages are *pro-drop*, which means you can have a sentence and drop the subject since the information is in the verb. They also have a gender classification of masculine and feminine that affects their morphology in similar ways.

After learning more about different languages of the world and the universal principles that drive the evolution of all natural language, it no longer surprises me that they share many traits. It is also interesting to note that Arabic and Spanish existed for centuries alongside one another in Spain. At first thought one might reason that this contact somehow could have caused the languages to influence each other. The truth is that Arabic has had a strong lexical influence on Spanish but not so much a morphological or syntactical one. Spanish is no doubt an offspring of Latin while Arabic belongs to the Semitic family of languages.

As a language teacher, grammatical agreement doesn't seem so complex. Actually, it is not difficult to teach in principal. However, I do remember as a learner encountering nounadjective agreement for the first time, especially the classification of gender. Among the questions I asked were, "Why do adjectives have to be MASCULINE or FEMININE?", and, "How can a table (una mesa) be FEMININE when it is made of wood and does not have the property of life?"

Even though most learners seem to grasp the concept right away, it is still astonishing to see how many errors they make in their first, and even their later years of learning Spanish and Arabic. The selection of gender and even selection of the noun to which the adjective should agree continues to cause confusion among learners. For Arabic language learners the matter is further complicated when dealing with plural nouns that are *nonhuman* as we will see in chapter

three. From previous experience it seems that many of the errors occur when dealing with irregular nouns or nouns lacking the most typical inflectional markers (such as –o or –a in Spanish).

The focus of this research paper is not on the individual learner experience or the many variables involved in the process of second language acquisition (SLA), nor is it about teaching methodologies and best teaching practices. This research highlights the structures of the target languages (TLs) themselves and the learner's interaction with these structures. There is one important variable, however, that almost all of the participants have in common: English as a first language (L1) (or in some cases, one of multiple L1s).

I hope that through this research I can not only identify common types of noun-adjective agreement errors but also shed some light on possible causes. My desire is that though the compilation and analysis of data and my interaction with learners I will become a more reflective practitioner and ultimately, a better teacher.

This thesis is divided into eight chapters, inclusive of this introduction. Chapter Two explores some basic principles of human language as well as some main theories of SLA and learning and what it means for language education. Chapter Three discusses the properties of nouns and noun-adjective agreement in Spanish and Arabic as well as English in order to contrast them. Chapter Four describes the eight hypotheses upon which the various tests are based. Chapter Five explains the methodology of data collection and who the language learner participants were, as well as the methodology and sequencing of the course instruction related to nouns and agreement. Chapters Six and Seven present the results of the tests in great detail and offer some initial conclusions. Chapter Eight brings together the conclusions of the individual tests to learn whether the initial hypotheses can be validated and to what degree. The discussion in Chapter Eight also offers a more simplified reflection of the error types and revisits the question of language acquisition versus classroom learning.

Chapter 2

LEARNING AND ACQUIRING A SECOND LANGUAGE AND, WHAT DOES THAT MEAN IN A CLASSROOM?

2.1 LANGUAGE ACQUISITION OR LANGUAGE LEARNING?

Before embarking on a study that attempts to explain why certain errors occur in a classroom it is important to understand the difference between language *acquisition* and language *learning*.

According to Dr. Stephen Krashen and his theory of second language acquisition (SLA), the two are interrelated processes in the development of an adult second language, or *L2* (Krashen 1981:1). *Acquisition* is subconscious and is similar to the process children use in acquiring their first (L1) and second languages. Acquisition occurs through meaningful interactions in the language where the focus is on the speaker's message, and not on the form of the actual utterances (Krashen 1981:1). The grammar of a language is acquired, however speakers do not have 'conscious' knowledge of it. On the other hand, *learning* a language is a conscious process aided by error correction and the presentation of explicit rules (Krashen 1981:2). For the acquisition of grammatical structures there exists a natural order which is quite stable. There are similarities between languages with respect to structures which are acquired earlier and those that are usually acquired later. However, for learning there is no specific order, although teaching programs typically follow a sequence from the very basic to the more complex (Krashen 1981:2).

2.2 OTHER COMPONENTS TO KRASHEN'S THEORY

The monitor hypothesis, another part of Krashen's theory, affirms that learning explicit knowledge only plays the role of monitoring the performance of the L2 learner (Krashen 1981:2). The acquired grammar system is responsible for language production while the learned information can be used to alter this production: sometimes before the utterances and sometimes after in order to correct them (Krashen1981:2). Although an interaction exists between acquisition and learning, the acquisition process is much more significant.

Language input plays a central role in acquisition. The *input hypothesis* proposes that the only way to acquire language is by understanding messages or what Krashen calls "comprehensible input". If the student receives sufficient input which is "understood", the grammar that the student requires at his level would be automatically provided (Krashen1981:2).

The final component is the *affective filter*. Krashen proposed that the language acquirer has a 'mental block' which could prevent the comprehensible input from reaching their language acquisition device (LAD). If the affective filter is low (for example the student feels comfortable, motivated, and has no anxiety) the input will reach the LAD and acquisition is inevitable (Krashen1981:3).

2.3 KRASHEN'S HYPOTHESES AND LANGUAGE LEARNING IN THE CLASSROOM

The last two hypotheses, input and affective filter, have notable implications for the context of L2 education. Krashen proposes that we acquire a L2 like we acquire our L1 and the same processes can occur within a classroom. Instead of obtaining comprehensible input through "caretaker speech" as babies do, the learner receives input in the form of "teacher talk" and "foreigner talk". For example, the language teacher will speak slowly, simplify structures, enunciate and use gestures to be understood. Most students are not immersed in the L2 unless they are studying abroad and so it is important to maximize the amount of input they receive within the classroom. From a Krashen perspective, a language class needs to be an immersion experience. This means that diverse material should be taught so that the student receives meaningful messages through the target language (TL). In addition, the L2 input should be modified to a level slightly above the level already acquired by the learner (Krashen1981:6). Krashen also proposes that it is not necessary to teach grammar. With enough input and access of input to the LAD language is acquired automatically.

From a teacher's point of view (mine) it is unthinkable to have a language class without *teaching* grammar in some way. With contextualized and modified TL input, however, teachers can intentionally introduce certain structures. Ideally we would introduce the structures in an implicit way with a lot of repetition and let students discover the forms through this comprehensible input. Another way is by consciousness raising (CR) which is a "deliberate attempt to draw the learner's attention specifically to the formal properties of the target

language" (Rutherford 1985:107). This could be done through typographic conventions such as underlining, capitalization, or even by exposing the leaner to an artificially large amount of the target structure. CR also can have various degrees of elaboration or explicitness (Rutherford 1985:108).

The *filter hypothesis* formulates how the input provided within the classroom makes it to the acquisition apparatus: through a "low" affective filter. The job of a teacher is not only to provide appropriate input but also to modify the environment since the mental state of the student is another factor in acquisition. For example, the teacher can reduce anxiety through activities such as total physical response (TPR) where students have to listen and carry out commands. These activities are interactive and presented entirely in the TL yet students are not necessarily required to produce language. Or, the teacher can make the material so interesting and motivating the students forget their fear of making mistakes in front of peers. Krashen's conclusion is that "people acquire second languages only if they obtain comprehensible input and if their affective filters are low enough to allow the input to "enter" (Krashen 1981:4).

One difficulaty in L2 education is that there is just not enough time spent in a classroom for acquisition to happen the way Krashen proposes. The ideal situation for acquiring a L2 would be immersion for an extended amount of time, such as traveling to another country. The fact is that teachers have to work within limited blocks of time, teach very specific material (including grammar, vocabulary and cultural content) and assess the student performance or learning of this material. The hypotheses of Krashen however, cause one to reflect on how lessons are prepared and how new information or input is presented in the classroom. I believe that although the main process in the classroom is learning and not acquisition, certain teaching techniques can certainly facilitate the process of acquisition.

2.4 THE UNIVERSALS OF HUMAN LANGUAGE

Another theory which has had great impact on L2 studies is Noam Chomsky's *Universal Grammar* (UG). According to UG theory there is an inherent faculty of language in the human mind to guide the acquisition process. The human being is born with this faculty; one just needs to listen to speech and interact with others to acquire the grammar of their native language (NL).

Knowledge of grammar consists of two components: principles and parameters. The principles are built in to the human mind and are universal characteristics shared by all languages in the world, while the parameters are aspects or 'settings' that vary from language to language (Cook 1994:22). For example, one principle shared by all language is structure dependency. Each language possesses a system of forming sentences, words cannot be placed in any order and still make sense. The parameter setting would be the particular order(s) or phrasing of words that the language uses. Another UG principle is the formation of syllables. In each language, words are constructed of syllables made of consonants and vowels. The parameter of this syllabification would be the combinations of consonants and vowels that the language allows. For example, in English you may have up to three word initial consonants (CCC) as in 'stripe' and in Spanish there may be two (CC) as in *problema* 'problem'. However, in Standard Arabic a word or syllable cannot begin with more than one consonant. One parameter that distinguishes both Arabic and Spanish from English is the *pro-drop* parameter. Pro-drop languages allow for sentences without subjects, since the information is provided by a conjugated verb. English is a non-pro-drop language, in which the subject cannot be 'dropped' but rather must come before the verb in the sentence. Another important parameter to consider throughout this research is the parameter of gender which is a feature of both Arabic and Spanish but not English. English has biological gender but not grammatical gender.

2.5 UNIVERSAL GRAMMAR (UG) THEORY AND THE L2 LEARNER

UG has implications for L2 teaching. The idea is that adult learners still have access to the acquisition faculty and that parameters can be adjusted. It would be very helpful for a teacher to have knowledge of the principles and parameters of the student's L1. This allows the teacher to focus the lessons on parameters that distinguish the two languages without putting much effort into teaching the principles and other features that the learner already has in their L1 grammar. With regard to the noun morphology, little time is needed to teach the plural morpheme because it is similar between English and Spanish (although the form of the morpheme itself would not be considered a principle).

As mentioned, (grammatical) gender is a parameter of Arabic and Spanish that does not exist in English (White 2004:109). It is necessary to bring more attention to the use of gender

morphemes perhaps with very explicit instruction (still presented in a contextualized way using only the TL), CR techniques, and also with more time spent on the topic with sufficient targeted practice for the learner. Pulling from both Krashen's and Chomsky's theories I would add that extra input of the targeted structures should be provided so that the learner can begin to acquire a parameter instead of trying to memorize a set of rules.

2.6 INTERLANGUAGE

Although Krashen speaks about L2s being acquired much like a L1 if the conditions are right, one important variable is missing regarding the adult L2 learner: the fact that this learner already has a first (native) grammar.

According to Larry Selinker there are three different linguistic systems responsible for output or 'utterances' that can be used to collect language data: the *Native Language* (NL) produced by the learner in his own first language, *Interlanguage* (IL) produced by the learner in the language being learned, and *Target Language* (TL) produced by native speakers of that TL.

Selinker defines IL as a "separate linguistic system based on the observable output which results from a learner's attempted production of a TL norm" (Selinker1987:16). It is not merely a combination of the two languages (L1 and L2), as studies have found characteristics in IL that did not originate in either language. Selinker speaks of a certain psychological 'latent' structure or an "already formulated arrangement in the brain, which is activated whenever an adult attempts to produce meanings, which he may have, in a second language which he is learning (Selinker 1987:31)". The latent structure is very much like the language faculty in UG theory.

IL can also be used to explain a common 'problem' of L2 learners: *fossilization* or the "regular reappearance in second-language performance of linguistic phenomena which were thought to be eradicated in the performance of the learners (Selinker 1987:13)"

There are five central process thought to be at work behind fossilization errors found in adult L2 output: *language transfer*, *transfer-of-training*, *strategies of second-language-learning*, *strategies of second-language-communication*, and the *overgeneralization of TL linguistic material*. Among the processes that I will refer to later in this study are *language transfer* which becomes evident if the fossilized item, rule or subsystem in the IL is also part of the learner's

NL, as well as the *overgeneralization of TL rules*. I will suggest later that an overgeneralization of TL rules causes some errors in Arabic L2 *human* plural agreement, which participants had previously been doing well with. Interestingly, Selinker describes how these fossilizations may "reappear in IL performance when the learner's attention is focused upon new and difficult intellectual subject matter or when he is in a state of anxiety or other excitement, and strangly enough, sometimes when he is a state of extreme relaxation" (Selinker 1987:17).

2.7 A NOTION OF SUCCESFUL LANGUAGE LEARNING

Since fossilized errors can reappear and a L2 can never be considered a *NL* but rather part of an *IL* system, when can we say that an L2 has actually 'acquired a language'? As a L2 learner my original goal and idea of L2 success was once to sound like a native speaker. The reality is that the overwhelming majority of L2s will not reach *native* proficiency unless they begin at an early age and spend years in an immersion setting. Even if a learner can speak 'correctly' there will always be certain traits that distinguish him or her from a native speaker such as pronunciation, intonation or even aspects harder to observe such as *parsing* speed (processing L2 input in real time).

'Success' in L2 learning does not need to be defined in an absolute manner. Instead, "the teacher or the learner can be satisfied with the learner's achieving what has been called 'communicative competence'" (Selinker 1987:25). In terms of IL, 'successful learning' involves, "to a large extent, the reorganization of linguistic material from an IL to identity with a particular TL" (Selinker 1987:26). It may also help to think of L2 as a continuum which is always changing.

2.8 OTHER FACTORS INVOLVED IN LANGUAGE LEARNING/ACQUISITION

As previously mentioned there are many other variables aside from L1 influence that are involved in the process of language learning and language acquisition. Although I will not be dealing with them in this research, my chapter on SLA would not be complete if I did not include them.

I will be analyzing my data according to each *group* of participants; however, it is also

important to think about the learner as an *individual*. Some important factors that can attribute to language learning/acquisition are *motivation*, *aptitude*, *learning strategies*, *age* as well as other individual factors such as *cognitive styles*, *personality traits* and even *sex differences* (Cook 1991:95).

Chapter 3

NOUN & ADJECTIVE AGREEMENT:

CONTRASTS BETWEEN SPANISH, ENGLISH AND ARABIC

3.1 DEFINITION OF GRAMMATICAL AGREEMENT AND THE NOUN PHRASE

The term *agreement*, or *concord*, commonly refers to "some systematic covariance between a semantic or formal property of one element and a formal property of another. For example, adjectives may take some formal indication of the number and gender of the noun they modify" (Corbett 1991:105). For the purpose of this study I will be analyzing agreement both within the NOUN PHRASE (NP), where gender and number of the head noun spread to its inflected modifiers, as well as agreement with an adjective when it is in a separate Adjective Phrase (AP) as a predicate or a Direct Object (DO).

A NP is basically a noun together with its adjacent modifiers, if any. Pronouns and noun clauses can also be considered NPs because they occur in the same positions and with the same functions (Whitley 1986:135). The next sections will break down the NPs of Spanish, English and Arabic. Spanish is first because it is the highly inflected, and likely to be familiar to the reader. Arabic will be last, although similar to Spanish in its inflection, it has some additional complexities that need be discussed at length.

3.2 THE NOUN PHRASE IN SPANISH: Functions and Constituents

NPs in Spanish have five main roles in their function with verbs: the *Subject* (Subj), *Direct Object* (DO), *Indirect Object* (IO), *Predicate Element* (PredE), and *Object of a Preposition* (Obj. of Prep., or OP) (Whitley 1986:135). These five main functions are exactly the same in English as illustrated by the translation.

Subj: <u>El caballo</u> comenzó a correr. '<u>The horse</u> started to run.'

DO: Ayer vimos el caballo. 'Yesterday we saw the horse.'

IO: (Le) di heno al caballo. 'I gave the horse hay.'

PredE: El animal más bello es <u>el caballo</u>. 'The most beautiful animal is <u>the horse</u>.'

Obj of Prep: Pasaron por detrás del caballo. 'They passed behind the horse.'

(Whitley, 135)

As previously mentioned, a NP is made up of the head noun plus any accompanying modifiers, or a pronoun and even a nominal clause. The following are constituents of a NP in Spanish (Whitley 1986:151):

The elements represented in parentheses such as the Determiner (D), the Quantifier (Quant), the Adjective (Adj) or the Prepositional Phrase (PP) are all optional. The second line structure is one of a *compound* NP where one NP is "conjoined with any number or NPs conjunctions (C) (Whitely 1986:150). The (S) represents a *sentence*, so the third structure is actually a NP modified by a relative or adjectival clause. Pro stands for *pronoun*.

3.2.1 NUMBER in Spanish

Inflected modifiers must agree with the noun (N) which is the head of a NP in two main properties: number and gender. In Spanish the N is inflected for number which is either singular (one of something) or plural (two or more). The singular is unmarked while the plural is marked with a suffix: -s if the word ends in a vowel (such as *perro-s* 'dogs') and -es if it ends in a consonant or a glide (such as *universidad-es* 'universities' or *rey-es* 'kings').

3.2.2 GENDER in Spanish

In human language, some entities are clearly classifiable as either male or female sex (*the boy, the girl* or *el muchacho, la muchacha*). This distinction became grammaticalized in Proto-Indo-European, the ancestor of Spanish and also of English (Whitley 1986:145). All nouns,

whether sexed or sexless, came to be classified as either MASCULINE, FEMININE, or NEUTER ('neither'). Latin inherited the neuter gender which was (almost entirely) lost as Spanish evolved.

Spanish has an 'overt' gender system (Corbett 1991:115) in which words such as nouns and adjectives are inflected with suffixes after the stem to show agreement (with exceptions). Modifiers such as articles that have their own form for masculine and feminine, or adjectives which take the same inflectional affixes as the nouns they modify, all express gender agreement:

Since Spanish is a highly inflected language, it is almost impossible to use a noun without marking its gender.

Gender is somewhat predictable in Spanish with –o usually signifying masculine and –a signifying feminine. However, words have other endings in Spanish. The following statistics were made by William Bull in 1965 (Whitley 1986:145). They show a strong correspondence between noun-word endings and genders:

Feminine: -a, -d, -ción, -sión, -sis

However, the only word endings that actually correspond 100% of the time are the feminine suffixes –*ción* and –*sión*. The –*e* is the most irregular, corresponding with the masculine 89.3% of the time. Some of these '–*e* as feminine exceptions' include *la clase*, 'the class' *la mente* 'the mind', *la calle* 'the street', *la noche* 'the night', etc. There are a great deal of exceptions with the other word endings as well: *el día* 'the day', *el mapa* 'the map', *el césped* 'the lawn', *la mujer* 'the woman', *la mano* 'the hand', *la imagen* 'the image', *la toz* 'the cough', etc. (Whitley 1986:146).

Another criterion for figuring out the gender of a noun in Spanish is by meaning. Names of rivers, trees, ships, days and months are all masculine (Whitley 1986:147). Also, nouns referring to persons usually match the sex gender (*el padre* 'father', *la madre* 'mother', *el hombre* 'man', *la mujer* 'woman', etc.).

3.2.2.1 The EPICENE Gender

The *epicene* gender refers to "human nouns and pronouns that refer to neither sex in particular but to either or both together" (Whitley 1986:149). These are words like *los padres* 'parents', *los hijos* 'the children', *los profesores* 'the professor', *alguien* 'someone', etc. In Spanish, these are all handled by the masculine gender. If the feminine form was used then it would refer specifically and exclusively to females.

3.2.3 Agreement in Subject-Predicate Sentences in Spanish

Not only do adjectives agree with a head noun inside a NP, but agreement also occurs when adjectives are in other syntactic positions such as the predicate:

La	muchach-a	es	pequen-a
The-FEM	girl-FEM	is	small-FEM

3.3 The NOUN PHRASE in English

NPs in English have five main roles in their function with verbs: the *Subject* (Subj), *Direct Object* (DO), *Indirect Object* (IO), *Predicate Element* (PredE), and *Object of a Preposition* (Obj. of Prep. or OP) (Whitley, 135). These are the exact same functions as in Spanish. Please refer back to page one for examples in English and in Spanish.

As a reminder, a NP is made up of the head noun plus any accompanying modifiers, and maybe a pronoun or even a nominal clause. The following are constituents of a NP in English (Whitley 1986:151). Please refer to page two and note that the only difference from the Spanish is the adjective position in the first structure, where it preceds the noun:

3.3.1 NUMBER in ENGLISH

Nouns in English are inflected for number which is either singular or plural. The singular is unmarked while the plural is (usually) marked with a suffix. Orthographically it is the same suffix as the Spanish: -s or -es. However, in English, these may be pronounced /-s/, /-z/ or /-əz/ depending on the last phoneme of the word. The allomorph with the inserted vowel –*es* /-əz/, is used after sibilants ([s] [z] [ʃ] [tʃ] [dʒ] [ʒ]) and not after consonants and glides as in Spanish (hence we have *color/-z/* and *ray/-s/*, but *bush/-əz/* and *church/-əz/*) (Whitley 1986:143).

English has a finite number of irregular plurals from either (1) learned Latin or Greek words which have variably retained their classic plural forms (such as *cacti/cactuses* and *curricula/curriculums*) and (2) some irregular Germanic plurals (e.g. *man/men, foot/feet, mouse/mice.*) (Whitley 1986:143). In the latter plural type, there is a type of internal vowel change to mark inflection instead of a suffix. This is called 'ablaut' and it also occurs in some English verbs to mark tense inflection: *give/gave, see/saw*, etc.

Many modifiers in English, such as adjectives, are not inflected for number (the <u>small</u> girls). However, some articles and determiners (such as a(n), some, this/these and that/those) are inflected:

This-SING girl-SING These-PL girls-PL

3.3.2 GENDER in ENGLISH

Although English evolved from the Proto-Indo-European language family as well, it lost the grammatical distinction of gender altogether. Modifiers of nouns are not inflected for gender. English only expresses a 'natural gender' when referring to sexed entities. Therefore we have nouns like *father* (male) and *mother* (female), *actor* (male) and *actress* (female), and even pronouns in the third person such as *he/his/him* (male) and *she/her* (female).

3.4 THE NOUN PHRASE IN ARABIC (Modern Standard Arabic)

NPs in Arabic also have five main roles in their function with verbs: the *Subject* (Subj), *Direct Object* (DO), *Indirect Object* (IO), *Predicate Element* (PredE), and *Object of a Preposition* (Obj. of Prep., or OP). Please note the absence of the copula in the present tense*:

Subj: bada?a <u>al-ħiṣaan</u> yadʒrii 'started* <u>the horse</u> to run'

DO: ?ams ra?aynaa <u>al-ħiṣaan</u> 'yesterday (we) saw <u>the horse</u>'

IO: ?astaytu <u>al-hisaan</u> al-qif '(I) gave <u>the horse</u> hay'

PredE: $\frac{\partial ak\theta ar}{\partial ak\theta ar} \frac{\partial amaalan}{\partial amaalan}$ '(the) most animal beauty-ACC he (is)* the horse'

huwa al-ħiṣaan

Obj of Prep: marruu min waraa? <u>al-hiṣaan</u> 'they passed from behind <u>the horse</u>'

The following are the constituents of a NP in Arabic:

NP→	(Def. article) N	al-kalb	'the dog'
	(Demonstrative + Def. article) N	haaðaa al-kalb	'this dog'
	(Def. article) N (Def. article) Adjn	al-kalb al-kabiir	the-dog the-big 'the big dog'
	N N	kalb ?aħmad	dog Ahmed 'Ahmed's dog'
	Pro	huwa	'he'
	S (nominal clause)	an yaðhab	'that (he) goes'
	*Demonstrative	haaðaa	'this (one)'
	*(Def. article) Adj	al-kabiir	'the big (one)'

As in Spanish and English, a NP in Arabic is made up of the head noun plus any accompanying modifiers, and may also be a pronoun or a nominal clause. *However, Arabic has only three parts of speech: nouns, verbs and particles. Adjectives, pronouns, demonstratives and relative pronouns, participles, infinitives (verbal nouns), and numerals are all considered 'subclasses of nouns' in Arabic (DLI, p.33). Also note the N+N construction to signify possession: (the) dog (of) Ahmed.

Modifiers in an Arabic NP such as adjectives and demonstratives (but not articles) agree with the head noun in four categories: GENDER, NUMBER, CASE and DEFINITENESS.

3.4.1 GENDER in Arabic

^{*}Arabic is mostly verb-subject-object (VSO)

Although Arabic stems from the Semitic language family and not Proto-Indo-European, it has grammatical gender similar to Spanish. All nouns are classified as either *masculine* or *feminine*, either semantically arbitrarily, or, when a noun refers to a human being or other creature it may conform to natural gender (Ryding 2005:119). Verbs also agree in gender with the subject in Arabic.

The masculine gender in Arabic in unmarked in the singular while the feminine singular is (usually) marked with a suffix called *taa? marbuuṭa* is pronounced /-a/ or /-ah/. This is sometimes pronounced /-t/ if followed by a clitic possessive pronoun or if it is the first noun in a N+N construction: *madiin-a* 'city', but *madiin-at baydaad* '(the) city (of) Bagdad'. There are also separate suffixes for the masculine human plural (/-uun/ or /-iin/) and feminine plural (/-aat/). Adjectives take the same suffixes as the nouns while demonstratives have separate forms for the two genders.

mudarris dʒadiid mudarris-a dʒadiid-a

teacher-MASC new- MASC, '(a) new teacher' teacher-FEM new- FEM, '(a) new teacher'

haaðaa al-mudarris haaðihi al-mudarris-a

this- MASC the-teacher- MASC, 'this teacher' this- FEM the-teacher- FEM, 'this teacher'

There are some irregularities with gender markings in Arabic. First, there are a couple of very frequent feminine nouns that are marked with /t/ such as bint 'girl' and Puxt 'sister'. Many words including proper female names in Arabic are not marked but must be treated feminine since they coincide with natural gender such as zaynab 'Zainab' or miryam 'Miriam' Pumm 'mother', Faruus 'bride'. Although they may not be marked, city names, most countries and parts of the body that come in pairs are all feminine. Also, there is a small, defined set of unmarked nouns that are feminine. These include frequently used nouns like naar 'fire', Pard 'earth', ħarb 'war', xamr 'wine', biPr 'well' and fams 'sun'.

There are also a few masculine nouns that look overtly feminine because they are spelled with the *taa? marbuuṭa* such as the proper name *?usaam-a* 'Osama' or *xaliif-a* 'caliph', as well as some plurals such as *dakaatir-a* (sing. *duktuur*) 'doctors' or *?asaatið-a* (sing. *?ustaað*) 'professors'.

Finally, there is a special case of feminine adjectives, specific to some semantic categories of words such as colors, comparative and superlatives as well as bodily deformities of a certain word pattern, which are inflected by ablaut rather than a feminine suffix. For example blue and red are <code>?azraq</code> and <code>?aħmar</code> in the masculine; however they become <code>zarqaa?</code> and <code>ħamraa?</code> in the feminine. Ablaut, although not the norm for gender inflection, is actually very systematic in the Arabic language. The following section will be very useful to understanding both the process of ablaut as inflection as well the underlying system involved in Arabic word derivation.

3.4.2 The Arabic *ROOT-PATTERN SYSTEM*

Arabic derivation greatly differs from both English and Spanish because it is a *Semitic* rather than Indo-European language. Although Arabic usues both prefixes and suffixes, it is based to a large extent on discontinuous morphemes (Ryding 2005:45). "It consists primarily of a system of consonant roots which interlock with patterns of vowels (and sometimes certain other consonants) to form words, or word stems" (Ryding 2005:45). The most common number of root consonants is three and they must be in the same order. For example, kitaab (book), kutub (books), kaatib (writer), maktab (desk/office), yaktubu (he writes) are just a handful of the words formed from a common root k-t-b. The vowels and affixes contained in the previous words make up the 'pattern'. Other roots can be plugged into these same patterns; although not all roots use every pattern. Take for example the root 1-\(\varepsilon\)-b which has to do with 'playing' sports or games. laasib (player) shares the same pattern with kaatib (writer), while malsab (playing field) shares the same pattern with *maktab* (desk/office). The former two are formed with the active participle pattern aa i while the latter two denote a place where the action is carried out on the pattern ma a. The root is said to represent the lexical meaning while the pattern indicates the grammatical meaning (Ryding 2005:48). Therefore, most Arabic words contain both a root and a pattern, two morphemes, which combine to form a word.

The root-pattern system is not only responsible for word derivation but also for some inflection as mentioned previously. All color words with the pattern ?a_a_like ?aħmar (red) in the masculine, take the pattern _a_ aa? ħamraa? in the feminine. Arabic also has some patterns which are used to form plurals as we will see in the next section.

3.4.3 NUMBER in Arabic

Arabic has three classifications for number: SINGULAR, DUAL, and PLURAL (three or more). The singular for masculine is unmarked in simplified Modern Standard Arabic (MSA).

Classical or 'formal' Arabic has an indefinite article suffix, -un, -an, or -in depending on the case called tanwiin. For example, 'a book' would be either kitaab-un (nominative), kitaab-an (accusative) or kitaab-in (genative). Tanwiin is usually not written, except for the accusative case, nor is it pronounced except for formal didactic or religious texts or speeches. Modern spoken dialects, which have lost case agreement altogether, only retain this suffix in the accusative for a select number of fossilized words such as fukr-an 'thanks'. Except for with adverbs, tanwiin is generally not used in ARB 101 and so will not be represented in the examples in this research.

Although the singular for masculine is unmarked, feminine singular, and the masculine and feminine duals and plurals all have suffixes in Arabic (see Table 1 one the following page).

3.4.3.1 The BROKEN PLURAL

Arabic actually forms plurals in two ways: suffixation and ablaut. If a plural suffix is used and the stem of the word has no change, then this is called a *sound plural*. However, plurals of many nouns are formed by an internal vowel change (ablaut) or a combination of an internal change and a suffix. These are called *broken plurals* and they come in a number of different patterns. The following table illustrates all of the dual and plural suffixes, as well as examples of two patterns of broken plurals. There are actually many more plural patterns and the one that a noun or adjective will take does not depend on the word pattern in the singular. Therefore, the Arabic language learner must learn the correct plural form of each noun or adjective while learning the vocabulary.

	SING (1)	DUAL (2)	Sound PLURAL (3+)	Broken PLURAL (3+)
'teacher'	mudarris	mudarris-aan*	mudarris-uun*	

(MASC)		mudarris-ayn**	mudarris-iin**	
'teacher'	mudarris-a	mudarris-at-aan*	mudarris-aat	
(FEM)		mudarris-at-ayn**		
married	mutazawwadz	mutazawwadz-aan*	mutazawwadz-uun*	
(MASC)		mutazawwadz-ayn**	mutazawwa&-iin**	
married	тиtazawwadz-a	mutazawwadz-at-aan*	mutazawwadz-aat	
(FEM)		mutazawwadz-at-ayn**		
'man'	radzul	radzul-aan*		ri dz aa l
		radzul-ayn**		Pattern: _i_aa
'dog'	k a lb	kalb-aan*		kilaab
		k a lb -ayn**		Pattern: _i_aa_
'big'	k a b ii r	kabiir-aan*		kibaar
		kabiir-ayn**		Pattern: _i_aa_
'city'	madiin-a	madiin-at-aan*		m udu n
		madiin-at-ayn**		Pattern: _u_u_
'book'	kitaab	kitaab-aan*		kutub
		kitaab-ayn**		Pattern: _u_u_

TABLE 1

3.4.3 Two other inflectional categories in Arabic: CASE and DEFINITENESS

Adjectives and demonstratives must also agree with the head noun in case which is either *nominative* (such as the subject or predicate noun or adjective), *genitive* (such as the possessor in a N+N construction or the object of a preposition) or *accusative* (such as an adverb or a direct object). However, since spoken Arabic has lost its case marking, it is not necessary for communication in MSA and therefore is not regularly drilled in ARB 101. Learners are taught to recognize the dual and both masculine plural suffixes and to use *-uun* as a default. Since the dual is not used much in the classroom and the use of cases is not mandatory, dual forms as well as the agreement of case will henceforth be left out of this research.

^{*}nominative **accusative/genitive

Nouns in Arabic also are inflected for definiteness and indefiniteness (Ryding 2005:156). A definite noun (and adjective) is marked by the definite article prefix -al. In simplified MSA (and modern dialects) the indefinite is unmarked. Definiteness is considered a morphosyntactic rather than a semantic category in Arabic (Hoyt, 1). If a head noun is definite, then the adjective must also be marked for definiteness:

bint	dzamiil-a	al -bint	al -dzamiil-a
girl	pretty	the-girl	the-pretty
'a pre	tty girl'	'the pretty	y girl'

A definite noun in Arabic will not be overtly marked in one of two cases: (1) if it is the first noun in a N+N construction or (2) if it has a possessive pronoun suffix. The position of this noun is enough to signify its definiteness. The word *kalb* 'dog' is definite in all of these examples. Note the position of the adjective in the last one:

kalb	al-bint	kalb-haa	kalb-haa	al-kabiir
dog	the-girl	dog-her	dog-her	the-big
'The g	girl's dog'	'her dog'	her big do	og'

Also, most proper names in Arabic do not have the definite article but they are still treated definite.

3.4.4 Agreement in Subject-Predicate sentences in Arabic

Arabic is a language that has a *zero copula* in the present tense. That means that the word for *is* or *are* is understood. A subject with predicate in Arabic is commonly referred to as the *nominal* or *equational* sentence. In its most simple form, it is made up of a definite noun followed by an indefinite noun or adjective. In Arabic, as in Spanish, the predicate must agree with the subject in 2 categories: gender and number. Notice how the absence of a definite article changes the structure from a NP to a nominal sentence:

NOUN PHRASE		NOMINAL SENTENCE	
bint dzamiil-a '(a) pretty girl'	INDEF+INDEF	saara bint DEF+INDEF	
		'Sarah (is) (a) girl'	
al-bint al-dzam ii l-a	DEF+DEF	al-bint dzamiil-a DEF+INDEF	
'the pretty girl'		'The girl (is) pretty'	

TABLE 2

3.4.5 Separate NON-HUMAN Plural agreement rules in Arabic

Arabic has another inherent feature for nouns called *humanness*, that is, whether or not nouns refer to human beings. This grammatical criterion only comes into play when dealing with plural nouns. Although quite abstract, the rule is actually simple. When plural nouns refer to *human* entities they take regular masculine or feminine plural agreement. However, when they have a *nonhuman* referent (either creatures or inanimate things) they will take feminine singular agreement. There are some special cases where select human plurals may take this agreement but it is irrelevant to the level of Arabic for this study.

HUMAN PLURAL AGREEMENT		NONHUMAN PLURAL AGREEMENT	
al-mudarris- uun	ṭayyib -uun	al-sayyaar -aat ṭayyib- a	
The-teachers-MASC/PL (are) good-MASC/PL		The-cars-NH/PL (are) good-FEM/SING	
al-ban -aat	ṭayyib- aat	al-kilaab ṭayyib- a	
The-girls-FEM/PL (are)	good-FEM/PL	The-dogs- NH/PL (are) good-FEM/SING	

TABLE 3

3.5 CONTRASTS IN SPANISH, ENGLISH & ARABIC

NPs in all three languages perform basically the same functions syntactically. One of the main differences in Arabic is that there is no copula in the present tense and therefore it must be understood between the subject and the predicate. Spanish actually has two copulas, *ser* and *estar*, and English uses *to be*.

The elements of a NP are also very similar. One major difference in NP structure is the position of the adjective. The adjective in English must precede the noun while the Arabic

adjective must follow it. Spanish adjectives mostly follow the noun like Arabic, although they may sometimes precede the noun:

SPANISH	ENGLISH	ARABIC
Los gatos pequenos	The small cats	al-qiṭaṭ al-ṣaɣiira
The cats small		the-cats the-small
(also, los pequenos gatos)		

TABLE 4A

Another interesting point of divergence between the three languages is the way that possession is expressed within a NP:

SPANISH	ENGLISH	ARABIC
	Miriam's cats	
Los gatos de Miriam	The cats of Miriam (not used)	qiṭaṭ maryam
<u>Sus</u> gatos	Her cats	qiṭaṭ- <u>haa</u>

TABLE 4B

In English there are two methods of expressing possession: with a possessive NP in place of the determiner (Miriam's cats) or with a displaced NP introduced by 'of' in the place of a PP (The cats of Miriam). Although it looks comparable to the Spanish, this structure is not used very much in modern English. Arabic however, always uses the same word order as Spanish to show possession (possessed + possessor). The main difference is that it is not a PP, there is no preposition in Arabic. Rather it is the linking of two nouns together (N+N). This is called *idaafa* or *annexation* in Arabic. The use of a possessive pronoun in all three languages appears similar. However, in Arabic the pronoun follows and is actually suffixed to the noun (*qiṭaṭ-haa* cats-her) whereas the pronoun is a separate word and precedes the noun in Spanish and English.

Another unique trait of Arabic is that is often uses ablaut instead of suffixes for noun and adjective plurals, as well as for certain colors in feminine.

Spanish and Arabic are both highly inflected and show much more agreement compared

to English. One reason may be the absence of grammatical gender in English. In terms of agreement, standard Arabic is actually much more complex than Spanish. Not only are modifiers inflected for gender and number, but also for case and definiteness. Interestingly, verbs in Arabic are inflected for gender as well. Finally, Arabic nouns have an additional inherent grammatical feature that interacts with gender and number: *humanness*. This category is not only semantic but grammatical, affecting the morphology of all lexical items referring back to nouns such as pronouns, demonstratives and relative pronouns, adjectives and even verbs.

Chapter 4

HYPOTHESES

My general hypothesis is that Arabic and Spanish L2 learners are going to make frequent agreement errors or use adjectives without marking gender and number since English is the common L1 of the majority of participants. Not only does English lack the parameter of (grammatical) gender, a feature of both Spanish and Arabic, but adjectives only have one form, even if the noun is plural. Based on my previous experience teaching and working with learners of Arabic and Spanish I was able to formulate some specific hypotheses about the causes of agreement errors applicable to both languages. Many of them are tested in multiple activities while some are only tested once. Hypotheses one through six refer to both Arabic and Spanish L2 participants while hypotheses seven and eight are specific to the particular L2, due to some morpho-syntactic differences in the languages.

Hypothesis 1:

Since (most) students' L1 is English, which does not have grammatical gender, students are likely to choose the biological gender related to the noun instead of the grammatical gender of the noun itself.

For example the word *ħidʒaab*, 'headscarf', is masculine in Arabic but associated only with women. The same is true for *el vestido* 'dress' in Spanish and also *la corbata* 'tie' which would also be associated with the opposite gender.

Hypothesis 2:

Nouns lacking typological gender or number markers (suffixes) will cause students to make frequent errors.

This includes nouns in Spanish with endings other than the typical -o masculine and -a feminine. In addition to Arabic feminine nouns that may not end in -a, broken plurals will also cause agreement errors since they do not have a plural suffix -uun or -aat.

Hypothesis 3:

The presence of another (subject) noun is likely to cause confusion and many errors. In a subject-predicate sentence, students are likely to agree the adjective to the subject noun instead of the adjacent, predicate noun.

For example, *el perr-o es una mascot-a *buen-o* 'the dog-MASC is a good-MASC pet-FEM', or *?al-?ustaað-a ʃaxṣ *madʒnuun-a* 'the professor-FEM is a crazy-FEM person-MASC'.

Hypothesis 4:

In sentences with possession, there are likely to be agreement errors if the possessor is animate and the entity being possessed (to which the adjective should agree) is inanimate.

For example, Mari-a tiene el pel-o *rizad-a 'Maria has curly hair', or fustaan naadiy-a *dzadiid-a (dress Nadia new) 'Nadia's dress is new'.

Hypothesis 5:

Errors in possessive constructions may also have to do with proximity to the 'possessor' noun. Students may have trouble selecting the correct predicate adjective when the subject is a NP that contains another NP inside of a PP which is actually closer in proximity to the adjective. For Arabic it will be the N in the idaafa construction (N+N) which is closer in proximity.

For example, *la ventan-a del dormiti-o es *pequen-a* 'the bedroom window is small', or *fustaan naadiy-a *dzadiid-a (dress Nadia new),* 'Nadia's dress is new'.

Hypothesis 6:

The number of errors in gender, number and human/nonhuman agreement will generally increase when students produce their own, original noun-adjective phrases.

It is much more taxing to search the lexicon for words and write them. Therefore students' attention will be drawn away from gender/number agreement. There may also be some word order errors due to L1 transfer as the adjective always preceeds the noun in English. Also, the tests for this hypothesis (TESTS 7 & 8) may be closer to assessing actual language *acquisition* since the task is not focused on grammar like the previous tests.

Hypothesis 7 (Specific to Arabic):

Students will try to apply human agreement rules to nonhuman plurals.

For example, they might use a human plural suffix on a nonhuman plural such as *al-kilaab kabiir-uun 'the dogs are big'.

Hypothesis 8 (Specific to Spanish):

The presence of an article with a noun should aid students in selecting gender and therefor they are likely to make fewer errors concerning words that do not end in typological –o/-a.

For example, they should fare better here with feminine nouns lacking gender markers such as *la leche* 'the milk', *la luz* 'the light'.

Chapter 5

METHODOLOGY

5.1 PARTICIPANTS

Participants for this study include two groups of language learners: Arabic L2s and Spanish L2s, both at Stony Brook University.

5.1.1 SPANISH L2s

The Spanish L2 group consists of 26 students from SPN 111, a four-credit, first semester course held spring 2013. The actual number used in my data is 20 as I had to eliminate students who missed some of the tests. The class met twice a week and was taught by a professor from the Department of Hispanic Languages. During this period I visited the class only twice since I was working in a junior high school during the day. There were a total of eight tests (activities) used to collect data, so in most instances the professor administered these activities to the students on my behalf.

At the very beginning of the course students filled out demographic surveys providing background information such as their current academic status (freshman, sophomore etc.), their L1, if and for what duration they had studied Spanish, if they had any other contact with the language, if any family members spoke the language and what their motivation was for taking the course Spanish (see appendix I).

Of the 20 students, nine were females and 11 were males. Nine of them were freshman, three sophomores, four juniors, three seniors and one graduate student. 15 of these students listed only English as their L1. One listed Korean and one listed Chinese as the L1. One student listed both English and Spanish L1s, while another English and Farsi and another listed both English and Chinese. Twelve of these students had previously studied Spanish and eight had not. Of the 12 students, some had studied as little as one year, while some had taken between two to six years of Spanish in secondary school. One student had taken Spanish for four years in elementary school and four years in high school. The participants listed various reasons for taking the course. A small handful simply took the course to fulfill a university requirement

while the majority expressed a desire to be able to communicate in Spanish and learn about different cultures.

5.1.2 ARABIC L2s

The Arabic L2 participants were my students during the summer of 2013 for ARB 101, a six-credit, intensive elementary Arabic course. The course met over the course of eight weeks from 1:00 pm to 4:00 pm, four days a week, for a total of 12 hours per week.

The total number of participants was eight, which was also the class size. There were also eight tests administered, which all students completed. I made sure that if they were absent they completed it the next day. These students also filled out a similar demographic survey providing the same kind of background information (see Appendix I)

Four of the Arabic L2s were females and four were males. Two students were still attending high school going into their senior year while one was entering Stony Brook as a freshman. There were three juniors and two seniors. One of the juniors was actually in her 30s while the rest of the students were in their teens or very early 20s. Four of these students listed only English as their L1. The other four listed English and also another language as their L1s (two Spanish, one Bengali and one Egyptian Arabic).

One of the students can be considered a native speaker of (Egyptian) Arabic since her family speaks it at home. However, she was born in the United States and the Egyptian dialect is actually very different from the variation taught in the course. She was the only student who could already read and write the script, which she learned in a mosque as part of religious studies. A second student (whose family came from Bangladesh) also learned to read the script (not write) in a mosque but had no knowledge of the language aside from the letters and their sounds. Interestingly there was also a student who could not speak or understand the language but had part of her family from the Arab world so she was a sort of 'cultural' heritage learner. She also tried to teach herself at some point so she knew some letters. The other five students had no previous contact with the language and no religious or family connections to the Arabic world.

The reasons that Arabic L2 participants took the course was even more diverse than those of the Spanish L2s. The reasons varied from 'a future career in politics', 'study abroad', 'because language learning is a hobby', 'for religious purposes', 'Arabic is my cultural heritage', 'the language is different than others', 'I want to be fluent and the language is beautiful'. Only one student mentioned that it was also for a university requirement.

5.2 DATA COLLECTION PROCEDURE

The eight tests administered were very similar for both Spanish and Arabic. The first six were selection activities, in which students were given either NPs or sentences of specific structures where they had to pick an adjective from four choices (masc./sing., fem./sing., masc./pl., fem./pl.) in order to express the correct agreement. The two final tests had no written prompts; instead they had to describe items or articles of clothing from pictures. This way, I could control the vocabulary by using pictures of words that they were sure to be familiar with, however they were in charge of *producing* the nouns and adjectives themselves.

For the Spanish, I began collecting data in the fourth week of the spring semester and tests were spaced at one or two week intervals. For the intensive summer Arabic, I began in the fifth week and tests were administed every other day.

All of the tests had clear and simple instructions in English. Students were also told that they could ask the meaning of a word if they did not understand it. In Arabic, in addition to the meaning I encouraged students to ask if they were unsure if a noun was singular or plural; I made it clear that students must know the exact meaning in order to choose the correct agreement. Students were not allowed to share answers and had to be reminded that the outcome of these tests would not affect their grade in any way. As a way to say 'thank-you' to the Spanish L2s I presented the instructor with candy bars to give the day the last test was administered.

My Arabic students were eager to participate and enthusiastic about helping me with my research. However, the fact that they could not 'see' the results caused some tension and an element of 'mysteriousness' to the tests. It became a sort of joke because of its 'top-secret' nature. I did not return the tests nor did I show them the specific errors because I felt that it would influence future tests, especially if they knew more about the patterns that I was targeting.

However, I did use the results to assess students' individual learning and found ways to bring the same types of agreement errors to the students' attention without referring back to the tests. Since the last test (actually test number six, with the mixture of structures) was administered the day before the final exam, we were able to use it as part of our review. After completing the test, I asked students to switch papers and instructed them not to write on them or make any corrections as they could not be altered. They were of course, allowed to take notes. Since all of the tests for this research were completed we could now use them for the students' direct benefit. Not only did we clarify the tricky agreement rules, but it was also a good vocabulary and reading comprehension review. Most importantly, it provided them with much needed *closure* and a demystification of the purpose of my experiments. As a reward for completing the tests, I gave each student a laminated, foldable vocabulary chart in Arabic.

5.3 CLASSROOM METHODOLOGY

In order to have a better idea of the Spanish instructor's teaching style and also to get a feel for the Spanish L2 students' classroom interactions, I spent two class periods observing. This also provided the chance to administer some of the tests myself and get to know the students a little. The SPN 111 course covers a vast amount of material and although grammar is taught very explicity, the instructor used only the target language. On the days that I visited, the instructor was using a chalkboard to present material. Other resources were the textbooks and prepared handouts with activities to practice the material. Activities consisted of teacher presentation, whole class, individual as well as partner and conversational exercises. Once a week this class also meets in a lab were the teacher has access to additional technology. Students also complete assignments online with Quia, a learning website, in order to supplement the class.

The Arabic class was conducted mostly in Arabic as well. Although English was used to explain procedures and interact with students outside of lessons, Arabic was used exclusively while presenting and practicing new material. Material was presented with images though Power Point presentations and sometimes even realia (clothing, props, etc). Activities were also varied between teacher presentaions, whole class and group to communicative pair activities. Some material was taught with TPR activities such as physical/emotional states and body parts. Grammar was not taught explicitly in the first three weeks as students spent much time learning

to read and write the Arabic script. During that time expressions and vocabulary were taught in chunks and there was significant focus on oral communication. Through the interpersonal activities students were able to acquire concepts like gender in the second person. Grammar was taught explicitly in the second part of the course through CR techniques, especially on the PowerPoint presentations, and visuals to contextualize the TL input. As part of homework students also read grammar explanations from their textbooks.

5.4 TEACHING SEQUENCE

For Spanish, the course content closely followed *Dos Mundos*, Seventh Edition, which was customized for Stony Brook University. The book is used over the course of two semesters. For SPN 111 they cover the first three preliminary chapters (Paso, A, B, and C) and chapters one through six. Pasos A, B, and C are actually quite dense with vocabulary and grammar. Definite articles, indefinite articles and gender markers on nouns are taught in *Paso A* while nounadjective agreement and descriptions are taught in *Paso B*. That means by the third week of class students have already explicitly learned agreement rules in Spanish as well as possession and the verbs *tener* (to have) and *llevar* (to wear). For my tests, since this is a first-year language course, I was careful to use only vocabulary which had been taught and was likely to be actively used. This means that although agreement had already been taught by the time I began administering the tests, I had to refer back to the chapters for appropriate content while creating them.

For Arabic the teaching sequence is a bit more complex and the topic of agreement is not as straight forward as Spanish. I chose to wait until the end of week five in order to begin collecting data for a number of reasons. First, during the first two or three weeks much emphasis was placed on phonology and script along with some basic communicative functions such as greetings and introductions, as well as providing and obtaining information such as origins and telephone numbers. Much of the structures were learned in phrases and chunks during the first three weeks. After the transition to all-Arabic script students began to learn larger quantities of nouns and adjectives along with grammar. During week four students began to learn plural patterns as well as human/nonhuman agreement rules. This was understandably different from the Spanish course were students could already read the script and had similar noun plurals in their L1 (English) and therefore learned agreement rules within the first couple weeks of class.

The fact that SPN 111 was a four-credit course and ARB 101 a six-credit course seemed to level the playing field.

For ARB 101 material we used the third editions of *Alif Baa: Introduction to Arabic Letters and Sounds* (Brustad, et al., Georgetown U Press, 2010) along with the online component and *Al-Kitaab: A Textbook for Beginning Arabic* (Brustad, et al., Georgetown U Press, 2011) (the first eight chapters), as well as some additional topics that I added to the course such as *shopping* (clothing & colors) and *health* (body parts & expressing pain). I taught colors in the beginning and reintroduced them with the feminine patterns when students learned to describe clothing.

It is important to keep in mind that a week of ARB 101 instruction is actually 12 classroom hours. During the second week students were explicitly introduced to gender in nouns and adjectives as they learned how to read and write the feminine marker (taa marbuuTa 5). It was reintroduced as a grammar topic in chapter one during week three. During week four, students were introduced to plural types and some broken plural patterns and they also formally learned the rules of noun-adjective and gender-number agreement. By week five, students learned more plural patterns as well as possessive constructions and the subject-predicate or *nominal* sentence. By the time I started collecting data at the end of week five students seemed to be very comfortable using the Arabic script and I also had a large enough inventory of nouns and adjectives to work with.

Chapter 6

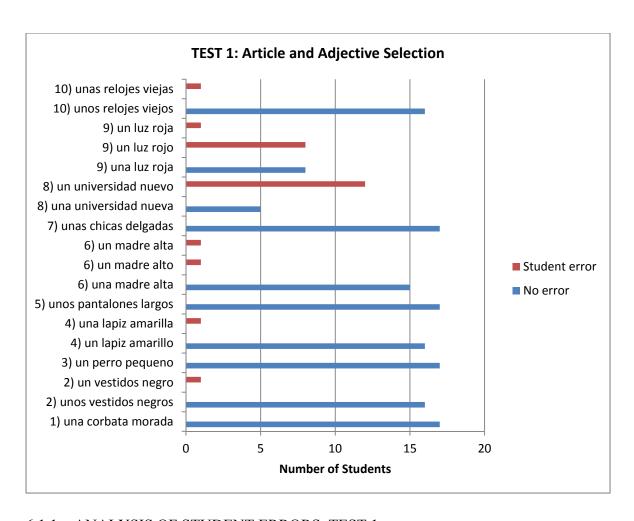
ANALYSIS OF SPANISH DATA

This chapter is divided into eight sections; one for each of the tests administered to the Spanish L2 participants over the course of the spring semester in 2013. For each test there is a brief explanation of the activity and grammatical structure as well as the hypothesis tested, followed by the results in a bar graph and a detailed analysis. Please refer to the appendices for the actual test and a translation in English.

6.1 TEST 1

The first test was administered on February 21st (week 4) and there were 17 students present. The structure consists of a simple NP made up of an *article* + *noun* + *adjective*. The noun is given but the student must select an indefinite article and an adjective. There are four choices for each so the student has to select the appropriate combination of gender and number based on the noun. Since students have already learned about gender and number agreement in Spanish, this was expected to be relatively easy.

I had two hypotheses for this test. The first (Hypothesis 1) was that students might not give importance to the grammatical gender morpheme and would prefer the biological sex related to the word. For example, *la corbata*, 'the tie', is a feminine word; however the article of clothing is associated with men. The same goes for the word *el vestido*, 'the dress', which is masculine but is associated with women. Since English has only biological gender and not grammatical gender I thought that this might influence students' choices. The next (Hypothesis 2) was that students are likely to err when faced with a noun that does not end in the typological gender markers -o and -a. There are many common nouns in Spanish that end in consonants like d or z as well as the vowel e such as el lapiz 'the pencil', la universidad 'the university' and la madre 'the mother'.



6.1.1 ANALYSIS OF STUDENT ERRORS, TEST 1

There were 10 entries and 17 students present for this test. Of the 170 total entries, there were only 26 total errors (15%).

Only one of these errors involved an error in number agreement (*un vestidos negro*). I conclude that this number error is insignificant, not only because of its scarcity but because the same student who erred once in number had correctly chosen plural in other cases.

After my initial analysis, it seems that my first assumption, about typological versus not-typological gender morphemes, turned out to be true, while my second hypothesis did not hold as much weight as I thought.

The nouns which resulted in no gender errors whatsoever were *corbata* 'tie', *vestidos* 'dresses', *perro* 'dog', *pantalones* 'pants' and *chicas* 'girls'. With the exception of *pantalones* which ends in –n in the singular form, all of these are nouns which end in either –o, for

masculine or –a, for feminine. I had assumed that these words would cause no errors. (I included the word *pantalones* since I thought that perhaps some students might choose a singular agreement for the word since *pants* semantically refers to a single object. However, none of the 17 student made that mistake.)

My second hypothesis, involving words like *corbata* 'tie' and *vestido* 'dress' was wrong. Students did not get distracted by the 'masculinity' or 'femininity' of the object. All of the students correctly selected the article and adjective to match the grammatical gender of these words. Perhaps we will see different results with these words in other tests when we add (animated) NPs in complete sentences.

As for the errors involving gender with the nouns ending in atypical morphemes, they are of three types: an error in the article, and error in the adjective, or a total error (article and adjective). The 'total' error was far more common. Once students determined the gender, they usually selected the article and adjective uniformly.

The most common total error was *un universidad nuevo 'a new university' with 12 students (71%). Although not ending in –a, -dad is a feminine morpheme in Spanish which, although taught in class, is less common and therefore students often do not remember that it marks feminine.

The second most common total error was *un luz rojo 'a red light' with 8 students (47 %) and a partial error *un luz roja with one student (6%).

The consonant ending -z in Spanish is not a grammatical gender marker and therefore students must either remember learning that the word is either masculine or feminine or be exposed enough to have acquired it in their lexicon as being either masculine or feminine. By being exposed I mean hearing or reading it in a NP with modifiers that signal the grammatical gender.

The following errors are less significant since they only occurred once:

una lapiz amarilla (6%) 'a yellow pencil'unas relojes viejas (6%) 'some old watches'un madre alto (6%) 'a tall mother'

un madre alta (6%) 'a tall mother'

un vestidos negro (6%) 'some black dresses'

un luz roja (6%) 'a red light'

Most students correctly assigned the masculine gender to the word *reloj* 'watch'. Since the consonant –j is not a morpheme, it seems the students either had enough exposure to the word to remember its gender, or, they may have been using masculine as the default.

Surprisingly, there were not many errors with the word *madre* 'mother'; only one student had a full error: *un madre alto* and one had a partial error: *un madre alta*. I thought that there would have been more errors since the morpheme –*e* mostly corresponds with masculine words. However, this is a noun that also corresponds with biological gender *mother* being a woman.

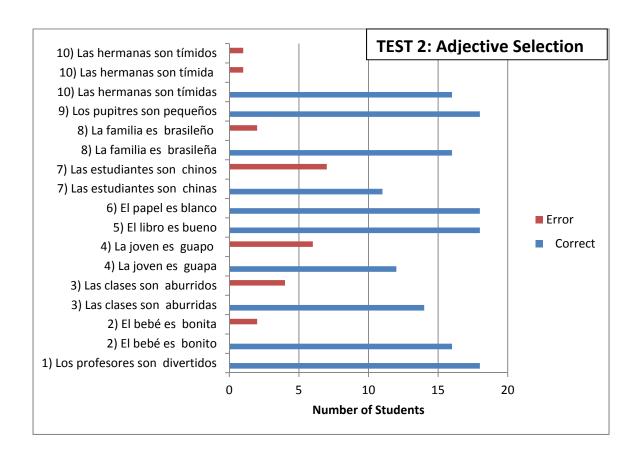
Finally, with the exception of these two errors: *una lapiz amarilla* 'a yellow pencil' and *unas relojes viejas* 'some old watches', the overall majority of the gender errors involved choosing masculine instead of feminine for nouns that do not end in –o or –a (92%).

To conclude, it appears that when students are unsure of a gender, they are likely to choose masculine as a default gender.

6.2 TEST 2

TEST 2 was administered on March 12^{th} and there were 18 students present. The structure consists of an article + noun + verb + adjective. Students only had to select the adjective this time. However, the adjective here is part of the verbal phrase (VP) and not inside the NP. Like TEST 1, most of the nouns end in morphemes or consonants other than the typological -o / -a.

I had one new hypotheses for this test (Hypothesis 8): that the presence of the definite article marking gender will aid students and there will be fewer gender errors concerning words that do not end in the typological –o / -a. I was also curious to see if there might be an increase in errors for some students since the adjective is no longer adjacent to the noun, but rather, outside of the NP and posterior to the verb (as a predicate).



6.2.1 ANALYSIS OF STUDENTS ERRORS, TEST 2

Out of the 180 entries (10 X 18 students) there were only 23 errors in total (13%). Only one of the errors involved only incorrect number agreement, which is insignificant (*las hermanas son timida 'the sisters are shy'). Out of the 22 gender errors, only three errors involved nouns ending in a typological morpheme –a/-as (13.6 %). One student chose *las hermanas son timidos while two students chose *la familia es brasileño 'the family is Brasilian'. I chose to include the word familia 'family' since it is a collective noun, and therefore, I thought there might be some error concerning number. I did not expect students to select the wrong gender and at the moment I cannot explain this. Perhaps it is because a family is usually made up of both males and females and in Spanish the default when there is mixed gender (in plurals) is masculine.

The other 19 errors (86.4%) involve nouns ending in -e, -n or -or, which is consistant with the error pattern from the first test (and Hypothesis 2).

While the percentage of errors in TEST 2 is a bit smaller than TEST 1, I am surprised to find a 13% error rate in adjective agreement when each noun was preceded by a definite article signaling the grammatical gender of the word.

The majority of the errors (20 out of 22, or 91%) involve incorrectly selecting masculine adjectives for feminine nouns such as *las estudiantes* 'the students- FEM', *la joven* 'the young (lady)' or *las clases* 'the classes'. This second test supports my conclusion from TEST 1; for many students *masculine* tends to be the default for nouns that do not end in -a.

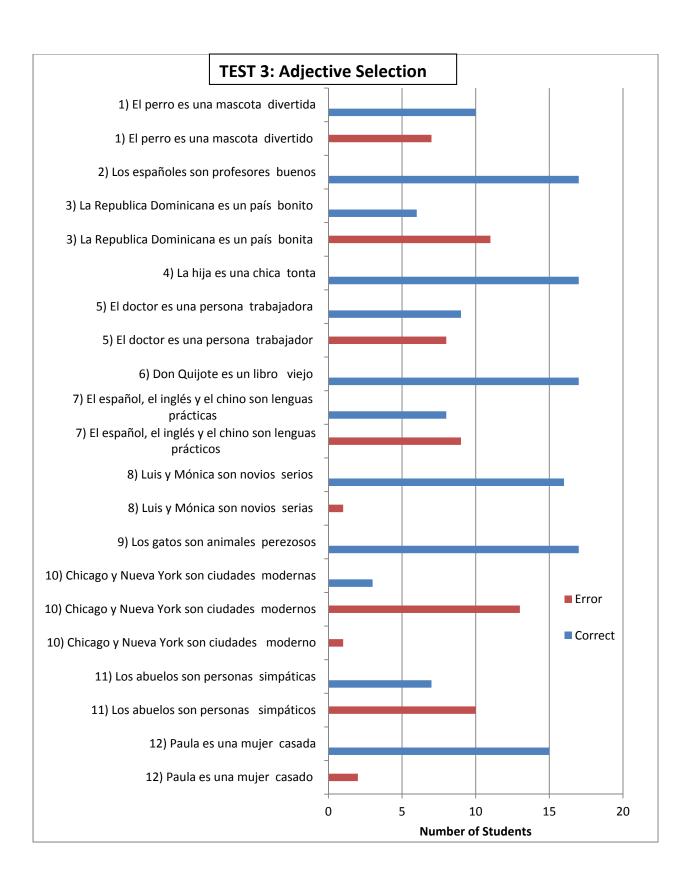
Also, contrary to my initial hypothesis (Hypothesis 8) there were still many errors of this type even with the presence of a definite article marking gender. Many students relied on the word-ending and ignore the article in TEST 2.

To be fair, in comparison, the number of students making errors in TEST 2 was much lower than in TEST 1. 13 out of 17 students (76 %) had at least one error in TEST 1 compared with only eight of 18 students (44%) in TEST 2. This means that many students were likely to notice the presence of the article and used it to correctly determine the gender.

6.3 TEST 3

TEST 3 was administered on March 26th. Similar to TEST 2, TEST 3 samples are sentences with the copula verb *ser* (to be). However, this time the structure consists of a NP (article + noun) followed by the VP which includes another NP (article + noun + adjective) as the predicate element. The adjective this time is not modifying the subject, rather the predicate noun.

Although the adjective is adjacent to the noun, I hypothesized that students would make the mistake of modifying the subject noun instead (Hypothesis 3). To test this hypothesis, many samples have nouns with opposing genders such as <u>el perro es una mascota divertida</u> 'the dog is a good pet'.



6.3.1 ANALYSIS OF STUDENTS ERRORS, TEST 3

Due to the overwhelming number of errors in TEST 3, I think it is safe to say that Hypothesis 3 can be confirmed. We can divide the samples into two types: Category A (six sentences) are made of nouns with opposing genders (59 incorrect/43 correct) while Category B (also six sentences) are made up of same gender nouns (3 incorrect/99 correct). The opposing gender sentences have a 58% error rate while the same gender noun sentences have a 1.5% error rate.

All three of the errors in the same gender category can be explained easily. Two students chose *Paula es una mujer casado* 'Paula is a married woman', most likely because *mujer* ends in a consonant and not the feminine marker. The other error is isolated: *Luis y Monica son novios serias* 'Luis and Monica are serious fiances'. The student may have been confused since the subject of the sentence was a conjunction of both a masculine and a feminine noun: *Luis y Monica*. The name *Monica* might have stood out since it preceded the copula.

I had expected Category A sentences (opposing gender) to cause many errors, however the fact that it came from more than half of the students was quite surprising.

In sample #5: *El doctor es una persona trabajadora* 'the doctor is a hardworking person', nearly half of the students chose *trabajador*. It is very logical mistake to make since *el doctor*, a masculine noun, is the subject of the sentence and is in essence, being described. *El doctor* has a semantic relationship with the adjective *trabajadora*. The adjective is part of the predicate and therefore in some way it does modify the subject. In the TEST 3 samples, students are given two possibilities: either make the semantic connection (which seems to be stronger) with the subject or relate the adjective internally to the predicate noun within the actual NP (the grammatically sound option). In the battle between semantic relationships and grammatical ones, it seems that grammatical relationships are much weaker in the L2 mind.

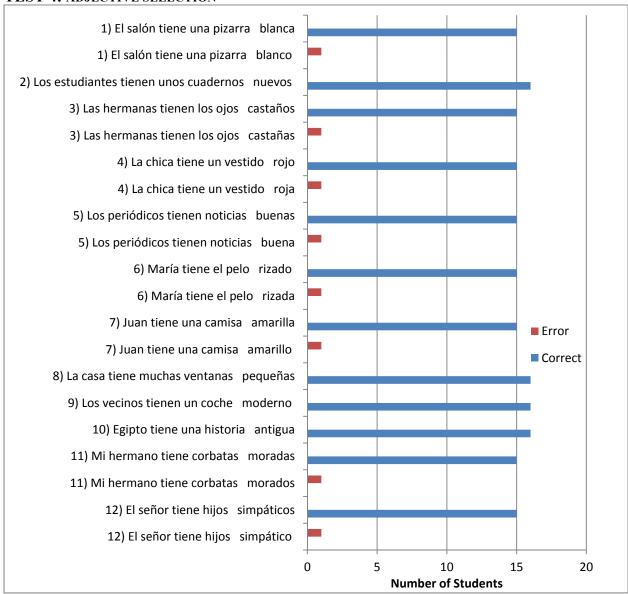
6.4 TEST 4

TEST 4 was administered on March 28th and there were 16 students present. The sentence structure for TEST 4 is exactly the same as TEST 3. If we were to draw a syntactic tree it would look the same [NP+VP[NP]]. The major difference is the type of verb: TEST 3 is the

copula *ser* while TEST 4 sentences have a transitive verb *tener* 'to have'. For example *la chica tiene un vestido* rojo 'the girl has a red dress'.

My hypothesis for TEST 4 was also similar; I thought that students would make the mistake because of the presence of another noun, the subject (Hypothesis 3). I also thought that since the verb *tener* expresses possession, learners might be likely to make errors if the possessor was animate and the direct object inanimate (Hypothesis 4).

TEST 4: ADJECTIVE SELECTION



6.4.1 ANALYSIS OF STUDENT ERRORS, TEST 4

At a first glance, the results of TEST 4 do not seem very interesting since the errors are very few in comparison with TEST 3. There were 16 students present for this test with 12 entries for a total of 192 entries. There were eight total errors and no more than one error for each entry. 12 of the 16 students however, had zero errors. The other four made some mistakes by choosing to agree the adjective with the subject noun instead of the noun within its own NP. For example *El salon tiene una pizarra blanco 'the room has a white board' or *la chica tiene un vestido roja 'the girl has a red dress'. However, these types of errors were very scarce and even these students chose the majority correctly.

This test did not seem to confirm Hypothesis 4 concerning sentences with animate 'possessor' nouns and inanimate nouns as the direct object. Each of the following errors occurred only once:

Animate - Inanimate:	*Las hermanas tienen los ojos castañas	'the sisters have brown eyes'
(7 entries total)	*Juan tiene una camisa amarillo	'Juan has a yellow shirt'
	*La chica tiene un vestido roja	'the girl has a red dress'
	*María tiene el pelo rizada	'Maria has curly hair'
	*Mi hermano tiene corbatas morados	'my brother has purple ties'

Inanimate – Inanimate *El salón tiene una pizarra blanco 'the room has a white board'

(4 entries) *Los periódicos tienen noticias buena 'the newspapers have good news'

Animate - Animate: *El señor tiene hijos simpático 'the genteman has nice children' (1 entry)

As for Hypothesis 3, if you compare TEST 3 results with TEST 4, the hypothesis can be confirmed for TEST 3 but not as strongly for TEST 4. However, TEST 4 does shed some new light on the error type.

I believe that my hypothesis about the presence of another NP causing an error was correct since most of the error did mark agreement with the wrong noun. However, these errors were much fewer than I expected.

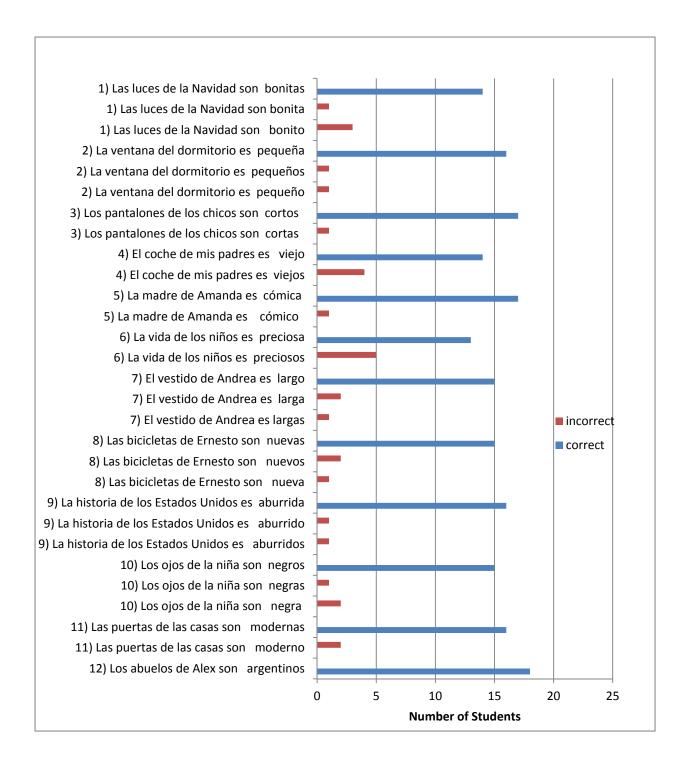
The contrast of data results between TEST 3 and TEST 4 highlights the importance of the function of the NP in a sentence and the effect that different kinds of verbs can have. With a copula verb, A (subject) equals B (predicate). So whatever modifies the noun in B is in effect, describing A. However with a transitive verb such as *tener*, NP A will be the subject, acting upon NP B, which will be a direct object. The subject and the object have no semantic connection except that A is the possessor of B since the verb means *to have*. NP A and NP B refer to two different entities in a sentence with a transitive verb and therefore, students are less likely to incorrectly agree the adjective.

6.5 TEST 5

This test was administered on April 16th. Like the previous test, TEST 5 also explores possession and the question of animate and nonanimate nouns. This structure contains a PP as the object of the copula verb *ser* followed by a predicate adjective: [[PP[NP]]+[VP[AP]]]. For example; *el coche de mis padres es viejo*, 'the car of my parents is old'.

My original hypothesis for this test was that students would have trouble selecting the correct predicate adjective when the subject is a NP that contains another NP inside of a PP which is actually closer in proximity to the adjective (Hypothesis 5). I also hypothesized that it would be further complicated when the subject is inanimate and the possessor is animate (Hypothesis 4). In the example above (*el coche de mis padres es viejo*) the additional NP to confuse the students is the possessor 'my parents'. Not only is this noun closer to the adjective but it is also animate and may stand out more, causing students to agree the adjective to this noun, in error.

TEST 5: ADJECTIVE SELECTION



6.5.1 ANALYSIS OF STUDENT ERRORS, TEST 5

There were 18 participants present with 12 entries for a total of 216. Overall the error rate for this activity was fairly low compared with some the other types: 31/216 (14.35%).

The sentences can be broken down into three types:

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Inanimate noun + inanimate noun possessor (4 entries X 18 students) > 10 errors = 4.6 %

Animate noun + animate noun possessor (2 entries X 18 students) > 1 error = 0.46%

Inanimate noun + animate noun possessor (6 entries X 18 students) > 20 errors = 9.26 %
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The animate/animate category had only one error, which was *la madre de Amanda es comico* 'Amanda's mother is funny'. This error was most likely not due to conflicting nouns but rather the usual mistake of defaulting to masculine gender when a noun ends in anything other than –a.

The inanimate/inanimate sentences mostly had two errors each (18 students) except for Las luces de la Navidad son bonita (one error) and las luces de la Navidad son bonito (three) 'Christmas lights are beautiful'. All four of these students clearly chose the wrong noun to modify la Navidad; the three that chose a masculine form most likely did so, again since the noun did not end in –a. This sentence was the very first entry so it is likely that students began to err with the conflicting nouns and then realized right away that the subject noun should be modified, not the possessor.

The inanimate/animate category is the most interesting because there were more errors. Among them: *El coche de mis padres es viejos* 'my parents' car is old' (four errors), *Los ojos de la niña son negras* (one) *Los ojos de la niña son negra* (two) 'the (girl) child's eyes are black', *Las bicicletas de Ernesto son nuevos* (two), *Las bicicletas de Ernesto son nuevo* 'Ernesto's bicycles are new' (one), *La vida de los niños es preciosos* 'the children's life is precious'(five).

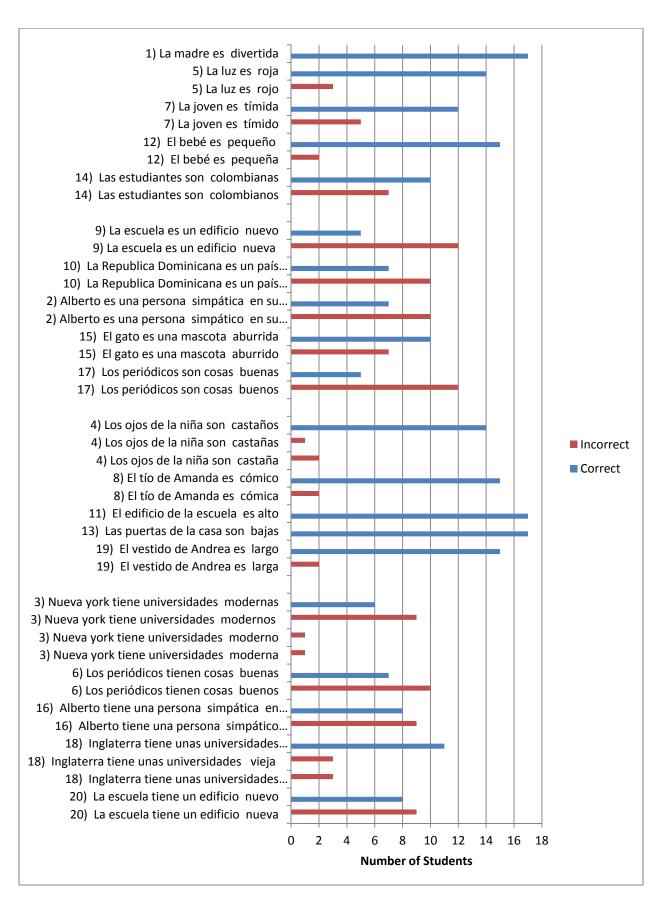
Although the number of errors is not as large as in data three entries, many errors were in fact due to conflicting nouns, especially when the possessor inside the NP was animate. Unlike TEST 4, TEST 5 does confirm Hypothesis 4, in addition to Hypothesis 5. Since animateness did not seem to affect results of the previous test (with the verb *tener* to have) the increase in errors may also have been due to both animateness and proximity of the possessor noun.

6.6 TEST 6

This activity, administered on April 18th, was a combination of structures from tests 2, 3, 4, and 5. The purpose was to revisit and confirm some of my initial conclusions from the previous tests. TEST 6 also included many of the nouns with the atypical endings that had given

students trouble previously. In addition, it included three pairs of sentences that were identical except for a difference in verb (the verbs *ser/tener*). This was employed as a variable in order to further test the hypothesis about the function of the NP and the type of verb making the difference (TEST 3 versus TEST 4).

TEST 6: ADJECTIVE SELECTION



6.6.1 ANALYSIS OF STUDENT ERRORS, TEST 6

In the actual test, the entries were mixed up in terms of structure. However, in the graph above I grouped them together according to structure types. There were a total of 20 entries and the number of students was 17 for a total of 340 entries. The total number of errors was 120 for an error percentage of 35.3%. The following is a breakdown according to the type of sentence:

TEST 2 structure: 20.0% errors (la madre es divertida; 'the mother is fun')

TEST 3 structure: 60.0% errors (la escuela es un edificio nuevo; 'the school is a new building')

TEST 4 structure: 52.9% errors (la escuela tiene un edificio nuevo; 'the school has a new

building')

TEST 5 structure: 8.2% errors (los ojos de la nina son castaños; 'the (girl) child's eyes are

black')

For TEST 2 structures, many students are still having trouble selecting the correct adjective for words that do not end in –o or –a: *La luz es rojo*, 'the light is red' (three) *La joven es timido*, 'the youg (lady) is shy' (five), *El bebe es pequena*, 'the baby is small' (two), *Las estudiantes son colombianos*, 'the students are Columbian' (seven). These students did not notice or give importance to the article signifying gender.

TEST 5 structures had the least amount of errors. However, an error pattern can still be detected where students are confusing the noun to be modified in the presence of an animate possessor: *El vestido de Andrea es larga* (two), *Los ojos de la nina son castana* (two).

TEST 3 structures still had the most errors as expected and the TEST 4 versions of the pairs had slightly less errors. Actually, TEST 4 structures (with *tener*) this time had a much greater amount of errors than they did before which was very surprising. For the previous test there were only one or two errors per entry. Now we are seeing up to 9 or 10 errors for one entry.

For example, in *La escuela es un edificio nueva* (The school *is* a new building) (12 errors), this error (TEST 3 structure) is not surprising because *ser* is a copulative verb and students are making a semantic connection between *the building* and *the school*. They essentially refer to the same entity. However, I did not expect to see *La escuela tiene un edificio nueva* (the school *has* a new building) (nine errors). The other two pairs have an even closer number of errors. Perhaps the outcome or the *tener* sentences was altered by the presence of similar

sentences with *ser*. It could also be that the nouns in the examples that I used had too much of a semantic connection. For example, *el edificio* 'building' is referring to a part of the *la escuela* 'the school'. Also, *cosas* 'things' are part of *los periodicos* 'the newspapers'. Ultimately, I believe that the test itself may have caused an increase in these errors, that is, students were likely to be confused by the similarity of the vocabulary used between sentences.

As far as the overall errors for TEST 4 structures in TEST 6, a second look reveals that only the three sentences that were paired have the odd pattern. The other two sentences have mostly errors that can be related to word endings and not confusing the nouns. For example *Nueva York tiene universidades modernos* 'New York has modern universities' (nine errors). If these students were in fact trying to agree the adjective with Nueva York then it would be in the singular. The word *universidad* 'university' is used again in entry 18 causing more of this error type: **Inglaterra tiene unas iniversidades viejos* 'England has some old universities' (three errors). This is a gender error due to the word ending. Without the 12 errors assigning masculine plural to *universidades*, the error percentage would be a bit less for the TEST 4 structure. Instead of 52.9 % it would be 38.8 %.

6.7 TEST 7

For this test, students were given ten images in color and asked to write a descriptive sentence using an adjective for each (Appendix G). 18 students completed this activity. Since the previous six data collections were selection activities they were not a measure of language acquisition but rather, of learned rules. This activity is different since it looks at the *production* of original NPs as learners are prompted to describe images. This tests Hypothesis 6: that there will be more number and gender errors since learners have to first search their lexicon in order to *produce* the nouns and adjectives themselves. Therefore they will be less focused on grammatical precision. I also expected to see some errors in word order such as the adjective being placed before the noun as in English.

6.7.1 ANALYSIS OF STUDENT ERRORS, TEST 7

Although the students were given the same images, their answers for each entry varied greatly. While analyzing the data I counted only entries that include both the noun and an

adjective to modify it since these were my instructions. For example, one student provided the correct type of structure for eight of the entries such as *la casa roja es muy grande* 'the red house is very big' and then in describing another two, failed to use an adjective as in *dos amigas juegan* 'two friends play' and *la nina baile muy rapido* 'the girl dances very fast'. Although these sentences include a noun with modifiers (*las dos, la*) there are no adjectives and so they were not counted.

Altogether the test yields 152 nouns accompanied by modifying adjectives and most of these include articles as well. The structures include both adjectives within the NP (Es <u>un vestido</u> *amarillo* 'it is a yellow dress') and NPs with a predicated adjective (<u>el vestido</u> es *Amarillo* 'the dress is yellow'). However, the majority were of the latter type.

116 out of the 152 examples show no errors in agreement (76.3%). These show correct agreement between the noun, its article if present and the adjective whether inside or outside the NP. There are 36 total NPs or N+Adj. agreement errors (23.7%). These include errors of both gender and number.

Interestingly, some of these were only partial agreement errors. For many, the article agrees correctly but not the adjective: *<u>la leche</u> es blanco 'the milk is white', *<u>los huevos</u> son pequeno 'the eggs are small' or *las botas es largo 'the boots is long'.

To break this down further, only six of these errant structures involve an error in both article and adjective agreement, most of which involved the word leche (f): *el leche es blanco or *el leche es delisioso, etc. In Spanish most nouns ending in –e are masculine so this error was expected.

The other 29 errors involved an incorrect adjective only. Interestingly, 24 out of the 29 incorrect adjectives included an indefinite or definite article correctly modifying the gender and number of the noun: *las botas es largo, *las botas son feo, *las amigas son contento, * la leche es blanco, *los huevos son pequeno etc. In fact, 30 out of the total 36 incorrect adjectives involve incorrectly assigning masculine singular when the nound was actually masculine plural, feminine singular or feminine plural.

Surprisingly, there was only one word-order error: *Ellas tienen azul y rojo vestidos 'they have blue and red dresses'. However, the overwhelming majority of the structures were made up of noun as subject and adjective as the predicate so it would not apply.

In order to see whether in fact students have more agreement errors when actually producing language, we need to compare these sentences with another data set. Since almost all of the structures produced in this test are of the type tested in TEST 2 (artice + noun + copula + adjective) it would be most accurate to compare their percentage of agreement errors. TEST 2 structures yielded a 13% error rate when the test was first given and a 20% error rate when retested in the mixed TEST 6. It is important to note that the errors were greater the second time as only nouns not marked for gender (*las estudiantes, el bebe, la luz*, etc) were given. In TEST 7, mostly nouns ending in –o,-a,-os,-as are elicited with the images, with the exception for *la leche* and *el reloj*, therefore it would be most acurate to compare it with TEST 2. For TEST 7, 36 incorrect adjectives out of 152 counted entries gives about a 23.7% error rate which is in fact much larger than the original 13%, especially when we take into consideration that these are mostly nouns without overtly marked gender. However, interestingly enough most of these errors were only partial. Students used the correct modification of the article and then assigned masculine singular as a default to the adjective.

Confirming Hypothesis 6, there are in fact, far more errors present when students are *producing* language output rather than just selecting the right form. Secondly, for almost all of these errors (except for *la leche*), students are assigning masculine singular as a default for the adjective. Lastly, even when students are assigning a masculine singular default for the adjective, most of the time they are correctly assigning an article to modify the nouns signifying that they do know that the noun has a gender and number.

6.8 TEST 8

For this final test, students were given a color image of three children wearing different types of clothing. A name was placed underneath each image. Participants were asked to write complete sentences using adjectives to describe two items that each child was wearing (Appendix H).

My hypothesis and results for TEST 8 are much like TEST 7: I had hypothesized that there would be more number and gender errors in this last activity since learners must first search their lexicon in order to produce the vocabulary. Therefore they would be less focused on grammatical precision (Hypothesis 6).

6.8.1 ANALYSIS OF STUDENT ERRORS, TEST 8

All 18 of the participants where present for this task. Since they were instructed to describe six items in total, there should have been a total of 108 noun-adjective agreement structures. However, eight clothing items were mentioned without a description so they are not included in the data.

The total number of items (noun with description) is 100. Of the 100, there were 21 agreement errors (21%). Of the 21 agreement errors, 10 were due to errors in number agreement and 11 were gender agreement errors. It is interesting to note again that when included, the articles that modify the nouns *do* show correct number/gender agreement. The mistakes are all in the adjectives:

NUMBER ERRORS (10 total):	
Los pantalones <u>azul</u>	(3)
<u>Azul</u> pantalones	(1)
Pantalones <u>azul</u> y <u>amarillo</u>	(1)
Azules y <u>rojo</u> zapatos	(1)
Zapatos de tenis <u>rojo</u>	(1)
Zapatos de tenis <u>blanco</u>	(1)
Zapatos gris	(1)
Zapatos de tenis <u>anaranjado</u> y <u>azul</u>	(1)

GENDER ERRORS (11 total):			
Una camiseta <u>rosado</u>	(1)		
Los zapatos <u>blancas</u> *	(1)		
Una chaqueta <u>amarillo</u>	(4)		
Negros sandalias*	(1)		
Negros gafas*	(1)		
Amarillo chaqueta	(1)		
Amarillo camisa	(2)		
* exception to error pattern, described below			

TABLE 5: ERROR FREQUENCY, TEST 8

Hypothesis 6 again turned out to be true with a 21% agreement error rate.

Another interesting finding is that whether the agreement was correct or not, 16 of the structures had an adjective-subject word order like English. This was a consistent pattern among three students. I had expected to see some errors in word order such as the adjective being placed before the noun. Interestingly, three of the 18 students used the pattern of word order placing the adjective before the noun as in English.

For the overwhelming majority (except for the three starred) of these errors, students are assigning the masculine/singular to the adjective when it should be either plural or feminine. Masculine/singular here is the default. These students simply did not realize, forgot, or perhaps, have not yet fully *acquired* grammatical agreement.

Chapter 7

ANALYSIS OF ARABIC TESTS

This chapter is also divided into sections; one for each of the tests administered to the Arabic L2 participants over the course of the summer semester in 2013. For each of tests there will also be a brief explanation of the activity and grammatical structure as well as the hypothesis tested. It will be followed by the results in a bar graph which have been transliterated using (mostly) IPA simbols and then a detailed analysis. Please note that for the letter φ /jaas/ when it represents a glide I have used /y/ instead of /j/ so as not to confuse readers unfamiliar with IPA symbols. I also used dots underneath to represent emphatic sounds. Therefore φ φ represent /s φ / φ / φ represent φ / φ / φ / φ represent as well as a translation in English.

7.1 TEST 1

The first Arabic test was administered on July 25th (Week 5). It was very similar in structure to the Spanish in the sense that it is an *indefinite* NP. However, unlike Spanish, there is no indefinite article; students only select an adjective. For example *ħidʒaab dʒadiid* '(a) new headscarf'. Students also have four choices; masculine singular, feminine singular, masculine (human) plural, and feminine (human) plural.

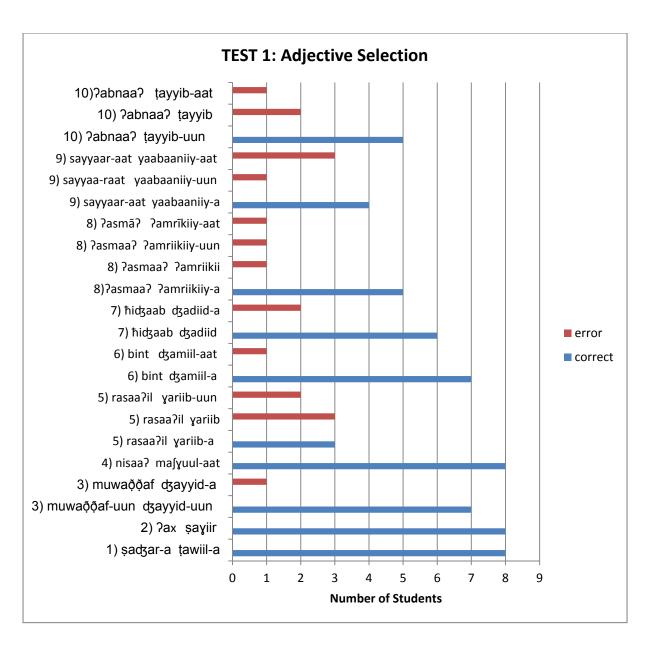
As mentioned in chapter three, Arabic plural markers for modifiers (such as adjectives and verbs) are used only on nouns referring to humans. All other plural nouns, whether inanimate or animal, must take *feminine singular* agreement. It is also important to recall that not only do some noun plurals have a 'broken plural' form, but some masculine adjective plurals as well (e.g., *ṣiɣaar* 'small-MASC/PL'). All of the adjectives used in the test had been taught and practiced by students in class and in assignments. However, many students had not quite mastered either of these concepts (i.e., broken plurals and nonhuman plural agreement).

Since students had now learned adjective agreement rules as well as the different types of plurals, I could begin to test (mostly) the same hypothesis from Spanish TEST 1:

First, since their L1 (English) only has biological gender and not grammatical gender I thought that this might influence students' choices. They might not give importance to the grammatical gender and prefer the biological sex related to the word. For example, the word *hidzaab* 'headscarf' is masculine but is associated only with women (Hypothesis 1).

Second, I hypothesized that students were likely to make mistakes when dealing with nouns lacking typical gender markers (for Arabic, a feminine noun without –a, such as *bint* 'girl') but also in the case of Arabic, broken plurals (ablaut) which neither have a gender marker nor a typical, overt number marker (such as-*uun*/-*aat*) (Hypothesis 2).

A third hypothesis specific to Arabic is that students might apply *human* agreement to non-human plurals (Hypothesis 7).



7.1.1 ANALYSIS OF STUDENT ERRORS, TEST 1

Hypothesis 1 appears to be confirmed for this Arabic test as two of the eight students (25%) chose *hidzaab dzadiid-a *'a new-FEM headscarf-MASC'. However I only included one noun of this type so we will have to revisit this in later tests in order to strengthen this conclusion.

The second hypothesis did not happen with the word *bint* 'girl', most likely because it is a high frequency word that they immediately associated with the biological gender.

However, broken plurals did indeed cause many of the mistakes:

```
*rasaa?il yariib(three students)(letters-n.h.p. strange-m.s.)*rasaa?il yariib-uun(two students)(letters-n.h.p. strange-m.h.p.)rasaa?il yariib-a(three students)(letters-n.h.p. strange-f.s.)
```

It appears that the three students chose masculine-singular as a default since there was no overt gender marker. The next two chose masculine plural as a default since they recognized that the word was plural (and no gender marker). As stated in Hypothesis 7, I believe that students were applying human agreement rules. Another explanation could be that some students did not know the meaning of the word and so did not know if it was human or not. However, in my instructions I asked students to raise their hands and ask if they forgot a word meaning as this was necessary in order to perform the task correctly.

Below is another example of a broken plural noun where masculine singular has been erroneously chosen as a default:

```
*?abnaa? tayyib (two students, 25%) (sons-m.h.p. good-m.s.)

?abnaa? tayyib-uun (five students, 62.5%) (sons-m.h.p. good-m.p.
```

Finally, to confirm Hypothesis 7 that students would apply human agreement to nonhuman nouns:

```
*sayyaar-aat yaabaaniiy-aat (three students, 37.5%) cars-n.h.p. Japanese-f.h.p.

*sayyaar-aat yaabaaniiy-uun (one student, 12.5%) cars-n.h.p. Japanese-m.h.p.
sayyaar-aat yaabaaniiy-a (four students, 50%) cars-n.h.p. Japanese-f.s.
```

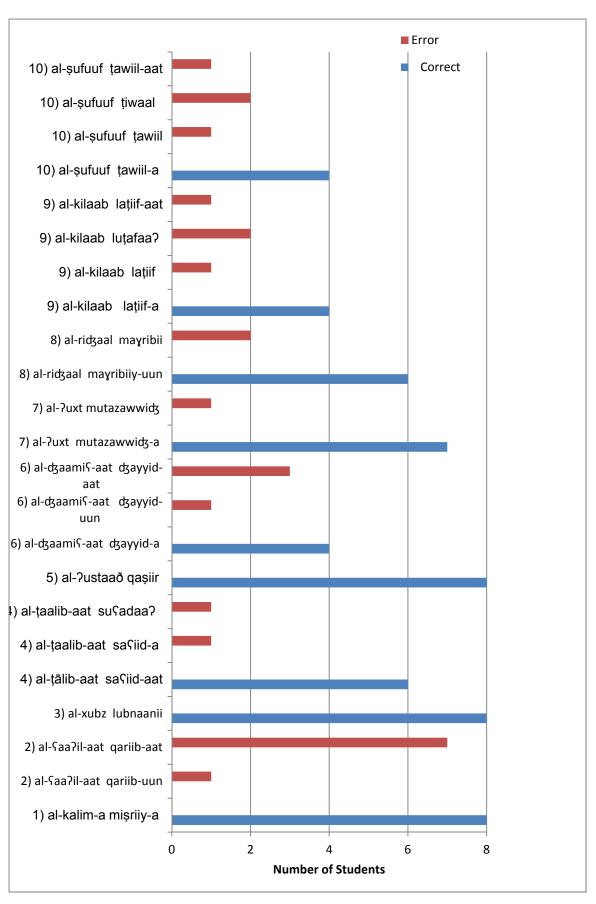
However, this example is quite tricky since the plural nonhuman noun carries a feminine plural marker *-aat* (used on nouns for both human and nonhuman).

7.2 TEST 2

TEST 2 was administered on July 31st. My hypothesis for TEST 2 in Arabic was the same as TEST 1 since the only additional element is the presence of a definite article *al*-(hypotheses 1, 2 & 7). The Spanish version of this test was quite different since the nominal

sentence in Spanish consists of an article + noun + verb + adjective as in $el \ libro \ es \ buen-o$ 'the book is good'. Arabic has no verb in this type of sentence and the article in Arabic is a prefix which is not modified for gender or number: al- $kitaab \ dgayyid$ 'the-book (is) good'.

TEST 2: ADJECTIVE SELECTION



7.2.1 ANALYSIS OF STUDENTS ERRORS, TEST 2

This test contained 10 entries for a total of 80. There were 24 errors for an error rate of 30%. Basically, to continue with the hypothesis from the previous test, there are many more examples to strengthen my conclusions; that masculine singular can be a default for broken plurals (no gender/number marker) and that students will try and apply human agreement rules to nonhuman nouns:

*al-Saa?il-ad	at qariib-uun	(one student, 12.5%)	the-families-n.h.p. (are) close-m.h.p.
*al-Saa?il-ad	at qariib-aat	(seven students, 87.5%)	the-families-n.h.p. (are) close-f.h.p.
al-Saa?il-aai	t qariib-a	(zero students, 0.0%)	the-families-n.h.p. (are) close-f.s.
*al-dzaami\$-	-aat dzayyid-uun	(one student, 12.5%)	the-universities-n.h.p (are) good-m.h.p.
*al-dzaami\$-	-aat dzayyid-aat	(three students, 37.5%)	the-universities-n.h.p (are) good-f.h.p.
al-dzaami\$-a	at dzayyid-a	(four students, 50.0%)	the-universities-n.h.p (are) good-f.s.
*al-ridzaal	mayribii	(two students, 25.0%)	the-men-m.h.p. (are) Morrocan-m.s.
al-ridzaal	mayribiiy-uun	(six students, 75.0%)	the-men-m.h.p. (are) Morrocan-m.h.p.
*al-kilaab	laṭiif	(one student, 12.5%)	the-dogs-n.h.p. (are) nice-m.s.
*al-kilaab	luṭafa?	(two students, 25.0%)	the-dogs-n.h.p. (are) nice-m.h.p.
*al-kilaab	laṭiif-aat	(one student, 12.5%)	the-dogs-n.h.p. (are) nice-f.h.p.
al-kilaab	laṭiif-a	(four students, 50.0%)	the-dogs-n.h.p. (are) nice-f.s.
*al-ṣufuuf	ṭawiil	(one student, 12.5%)	the-classes-n.h.p. (are) long-m.s.
*al-ṣufuuf	ṭiwaal	(two students, 25.0%)	the-classes-n.h.p. (are) long-m.h.p.
*al-ṣufuuf	ṭawiil-aat	(one student, 12.5%)	the-classes-n.h.p. (are) long-f.h.p.
al-șufuuf	ṭawiil-a	(four students, 50.0%)	the-classes-n.h.p. (are) long-f.s.

For the first example, all students chose a human plural adjective for *families* understandably since the noun does refer to people. However it is a collective noun (like the

Spanish *familia*) that does not refer to individual entities and so it follows the agreement rules for nonhuman plural.

However, 50% of the students gave a clearly nonhuman plural, dzaami?-aat 'universities', a human plural adjective. Three of the four students did so by giving it a feminine plural to match the existing plural marker (-aat) whille one used the masculine plural (-uun).

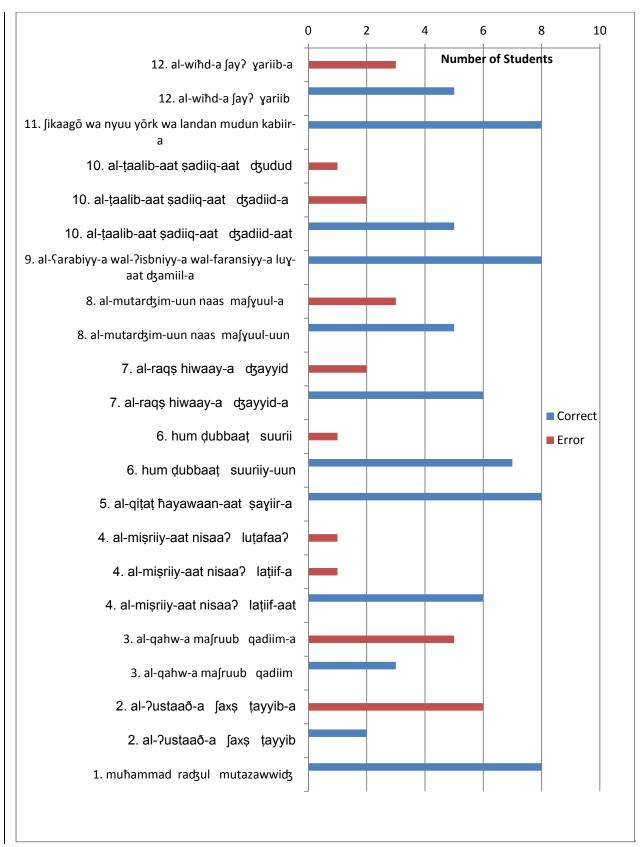
In the example 'The men are Moroccan', the two errors (25%) are most likely due to the absence of a plural suffix since *men* (*ridgaal*) is a broken plural. I had reminded students each time to ask if they did not understand the meaning of a word or if they were not sure whether something was singular or plural. Either students were assigning masculine singular as a default due to the absence of a plural suffix, or they could have mistaken the noun for singular, also due to lack of a plural marker.

The last two examples clearly show that errors of all types occur when a noun is both broken plural and nonhuman. 37.5% of students assigned human plural adjectives to *dogs* and *classes*, 12.5% assigned masculine singular, while 50% correctly chose feminine singular agreement.

7.3 TEST 3

TEST 3 was administered on August 1st. Although the structure of the Arabic data 3 test sentences was a bit different than the Spanish data 3 test, I had the same hypothesis for both. In Spanish, the nominal sentence structure that I chose consists of a NP (article + noun) followed by the VP (with the copula *ser*) which includes another NP (article + noun + adjective) as the predicate element. The adjective to choose here modifies the predicate noun. I hypothesized that students would make the mistake of modifying the subject noun instead, and in order to test this I gave many samples nouns with opposing genders such as, *El perr-o es un-a mascot-a diverted-a*, 'the dog is a good pet' (Hypothesis 3).

For Arabic TEST 3 I created the same type of sentences, the sole difference being that Arabic has no copula verb in the present tense and no indefinite article: *al-?ustaað-a ſaxṣ ṭayyib* (The-professor-f.s. (is a) person-m.s. good-m.s); 'the (female) professor is a good person'.



TEST 3: ADJECTIVE SELECTION

7.3.1 ANALYSIS OF STUDENT ERRORS, TEST 3

There were 12 entries for a total of 96. There were 26 total errors for an error rate of 27%. Like the Spanish, the Arabic test sentences can also be broken down into two kinds: Sentence type A (four sentences) which involve two nouns of opposing gender, and sentence type B (eight sentences) which include human nouns with the same agreement as well as nonhuman nouns which would also both have the same agreement (feminine singular). The overall error patterns are similar to the Spanish; many students are modifying the adjective to the subject noun instead of the adjacent predicate noun (choosing the semantic relation over the grammatical one):

```
*al-?ustaað-a ſaxṣ ṭayyib-a (six students, 75%) The-professor-f.s. person-m.s. good-f.s. al-?ustaað-a ſaxṣ ṭayyib (two students, 25%) The-professor-f.s. person-m.s. good-m.s 'The (female) professor is a good person'
```

*al-qahw-a maſruub qadiim-a (five students, 62.5%) the-coffee-f.s. drink-m.s. old-f.s. al-qahw-a maſruub qadiim (three students, 37.5%) the-coffee-f.s. drink-m.s. old-m.s. 'Coffee is an old drink'

*al-raqṣ hiwaay-a dʒayyid (two students, 25%) The-dance-m.s. pastime-f.s. good-m.s. al-raqṣ hiwaay-a dʒayyid-a (six students, 75%) The-dance-m.s. pastime-f.s. good-f.s. 'Dance is a good pastime'

*al-wiħd-a ſay? yariib-a (three students, 37.5%) Loneliness-f.s. thing-m.s. strange-f.s. al-wiħd-a ſay? yariib (five students, 62.5%) Loneliness-f.s. thing-m.s. strange-m.s. 'Loneliness is a strange thing'

All errors for sentence type A above involve agreement with *subject* noun instead of the noun within the NP. The total error rate for sentence type A is 50%

For sentence type B the error rate was much smaller: 15.6% (10 total errors out of 64 entries). Interestingly, seven of these 10 errors involve human broken plurals. It seems that some students at this point started to overgeneralize the nonhuman plural agreement rule and

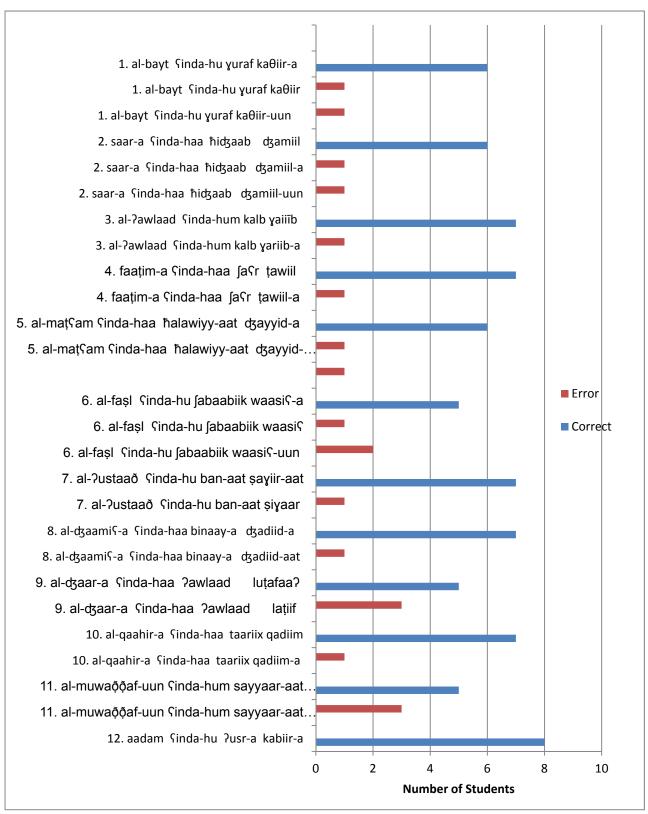
associated all *broken* plurals in general (even human) with nonhuman, feminine-singular agreement. However, even with the presence of broken plurals and nonhuman plural nouns in sentence types B, it still caused relatively few errors compared with the clear error pattern of sentence type A. As I concluded from the Spanish data 3 test as well, students are more likely (and in the case of Arabic, 50% more likely) to make a semantic connection to the subject rather than make the more grammatically-sound option, which would be to modify the adjective to the noun head of the NP.

7.4 TEST 4

Arabic TEST 4 sentences express ownership and can be translated into similar sentences as the Spanish TEST 4 structures. However, the Arabic for *to have* is not usually expressed with a verb but rather a preposition followed by an attached, possessive pronoun suffix. Therefore 'Adam has a large family' in Arabic is *?aadam ?inda-hu ?usr-a kabiir-a*, which translates roughly as 'Adam-m.s. *at-him* family-f.s. large-f.s.'

Whereas the Spanish TEST 3 and TEST 4 might have been influenced by different types of verbs, a copula *ser* verses a transitive *tener*, both tests in Arabic are verbless. However for the Arabic we can still talk about a syntactic relationship versus a semantic one in the difference of error rates for TEST 3 and 4 (Hypothesis 3).

As I did for the Spanish, I hypothesized that the presence of a second, possessor/subject, noun in the sentence would cause agreement errors, especially if the *possessor* was animate and the *possessed* inanimate (Hypothesis 4).



TEST 4: ADJECTIVE SELECTION

7.4 ANALYSIS OF STUDENT ERRORS, TEST 4

There were 12 entries in the test for a total of 96. There were a total of 20 errors which gives a total error percentage of 20.8 %. Like the Spanish, it is notable that the total error rate is much less in TEST 4 than in TEST 3 from which we can conclude that the equational sentence in Arabic (like the copula sentence in Spanish) professes a semantic connection between the two nouns, which is much stronger than a relationship of ownership.

Next, the common errors (involving two or more students) were not actually due to a mismatch of nouns, but rather, error patterns seen previously involving plurals (Hypothesis 7). The errors in following two examples involve giving nonhuman plurals *human* plural agreement:

*al-faṣl Sinda-hu ʃabaabiik	(2 students)	*The classroom-m.s. at-it windows-n.h.p.
waasi\$-uun		wide-m.h.p.
al-faṣl Sinda-hu ʃabaabiik	(5 students)	The classroom-m.s. at-it windows-n.h.p.
waasi\$-a		wide-f.s.

^{&#}x27;The classroom has wide/spacious windows'

*al-muwaððaf-uun Sinda-hum sayyaar-aat ?amriikiiy-aat	(3 students)	*The employees-m.h.p. at-them cars-n.h.p. American-f.h.p.
al-muwaððaf-uun Sinda-hum sayyaar-aat ?amriikiiy-a	(5 students)	The employees-m.h.p. at-them cars-n.h.p. American-f.s.
*al-faşl Sinda-hu fabaabiik waasiS-uun	(2 students)	*The classroom-m.s. at-it windows-n.h.p. wide-m.h.p
al-faşl Sinda-hu fabaabiik waasiS-a	(5 students)	The classroom-m.s. at-it windows-n.h.p. wide-f.s.

^{&#}x27;The employees have American cars'

Another common error involves a broken plural receiving masculine singular as default, possibly due to the lack of gender/number suffix:

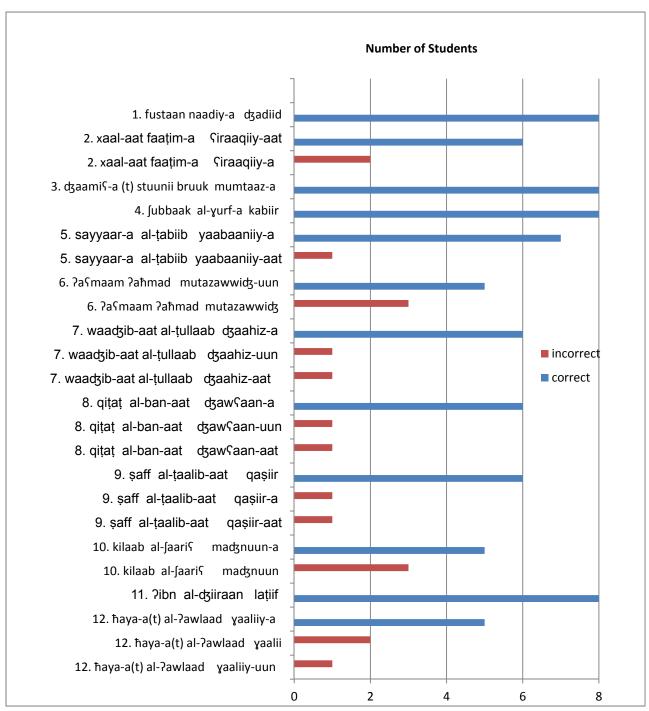
*al-dzaar-a Sinda-haa Pawlaad (3 students)	The neighbor-f.s. at-her boys-m.h.p.
laṭiif	nice-m.s.
al-dzaar-a Sinda-haa Pawlaad (5 students)	The neighbor-f.s. at-her boys-m.h.p.
luṭafaa?	nice-m.h.p

'The (female) neighbor has nice boys'

To conclude, the error patterns in data 4 do not show confusion by the presence of another noun so Hypotheses 3 and 4 cannot be confirmed for this type of sentence in Arabic. The errors in Arabic are actually consistent with error patterns of the first two data sets involving human/nonhuman agreement and broken plurals (Hypothesis 2 and Hypothesis 7).

7.5 TEST 5

The possessive constructions in the Arabic data 5 are similar to the Spanish by means of word order so my hypothesis remained the same: students could have trouble selecting the correct predicate adjective when the subject is a NP that contains another NP inside of a PP (this case a N+N) which is actually closer in proximity to the adjective (Hypothesis 5). I also wanted to test Hypothesis 4 again, that there would be a greater amount of errors if the subject is inanimate and the possessor is inanimate, as was the case with the Spanish. For example *fustaan naadiy-a dzadiid* (*dress-*m.s.inanimate *Nadia-*f.s.animate new-m.s. or 'Nadia's dress is new').



TEST 5: ADJECTIVE SELECTION

7.5.1 ANALYSIS OF STUDENT ERRORS TEST 5

There were 12 entries in this test for a total of 96. The total number of errors was only 18 (18.8%). The entries with common errors are the following:

```
*xaal-aat faaṭim-a Siraaqiiy-a (2 students) Aunts-f.h.p. fatima-f.s. Iraqi-f.s. xaal-aat faaṭim-a Siraaqiiy-aat (6 students) Aunts-f.h.p. fatima-f.s. Iraqi-f.h.p. 'Fatima's aunts are Iraqi'
```

*?asmaam ?aħmad mutazawwidz (3 students) Uncles-m.h.p. Ahmed-m.s. married-m.s. ?asmaam ?aħmad mutazawwidz-uun (5 students) Uncles-m.h.p. Ahmed-m.s. married-m.h.p. 'Ahmed's uncles are married'

```
*kilaab al-faari? madznuun (3 students) dogs-n.h.p. the-street-m.s. crazy-m.s. kilaab al-fri? madznuun-a (5 students) dogs-n.h.p. the-street-m.s. crazy-f.s. 'Street dogs are crazy'
```

```
*haya-a(t) al-awlaad yaalii (2 students) life-f.s. the-children-m.h.p. precious-m.s.

*haya-a(t) al-awlaad yaaliiy-uun (1 students) life-f.s. the-children-m.h.p. precious-m.h.p.

haya-a(t) al-awlaad yaaliiy-a (5 students) life-f.s. the-children-m.h.p. precious-f.s.

'Children's life is precious'
```

The first of the common errors (Fatima's aunts) seems to prove Hypothesis 5 as the two students clearly chose the adjective to agree with *faatima* instead of her aunts. There were also three other single examples occurring in this test where students chose the adjective to agree with the wrong NP, the possessor, which is closer to the adjective.

However, the other three common errors are a little harder to analyze. First, the three students who chose a masculine singular adjective (*mutazawwidz*) for 'Ahmed's uncles' may have done so either because *?aħmad* is singular or because 'uncles', the correct noun, is a broken plural. The same may be true for 'street dogs' since dogs *kilaab* is a broken plural.

In the last example 'Children's life is precious' the three students are without a doubt choosing to modify the wrong NP 'children' as the word life ħaya-a is clearly feminine singular. Also, two of them erred for a second reason; choosing masculine singular and not the plural adjective since children ʔawlaad is a broken plural (i.e. no suffix). Interestingly, this was a direct translation of a test entry in the Spanish data set which also yielded the most errors: *La vida de

los niños es preciosos (five of 18 students). This mistake is understandable; grammatically 'life' may *belong* to the 'children' but semantically it is also *part* of them.

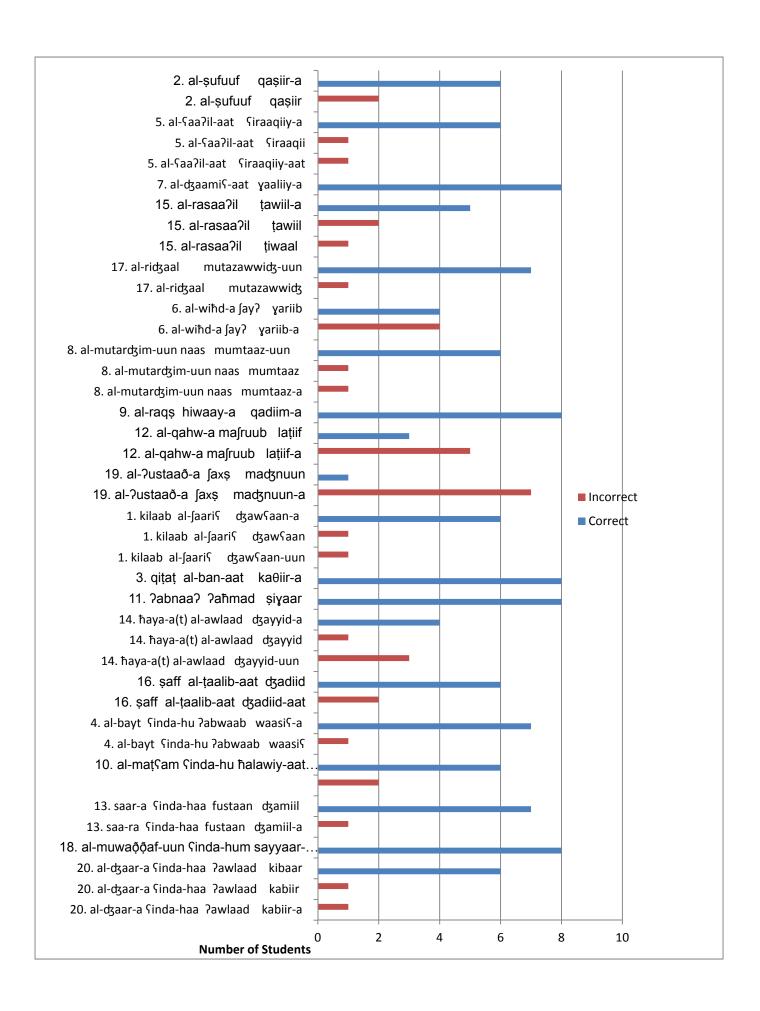
To conclude, TEST 5 results contain evidence to confirm Hypothesis 5 as at least half of the 18 errors are due to the presence of another NP closer in proximity. However, the fact that some possessor nouns were animate with an inanimate subject seemed to have no influence in the error rate for this test in Arabic. Therefore there is no eveidence here to support Hypothesis 4.

Lastly, I would like to revisit Hypothesis 1; that English L1 students would have trouble with a grammatically masculine word associated with femininity such as 'dress' *fustaan /vestido* or 'headscarf' *hidzaab*. Initially, two of the eight students (25%) made that association in TEST 2: *hidzaab dzadiid-a '*(a) headscarf-m.s. new-f.s.'. Surprisingly, for this test all eight of the students correctly chose masculine singular for *fustaan naadiy-a dzadiid* 'dress-m.s. nadia-f.s. new-m.s.' or 'Nadia's dress is new'. Although these tests were given only about a week and a half apart, due to the intensive nature of the course and number of instructional hours it is quite possible that at this point *grammatical* gender has become a solid part of these students' Arabic IL (interlanguage). It is also important to note that some students already spoke or studied another language with grammatical gender such as Spanish.

7.6 TEST 6

TEST 6 in Arabic is a mixed selection activity combining structures from TESTs 2, 3, 4 and 5. This test was actually administered last; the day before the final exam. After students completed it they exchanged papers so as not to change any answers, and then went over it together. It not only served as a review for the final and a clarification of some common errors, but as a much needed closure activity as I had not let them see the direct results of the previous activities up until this point.

TEST 6: ADJECTIVE SELECTION



7.6.1 ANALYSIS OF STUDENT RESULTS, TEST 6

The graph above has been rearranged to group together the different structures as was done for the Spanish TEST 6. There were 20 entries and eight students for a total of 160 answers. The total number of errors was 40 for a total error percentage rate of 25%. The following is a breakdown of error rates by structures:

TEST 2 structure (*al-dzaamis-aat yaaliiy-a* 'the universities are expensive'): 20% error rate (30% errors in TEST 2, 7/31).

TEST 3 structure (*al-?ustaað-a ſaxṣ madʒnuun* 'the (female) professor is a crazy person'): 45% error rate (27% total error rate for TEST 3, with 50% error rate for the subset of types of sentences containing opposing genders, which comprised most of TEST 6.)

TEST 4 structure (*saara Sinda-haa fustaan dzamiil* 'Sarah has a beautiful dress'): 15% error rate (20.8 % errors in TEST 4).

TEST 5 structure ($qitat \ al-ban-aat \ ka\theta iir-a$ 'the girls' cats are many'): 20% error rate (18.8% errors in TEST 5).

The common errors in TEST 2 structures still involved students assigning masculine singular agreement to broken plurals and even human agreement:

```
*al-sufūf qaṣiir The-classes—n.h.p. *short-m.s. 'The classes are short'

*al-rasaa?il ṭawiil The messages-n.h.p *long-m.s.

*al-rasaa?il ṭiwaal The messages-n.h.p *long-m.h.p. 'The messages are long'
```

As the instructor I am very confident that there was sufficient input and practice of these particular words for students to recognize the difference between singular and plural. However, it is very easy to overlook broken plurals and chose singular agreement since they do not contain a suffix as a number marker which students are used to (as the norm) in their L1 (Hypothesis 2).

TEST 3 structures contained the most errors (45%), which is consistent with results of this type of sentence in Spanish. Like the Spanish copula sentences, the Arabic equational

sentences produce the most total errors which are almost always connected to the presence of a subject NP:

```
*al-wihd-a fay? yariib-a (4 students) Loneliness-f.s. thing-m.s. strange-f.s. al-wihd-a fay? yariib (4 students) Loneliness-f.s. thing-m.s. strange-m.s.
```

'Loneliness is a strange thing'

```
*al-qahw-a maſruub laṭiif-a (5 students) The-coffee-f.s. drink-m.s. nice-f.s. al-qahw-a maſruub laṭiif (3 students) The-coffee-f.s. drink-m.s. nice-m.s.
```

'Coffee is a nice drink'

```
*al-?ustaað-a ſaxṣ madʒnuun-a (7 students) The-professor-f.s. person-m.s. crazy-f.s. al-?ustaað-a ſaxṣ madʒnuun (1 student) The-professor-f.s. person-m.s. crazy-m.s.
```

'The (female) professor is a crazy person'

In the three examples above, all of the subject NPs are feminine singular and have a feminine marker on the noun (-a) to which most students selected a matching adjective. However, there is a similar entry with opposite gender nouns that to my surprise yielded correct adjectives from all eight students:

```
al-raqṣ hiwaay-a qadiim-a (8 students)

The-dance-m.s. past-time-f.s. old -f.s. 'Dance is an ancient pastime'
```

I found two possible explanations for this. First, it may be that an *overt* gender marker (-a) stands out more than a zero marker for masculine. Perhaps this is why the previous three errors occurred: the students saw a feminine gender marker, and although not the correct noun, it drew them to choose a feminine adjective.

The other possibility is that it is because students actively used the word pastime (hiwaay-a) a lot more frequently than the word dance (raqṣ) and even more frequently than the lexical items in the other examples. After learning pastime vocabulary students interviewed each other and had to repeat the word hiwaay-a many times. Perhaps they were drawn to the word even though it was not the subject noun because of the frequency of which they used it.

TEST 4 structure sentences had the fewest errors. Since TEST 3 and 4 structures in Arabic were very different and neither involves verbs, I did not try to compare them with similar vocabulary. There was actually only one common error which is not due to the wrong NP but rather, human/nonhuman agreement:

```
*al-maṭʕam Ṣinda-hu ħalawiy-aat (2 students) The-restaurant-m.s. at-it sweats-n.h.p.

dʒaahiz-aat ready-f.h.p.

al-maṭṢam Ṣinda-hu ħalawiy-aat (6 students) The-restaurant-m.s. at-it sweats-n.h.p.

dʒaahiz-a ready-f.s.
```

'The restaurant has ready sweets'

Although the errors were few for TEST 5 structures, there were some persistent patterns, especially this one:

```
*haya-a(t) al-awlaad dzayyid (1 students) life-f.s. the-boys-m.h.p. good-m.s.

*haya-a(t) al-awlaad dzayyid-uun (3 students) life-f.s. the-boys-m.h.p. good-m.h.p.

haya-a(t) al-awlaad dzayyid-a (4 students) life-f.s. the-boys-m.h.p. good-f.s.

'The boys' life is good'
```

All four errors (50%) can be attributed to agreement with the wrong noun. At least three of the four had 'correctly' chosen a human adjective plural for the broken plural boys (*Sawlaad*) which seems to be a slight improvement (two of the three errors in data TEST 5 chose a masculine singular adjective for *Sawlaad*).

The other common error also involved agreement with the wrong NP:

```
*saff al-taalib-aat dzadiid-aat (2 students) class-m.s. the-students-f.h.p. new-f.h.p. saff al-taalib-aat dzadiid (6 students) class-m.s. the-students-f.h.p. new-m.s. 'The (female) students' class is new'
```

Although up until now I have been focusing on errors, there has also been significant development. Some lexical items were problematic in previous tests, especially because of nonhuman/human agreement, and they yielded few or no errors in TEST 6. In the following entries adjectives were correctly chosen by all eight students:

qiṭaṭ al-ban-aat kaθiir-a

cats-n.h.p. the-girls-f.h.p. many-f.s. 'The girls' cats are many'

al-dzaami\(\sigma\)-aat yaaliiy-a

The-universities-n.h.p. expensive-f.s 'The universities are expensive'

al-raqṣ hiwaay-a qadiim-a

The-dance-m.s. past-time-f.s. old-f.s. 'Dance is an ancient pastime'

PabnaaP Paħmad şiyaar

sons-m.h.p. Ahmed-m.s. little-m.h.p. 'Ahmed's sons are small'

al-muwaððaf-uun Sinda-hum sayyaar-aat yaabaaniiy-a

The employees-m.h.p. at-them cars-n.h.p Japanese-f.s

'The employees have Japanese cars'

To conclude, I targeted many of the problematic lexical items and structures in TEST 6 to see if the errors patterns from TESTS 2, 3, 4 and 5 would persist. Although the errors did persist and in some cases the error percentages did not change much, it is important to note that I had purposely selected entries that would be problematic for students from those previous tests and therefore TEST 6 was significantly harder. Although the error types still exist in TEST 6, there is also strong evidence that students are beginning to acquire the complex agreement rules of Arabic plurals. This will be further tested by students' own production of nouns and adjectives in TESTs 7 & 8, also administered the last week of class.

7.7 TEST 7 AND TEST 8

The previous six selection activities provided students with four options to select from when modifying adjectives to agree with nouns. Although it measured how well students learned agreement rules and showed some development over the three weeks they were administered, students were not producing their own NPs. For TESTS 7 & 8, students actually

produced their own original NPs which is a more precise way to see if they are really on the path to acquiring these rules. TEST 7 and TEST 8 are written tests with instructions exactly like the Spanish. However, I modified the images to elicit only lexical items that were frequently used in the Arabic class so that students could produce them and modify them accurately. Please see appendix G and H.

For both TESTs 7 and 8, I tested Hypothesis 6, that students would produce more number, gender, and human/nonhuman agreement errors since they would first have to search their lexicon for nouns and adjectives. With this extra effort and without the selection prompts, they would be less focused on grammatical precision. I also expected to see some word order errors such as the adjective being placed before the noun as in English.

For TEST 7, I asked students to write a simple descriptive sentence, including an adjective for 10 images. Students were also instructed to ask if they forgot how to say something. For this activity I included all NPs that included both a noun and adjective and disregarded spelling mistakes so long as the gender and number markers were intact on the nouns.

7.7.1 ANALYSIS OF STUDENT ERRORS TEST 7

TEST 7 yielded 77 NPs (N + Adj) with a total of 16 agreement errors which is about 20.8 %.

The common errors still included the same patterns as the selection activities. For example, there were four errors involving human agreement for nonhuman plurals such as sayyaar-aat siyaar 'small cars' or fawaaris kabiir-uun 'large streets'. Also we see masculine singular as a default for nouns that are broken plurals and even for feminine singular such as tullaab latiif 'nice students' or fii yurf-a waasis' in a spacious room'. The masculine singular as default errors were most common; there were eight. Lastly, there were two errors involving masculine plural adjectives with a feminine plural noun such as al-ban-aat sayiir-uun 'the girls are small'.

Surprisingly the only word order error involved $ka\theta iir$ 'many' as in * $ka\theta iir$ fawaari? 'many streets' which is used as an adjective in Arabic and must follow the noun. In Spanish,

which is this particular student's (other) L1, this word is modified like an adjective but is a modifier that always precedes the noun as in *muchas calles* 'many streets'.

7.7.2 ANALYSIS OF STUDENT ERRORS, TEST 8

For TEST 8 students had pictures of three people wearing different outfits. They had to identify and describe two items that each was wearing using adjectives. I counted the total number of complete noun + adjective NPs for a total of 47. There were only five errors for an error rate of about 10.6 %. It is important to note that there were no plurals as the words banţaluun 'pants' and ħiðaa? 'shoes' in Arabic are treated as singular.

Of the five errors, four of them involve masculine singular adjectives with feminine singular nouns. Interestingly, three of these four errors involve colors for which a feminine marker does not exist, the feminine is inflected through a pattern of ablaut (see Chapter 3):

Paswad 'black-MASC' sawdaa? 'black-FEM'
Pabyad 'white-MASC' baydaa? 'white-FEM'

These errors were made by two students who could not produce the feminine color adjective for this pattern. Interestingly they did not attempt to add a feminine marker either (they most likely knew it would be incorrect). There were however, two other students who chose colors of the <code>?affal / faflaa?</code> pattern to modify feminine nouns and they did so correctly.

There was only one error involving a feminine adjective with masculine noun which was the word *fustaan* 'dress' and was discussed in previous tests. Overall there have been very few errors involving masculine nouns associated with femininity like *dress* or *headscarf*.

The only explanation for the students' very accurate noun adjective agreement compared with other data tests is the fact that there are no plurals present in TEST 8, and only four in TEST 7. The hypothesis stating that there would be an increase in agreement errors when students have to produce nouns and adjectives cannot be confirmed for Arabic TESTS 7 and 8. However, I believe that this may be a bias of the images I used in the tests; most of the items to be described elicited a *singular* noun/-adjective. These tests actually highlight just how challenging plurals and plural agreement rules can be for first year Arabic students (in this case, first *summer* Arabic

students). The students have seemed to acquire gender quite well in Arabic. The issue here, unlike Spanish, is plural and *human-nonhuman* agreement.

Chapter 8

DISCUSION OF RESULTS COMBINED & FINAL CONCLUSIONS

For this section I will begin with the initial hypotheses and discuss the general patterns found throughout the test results for both languages, in terms of the hypothesis as well as some other interesting or unexpected results that occurred as a result of the tests.

8.1 HYPOTHESIS 1

Since (most) students' L1 is English, which does not have grammatical gender, students are likely to choose the biological gender related to the noun instead of the grammatical gender of the noun itself.

Interestingly, the Spanish and Arabic tests had very different results. For Spanish, the hypothesis was almost null while for Arabic, there was some evidence of L1 transfer.

For Spanish, the TEST 1 pattern was a very simple NP, and there were no errors from words associated with the opposite gender such as *un vestido* 'a dress' *una corbata* 'a tie'. Students actually fared better with these words than others since they contained the most common gender markers (-o masculine, -a feminine). Interestingly in TEST 4, there was on average one error in which the Spanish L2 agreed the adjective with the the wrong (possessor) noun as in *la chica tiene un vested-o roja 'the girls has a red dress', *el salon tiene una pizarra blanca 'the room has a white board' and *las hermanas tienen los ojos castanas 'the sisters have brown eyes'. Here, the errors involving vestido 'dress' and corbata 'tie' are just as frequent as errors with non-animate nouns and nouns that are not usually associated with an opposing gender. I therefore concluded that all of the errors were most likely due to the presence of the other noun and not because of the 'biological' gender usually associated with having or using the particular object (girl>dress, man>tie, etc.).

For the Arabic there were initially some errors in TEST 1 in which two students (25%) chose a feminine adective for ħidʒaab 'headscarf', which like dress, is always associated with the female gender. However, this error type disappeared in TEST 4. Surprisingly, the word fustaan 'dress' as in fustaan naadiya dʒadiid '(the) dress (of) Nadia (is) new' cuased zero errors even with the presence of a feminine and (biologically) female possessor noun preceding it. However,

the word *fustaan* was later given feminine agreement, once in TEST 6 and once in TEST 8. This suggests that biological gender associations may be a tendency as L2s are first encountering grammatical gender in a new language. Since English only has biological gender and not grammatical gender, I would suggest that this error type is from the process of *language transfer*. The reappearance of this error after it is thought to be eliminated is also consistent with how Selinker describes *fossilization* in an interlanguage (Chapter 2).

8.2 HYPOTHESIS 2

Nouns lacking typological gender or number markers (suffixes) will cuase students to make frequent errors.

This hypothesis held up for both Spanish and Arabic throughout the eight tests. The lack of an (obvious) gender or number marker (mostly gender for Spanish, number for Arabic) was the most consistent cause of errors throughout the tests.

For example, in Spanish TEST 1, there were no gender errors involving words that end in -o or -a. However, the majority of students incorrectly choose *un universidad nuevo 'a new university' while almost half chose *un luz rojo 'a red light'. Although -dad is a feminine marker, it is less common and students at this state do not have enough exposure. However -z is not a gender marker so if the students did not 'learn' (or remember) the gender for the particular word they had to guess. Interestingly -j as in reloj is not a gender marker either and I therefore I assumed that students would have guessed as well. Interestingly, all but one student correctly chose masculine for unos relojes viejos 'some old watches'. I concluded from this test that students were likely to choose masculine as a default gender either because they thought is was correct or because they were unsure. To be sure, in 92% of TEST 1 errors, students selected masculine instead of feminine for nouns that did not end in -o -a.

For TEST 2, 86.4% of the errors involved nouns ending in either –e, -n, or –or. The most common of these errors also had the pattern of masculine as a default as in *las estudiantes son <u>chinos</u> 'the students-FEM are Chinese-MASC.', *la joven es <u>guapo</u> 'the young (woman) is goodlooking' or *las clases son <u>aburridos</u> 'the classes are boring'. These errors are understandable since masculine is the epicene gender in Spanish (as well as Arabic). However, what is

surprising here is that somehow the students missed or ignored the article which should have signaled to them that the nouns were actually feminine.

These errors, although on a smaller scale, did continue in TEST 6: *La joven es timido 'the young-woman is shy' *la luz es rojo 'the light is red' *las estudiantes son colombianos 'the students are Colombian'. In TEST 7, there was one word that was often produced as a total agreement error (both the article and adjective) signaling that L2s were very confident that it should be masculine: *el leche es blanco 'la leche es blanca the milk is white. This is a very logical mistake; according to Bull's statistics (Chapter 2) words that end in –e are musculine 89.3% of the time.

Arabic is a little more complex but the same generalization can be made, especially of broken plurals which lack suffixes. Feminine nouns in Arabic, however, are much more regular in taking the feminine marker. Asides form the nouns coinciding with biological gender such as *Nadia*, *girl*, *sister*, etc., the feminine singular nouns tested all ended in -a. Therefore, there were fewer 'gender' errors (in the singular) for the Arabic tests compared with the Spanish.

However, in the presence of a *broken* plural (ablaut), a common error pattern was to choose masculine singular as a default since there was no suffix. This was a pattern for both human and nonhuman broken plurals. For example in TEST 1: $rasaa?il\ yariib$ 'strange letters', $?abnaa?\ tayyib$ 'good sons', al-ridaal mayribii 'the men are Moroccan'. Then again in TEST 4 and in TEST 6: al-daara ?inda-haa $awlaad\ latiif$ 'the (female) neighbor has nice boys', al- $rasaa?il\ tawiil$ 'the letters (are) long' and al- $sufuuf\ qasiir$ 'the classes (are) long'. In fact most of the errors of sentence production present in TEST 7 involved masculine singular as a default as in $tullaab\ latiif$ 'pleasant students' (here, there was a general pattern of lacking agreement, even for gender: yurf- $a\ waasi$?).

However, when there was a plural or gender suffix present, they where more likely to choose the correct agreement, at least for *human* nouns as in *muwaðaf-uun dʒayyid-uun* 'good employees'. This pattern was also present throughout the eight tests.

Interestingly, the exception for both Spanish and Arabic concerning words that do not end in a typical gender marker is when biological gender coincides with grammatical gender.

There were zero errors for the Arabic word *bint* 'girl', *uxt* 'sister', and the Spanish word *madre*

'mother'; students were able to choose the correct agreement for these even without a suffix marking gender. There were two mistakes for the Spanish *mujer* 'woman'. However, this word may not have been as frequently used in class and since it was the only error involving biological gender it is possible that those particular students did not know the meaning.

8.3 HYPOTHESIS 3

The presence of another (subject) noun is likely to cuase confusion and many errors. In a subject-predicate sentence, students are likely to agree the adjective to the subject noun instead of the adjacent, predicate noun.

TEST 3 and TEST 4 were the most interesting for both Arabic and Spanish. TEST 3 had the greatest number of errors of any single test. This time, it was not because of word ending or absence of inflectional markers, but rather, because of the relationship of the adjective to the subject noun. Even though grammatically the adjective should modify the predicate noun, the semantic connection to the subject was much stronger even though it was *spacially* farther away. In sentences like *el doctor es una persona trabajador 'the doctor is a hardworking person' and *al-?ustaað-a ʃaxṣ ṭayyib-a 'the (female) professor is a good person', although the adjectives 'hardworking' and 'good', must agree grammatically with the nouns preceeding them, they are in essence describing the subject nouns 'professor' and 'doctor'.

Hypothesis 3 certainly holds up for both languages. For Spanish TEST 3, sentence type A (the opposing gender nouns) have a 59% error rate while there is a 50% error rate in the Arabic sentence type A. All of these errors are attributable to the subject nouns in the sentence.

However, the fact that L2s are agreeing the adjectives to another noun simply because it is a 'subject' turns out not to be the case; the same error pattern (at least to the same degree) is not present in TEST 4 which also contains another noun which is the 'subject'. At first glance TEST 4 for both Spanish and Arabic was not as interesting since the error rate was very low. For the Spanish there were only eight total errors with no more than one error for each entry (16 students present). Although the errors were limited, they did also involve agreement with the subject noun. The Arabic TEST 4 did yield far more errors (20.8%). However the majority of errors in Arabic TEST 4 were not due to another noun, but rather to issues regarding plurals such

as giving nonhuman plurals human agreement (*al-faṣl Sinda-hu ʃabaabiik waasiS-uun 'the classroom has spatious doors') and also lack of agreement for broken plurals (*al-dʒaara Sinda-haa awlaad laṭiif 'the (female) neighbor has pleasant boys').

Although we can confirm Hypothesis 3, I think that it is important to modify the original hypothesis and add the *type* of verb (when the verb is a copula) as well as the *function* of the second noun. With the presence of a subject, the learner will likely be drawn to it instead since it has a strong semantic connection while the predicate noun (to which the adjective should grammatically agree) is also, in effect, describing the subject noun.

8.4 HYPOTHESIS 4 AND HYPOTHESIS 5

In sentences with possession, there are likely to be agreement errors if the possessor is animate and the entity being possessed (to which the adjective should agree) is inanimate.

&

Errors in possessive constructions may also have to do with proximity to the 'possessor' noun. Students may have trouble selecting the correct predicate adjective when the subject is a NP that contains another NP inside of a PP which is actually closer in proximity to the adjective. For Arabic it will be the N in the idaafa construction (N+N) which is closer in proximity.

Originally for TEST 4 in both Spanish and Arabic there was no evidence to support Hypothesis 4 as the errors were not greater for the sentences that contained animate possessors with inanimate nouns being described. TEST 5 in Spanish does, however, provide some evidence to support Hypothesis 4 concerning *animateness*, as well as Hypothesis 5 about proximity. Although not as numerous as the errors in TEST 3, there was a clear pattern where the adjective was chosen to agree to the wrong noun. This time the noun was a possessor, the object of a PP. The errors could have been due to either the semantic relationship of ownership, or, simply because this noun is actually closer, preceding the adjective which is Hypothesis 5 explains. The sentences with errors were analized also by a relationship of *inanimate-inanimate*, *animate-animate* and *inanimate-animate* nouns. Interestingly, the majority of the errors occurred where

the object being described was inanimate and the possessor was animate. As I mentioned in Chapter 6, this was most likely due to the combination of sentence structure (proximity of the other noun) and the fact that the other noun was animate.

Interestingly the Arabic TEST 5 only supports Hypothesis 5, in that there was clearly a pattern of errors where the possessor noun preceding the adjective was chosen. Concerning Hypothesis 4, there were just as many errors for sentences with animate-animate nouns as there were for inanimate-animate.

However, not all of the Arabic errors were as straightforward in their analysis. For example, in *kilaab al-faari madznuun 'dogs of the street are crazy' or *?asmaam ?aħmad mutazawwadz 'Ahmad's uncles are married', it is impossible to say whether the wrong noun was chosen by students selecting masculine singular because the nouns were broken plurals (no suffix) or because the second (possessor) noun was singular. There were some clear examples of errors with agreement to another noun, however it is not possible to say exactly how many.

In TEST 6 for both Spanish and Arabic there is further evidence to support Hypothesis 5, that proximity of the other noun causes errors. To conclude, the hypothesis about proximity of the nouns due to sentence structure can clearly be confirmed and I would add that animacy of the possessor noun can increase the frequency of these errors. It seems that animacy only has an effect when the sentence structure is more complex.

8.5 HYPOTHESIS 6

The number of errors in gender, number and human/nonhuman agreement will generally increase when students produce their own, original noun-adjective phrases.

It is much more taxing to search the lexicon for words and write them. Therefore students' attention will be drawn away from gender and number agreement. There may also be some word order errors due to L1 transfer as the adjective always preceeds the noun in English. Also, the tests for this hypothesis (TESTS 7& 8) may be closer to assessing actual language *acquisition* since the task is not focused on grammar like the previous tests.

It was no surprise that there would be a greater number of errors when students produce

their own nouns and adjectives. What was interesting to see was a new error pattern: a *lack* of agreement. For both the Spanish TEST 7 and TEST 8, students most often used the correct article showing that they were aware of the gender and number of the noun. However, the overwhelming majority of errors resulted in masculine singular adjectives when they should have been plural or feminine singular or plural. Interestingly for TEST 1, where students had to select both an article and adjective, they mostly chose them uniformly regarding gender and number. In the selection activities students were made aware by the test itself that the adjective can have four different forms. However in TEST 7 and TEST 8 there was no explicit prompt that would draw their attention to gender and number, thus masculine singular was clearly the default.

As for L1 transfer in word order in TEST 8 where students had the most freedom to describe what the characters are wearing, their was a clear pattern of adjective-noun order for some students which would be correct in English but not for this type of description in Spanish.

For the Arabic, TEST 7 still involved some of the previous error patterns such as human agreement for nonhuman nouns. However, most errors were like the Spanish: a lack of adjective agreement where masculine singular is used by default. TEST 7 involved few plurals and plurals were absent altogether in TEST 8 since all of the articles of clothing were described in the singular. Therefore, for TEST 8 there was actually fewer agreement errors than any other test. For this reason I cannot use the Arabic production tests to confirm hypothesis 6 as the majority of agreement errors in Arabic came about through plural nouns. However, this was a bias of the test; I believe if more prompts for plurals existed there would have been a great number of errors.

For Arabic, gender in the singular is marked (for feminine) very regularly whereas plural inflection as well as plural agreement rules have a higher level of complexity. Spanish on the other hand has a very regular (and far simpler) system of marking plurals while gender is often marked irregularly.

8.6 HYPOTHESIS 7 (Specific to Arabic)

Students will try to apply human agreement rules to nonhuman plurals.

This was another error found throughout all of the Arabic tests. All *nonhuman* plural nouns, whether broken plurals or with a feminine sound plural suffix, should take feminine

singular agreement in the adjective. However, in TESTS 1 and 2 these entries were often given human plural adjectives such as *rassaa?il yariib-uun* 'strange letters' and **sayyaar-aat yabaaniyy-uun* 'Japanese cars'. This was especially frequent when the noun plural had the feminine suffix –*aat* such as in the previous 'car' example or *al-dzaanis-aat jayyid-aat / jayyid-uun* 'the universities are good'. In TEST 2, 50% chose a human plural suffix for the adjective when a nonhuman noun ended in a feminine plural suffix.

For a nonhuman but *animate* noun such as 'dogs' there was also an increase in human agreement (37.5 %). Finally, all eight were incorrect in *al- Saa?il-aat qariib-aat* and *al- Saa?il-aat qariib-uun* 'the families are close', with seven feminine plural suffixes and one masculine plural suffix. Since *Saa?il-a* 'family' (singular) is a collective noun it is treated as a normal nonhuman, feminine word. Therefore grammatically it should take nonhuman agreement for the plural. However, the students clearly associated a semantic meaning to the word since is does refer to a group of human beings.

Since the grammatical distinction of human-nonhuman is a parameter that does not exsist in English, I knew these errors would be very frequent. However there was a very notable progression between TESTs 1 through 6. The error pattern was very regular in TEST 1 and TEST 2. There were a bit fewer nonhuman plurals entries for TESTS 3, 4, and 5, however there were still a few instances though on a much smaller scale. In TEST 6 this error pattern was actually almost eradicated, except for one student out of the eight. However when students had to *produce* the nouns and adjectives in TEST 7, the error peaked again: four of the 16 total agreement errors involved human agreement (using a plural suffix on the adjective) for nonhuman plurals such as *fawaaari* kabiir-uun 'big streets'. Here again we see a reappearance of *fossilized* errors increasing when the task becomes more taxing as in TEST 7.

A last note, another interesting pattern emerged during TEST 3: some learners actually started to overgeneralize the nonhuman agreement rules to all *broken* plurals (including human) and assigned feminine singular such as *al-mutardzim-uun naas mafyuul-a* 'the translators (are) busy people'.

8.7 HYPOTHESIS 8 (Specific to Spanish)

The presence of an article with a noun should aid students in selecting gender and therefor they are likely to have less errors concerning words that do not end in typological –o/-a.

My hypothesis was for there to be less errors for TEST 2 than for TEST 1, although TEST 2 also contained a majority of nouns not ending in –o/-a, students could use the article which was present to figure out the correct gender. There actually was not a notable decrease in errors (15% in TEST 1 and 13% in TEST 2). Most of the errors were still caused by nouns with atypical endings (91%), where students chose masculine as a default. This is consistent with the results in TEST 1 and confirms Hypothesis 2. Actually, many students ignored or did not notice the definite article indicating the feminine gender. For example four (of the 18) students chose *Las clases son aburridos' the classes are boring', seven chose *las estudiantes son chinos 'the students are Chinese' and six chose *la joven es guapo 'the young (woman) is goodlooking'.

However, there was also clear evidence that some students did catch on if we compare the percentage of students who had at least one error in TEST 1 (76%) with that percentage in TEST 2 (only 44%).

This test also strengthed the conclusion about masculine being the default gender for nouns not ending in –a. Interestingly, as we have seen, many of the errors in the production tests (7 and 8) were partial errors where students wrote the article with the correct gender but then produced an adjective in masculine singular.

8.8 SOME FINAL CONCLUSIONS

To generalize the sum of error types observed throughout the Arabic and Spanish tests, they can be grouped into three kinds; internal errors (the noun itself), external errors (other nouns) and errors due to L1 transfer.

Many of the agreement errors were due to the *morphology of the noun* itself. For example, if it does not have an easily recognizable gender marker, many of the Spanish L2s were unsure of the noun's actual gender marker as was usually the case with feminine words such as *la universi-dad* 'the university' or *la leche* 'the milk' or nouns that can be either gender where some Spanish L2s have not yet learned to determine the gender based on the noun's modifiers

such as *la joven* 'the young (woman)', *la estudiante* 'the (female) student', etc. For Arabic, broken plurals were a constant source of difficulty as there are actually many different patterns used in the Arabic language so they must be learned along with the singular noun. This is an extra load not only when learning new lexical items but also when processing them during activities such as these tests. They are also not as frequently used in class as nouns in the singular are. Therefore, it is very easy for Arabic L2s to read over them and, since there is no overt number marker such as a plural suffix, they are likely to select an adjective in masculine singular which has a zero morpheme simply because it 'matches'. It is also possible here that L2s simply did not recognize the broken plural as a plural. Lastly, they could merely have been distracted, tired, or fatigued because of the weight of the task. It is also important to note that they are reading a script in which they are still developing proficiency; they cannot read with the same automaticity as they can with English (or even Spanish).

As for errors caused by an interference of another noun, some were due to the structure within the sentence itself. For example, if there is a possessive phrase in Arabic or Spanish such as 'the *shirt* of *Johnny* is *blue*' some L2s will automatically equate 'blue' with Johnny instead of his shirt since it preceeds the adjective. Another interesting finding here is that *animacy* of the possessor (Johnny being a living being) can also increase the likely hood that this will occur. Also, a *semantic* relationship is very likely to cuase a noun to interfere. Such was the case when half (Arabic) or more than half (Spanish) of the L2s focused on the subject noun and not the predicate noun when the adjective was part of the predicate NP (as *al-2ustaað-a faxṣ madʒmuun-a '*the professor-FEM (is a) person-MASC crazy-FEM' or *los perr-o-s son mascot-a-s buen-a-s '*the dogs-MASC are pets-FEM good-MASC'). Here, the error was not due to proximity of another noun as the predicate noun did actually preced the adjective. Rather it is the function of the *copula* verb in Spanish (and the *zero copula* in Arabic) that equates the two parts; the adjective and the predicate noun are essentially describing the subject and therefore L2s are focusing on that relationship instead of the grammatical one.

A third notable source of error is the learner's L1. Most of the participants for this study were English L1 (a handful also had an additional L1) which has only a biological gender classification. Where biological gender and grammatical gender intersected such as *la madre* 'the mother' and *al-bint* 'the girl' there were almost zero errors even though these words lacked

noticible gender markers. Also, *animacy* of another noun did increase the likelihood that it would interfere in more complex structures.

For Arabic, there is an additional parameter which is difficult for most Arabic L2s as it is not likely to be found in any other language they have encountered: the *human-nonhuman* distinction in plural agreement. Nonhuman plurals were frequently assigned human plural suffixes in the tests. Although the decrease of these errors types in the selection activities from TEST 1 to TEST 6 signaled some development, the L2 production of nouns and adjectives in TEST 7 hinted that this noun classification could actually take longer to actually *acquire*.

Next, there was some word order patterns that mirrored English (adjective-noun) in the last Spanish test where L2s had the most freedom to describe clothing attire.

Finally, although masculine (and masculine 'singular' for Arabic) was selected as a default consistently throughout the tests, the production tests at the end were the most interesting. For Arabic there were more adjectives produced without agreement even though the nouns were plural and even feminine singular. For Spanish, many adjectives were also written in masculine singular even though they correctly inflected definite or indefinite articles. The presence of the article indicates that they are mostly aware of the gender and number as properties of the noun itself. This evidence that the masculine singular used erroneously in these last tests was not an internal or external error but rather a mere lack of agreement and L1 transfer as adjectives are not inflected in English.

The increase in errors on the production tests, especially those that were due to L1 transfer, indicates that those students have 'learned' the rules well enough to choose the correct forms when prompts were available. However the production tests hint that many of the features such as word order and adjective inflection have not yet been actually 'acquired'. In the IL spectrum, these are the fossilized errors that will show up when faced with a task that is more intellectually taxing, such as producing the lexical items and spelling them out in a foreign language, and even in a foreign script.

8.9 FINAL THOUGHTS

I would like to conclude with some reflections on language learning. Throughout the two semesters of data collection and since I have started teaching high school Spanish and Arabic as I

began writing this, I have had the unique opportunity to encounter many L2s at the very beginning stages of SLA. I also had the opportunity to compare the experience of teaching Arabic to a small goup of learners that met daily for a total of 12 hours a week, to that of teaching a high school group, which though not as motivated, met two or three times a week for a more extended length of time. The former was much closer to an immersion experience and covered a short time span; the amount of Arabic that these students were able to effectively produce in both written and oral communication was astonishing.

Although the field of second language education has greatly improved throughout the last few decades, the classroom is still not comparable to the natural, interactive environment in which a human being acquires his or her L1. Nor is the adult L2 mind comparable to that of a child who is a master of implicit learning and whose neurons are still rapidly forming connections in the brain. Yet despite all of this, it is still amazing to see what the adult human mind is capable of obtaining if it possesses the will and is allowed the right conditions. As a teacher (and learner) I like to tell students that successful language learning comes down to three things, the first two of which are not always controlled by the learner. However, if strong enough, the third can compensate. They are aptitude, time devoted (or time 'immersed') and lastly that motivation, the yearning to communicate with others, will power, or whatever you would like to call it, which drives one to keep pushing farther even when obstacles seem to get in the way. I was inspired to teach languages because I loved to learn them. Now I am inspired by the learners who allow me to take part in their L2 development and continue to relive this amazing experience.

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Appendix A (Spanish and Arabic Test 1)

Please circle the correct article and adjective to make a phrase:

- 1) un / una / unos / unas **corbata** morado / morada / morados / moradas
- 2) un / una / unos / unas **vestidos** negro / negra / negros / negras
- 3) un / una / unos / unas **perro** pequeño / pequeña / pequeños / pequeñas
- 4) un / una / unos / unas lápiz amarillo / amarilla / amarillos / amarillas
- 5) un / una / unos / unas **pantalones** largo / larga / largos / largas
- 6) un / una / unos / unas madre alto / alta / altos / altas
- 7) un / una / unos / unas **chicas** delgado / delgadas / delgados / delgadas
- 8) un / una / unos / unas universidad nuevo / nueva / nuevos / nuevas
- 9) un / una / unos / unas **luz** rojo / roja / rojos / rojas
- 10) un / una / unos / unas **relojes** viejo / vieja / viejos / viejas

SPANISH TEST 1 Translation

- 1) a purple tie
- 2) some black dresses
- 3) a small dog
- 4) a yellow pencil
- 5) some long pants
- 6) a tall mother
- 7) some thin girls
- 8) a new university
- 9) a red light
- 10) some old watches

Please circle the appropriate adjective to complete the phrase:

```
      1 شَبَجَرة
      طویل / طویلة / طِوال / طویلات

      2 أَحْ
      صغیر / صغیرة / صغار / صغیرات

      3 مُوَظِّفُونَ جَیِّد / جَیِّدة / جَیِّدونَ / جَیِّدات

      4 نِساء
      مَشغول / مَشغولة / مَشغولونَ / مَشغولات

      5 رَسائِل غَریب / غَریبة / غَریبونَ / غَریبات

      6 نِئْت جمیل / جمیلة / جمیلونَ / جمیلات

      7 حِجاب جدید / جَدیدة / جُدُد / جَدیدات

      8 اسْماء
      امریکیّ / أمریکیّة / أمریکیّونَ / أمریکیّات
```

9 سَيّارات يابانيّ / يابانيّة / يابانيّونَ / يابانيّات 10 أَيْناء طَيّب / طَيّبة / طَيّبونَ / طَيّبات

```
1. ſadzar-a
                       tawiil /
                                 tawiil-a / tiwaal / tawiil-aat
 Tree-f.s.
                       tall-m.s.
                                 tall-f.s
                                            tall-m.p tall-f.p.
'a tall tree'
2. ?ax
                                              şiyaar /
                       şayiir /
                                  sayiir-a /
                                                          sayiir-aat /
  Brother-m.s.
                       little-m.s. little-f.s
                                              little-m.p little-f.p.
'a little brother'
3. muwaððaf
                       dzayyid / dzayyid-a / dzayyid-uun / dzayyid-aat
  Emplyee-m.s.
                       good-m.s. good -f.s good -m.p
                                                            good –f.p.
'a good employee'
4. nisaa?
                       mafyuul / mafyuul-a / mafyuul-uun / mafyuul-aat
  Women-f.h.p.
                       busy –m.s. busy –f.s
                                                busy -m.p
                                                               busy –f.p.
'Busy women'
5. rasaa?il
                       yariib /
                                    yariib-a /
                                                 yariib-uun / yariib-aat
                       strange-m.s. strange-f.s strange-m.p strange-f.p
  Messages-n.h.p
'strange messages'
6. bin-t
                       dzamiil /
                                     dzamiil-a / dziimaal /
                                                               dzamiil-aat /
  Girl-f.s.
                       beautiful-m.s beautiful-f.s beautiful-m.p beautiful-f.p
'a beautiful girl'
7. ħidʒaab
                       dzadiid / dzadiid-a / dzudud / dzadiid-aat
  Hijab-m.s.
                       new-m.s new-f.s
                                            new -m.p new -f.p
'a new hijab'
8. ?asmaa?
                       Pamriikii /
                                      Pamriikiiy-a / Pamriikiiy-uun / Pamriikiiy-aat
  Names-n.h.p
                       American-m.s American-f.s American-m.p American-f.p
'American names'
9. sayyaar-aat
                       yaabaanii / yaabaaniiy-a / yaabaaniiy-uun / yaabaaniiy-aat
  Cars-n.h.p
                       Japanese-m.s Japanese-f.s
                                                     Japanese-m.p
                                                                       Japanese-f.p
'Japanese cars'
10. ?abnaa?
                       tayyib / tayyib-a / tayyib-uun / tayyib-aat
   Sons-m.h.p.
                       good-m.s good-f.s good-m.p
                                                         good-f.p
'good sons'
```

Appendix B (Spanish and Arabic Test 2)

Please circle the appropriate adjective to complete the sentence:

- 1) Los profesores son divertido / divertida / divertidos / divertidas
- 2) El bebé es bonito / bonita / bonitos / bonitas
- 3) Las clases son aburrido / aburrida / aburridos / aburridas
- 4) La joven es guapo / guapa / guapos / guapas
- 5) El libro es bueno / buena / buenos / buenas
- 6) El papel es blanco / blanca / blancos / blancas
- 7) Las estudiantes son chino / china / chinos / chinas
- 8) La familia es brasileño / brasileña / brasileñas
- 9) Los pupitres son pequeño / pequeña / pequeños / pequeñas
- 10) Las hermanas son tímido / tímida / tímidos / tímidas

SPANISH TEST 2 Translation

- 1) The professors are fun
- 2) The baby is pretty
- 3) The clases are boring
- 4) The young (lady) is goodlooking
- 5) The book is good
- 6) The paper is white
- 7) The students (female) are Chinese
- 8) The family is Brasilian
- 9) The desks are small
- 10) The sisters are shy

Please circle the appropriate adjective to complete the sentence:

1	الكلِمة	مِصريّ / مِصريّة / مِصريّون / مِصريّات
2	العائيلات	قریب / قریبة / قریبون / قریبات
3	الخُبز	لُبنانيّ / لُبنانيّة / لُبنانيّون / لُبنانيّات
4	الطالبات	سَعيد /سَعيدة / سُعَداء / سَعيدات
5	الأُستاذ	قَصير / قَصيرة / قِصار / قَصيرات
6	الجامعات	جَيِّد / جَيِّدة / جَيِّدون / جَيِّدات
7	الأُخْت	مُتَزَوِّج / مُتَزَوِّجة / مُتَزَوِّجون / مُتَزَوِّجات
8	الرجال	مَغربيّ / مَغربيّة / مَغربيّون / مَغربيّات

و الكِلاب لَطيف / لَطيفة / لُطَفاء / لَطيفات الصُغوف طَويل / طَويلة / طِوال / طَويلات

- **1.** *al-kalim-a miṣrii* / *miṣriiy-a* / *miṣriiy-uun* / *miṣriiy-aat*The word-f.s. Egyptian-m.s. Egyptian-f.s. Egyptian-m.p. Egyptian-f.p. 'the word is Egyptian'
- 2. al-\(\frac{aa}{il-aat}\) qariib / qariib-a / qariib-uun / qariib-aat
 The families-n.h.p. close-m.s close -f.s. close -m.p. close -f.p.
 'the families are close'
- **3.** al-*xubz* lubnaanii / lubnaaniiy-a / lubnaaniiy-uun / lubnaaniiy-aat
 The bread-m.s. Lebanese-m.s Lebanese -f.s. Lebanese -m.p. Lebanese -f.p.
 'the bread is Lebanese'
- 4. al-ṭaalib-aat sasiid / sasiid-a / susadaa? / sasiid-aat The students-f.h.p. happy-m.s happy-f.s. happy-m.p. happy-f.p. 'the (female) students are happy'
- 5. al-?ustaað qaṣiir/ qaṣiir-a / qiṣaar/ qaṣiir-aat
 The professor-m.s. short- m.s. short-f.s. short-m.p. short-f.p.
 'the professor is short'
- 6. al-dzaami?-aat dzayyid / dzayyid-a / dzayyid-uun / dzayyid-aat The universities-n.h.p. good-m.s. good -f.s good -m.p good -f.p. 'the universities are good'
- 7. al-?uxt mutazawwidz / mutazawwidz-a / mutazawwidz-uun / mutazawwidz-aat The sister-f.s. married-m.s. married-f.s married-m.p married-f.p. 'the sister is married'
- **8.** *al-ridzaal mayribii / mayribiiy-a / mayribiiy-uun / mayribiiy-aat*The men-m.h.p. Moroccan-m.s. Moroccan-f.s Moroccan-m.p Moroccan-f.p. 'the men are Moroccan'
- 9. al-kilaab latiif / latiif-a / lutafaa? / latiif-aat The dogs-n.h.p. nice-m.s. nice-f.s nice-m.p nice-f.p. 'the dogs are nice'
- 10. al-sufuuf tawiil / tawiil-a / tiwaal / tawiil-aat The classes-n.h.p. long-m.s. long-f.s long-m.p long-f.p. 'the classes are long'

Appendix C (Spanish and Arabic Test 3)

Please circle the appropriate adjective to complete the sentence:

- 1) El perro es una mascota divertido / divertida / divertidos / divertidas
- 2) Los españoles son profesores bueno / buena / buenos / buenas
- 3) La Republica Dominicana es un país bonito / bonita / bonitos / bonitas
- 4) La hija es una chica tonto / tonta / tontos / tontas
- 5) El doctor es una persona trabajador / trabajadora / trabajadores / trabajadoras
- 6) Don Quijote es un libro viejo / vieja / viejos / viejas
- 7) El español, el inglés y el chino son lenguas práctico / práctica / prácticos / prácticas
- 8) Luis y Mónica son novios serio / seria / serios / serias
- 9) Los gatos son animales perezoso / perezosa / perezosos / perezosas
- 10) Chicago y Nueva York son ciudades moderno / moderna / modernos / modernas
- 11) Los abuelos son personas simpático / simpática / simpáticos / simpáticas
- 12) Paula es una mujer casado / casada / casados / casadas

SPANISH TEST 3 Translation

- 1) The dog is a good pet
- 2) Spaniards are good professors
- 3) The Dominican Republic is a beutiful country
- 4) The daughter is a silly girl
- 5) The doctor is a hardwoking person
- 6) Don Quijote is an old book
- 7) Spanish English and Chinese are practical languages
- 8) Luis and Mónica are serios *novios* (boyfriend-girlfriend or fiances)
- 9) Cats are lazy animals
- 10) Chicago and New York are modern cities
- 11) The grandparents are nice people
- 12) Paula is a married woman

Please circle the appropriate adjective:

5 القِطَط حَيَوانات صغير / صغيرة / صِغار / صغيرات
 6 هم ضُبّاط سوريّ / سوريّة / سوريّون / سوريّات
 7 الرُقْص هِواية جَيِّد / جَيِّدة / جَيِّدونَ / جَيِّدات
 8 المُتَرْجِمون ناس مَشغول / مَشغولة / مَشغولونَ / مَشغولات
 9 العربيّة والإسبانيّة والفرنسيّة لغات جميل / جميلة / جميلونَ / جميلات
 10 الطّالبات صديقات جديد / جَديدة / جُدُد / جَديدات
 11 شيكاغو ونيويورك ولُنْدَن مُدُن كبير / كبيرة / كِبار / كبيرات
 11 ألوحْدة شَيْء عَريبونَ / عَريبات

- 1. muhammad radyul mutazawwidy/mutazawwidy-a/mutazawwidy-uun/mutazawwidy-aat
 Muhammed-m.s. man-m.s. married-m.s. married-f.s married-m.p
 married-f.p.
 'Muhammed is a married man'
- 2. al-?ustaað-a faxṣ tayyib / tayyib-a / tayyib-uun / tayyib-aat
 The professor is a good person'

 tayyib / tayyib-a / tayyib-uun / tayyib-aat
 good-m.s good-f.s good-m.p good-f.p

 The professor is a good person'
- 3. al-qahw-a maſruub qadiim/ qadiim-a/ qudamaa?/ qadiim-aat
 The coffee-f.s. drink-m.s. old-m.s old-f.s. old-m.p. old-f.p
 'Coffee is an old drink'
- 4. al-miṣriiy-aat nisaa? laṭiif / laṭiif-a / luṭafaa? / laṭiif-aat The Egyptians-f.h.p. women-f.h.p nice-m.s. nice-f.s nice-m.p nice-f.p. 'The Egyptians (females) are nice women'
- 5. al-qitat hayawaan-aat şayiir / şayīr-a / şiyaar / şayiir-aat
 The cats-n.h.p. animals-n.h.p.
 'cats are small animals'
- 6. hum dubbaat suurii/ suuriiy-a/ suuriiy-uun/ suuriiy-aat
 They-m.h.p. officers-m.h.p Syrian-m.s. Syrian-f.s Syrian-m.p Syrian-f.p.
 'They are Syrian officers'
- 7. al-raqs hiwaay-a dzayyid / dzayyid-a / dzayyid-uun / dzayyid-aat The dance-m.s. pastime -f.s. good-m.s. good -f.s good -m.p good -f.p. 'dance is a good pastime'
- 8. *al-mutardzim-uun naas mafyuul / mafyuul-a / mafyuul-uun / mafyuul-aat* The translators-m.h.p. people-m.h.p busy -m.s. busy -f.s busy -m.p busy -f.p. 'Translators are busy people
- 9. al-sarabiyy-a wal-isbniyy-a wal-faransiyy-a luy-aat
 dgamiil / dgamiil-a / dgimaal / dgamiil-aat
 The-Arabic-f.s. and-the-Spanish-f.s. and-the-French-f.s. languages-n.h.p.
 beautiful-m.s beautiful-f.s. beautiful-m.p beautiful-f.p

- 'Arabic, Spanish, and French are beautiful languages'
- 10. al-ṭaalib-aat ṣadiiq-aat dʒadiid / dʒadiid-a / dʒudud / dʒadiid-aat The-students-f.h.p. friend-f.h.p. new-m.s new-f.s new-m.p new-f.p
 - 'The students (females) are new friends'
- 11. sikaaguu wa nyuu yuurk wa landan mudun

kabiir / kabiir-a / kibaar / kabiir-aat

Chicago and New York and London (together-n.h.p.) cities-n.h.p.

large-m.s. large -f.s. large-m.p large-f.p.

- 'Chicago, New York and London are large cities'
- 12. al-wihd-a fay? yariib / yariib-a / yariib-uun / yariib-aat Loneliness-f.s. thing-m.s. strange-m.s. strange-f.s strange-m.p strange-f.p 'Loneliness is a strange thing'

Appendix D (Spanish and Arabic Test 4)

Please circle the appropriate adjective:

- 1) El salón tiene una pizarra blanco / blanca / blancos / blancas
- 2) Los estudiantes tienen unos cuadernos nuevo / nueva / nuevos / nuevas
- 3) Las hermanas tienen los ojos castaño / castaña / castaños / castañas
- 4) La chica tiene un vestido rojo / roja / rojos / rojas
- 5) Los periódicos tienen noticias bueno / buena / buenos / buenas
- 6) María tiene el pelo rizado / rizada / rizados / rizadas
- 7) Juan tiene una camisa amarillo / amarilla / amarillos / amarillas
- 8) La casa tiene muchas ventanas pequeño / pequeña / pequeños / pequeñas
- 9) Los vecinos tienen un coche moderno / moderna / modernos / modernas
- 10) Egipto tiene una historia antiguo / antigua / antiguos / antiguas
- 11) Mi hermano tiene corbatas morado / morada / morados / moradas
- 12) El señor tiene hijos simpático / simpática / simpáticos / simpáticas

SPANISH TEST 4 Translation

- 1) The room has a white board
- 2) The students have some new notebooks
- 3) The sisters have brown eyes
- 4) The girl has a red dress
- 5) The newspapers have good news
- 6) María has curly hair
- 7) Juan has a yellow shirt
- 8) The house has a lot of small windows
- 9) The neighbors have a modern car
- 10) Egypt has an ancient history
- 11) my brother has purple ties
- 12) the gentleman has nice children

Please circle the appropriate adjective:

5 المَطْعَم عِندهُ حَلَوِيات جَيِّد / جَيِّدة / جَيِّدونَ / جَيِّدات
 6 الفَصْل عِندهُ شبابيك واسِع / واسِعة / واسِعون / واسِعات
 7 الأسْتاذ عِندَهُ بَنات صغير / صغيرة / صِغار / صغيرات
 8 الجامِعة عِندَها بِناية جديد / جَديدة / جُدُد / جَديدات
 9 الجارة عِندها أولاد لَطيف / لَطيفة / لُطَفاء / لَطيفات / لَطيفات اللَّهُ وَعَندها تاريخ قديم / قديمة / قُدَماء / قديمات 10 المُوَظَفُون عِندهُم سيّارات أمريكيّ / أمريكيّة / أمريكيّونَ / أمريكيّات 11 المُوظَفُون عِندهُم سيّارات كبير / كبيرة / كبار / كبيرات 12 آدَم عِندَهُ أُسُرة كبيرات

- 1. al-bayt Sinda-hu yuraf kaθiir / kaθiir-a / kaθiir-uun / kaθiir-aat The house-m.s. at-it rooms-n.h.p. many-m.s. many-f.s. many-m.p. many-f.p. 'The house has a lot of rooms'
 - 2. saar-a Sinda-haa hidgaab dzamiil / dzamiil-a / dzamiil-uun / dzamiil-aat sarah-f.s. at-her hijab-m.s. beautiful-m.s beautiful-f.s beautiful-m.p beautiful-f.p 'Sarah has a beautiful hijab'
- 3. al-?awlaad Sinda-hum kalb yariib / yariib-a / yariib-uun / yariib-aat The boys-m.h.p. at-them dog-m.s. strange-m.s. strange-f.s strange-m.p strange-f.p 'The boys have a strange dog'
- 4. faaṭim-a Sinda-haa faSr tawiil / tawiil-a / tiwaal / tawiil-aat fatima-f.s. at-her hair-m.s. long-m.s. long-f.s long-m.p long-f.p. 'Fatima has long hair'
- 5. al-matsam sinda-hu halawiy-aat dayyid / dayyid-a / dayyid-uun / dayyid-aat The restaurant-m.s. at-it sweets-n.h.p. good-m.s. good -f.s good -m.p good -f.p. 'The restaurant has good sweets'
- 6. al-faṣl Ṣinda-hu ʃabaabiik waasiṢ- waasiṢ- a/ waasiṢ- uun / waasiṢ- aat The classroom-m.s. at-it windows-n.h.p. 'The classroom has wide/spacious windows' wide-m.s. wide-f.s. wide-m.p. wide-f.p.
- 7. al-?ustaað Sinda-hu ban-aat ṣayiir / ṣayiir-a / ṣiyaar / ṣayiir-aat The professor –m.s. at-him daughters-f.h.p. small- m.s small-f.s. small-m.p. small-f.p. 'The professors has small daughters'
- 8. al-dzaamis-a sinda-haa binaaya dzadiid / dzadiid-a / dzudud / dzadiid-aat The university-f.s. at-her building-f.s. new-m.s new-f.s new-m.p new-f.p

'The university has a new building'

- 9. al-dzaar-a Sinda-haa Pawlaad latiif / latiif-a / lutafaa? / latiif-aat
 The neighbor-f.s. at-her boys-m.h.p.
 'The neighbor (female) has nice boys'
- 10. al-qaahir-a Sinda-haa taariix qadiim / qadiim-a / qudamaa? / qadiim-aat The-Cairo-f.s. at-it history-m.s. old-m.s old-f.s. old-m.p. old-f.p 'Cairo has an old history'
- 11. al-muwaððaf-uun Sinda-hum sayyaar-aat
 2amriikii / 2amriikiiy-a / 2amriikiiy-uun / 2amriikiiy-aat
 The employees-m.h.p. at-them cars-n.h.p

American-m.s American-f.s American-m.p American-f.p

'The employees have American cars'

12. aadam Sinda-hu Pusr-a kabiir / kabiir-a / kibaar / kabiir-aat Adam-m.s. at-him family-f.s. large-m.s. large-f.s. large-m.p. large-f.p. 'Adam has a large family'

Appendix E (Spanish and Arabic Test 5)

Please circle the appropriate adjective:

- 1) Las luces de la Navidad son bonito / bonita / bonitos / bonitas
- 2) La ventana del dormitorio es pequeño / pequeña / pequeñas /
- 3) Los pantalones de los chicos son corto / corta / cortos / cortas
- 4) El coche de mis padres es viejo / vieja / viejos / viejas
- 5) La madre de Amanda es cómico / cómica / cómicos / cómicas
- 6) La vida de los niños es precioso /preciosa / preciosos / preciosas
- 7) El vestido de Andrea es largo / larga / largos / largas
- 8) Las bicicletas de Ernesto son nuevo / nueva / nuevos / nuevas
- 9) La historia de los Estados Unidos es aburrido / aburrida / aburridos / aburridas
- 10) Los ojos de la niña son negro / negra / negros / negras
- 11) Las puertas de las casas son moderno / moderna / modernos / modernas
- 12) Los abuelos de Alex son argentino / argentina / argentinos / argentinas SPANISH TEST 5 Translation
- 1) Christamas lights are pretty
- 2) The window of the room is small
- 3) The boys' pants are short
- 4) My parents' car is old
- 5) Amanda's mother is funny
- 6) The children's life is precious
- 7) Andrea's dress is long
- 8) Ernesto's bicicles are new
- 9) History of the United States is borring
- 10) The (female) child's eyes are black
- 11) The doors of the houses are modern
- 12) Alex's grandparents are Argentinian

Please circle the appropriate adjective:

جدید / جَدیدة / جُدُد / جَدیدات 1 فُسْتان نادية عِراقي / عِراقية / عِراقيون / عِراقيات 2 خالات فاطمة مُمْتاز / مُمتازة / مُمتازون / مُمتازات 3 جامعة ستونى بروك 4 شُرِّاك الغُرفة كبير / كبيرة / كِبار / كبيرات يابانيّ / يابانيّة / يابانيّونَ / يابانيّات 5 سَيّارة الطبيب مُتَزَوِّج / مُتَزَوِّجة / مُتَزَوِّجون / مُتَزَوِّجات 6 أعْمام أحْمد 7 واجبات الطُّلاب جاهِز / جاهِزة / جاهِزون / جاهِزات جَوعان / جوعانة / جَوعانون / جوعانات 8 قطط البنات 9 صنف الطالبات قَصير / قَصيرة / قِصار / قَصيرات مَجْنون / مَجنونة / مَجانين / مَجنونات 10 كِلاب الشارع لَطيف / لَطيفة / لُطَفاء / لَطيفات 11 ابْن الجبران غالي / غالية / غاليون / غاليات 12 حباة الأولاد

1. fustaannaadiy-adzadiid / dzadiid-a / dzudud / dzadiid-aatdress-m.s.nadia-f.s.new-m.snew-m.pnew-m.pnew-m.p

'Nadia's dress is new'

- **2.** xaal-aat faaṭim-a Siraaqii / Siraaqiiy-a / Siraaqiiy-uun / Siraaqiiy-aat Aunts-f.h.p. fatima-f.s. Iraqi-m.s Iraqi-f.s Iraqi-m.p Iraqi-f.p 'Fatima's aunts are Iraqi'
- 3. dzaamis-a stuunii bruuk mumtaaz / mumtaaz-a / mumtaaz-uun / mumtaaz-aat university-m.s. Stony Brook-m.s. excellent-m.s. excellent -f.s excellent-m.p excellent-f.p. 'The University of Stony Brook is excellent'
- **4.** *fubbaak al-yurf-a kabiir / kabiir-a / kibaar / kabiir-aat* window-m.s. the-room-f.s. large-m.s. large-f.s. large-m.p. large-f.p.

'The room's window is large'

- **5.** *sayyaar-a al-ṭabiib yaabaanii / yaabaaniiy-a / yaabaaniiy-uun / yaabaaniiy-aat* Car-m.s. the-doctor-m.s. Japanese-m.s Japanese-f.s. Japanese-m.p. Japanese-f.p. 'The doctor's car is Japanese'
- **6.** PaSmaam Pahmad mutazawwidz/mutazawwidz-a/mutazawwidz-uun/mutazawwidz-aat uncles-m.h.p ahmed-m.s. married-f.s. married-m.p. married-f.p. 'Ahmed's uncles are married'
- 7. waadzib-aat al-tullaab dzaahiz / dzaahiz-a / dzaahiz-uun / dzaahiz-aat homeworks-n.h.p. the-students-m.h.p. ready-f.s ready-f.s ready-m.p. ready-f.p.

'The students' homeworks are ready'

8. qitat al-ban-aat dawsaan / dawsaan-a / dawsaan-uun / dawsaan-aat cats-n.h.p. the-girls-f.h.p. hungry-m.s hungry-f.s hungry-m.p. hungry-f.p.

'The girls' cats are hungry'

- 9. saff al-ṭaalib-aat qaṣiir/ qaṣiir-a / qiṣaar/ qaṣiir-aat class—m.s. the-students-f.h.p. short-m.s. short-f.s. short-m.p. short-f.p. 'The students' (females) class is short'
- 10. kilaab al-ſaaris madʒnuun / madʒnuun-a / madʒaaniin / madʒnuun-aat dogs-n.h.p. the-street-m.s. crazy-m.s. crazy-f.s crazy-m.p crazy-f.p. 'Street dogs are crazy'
- 11. ibn al-dziiraan latiif / latiif-a / lutafaa? / latiif-aat son-m.s. the-neighbors-m.h.p. nice-m.s. nice-f.s nice-m.p nice-f.p. 'The neighbors' son is nice'
- 12. haya-at al-awlaad yaalii / yaaliiy-a / yaaliiy-uun / yaaliiy-aat life-f.s. the-children-m.h.p. precious-m.s precious-f.s precious-m.p. precious-f.p.

'Children's life is precious'

Appendix F (Spanish and Arabic Test 6)

Please circle the appropriate adjective:

- 1) La madre es divertido / divertida / divertidos / divertidas
- 2) Alberto es una persona simpático / simpática / simpáticos / simpáticas en su trabajo
- 3) Nueva york tiene universidades moderno / moderna / modernos / modernas
- 4) Los ojos de la niña son castaño / castaña / castaños / castañas
- 5) La luz es rojo / roja / rojos / rojas
- 6) Los periódicos tienen cosas bueno / buena / buenos / buenas
- 7) La joven es tímido / tímida / tímidos / tímidas
- 8) El tío de Amanda es cómico / cómica / cómicos / cómicas
- 9) La escuela es un edificio nuevo / nueva / nuevos / nuevas
- 10) La Republica Dominicana es un país hermoso / hermosa / hermosas
- 11) El edificio de la escuela es alto / alta / altos / altas
- 12) El bebé es pequeño / pequeña / pequeños / pequeñas
- 13) Las puertas de la casa son bajo / baja / bajos / bajas
- 14) Las estudiantes son colombiano / colombianos / colombianas
- 15) El gato es una mascota aburrido / aburrida / aburridos / aburridas
- 16) Alberto tiene una persona simpático / simpático / simpáticos / simpáticas en su trabajo
- 17) Los periódicos son cosas bueno / buena / buenos / buenas
- 18) Inglaterra tiene unas universidades viejo / vieja / viejos / viejas
- 19) El vestido de Andrea es largo / larga / largos / largas
- 20) La escuela tiene un edificio nuevo / nueva / nuevos / nuevas

SPANISH TEST 6 Translation

- 1) the mother is fun
- 2) Alberto is a nice person at his work
- 3) New York has modern universities
- 4) The (female) child's eyes are brown
- 5) The light is red
- 6) The newspapers have good things
- 7) The young (woman) is shy
- 8) Amanda's unlee is funny
- 9) The school is a new building
- 10) The Dominican Republices is a beautiful country
- 11) The school building is tall

- 12) The baby is small
- 13) The doors of the house are short
- 14) The (female) students are Colombian
- 15) The cat is a boring pet
- 16) Alberto has a nice person at his work
- 17) The newspapers are good things
- 18) England has old universities
- 19) Andrea's dress is long
- 20) The school has a new building

Please circle the appropriate adjective:

1	كِلاب الشارِع	جَوعان / جوعانة / جَوعانون / جوعانات
2	الصئفوف	قَصير / قَصيرة / قِصار / قَصيرات
3	قِطَط البَنات	كَثير / كَثيرة / كَثيرون / كَثيرات
4	البَيْت عِندَهُ أَبْواب	واسِع / واسِعة / واسِعون / واسِعات
5	العائلات	عِراقي / عِراقية / عِراقيون / عِراقيات
6	الوِحْدة شَيْء	غَريب / غَريبة / غَريبونَ / غَريبات
7	الجامعات	غالي / غالية / غاليون / غاليات
8	المُتَرْجِمون ناس	مُمْتاز / مُمتازة / مُمتازون / مُمتازات
9	الرَّقْص هِواية	قدیم / قدیمة / قُدَماء / قدیمات
10	المَطْعَم عِندهُ حَلَوِيات	جاهِز / جاهِزة / جاهِزون / جاهِزات
11	أبناء أحمد	صغیر / صغیرة / صِغار / صغیرات
12	القهوة مشروب	لَطيف / لَطيفة / لُطَفاء / لَطيفات
13	سارة عِندَها فُسْتان	جميل / جميلة / جميلونَ / جميلات
14	حياة الأؤلاد	جَيِّد / جَيِّدة / جَيِّدونَ / جَيِّدات
15	الرَّسائِل	طَویل /طَویلة / طِوال / طَویلات
6	1 صَفّ الطالبات	جدید / جَدیدة / جُدُد / جَدیدات
17	الرِّجال	مُنْزَوِّج / مُنْزَوِّجة / مُنْزَوِّجون / مُنْزَوِّجات
18	المُوَظَفُّون عِندهُم سيّارات	يابانيّ / يابانيّة / يابانيّونَ / يابانيّات
19	الأستاذة شَخْص	مَجْنون / مَجنونة / مَجانين / مَجنونات
20	الجارة عِندها أولاد	کبیر / کبیرة / کِبار / کبیرات

1. kilaab al-ſaaris &æwsaan / &æwsaan-a / &æwsaan-uun / &æwsaan-aat dogs-n.h.p. the-street-m.s. hungry-m.s. hungry-f.s hungry-m.p hungry-f.p. 'Street dogs are hungry'

- 2. al-ṣufuuf qaṣiir/ qaṣiir-a / qiṣaar / qaṣiir-aat the-classes—n.h.p. short-m.s. short-f.s. short-m.p. short-f.p.
 - 'The classes are short'
- 3. qiṭaṭ al-ban-aat kaθiir / kaθiir-a / kaθiir-uun / kaθiir-aat cats-n.h.p. the-girls-f.h.p. many-m.s. many-f.s. many-m.p. many-f.p. 'The girls' cats are many'
- 4. al-bayt Sinda-hu Pabwaab waasiS waasiS-a / waasiS-uun/ waasiS-aat the-house-m.s. at-it doors-n.h.p. wide-m.s. wide-f.s. wide-m.p. wide-f.p.

'The house has wide/spacious doors'

- 5. al-Ṣaaʔil-aat Ṣiraaqii / Ṣiraaqiiy-a / Ṣiraaqiiy-uun / Ṣiraaqiiy-aat the-families-h.h.p. Iraqi-m.s Iraqi-f.s Iraqi-m.p Iraqi-f.p

 'The families are Iraqi'
- 6. al-wiħd-a fay? yariib / yariib-a / yariib-uun / yariib-aat the-loneliness-f.s. thing-m.s. strange-m.s. strange-f.s

'Loneliness is a strange thing'

7. al-dzaami\(\frac{1}{2}\)-aat yaalii / yaaliiy-a / yaaliiy-uun / yaaliiy-aat the-universities-n.h.p. expensive-m.s expensive-f.s expensive-m.p. expensive-f.p.

'The universities are expensive'

- 8. al-mutardzim-uun naas mumtaaz / mumtaaz-a / mumtaaz-uun / mumtaaz-aat the-translators-m.h.p. people-m.h.p excellent-m.s. excellent-f.s excellent-m.p excellent-f.p. 'Translators are excellent people'
- 9. al-raqṣ hiwaay-a qadiim / qadiim-a / qudamaa? / qadiim-aat the-dance-m.s. past-time-f.s. old-m.s old-f.s. old-m.p. old-f.p 'Dance is an ancient pastime'
- 10. al-matsam Sinda-hu halawiy-aat dgaahiz / dgaahiz-a / dgaahiz-uun / dgaahiz-aat the-restaurant-m.s. at-it sweats-n.h.p. ready-m.s ready-f.s ready-m.p. ready-f.p.

'the restaurant has ready sweets'

11. ?abnaa? ?aħmad ṣayiir / ṣayiir-a / ṣiyaar / ṣayiir-aat sons-m.h.p. Ahmed-m.s. little-m.s. little-f.s. little-m.p little-f.p.

'Ahmed's sons are small'

- 12. al-qahw-a maſruub laṭiif / laṭiif-a / luṭafaaʔ / laṭiif-aat the-coffee-f.s. drink-m.s. nice-m.s. nice-f.s nice-m.p nice-f.p. 'Coffee is a nice drink'
- 13. saara Sinda-haa fustaan dzamiil / dzamiil-a / dzamiil-uun / dzamiil-aat sarah-f.s. at-her dress-m.s. beautiful-m.s beautiful-f.s beautiful-m.p beautiful-f.p 'Sarah has a beautiful dress'
- 14. haya-a al-awlaad dayyid / dayyid-a / dayyid-uun / dayyid-aat life-f.s. the-boys-m.h.p. good-m.s. good -f.s good -m.p good -f.p. 'The boys' life is good'
- 15. al-rasaa?il tawiil / tawiil-a / tiwaal / tawiil-aat the messages-n.h.p long-m.s. long-f.s long-m.p long-f.p.

- 'The messages are long'
- 16. saff al-ṭaalib-aat dʒadiid / dʒadiid-a / dʒudud / dʒadiid-aat class—m.s. the-students-f.h.p. new-m.s. new-f.s. new-m.p. new-f.p. 'The students' (females) class is new'
- 17. al-ridgaal mutazawwidg / mutazawwidg-a / mutazawwidg-uun / mutazawwidg-aat The-men-m.h.p. married-m.s. married-f.s. married-m.p. married-f.p. 'The men are married'
- 18. al-muwaððaf-uun Sinda-hum sayyaar-aat
 yaabaanii / yaabaaniiy-a/ yaabaaniiy-uun / yaabaaniiy-aat
 the employees-m.h.p. at-them cars-n.h.p
 Japanese-m.s Japanese-f.s Japanese-m.p Japanese-f.p

'The employees have Japanese cars'

- 19. al-?ustaað-a faxṣ madʒnuun / madʒnuun-a / madʒaaniin / madʒnuun-aat the-professor-f.s. person-m.s. crazy-m.s. crazy-f.s crazy-m.p crazy-f.p. 'The (female) professor is a crazy person'
- 20. al-dʒaar-a Sinda-haa ?awlaad kabiir / kabiir-a / kibaar / kabiir-aat the-neighbor-f.s. at-her boys-m.h.p. large-m.s. large-f.s. large-m.p. large-f.p. 'The neighbor has large boys'

Appendix G (Spanish and Arabic Test 7)

Please write a *simple descriptive sentence* in Spanish telling what each pictures is. Please be sure to **include an adjective**. You may ask the teacher if you forget how to say something.

1)	
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3)	
4)	
5)	MARION CO.
6)	
7)	
9)	

)	
0)	
·)	
lease write a simple descriptive sentence in Arabic telling what each pictures	s is. Please be sure to
nclude an adjective. You may ask if you forget how to say something.	
)	
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	The observation of EULYS

5)	
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7)	
8)	
9)	Committed Street S

Appendix H (Spanish and Arabic Test 8)

In complete sentences, please <u>identify</u> and <u>describe 2 items</u> that each person is wearing. Please include adjectives.



- a) Fernando
- b) Estela
- c) Pablo

a)				
			-	
b)				
			-	
c)				

ماذا يَلبَس؟

In complete sentences, please <u>identify and describe 2 items</u> that each person is wearing. <u>Please include adjectives.</u>



Appendix I (Student Surveys for Spanish	(SPN 111) and	Arabic (ARB 101))
Name		
Status at Stony Brook University		
FreshmanSophomore	Junior	Senior
Graduate Auditing	-	
What is your first language (mother tongue):	:	
How long have you been studying Spanish a	and where?	
Please check the years you have taken Spani	sh	
High school: 7 th Grade 10 th Grade	AP Spanish	n
8 th Grade11 th Grade		
9 th Grade 12 th		
Regents? yes Score	No	
College: SPN 111Where?		
SPN 112 Where?		
SPN 211 Where?		
Have you had any other contact with the language	guage? Please de	escribe your experience.
Does anyone in your family speak Spanish?	Do any of your f	friends? Please comment.
Why are you taking Spanish?		
Are you going to continue taking Spanish at	this University?	

Intensive Elementary Arabic, Stony Brook University, Summer 2013

Course: ARB 101	Name:		Ema	il:	
University Status:					
Freshman	Sophomore	Junior	Senior	Graduate	
High school	Do you go to	school at anoth	er university?		-
What is your first	language?				
Do you speak a lar	nguage besides Eng	glish at home? If	yes, what langu	age or dialect?	
Do you speak a se	cond language? W	hich language?			
Have you ever stu	died another langu	lage? (If so, for I	now long?)		
Does anyone in yo	our family speak Ar	abic?			
Have you ever stu	died Arabic before	or had any conf	tact with the lang	guage?	
	n what nature (e.g. le me dialect, etc.)	earned how to rea	ad the script for re	ligious purposes, traveled abr	oad and
	ying Arabic? (e.g., v	why you are inte	erested in the lan	guage and/or what you pla	an on
Do you plan to cor	ntinue studying Ara	abic after this co	ourse?		