ACQUISITION OF FORM-MEANING MAPPING IN L2 ARABIC AND ENGLISH NOUN PHRASES: A BIDIRECTIONAL FRAMEWORK

By

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SIGNED:

________________________________________
Mahmoud Azaz
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DEDICATION

To my beloved Egypt, the cradle of civilization,
who instilled in me the love of perseverance,

To the soul of Dr. Amal Kary,
who has introduced me to the field of second language acquisition,

To my father,
who taught me how to be diligent,

And to my mother and my wife,
who taught me how to be patient.
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ABSTRACT

Despite the plethora of SLA research conducted on the acquisition of the definite marker in noun phrase configurations in L2 Arabic and English (e.g., Sarko, 2007; Master, 1997; Collier, 1987; Anderson, 1984; Kharma, 1981), there is as yet no definitive description of how noun phrases are acquired and why errors persist after advanced stages in L2 learning. Results, as shown by Butler (2002), are inconclusive, and the primary causes of difficulties in the acquisition of the definite marker in noun phrase configurations remain unclear. Recently, the internal syntax-semantics interface (Cuza & Frank, 2011; Montrul, 2010; Tsimpli & Sorace, 2006; Sorace, 2003, 2004) and the specificity-definiteness distinction (Ionin, 2003; Ionin et al., 2004; Ionin et al., 2008) have been considered as appropriate frameworks for exploring the acquisition of noun phrases and other structural features. The structure of noun phrase configurations in Arabic and English offers a complex interface between form and meaning for L2 learners with multiple cases of matches and mismatches between specificity and definiteness.

In this three-article dissertation project, two of which were conducted in a bi-directional methodological framework with L1 Arabic-L2 English and L1 English-L2 Arabic learners, I explored the acquisition of three cases of noun phrase configurations. In the first study, I investigated the acquisition of plural noun phrase configurations that carry generic and specific readings at the initial state of L2 learning. Using three data collection instruments: written translation; error detection and correction; and forced choice elicitation, I tested the predictions made by the Interface Hypothesis (IH) and the Full Transfer (FT) Hypothesis. Results showed that L2 learners in both directions tend to
transfer noun phrase configurations from L1 into L2, a result that I took to support the FT hypothesis. In addition, it took L1 English-L2 Arabic learners two years of instruction to recover from this L1 effect.

The second study aimed at confirming the result of the first study, but in the acquisition of the definite marker in generic singular noun phrase configurations in the L1 English-L2 Arabic direction. The behavior of generic singular noun phrases in L2 Arabic offers a good testing ground since it has numerous similarities and differences with English. Two conditions were established: a matching condition and a mismatching condition. Both conditions were tested in the L1 English-L2 Arabic direction. Results showed a similar pattern to the one recorded in the first study. Typological proximity and distance were found to be important determiners of language acquisition of the in/definiteness configurations of singular noun phrases.

In the third study, I shifted to the exploration of a more complex type of noun phrases; namely the definite Iḍāfah construction in Modern Standard Arabic (MSA) and its equivalent noun phrase configurations in English in the two directions. I started with a common difference between MSA and English. Whereas in MSA there is a canonical configuration in terms of head-complement ordering and head-complement definiteness, English is tolerant of more than one permissible configuration. I operationalized the acquisition of these noun phrases in terms of head-complement ordering and head-complement definiteness. Results showed a clear effect of L1 transfer in both directions; knowledge of L1 noun phrase configurations acts as the initial step in L2 learning. I concluded that both communities of L2 learners face problems that vary according to the
L1 noun phrase configuration at hand. However, in the L1 English-L2 Arabic direction, learners reached a satisfactory level of performance in the Iḍāfah construction after two years of instruction. I approached this finding as a result of intensive Focus-on-Form Episodes (Loewn, 2005) that the Iḍāfah construction receives in MSA instruction.

At the conclusion of this research project I highlighted some implications for the second language acquisition and teaching of noun phrases. The overall results were couched in a broader perspective that characterizes the initial state of L2 learning of noun phrases in + article and – article languages, the effects of typological proximity and distance, and the effects of Instructed SLA. For the pedagogical implications, I called for the integration of the semantics of the definite marker while presenting noun phrases in textbooks. I also recommended the use of explicit instruction and structured-input activities (VanPatten, 2004; Marsden & Chen, 2011) as effective pedagogical tools that foster form-meaning mapping in the acquisition of L2 Arabic and English noun phrases.
Chapter I

Introduction

1.1. Background: Problem and context

Throughout its development as an interdisciplinary field, applied psycholinguistics has acted as a mediator between theoretical and empirical investigations (Davies, 2007; Brumfit, 1997; Kaplan & Widdowson, 1992) and has established unbreakable bonds between the underlying processes of second language acquisition (hereafter SLA) and second language pedagogy (Master, 1997; Pieneman, 1988). Uncovering these underlying processes of L2 learning acts as a cornerstone for developing solid pedagogical practices. This has been recognized as a seminal framework for solving cross-linguistic, real-world problems in second and foreign language classes (Wilkins, 1994; Crystal, 1992).

Unfortunately, the bond between processes of L2 learning and pedagogical practices in Arabic and English SLA research is not well-established. Despite the dramatic increase in studying Arabic as a second language, with Arabic enrollments registering ‘the largest percentage growth’ and ‘the fastest growing’ among all foreign languages at U.S. colleges and universities (see the MLA report, 2009), research on Arabic SLA in general can still “be described as parsimonious and sporadic” (Alhawary, 2009:48), with only two longitudinal studies (Alhawary, 2003; Nielsen, 1997) and very few cross-sectional ones completed up to the present. This unfortunate state, as Alhawary (2009:48) continues to explain, “presents a major challenge for researchers working on Arabic SLA, since even some of the most basic data-driven (explanatory in nature) observations available for other languages are not yet documented for Arabic”.
One phenomenon, although persistent until advanced stages of learning, that is neither well-documented nor studied in Arabic SLA studies is that L1 English-L2 Arabic learners have ongoing difficulties with the acquisition of the semantics of the Arabic definite marker in multiple noun phrase configurations. An overview of the Arabic SLA literature in Alhawary (2009) shows that the acquisition of the article system, when compared to that of other structural features has received almost no attention (contrast for example, the acquisition of gender agreement, verb tense, negation, case and mood). Furthermore, learner corpora (see for example the one at the University of Arizona’s center for Educational Resources in Culture, Language and Literacy (CERCLL) show that errors in article usage in definite and indefinite noun phrases, both simple and complex, persist until advanced levels of L2 Arabic learning. The same phenomenon has been observed by many teachers of Arabic across various levels in several Teaching-Arabic-as-a-Foreign Language (TAFL) settings.

The learning of the English article system is correspondingly difficult for non-English speakers. Almost all studies conducted on the acquisition of the article system by L2 learners of English of different first languages (L1s) show that the acquisition of this system is one of the most challenging tasks learners have to face. Yamada and Matsuura (1982: 50) concluded that L1 Japanese-L2 English learners’ use of articles “bears little or no resemblance to established English practice; students seem to use articles almost randomly.” Collier (1987) showed that article errors persisted after seven years of L2 learning of English by L1 Hindi/Punjabi learners. Kharma (1981) demonstrated that article choice errors persisted after twelve years of L2 learning by Arabic learners of English.
Thus despite the plethora of SLA research for more than three decades on article system acquisition in English (e.g., Sarko, 2008, 2009; Master, 1997; Collier, 1987; Anderson, 1984; Kharma, 1981), there is as yet no definitive description of how articles are acquired. Research results are inconclusive, and the primary causes of difficulties in mastering the determiner system remain unclear (Butler, 2002). This incomplete understanding of the phenomenon led Oller and Redding very early (1971:94) to consider article acquisition level as a significant indicator of language acquisition level in general. In their words, “the acquisition of articles goes hand in hand with other language skills”.

With L1 Arabic-L2 English learners, no consensus has been reached on clear, well-defined reasons underlying errors in article acquisition. While El-Sayed (1982) and Kharma (1981) attributed much of L1 Arabic-L2 English learners’ errors in article usage to first language interference, Abu-Ghararah (1989), Bataineh (2005) and Al-Sulmi (2010) attributed errors to the operation of learning strategies such as overgeneralization. These inconsistent results necessitate research studies “to set up detailed and systematic comparisons of Arabic and English articles to reduce the shortcomings” (Al-Sulmi, 2010: 64).

The confused situation of how to teach article system effectively has been exacerbated undoubtedly by non-systematic exploration of how the article system in general and the definite marker in particular are acquired. Although Al-Sulmi (2010), Bataineh (2005), and Abu-Ghararah (1989), and Kharma (1981) attributed these errors to lack of pedagogical training and the inadequate integration and presentation of the article
system in L2 curricula of English, they did not propose well-informed pedagogical guidelines for solid pedagogical interventions.

There is a number of reasons for the difficulty of acquiring the definite marker in Arabic and English. First, the definite marker surfaces in multiple noun phrase configurations in both systems. It surfaces in simple and complex definite noun phrases and in complex nominal compounds. Second, the behavior of the definite marker in particular offers a complex interface between syntax (i.e., form) and semantics (i.e., meaning) (For English, see Lyons, 1999; Heim 1982, 1991; Hawkins, 1978, Givón, 1978; Russell, 1905; For Arabic, see Al-Rawi, 2012; Benmamoun, 2000; Siloni, 1997; Fassi Fehri, 1993). The following section covers these two aspects in some detail.

1.2. Conceptual framework

1.2.1. Article system in Standard Arabic and English: A Typological overview

From a typological perspective, Standard Arabic and English are classified as article languages. Both have indefinite and definite articles that surface in multiple noun phrase configurations. For Standard Arabic, the literature offers two opposing views on how indefiniteness is marked. According to one view, Standard Arabic has an overt indefiniteness marker, which is nunation or tanwīn (Ryding, 2005). This marker is attached to the end of the word. It is represented as double signs (َّ, َّز, َّن) in written Arabic and is pronounced as -un, -an or -in according to whether it is nominative, accusative or genitive respectively. The second more common approach posits that Standard Arabic has a zero indefinite article used to mark indefiniteness (Guella et al., 2008; Sarko, 2008; Lyons, 1999; Fassi Fehri, 1993).
In English three articles are used to mark indefiniteness: a, an, (a/an) and Ø (Lyons, 1999). Perhaps the most complex of these is the null article that removes the boundaries that make nouns discrete. It also marks abstract nouns. Consider examples 1-3 below from Master (1997, 222):

(1) They ate pizza for dinner.
(2) They ate a pizza for dinner.
(3) Happiness is important in man’s life.

Consider (4) below for how indefiniteness is marked contrastively in singular count nouns in Arabic and English:

(4) **English**  
   A book  
   English

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>kitaab-un</td>
<td>A book</td>
</tr>
<tr>
<td>kitaab-an</td>
<td>a book</td>
</tr>
<tr>
<td>kitaab-in</td>
<td>a book</td>
</tr>
</tbody>
</table>

To convey definiteness, both languages have a definiteness marker: *the* in English and *al-* in Arabic. In English, the definite marker stands on its own, and in Arabic it is prefixed to the noun that follows. Consider (5) to see how definiteness is marked contrastively:

(5) **English**  
   The book  
   English

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>al-kitaab-u</td>
<td>The book</td>
</tr>
<tr>
<td>al-kitaab-a</td>
<td>the book</td>
</tr>
<tr>
<td>al-kitaab-i</td>
<td>a book</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>book-NOM.def.</td>
<td>kitaab</td>
</tr>
<tr>
<td>book-ACCU.def.</td>
<td>kitaab</td>
</tr>
<tr>
<td>book-GEN.def.</td>
<td>kitaab</td>
</tr>
</tbody>
</table>
The definite marker configurations have multiple alternations that vary across the two systems of Arabic and English. Consider examples from (6) to (12) below in table 1.1 for a typological distribution of the definite article in multiple noun phrase configurations:

<table>
<thead>
<tr>
<th>Configuration</th>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6) Proper nouns</td>
<td>Iraq</td>
<td></td>
</tr>
<tr>
<td>(7) Common unique nouns</td>
<td>The sun</td>
<td>al-shams-u sun.def.</td>
</tr>
<tr>
<td>(8) Abstract nouns</td>
<td>Happiness</td>
<td>al-ssaʕaadah happiness</td>
</tr>
<tr>
<td>(9) Definite noun phrase</td>
<td>The director</td>
<td>al-mudīr director.def.</td>
</tr>
<tr>
<td>(10) Simple noun phrase</td>
<td>The director of the school</td>
<td>mudīr al-madrasah director.indef. school. def.</td>
</tr>
<tr>
<td>(11) Extended noun phrase</td>
<td>The director of the university's library</td>
<td>mudīr maktabat al-jaamiʕah director. indef. library indef. university.def.</td>
</tr>
<tr>
<td>(12) Nominal compound</td>
<td>The bedroom</td>
<td>ghurfa-tu al-nawm room indef. sleep. def.</td>
</tr>
</tbody>
</table>

The above table shows multiple alterations in configurations in terms of the formal representation of the definite marker with various possibilities of ‘matches’ and ‘mismatches’ between Arabic and English. In the hierarchy of extended definite noun phrases for example, both simple and complex, Arabic as shown in (10) and (11) keeps a consistent pattern that prohibits the use of the definite marker before the head of the noun phrase and allows it only before the complement. This configuration migrates up the
English hierarchy as the position of the definite marker changes across configurations in the case of nominal compounds as in (12).

What adds to the complexity of noun phrase configurations in Arabic and English is the fact that there is an intricate interface between form (i.e. syntax) and meaning (i.e. semantics). Simply put, the same meaning may be realized in two different configurations across the two languages. Take for example generic or kind reference with plural nouns: whereas English uses bare or indefinite plural noun phrases, Arabic uses a definite one. In that respect Arabic behaves like most Romance languages. For specific reference, both languages use the same definite plural noun configuration. This difference, and many more as we will see, stem from the fact that definite marker semantics is different across the two systems. In other words, the syntax-semantics interface in the determiner system behaves differently. Understanding this interface in the first place departs from a fine-tuned distinction between two interrelated features: definiteness and specificity. I am turning next to this distinction.

1.2.2. Syntax-semantics interface in Arabic and English noun phrases: Definiteness and specificity

Definiteness and specificity have been identified as two fundamental features in the literature on article systems in article languages. In the development of the classical theory in article system analysis (see Lyons, 1999), discussions focused on definiteness versus indefiniteness. However, recently the emphasis shifted to another fine-tuned distinction between ‘definiteness’ as a formal feature and ‘specificity’ as a semantic feature (see Ionin et al., 2009: Ionin & Wexler, 2004; Ionin, 2003, 2006). Before I turn to an elaborate
discussion of the intricate relationship between definiteness and specificity, it may be
convenient to introduce the reader briefly to earlier theories in article system analysis.

Over a century ago, Russell (1905) developed a classical theory that distinguished
between definiteness and indefiniteness in English. According to this theory, a definite
description is an expression in the form of the $x$, used to refer to a unique individual or
distinguished entity. This specification, as critiqued by Lyons (1999:2), is not without
problems. It implies in the first place that indefinite noun phrases such as ‘a car’ signify a
generic, nonspecific entity. However, in a sentence such as “I bought a car this morning”,
the speaker is not referring to any car, but rather to a specific car that he purchased that
morning. This classical problem in analyzing what is definite led to the development of
what is known in the literature as the familiarization hypothesis (Christophersen, 1939)
that argued that ‘the’ in English signals an entity that is familiar or known to both the
speaker and the hearer.

Building on the work of Russell (1905) and Christophersen (1939), Hawkins (1978)
developed his Location Theory, in which he distinguished between eight categories over
which the non-generic definite article the is used:

(1) Anaphoric use: (e.g., Bill was working at a lathe the other day. All of a sudden, the
machine stopped running);
(2) Visible situation use: (e.g., Pass me the bucket);
(3) Immediate situation use: (e.g., Do not go in there, chum. The dog will bite you);
(4) Larger situation use relying on specific knowledge: (e.g., People from the same
village are talking about the church, the pub, and so forth);
(5) Larger situation use relying on general knowledge: e.g., The White House);
(6) Associative anaphoric use (e.g., We went to a wedding. The bride was very tall.);
(7) Unfamiliar use in NPs with explanatory modifiers: (e.g., The movies that are
shown here now are all rated R. (Hawkins, 1978: 139-147);
(8) Unfamiliar use in NPs with non-explanatory modifiers: information (e.g., My wife
and I share the same secrets).
This taxonomy has been reintroduced recently by Liu and Gleason (2002) who identified four underlying categories for the non-generic determiner marker *the* in English: (1) *textual* (determined by anaphoric and associative uses); (2) *structural* (determined by the structure of the language as modifiers and relative clauses); (3) *situational* (determined by information in the visible context); and (4) *cultural* (determined by what is unique in a speech community).

Thanks to the work of Givon (1987), and Huebner (1983), both leading discourse pragmaticians and semanticians, *specificity* as a semantic feature has been integrated into the analysis of article systems in English. For Givon, *specificity*, is what is “assumed by the speaker to be uniquely identifiable to the hearer’ v. ‘not so assumed’, respectively” (p.296). Huebner discusses the mental and knowledge state of the participants in the discourse as a marker for specificity and uniqueness and developed an annotation system that classifies nouns as ± *specific referent* ([+/-SR]) and ± assumed or *known to the hearer* ([+/-HK]). He discusses four possibilities in this annotation system: [-SR+ HK], [-SR-HK], [+SR- HK] and [+SR+ HK].

Although this annotation system has contributed greatly to our understanding of what is ‘specific’ and what it is ‘known’ to the hearer by mapping definite and indefinite articles, it has not resolved unclear issues in sentences such as the following: “I want to meet the winner of this tournament. I do not know him”. In this example, the uniqueness condition is not adequate to establish *specificity*. Although the mutual world knowledge that a *tournament has only one winner* is shared (Heim, 1991), it does not identify the individual entity of *the winner* that can act as the antecedent of ‘him’.
The fine-grained distinction between what is ‘definite’, ‘unique’ and ‘specific’ in discourse has been recently revisited in the seminal work of Tanya Ionin with others in a number of studies (e.g. Ionin & Montrul, 2010; Ionin, 2003, 2006; Ionin, Ko & Wexler, 2004). According to this line of research, the article system offers a complex interface between ± definiteness and ± specificity. Building on the work of Heim (1991), and Fodor and Sag (1982) on definiteness and referentiality respectively, Ionin et al., (2009:338) distinguished between these two features in (13) below:

(13) If a Determiner Phrase (DP) of the form [D NP] is ..... 
   a. [+definite], then the speaker assumes that the hearer shares the presupposition of the existence of a unique individual in the set denoted by NP. 
   b. [+specific], then the speaker intends to refer to ‘a unique’ individual in the set denoted by the NP, and considers this individual to possess some ‘noteworthy’ property.

It is clear that the concept of specificity as demonstrated in the above specification is different from what others (cf. Lyons, 1999) have proposed in two fundamental ways: first, what makes a noun ‘specific’ is not the ‘existence’ of its referent in the actual world, but the speaker’s ‘intent’ to refer to this particular individual. Second, this particular referent must possess some ‘noteworthy’ property that needs to be brought forward in the discourse.

Building on this view, Ionin, et al., (2004, 2009) posit that both features are independent and languages vary in how specificity is marked. Further, understanding this relationship depends on the discourse context. In a language like English, the definite marker can be used to mark specificity or non-specificity depending on the context.

Consider the following two examples in (14) from Ionin et al., (2004:8):

(14) a. [The man] with the black hat is talking. 
   b. The man with the black hat is talking.
(14)

a. I’d like to talk to the winner of today’s race—she is my best friend!

b. I’d like to talk to the winner of today’s race—whoever that is; I’m writing a story about this race for the newspaper.

In (a), the speaker is referring to a particular individual, who is ‘the winner of today’s race and who has the ‘noteworthy’ property of being the speaker’s friend. In (b) in comparison, the speaker is not referring to one individual winner but wants to talk to the winner of the race whoever he/she is. Thus, the conditions on specificity are satisfied in (a) but not in (b). However, in both cases the [+ definite feature] is attached to the same noun phrase ‘the winner’.

Undoubtedly, there is a complex interface between both features. This interplay yields at least four possibilities that are figured out from the context. Consider (15) below from Ionin, et al., (2004) for four possible specificity contexts:

(15)

a. [+definite +specific] context: Ex. I want to talk to the winner of this race – she is a good friend of mine.

b. [+definite −specific] context: Ex. I want to talk to the winner of this race – whoever that happens to be.

c. [−definite +specific] context: Ex. Professor Robertson is meeting with a student from her class – my best friend Alice.

d. [−definite −specific] context: Ex. Professor Robertson is meeting with a student from her class – I don’t know which one.

This reanalysis of definiteness and specificity as proposed by Ionin et al., (2004) showed that specificity (and not definiteness) is a crosslinguistic semantic feature. Languages choose articles either (a) on the basis of definiteness or (b) on the basis of specificity. Languages like Arabic, English, Spanish and French choose articles on the basis of definiteness without necessarily marking specificity. The language of the Samoan Islands,
on the other hand, belongs to the latter category, where “The specific article singular le/l
...indicates that the noun phrase refers to one particular entity regardless of whether it is
definite or indefinite” (Mosel & Hovdhaugen, 1992: 259).

Thus, this phenomenon in Samoan attests to the fact that the feature of definiteness
does not play a role in article choice across languages. What really counts is the intention
of the speakers to refer to a particular individual (Ionin, et al., 2004) and not whether the
noun itself is a unique individual. In many cases in Samoan, even when the context refers
to a unique individual, the name takes the [–specific] article se because the speaker does
not intend to refer to that individual; in other words, the identity of the speaker is
irrelevant.

This culminated in what Ionin et al., (2004: 12) called the Article Choice (binary)
Parameter (ACP) that posits that article languages encode either definiteness or
specificity, but not both. Consider (16) below:

(16)
A language that has articles distinguishes them as follows:
a. *The Definiteness Setting*: Articles are distinguished on the basis of definiteness.
b. *The Specificity Setting*: Articles are distinguished on the basis of specificity.

In general, although the feature of specificity has been debated, there are two
fundamental facts that are assumed. First, definiteness and specificity are two independent
features that need to be characterized separately in the discussion of article systems. A
definite noun does not necessarily mean that it is specific. Second, specificity mirrors
more finely-grained referential information about noun phrases in discourse. However, the
interpretation of the definite marker whether it denotes genericity or specificity in noun
phrases depends in the first place on discourse context. To know whether the definite
marker denotes definiteness or specificity, the reader waits to read the sentence that follows the one in which the noun phrase in nested in the discourse context.

What about this intricate relationship between definiteness and specificity in generic and specific reference within the same sentence? I am are going to refer to this as *sentential* specificity. Although the above specification of definiteness versus the specificity setting captures the relationship between the two features across languages in discourse context, it does not provide substantial details on the behavior of the definite marker in article languages within the sentence in which the noun phrase is nested.

I posit that the privileges of *definiteness-specificity* distinction can be adequately extended to better understand form-meaning mapping of noun phrases nested in the first sentence in discourse. Take for example generic plural noun phrases in Arabic and English: whereas in Arabic a definite plural noun (i.e., the dogs) meets genericity and specificity conditions, in English it only meets the specificity condition. Consider table 1.2 below:

<table>
<thead>
<tr>
<th>Construct-ion</th>
<th>English</th>
<th>Arabic</th>
<th>Match/mismatch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plural generic nouns</td>
<td><em>Dogs have four legs.</em></td>
<td><em>al-kilaab lahaʔarbaʕatʔarjul.</em></td>
<td>Mismatch</td>
</tr>
<tr>
<td>Configuration</td>
<td>[<em>-Definite - Specific</em>]</td>
<td>[+Definite - Specific]</td>
<td></td>
</tr>
</tbody>
</table>
The interaction between these two features in Arabic shows another layer of complexity: in kind reference for example there is an entailment relationship between both features that can be characterized in the following way: every specific entity in the specification of ‘the + NP’ is definite by entailment but not every definite entity is specific. This layer of complexity is discussed in some detail in chapter 2.

1.2.3. Article systems in SLA studies

In SLA studies, various explanations have been offered to account for the difficulty of acquiring article systems across languages. Master (2002), focusing on the article system in English, lists three in-depth reasons: first, articles are among the most frequent function words, a fact that makes it hard for learners to apply rules about their use across extended stretches of discourses. Second, as function words, articles are unstressed and thus they are hard to discern on the part of second language learners. Third, articles stack multiple functions into a single morpheme, which is the definite or the indefinite marker. As to non-syntactic factors, Liu and Gleason (2002), following Halliday and Hassan (1976), attribute problems of article usage to the cultural component (i.e., the context of situation and reference) in language use. Yoon (1993) attributes errors in article usage to perceptions of L1 and L2 learners of noun countability.

These conflicting views and explanations for article system acquisition have made their way into SLA theory. Two debatable perspectives have been proposed to account for how articles are acquired in L2 adult learning: Fluctuation between UG parameters (couched within the Innateness Hypothesis) and L1 transfer, with the question of which one overrides the other or if both interact in different ways remain unresolved.
Early, the ‘egocentricity’ premise in the Piagetian framework was proposed as an adequate explanation for the overuse of the definite marker ‘the’ by L1 learners (Warden, 1976). Huebner’s (1985, 1983) conclusion that his only L1- Hmong/Lao- L2 English learner tended to use the definite marker (85%) in all environments has been approached in the light of Bickerton’s (1984) “BioProgram Hypothesis” that posited that there is an innate tendency to distinguish between specific and nonspecific referents. Although Huebner (1985) did not explore the effect of first language in the acquisition of the determiner system, he acknowledged the role it may play:

Thus, the examination of variability across the interlanguages of speakers of different first languages appears to be a fruitful avenue to pursue for insights into the nature and role of language universals and language transfer in various subsystems of the interlanguage grammar (p. 144).

To address a greater role of first language, Master (1987) contrasted article use in L2 learners of English whose L1s have articles (German & Spanish) with L1 languages that lack articles (Japanese, Chinese, & Russian). Master showed that in the case of L1 no–article languages, zero article is acquired first at the lowest skill level, and then drops at the second level. It rises in the third level and rises again to nearly 100% at the highest levels. The overuse of the zero article decreases with interlanguage development and persists at the highest levels more than any other articles. In the case of + article L1 languages, zero article is not overused at the early stages of acquisition. As for the definite article, Master (1987) found that in the [+Specific Referent + Hearer Known] contexts, the definite article is used consistently regardless of first language.

Certain arguments against the effect of first language in the acquisition of article systems draw on Universal Grammar (UG), an approach that maximizes the role of the
innate capacity in language learning. Within UG, the Principles and Parameters (P&P) framework (Chomsky & Lasnik, 1993) distinguished between the invariants of human languages (principles) and crosslinguistic variations (as a function of parameters) to present an integrated explanation for how language acquisition occurs. The underlying premise of this approach claims that if L2 learners are able to learn features that are not present in their L1, this would mean that they have access to Universal Grammar that provides the parameters that they choose from.

Within the (P&P) framework, Ionin (2003) and Ionin et al., (2004) developed the Article Choice Parameter (ACP) that claims that all two-article languages have one way or another to express the speaker’s intent to refer to individual referents (i.e., specificity) with a binary parameter that allows the following settings: the definiteness setting and the specificity setting. This parameter as in (17) below stipulates that:

(17) A language that has articles distinguishes them as follows:
    The Definiteness Setting: Articles are distinguished on the basis of definiteness.
    The Specificity Setting: Articles are distinguished on the basis of specificity

This parameter was tested with L2 English learners by Ionin et al., (2004) with learners of two no-article languages (Russian & Korean). The study asked whether L2 learners of these languages would set the article choice parameter based on definiteness or on specificity, or whether they would fluctuate between both settings. It also hypothesized that fluctuation would mean first, that they have access to Universal Grammar and second, there is no L1 transfer since their first languages do not have articles in the first place.

Using forced choice and written production tasks, the subjects in Ionin et al., (2004) were tested on four possible combinations that alternated between the two features
of ‘definiteness’ and ‘specificity’: [ +definite +specific], [ +definite -specific], [-definite +specific], and [-definite +specific]. The study concluded that in the forced choice tasks learners of both languages fluctuated in determiner choice between the two settings. The same hypothesis was partially confirmed in production tasks, as there was not enough data. Further, the study confirmed the prediction that L2 learners whose languages lack articles would tend to overuse the in [-definite, +specific] and overuse the indefinite article a in the [-specific, +definite].

Results of Ionin et al., (2004) were considered as robust evidence that L2 learners of - article languages have access to parameters that are “instantiated in neither their L1 nor their L2 but are possible Universal Grammar options” (p.14). In addition, the study developed the Fluctuation Hypothesis (FH) in (18) below:

(18)  
a. L2 learners have full access to UG principles and parameter-settings. And,  
b. L2 learners fluctuate between different parameter-settings until the input leads them to set the parameter to the appropriate value.

Since the study of Ionin et al., (2004) was conducted with L2 learners whose languages do not have articles, there was a pressing need to explore languages that have articles. Zdorenko and Paradis (2007) addressed that need, but only with L2 young children. The study aimed at balancing the effects of Access to Universal Grammar as in the Fluctuation Hypothesis and the effect of L1 transfer. To do so, the study compared two groups of L2 young learners: (a) L2 children whose first languages lack articles (Chinese, Korean & Japanese) and (b) L2 children whose first languages have articles (Spanish, Romanian & Arabic).
The study found three basic patterns in article use: (a) all children regardless of their L1 background used the definite marker in specific indefinite contexts. This was taken as strong evidence in support of the fluctuation hypothesis; (b) children were more accurate in the use of ‘the’ in the definite contexts more than in the use of ‘a’ in the indefinite contexts, regardless of their first language; (c) children with -article language backgrounds tended more to omit articles as error forms than children with + article languages. The study concluded that L1 has limited influence on children’s developmental patterns and rates of article acquisition. It also concluded that fluctuation is an overreaching developmental pattern with children, and it overrides L1 transfer.

In a similar vein but with adult learners, Ionin et al., (2008) balanced the Fluctuation Hypothesis with L1 Transfer. The study compared English learning in (a) 24 L2 learners whose L1 have articles (Spanish), and (b) 23 L2 adults whose first language does not have articles (Russian). Two competing hypotheses were tested: (a) fluctuation overrides transfer: all L2 learners should fluctuate between ‘definiteness’ and ‘specificity’ in their article choice regardless of their L1s. (b) Transfer overrides fluctuation: L2 learners whose L1s have articles should transfer article semantics from their L1 to their L2. The study elicited responses using cloze-tests and short dialogues. Two different patterns were identified: First, L1 Russian learners exhibited an expected pattern: they overused ‘the’ with ‘specific indefinites’ and overused ‘a’ with ‘non-specific definites’. As for L1 Spanish learners, they did not show this pattern; rather they were more accurate on the ‘nonspecific definites’ than on ‘specific definites’. This was attributed to the fact that their first language requires article omission in this context. The basic conclusion in
Ionin et al., (2008) was that in cases of article languages, transfer overrides fluctuation in learning English. However, in case of non-article languages, fluctuation overrides transfer.

In an attempt to investigate a greater role for L1 transfer, Ionin and Montrul (2010) compared two groups of EFL L2 adult learners (Koreans whose first language lacks articles and Spanish speakers whose first language has articles) on a truth-value grammaticality judgment task that tests the generic interpretation of definite plurals. A typical sentence in these tasks is “The lions are dangerous” that is specific in English but generic in Spanish. Neither interpretation holds with Korean that is a –article language. Results showed that transfer effects were greater in the Spanish case: 83% of Spanish EFL learners treated definite plurals as generic in contrast to only 17% in the Korean case. Thus, Korean learners were more successful, since their first language does not assign this wrong interpretation.

Interestingly, in a follow-up study, Ionin and Montrul (2010) concluded that it is still possible for L2 learners to recover from their L1 effect. When the same study was conducted with ESL advanced Spanish and Korean learners of English in the United States, only 27% of the Spanish speaking and none of the Korean speaking ESL learners treated definite plurals as generic. The study concluded that it was easier for L2 Korean learners to establish a new category for definite plurals with a generic interpretation than for Spanish learners to shift the interpretation of an existing category.
1.3. Statement of the problem

Although the above explanations and theoretical frameworks have increased our understanding of the phenomenon, there is still lack of consensus on why article systems in general and the definite marker in particular are two challenging tasks for L2 learners of Arabic and English. The underlying processes involved in article acquisition that perpetuate errors remain unclear.

More importantly, although there has been a growing interest in Arabic SLA studies in the last decade (Alhawary, 2013), the acquisition of the article system in general and the definite marker in particularly in nominal noun phrases has not been researched in a systematic way. The acquisition of the semantics of the definite marker in Arabic, although important in the acquisition of noun phrases, is almost a neglected area of research. The study of the definite marker comes in previous Arabic SLA literature in a fleeting reference as part of the agreement system (see Nielsen, 1997; Alhawary, 2009). This may not capture the systematic underlying reasons for errors in the article system in general and in the definite marker in particular.

Further, although the behavior of the definite marker in Arabic and English offers an intricate interface between syntax and semantics (i.e. form and meaning) in some of its aspects (see chapter II for more details), no single study ever attempted to balance between the interface effect and other effects as L1 transfer as possible explanations for article system error types. Recently, special interest has been given to the semantics of article systems across languages (see Ionin, 2003, Ionin et al., 2004; Ionin, Zubizarreta & Philippov, 2009) with the hypothesis claiming that restructuring form-meaning mapping at
the syntax-semantics interface takes longer in L2 acquisition than purely syntactic forms or structures (Montrul, 2010; Tsimpli & Sorace, 2006; Sorace, 2004; Serratrice, el al., 2009). Other studies demonstrated that however difficult to acquire, structures and configurations at the syntax-semantics interface are possible to acquire only at advanced stages of L2 learning (e.g. Borgonovo, Bruhn de Garavito & Prévost, 2007; Dekydtspotter, et al., 1999, 2000). The acquisition of generic and specific plural nouns in L2 Arabic and English offers a good ground to test this hypothesis (see chapter II for elaborate discussion). In Arabic for example, whereas generic plural nouns offer an interfacing case between definiteness and specificity in the [+Definite – Specific] configuration, specific plural nouns do not. This is because the [+Definite + Specific] configuration is used. In English, generic and specific plural nouns do not offer any interfaces in either.

Further, although Ionin et al., (2004, 2008 with L2 young children and L2 adults respectively) have added recent insights into the acquisition of the article system, two conflicting results have been recorded: with children ‘fluctuation’ overrode ‘transfer’ while in adults it is vice versa. This result needs to be replicated with adult learners in other languages that have articles. Matched low proficiency Arabic-English bilinguals seem to be convenient populations for testing these hypotheses since both systems offer similarities and differences. If either ‘fluctuation’ or ‘transfer’ is attested, another question remains: at which proficiency level/s recovery from L1 is possible and what the developmental patterns of the definite marker interlanguage are. A comparison between low, mid and high proficiency levels may answer these questions.
Moreover, some methodological issues can be recorded with previous studies. To the best of my knowledge most of, if not all of, the studies reviewed above are ‘unidirectional’. e.g., learning a specific L2 while varying L1 of the learners. This approach may be flawed in a number of ways: In the first place, previous studies have tested the performance of L2 learners of different L1s with different instruments that vary in item difficulty and complexity. Further, these studies have investigated the acquisition of articles in L2 learning by collecting data from L2 learners of a particular language only. This approach misses the opportunity to compare and contrast the performance of L2 learners of the other language on the ‘same' set of instruments. I am going to call this methodological approach ‘bidirectional’. Thus it enables us to look closely at ‘difficulty direction’. The terms ‘difficulty direction’ has been used to refer to how much difficulty two communities of L2 learners face when they move from L1 into L2 (for an elaborate discussion of the term, see Eckman, 2008). In the context of this dissertation, the two directions are Arabic-English and English-Arabic.

It is important to note that the term ‘bidirectional’ is also used in L2 studies in a different sense; it addresses the same phenomenon in L1-L2 and L2-L1 directions. In the context of chapter II and IV in this dissertation, the bi-directional framework tracks the acquisition of the same construction in both L1-L2 directions. In our case these are L1Arabic- L2 English and L1English-L2 Arabic. This approach seems to be more systematic and promising, as it controls for various confounding factors by tracking the effect of L1 in both directions. If a consistent pattern of errors has been identified with the
same set of instruments, this may be taken as evidence for the effect of L1 transfer in article system acquisition in general and in the determiner system in particular.

Equally important is the role of well-informed pedagogical guidelines developed to address the issue. As reviewed above (see Al-Sulmi, 2010; Bataineh, 2005; Abu-Ghararah, 1989; Kharma, 1981 for Arabic, and Liu & Gleason, 2002; Yoon, 1993, for English), these investigations do not offer insightful pedagogical implications. Whether the effect is due to L1 transfer, fluctuation or the syntax-semantics interface, we are left with no solid guidelines to foster form-meaning mapping in noun phrases. This is further discussed in chapter V of this dissertation.

1.4. Significance and goals of the dissertation

This dissertation derives its significance from two dimensions: theoretical and practical. From the theoretical point of view, it tests for three hypotheses in SLA theory of article systems. First, in chapter II it balances between the interface hypothesis claiming that restructuring form-meaning mapping at the syntax-semantics interface takes longer in L2 acquisition (Montrul, 2010; Tsimpli & Sorace, 2006; Sorace, 2004) and the L1 Full transfer hypothesis (Schwartz & Sprouse, 1994). The behavior of the definite marker surfacing in plural noun phrase configurations in Arabic offers a good testing ground since it offers a complex and intricate interface between two distinct features: definiteness and specificity (Ionin et al., 2004). Second, it further tries to explore whether L1 English-L2 Arabic and L1 Arabic-L2 English learners transfer their L1 knowledge of noun phrase configurations from L1 into L2 or fluctuate between multiple noun phrase configurations
in the acquisition of the definite marker in Arabic singular and nominal construct state (see chapter III and IV respectively).

Further, this three-article dissertation attempts to couch its results in the broader article system acquisition theory by characterizing the interlanguage development of the definite marker in the three constructions. The bidirectional framework with L1-English-L2 Arabic and L1 Arabic-L2 English in the study may provide an adequate mode to provide evidence that support or refute any of the hypotheses tested.

From a practical angle, this dissertation integrates theory and practice in article system and noun phrase acquisition studies in a number of ways: first, it attempts to document errors of the definite marker by L1 English-L2 Arabic learners. These errors may be attributed to the lack of teaching the definite marker semantics. Achieving this goal may help improve the unfortunate state of Arabic SLA data that Alhawary (2009:48) characterized as ‘sporadic and parsimonious’. It may provide data-driven observations about the systematic reasons of errors in definite marker.

Second, it offers recommendations for L2 teachers of Arabic and English that stress the role of explicit instruction of the semantics of the definite marker in multiple noun phrase configurations. These recommendations also highlight the typological differences between nominal compounds as in the case of the Iḍāfah construction in MSA and in English. In this regard, chapter V offers guidelines for a number of structured-input activities (VanPatten, 2004) that foster the form-meaning mapping that accelerates the right interpretation of the definite marker and switch off the wrong ones in Arabic and English noun phrase configurations.
Implications go beyond the classroom practices to L2 Arabic curricula and teaching materials. They recommend the integration of a typological taxonomy of nouns in Arabic that considers the semantics of the definite marker in singular and plural noun phrases. This taxonomy needs to be integrated into Arabic textbooks. A close analysis of the basic textbooks in the field of teaching Arabic and English as Foreign Languages shows that this aspect is not given sufficient attention. For example, the third edition (2013-2014) of *Al-Kitaab Fii Ta’allum Al-`arabiyya* Book Series, one of the most common textbooks for teaching Arabic for L1 English-L2 Arabic learners, shows that article semantics is not integrated in the first place. This dissertation aims at bridging this gap in L2 Arabic and English textbooks.

1.5. Research questions

The underlying research question in this three-article study is: How the form-meaning mapping in three noun phrase configurations is acquired by L1 English-L2 Arabic and L1 Arabic-L2 English learners and how the developing interlanguage system is restructured in the process of acquisition across multiple proficiency levels. To do so, it balances between the effects of L1 transfer and syntax-semantics interface in definite marker choice across three constructions, in each of which the definite marker surfaces. It also examines variations across constructions and proficiency levels in recovery from the L1 effect (if attested).

Supplemental to this goal is that this research project explores the developmental sequence of the definite marker by L1 English- L2 Arabic learners. This three-article dissertation addresses this issue by comparing the performance of L2 learners of Arabic on
written production tasks across multiple levels of proficiency across the three targeted constructions.

To explore these underlying questions, this study attempts to investigate three constructions, in which the definite marker surfaces. Each investigation looks in some detail, among other things, into the acquisition of the definite marker. These three constructions are going to be explored in three studies as follows:

1. Study I: Acquisition of the definite marker in L2 Arabic and English plural noun phrases: a bidirectional study (Chapter II)
2. Study II: The role of L1 syntactic transfer in the acquisition of singular noun phrases by L1 English-L2 Arabic learners (Chapter III)
3. Study III: The acquisition of nominal phrases in L2 Arabic and English: a bidirectional study (Chapter IV)

1.5.1. Research questions for study I

The underlying goal of this investigation examines the acquisition of the syntax-semantics interface or form-meaning mapping of the definite marker in Arabic and English plural noun phrase configurations that carry on generic and specific interpretations in a bi-directional framework. It balances between the effects of L1 transfer and syntax-semantic interface at the initial state of L2 learning and explores interlanguage development across three levels of L1 English-L2 Arabic proficiency: low, intermediate and advanced.

Specifically, it seeks to answer the following three research questions:
(1) For L1 English-L2 Arabic learners, which construction is more difficult to acquire: definite plural noun phrases that carry on a generic reading or definite noun phrases that carry on a specific reading? In other words; which configuration is harder to acquire: one that offers an interface between syntax and semantics in the [+ Definite - Specific] configuration or one that offers a straightforward relationship between them in the [+ Definite + Specific] configuration? The interface hypothesis (see Sorace, 2004; Tsimpili & Sorace, 2006; Sorace, 2011) predicts that the first configuration is harder to acquire.

(2) For L1 Arabic-L2 English low proficiency learners, do their responses pattern the same as their L1 English-L2 Arabic counterparts while learning (1) plural noun phrases in the [- Definite - Specific] configuration used to refer to the generic nouns and (2) plural noun phrase configuration [+ Definite + Specific] that offer a specific reading? In both configurations, no interface is involved.

(3) If L1 transfer effect is found, are advanced L1 English-L2 Arabic learners able to recover from this effect as a result of instructed SLA?

1.5.2. Research questions for study II

In a similar vein to the first investigation, but only in the L1 English-L2 Arabic direction, this study narrows down the focus on the effect of L1 syntactic transfer at the initial stage of L2 learning of Arabic noun phrases that carry on generic interpretations when first introduced into discourse for first mention. Generic singular noun phrase configurations
are a good testing ground to examine the effect of L1 syntactic transfer since they offer matches and mismatches between Arabic and English. This study also examines the development of interlanguage across three levels of proficiency: low, intermediate and advanced. It does so by contrasting two conditions: a matching condition and mismatching condition to L1 English.

Specifically, it answers the following three research questions:

(1) Which construction is harder to acquire by low proficiency L1 English-L2 Arabic learners: generic singular nouns that offer a matching configuration or generic singular nouns that offer a mismatching configuration to their L1? This question can be answered by analyzing the patterns of L2 learners’ errors in article choice in the production tasks of the study.

(2) In case L1 transfer is supported, at which proficiency level/s are L1 English-L2 Arabic learners able to recover from this effect? This question can be answered by comparing the performance of the subjects across different proficiency levels.

(3) Overall, does the acquisition of the definite marker in Arabic singular noun phrases reflect a similar or a different developmental pattern to that of plural nouns phrases in the first investigation?

1.5.3. Research questions for study III

This investigation examines the acquisition of the Ḫāṭah construction in MSA and its equivalent constructions in English in a bi-directional framework: Arabic-English and English-Arabic. One of the basic differences between MSA and English is that whereas
there is only one canonical configuration for the Iḍāfah construction, the system of English is permissible of more than one canonical form. To address form-meaning mapping of these constructions, this investigation asks the following specific questions:

(1) Is there a real effect for L1 syntactic transfer at the initial state of L2 learning in the acquisition of the Iḍāfah construction in MSA and its equivalent noun phrase configurations in English? More specifically, I am asking whether different L1 noun phrase configurations trigger similar or different responses at the initial state of L2 learning. This question can be answered by examining responses of L1 English-L2 Arabic and of L1 Arabic-L2 English learners in the written production tasks of the study at the initial state of L2 learning in the 101 ARB and ENG class. I am also asking if there are other sources of knowledge that L2 learners employ at the initial state.

(2) What is the effect of Form-Focused Instruction on the acquisition of head-complement ordering and definiteness in the acquisition of the Iḍāfah construction in the English-Arabic direction? This question can be answered by analyzing the responses of L2 learners of Arabic at three proficiency levels on the two written production tasks of the study. This will allow us to track the developmental path that takes place over time.

1.6. Chapter overview

The section below offers substantial details on the chapters in which the previous three investigations are to be explored independently.
1.6.1. **Chapter II/ study I: Acquisition of the definite marker in L2 Arabic and English plural noun phrases: a bidirectional study**

To answer the questions formulated in the first investigation, chapter II reports on the findings of data collected by three instruments: written translation, error correction and detection and forced choice elicitation, all of which focused on the definite marker in two noun phrase configurations: plural nouns that have generic reference and plural nouns that have specific reference in a bi-directional mode.

Components of this chapter follow the classical sequence in publishable research articles in the field of applied psycho/linguistics. It starts with an *Introduction* in which the reader is briefly introduced to errors in the definite marker in noun phrases in previous studies in both directions of the study. In the *Background* section, it creates its research space by offering inconsistent results of previous definite marker research studies in the literature in the L1 English-L2 Arabic direction and how interpretations range between many sources especially, L1 transfer, performance errors, and operation of language learning strategies. This section also introduces the reader in some detail to the syntax-semantics interface in generic and specific plural nouns in English and Arabic. In the *Methods* section, the chapter offers substantial details on participants, tasks and the scoring procedures followed.

The *Results* section offers results of the study in both directions. It starts with presenting results of in-group comparisons followed by between-group comparisons in both the L1 English-L2 Arabic and in the L1 Arabic-L2 English directions. It ends with setting the results of low proficiency L1 Arabic-L2 English and L1 English-L2 Arabic side
by side to balance between the effects of L1 transfer and the effects of the syntax-semantics interface. The Discussion section couches results of this investigation in a bigger article system acquisition theory with special emphasis on the fine-tuned distinction between feature selection versus feature re-assembly (see Lardiere, 2008, 2009) and the Differential Markedness Hypothesis (Eckman, 2008) that may capture the results of the investigation. It concludes with brief pedagogical implications for L2 teaching of Arabic.

1.6.2. Chapter III/ study II: The role of L1 syntactic transfer in the acquisition of singular noun phrases by L1 English-L2 Arabic learners

To answer the questions formulated for the second investigation, chapter III reports on the findings of data collected by three instruments: written translation, error correction and detection and forced choice elicitation, all of which focused on two conditions in which singular generic noun phrases are used: a matching condition with L1 and a mismatching condition. Similar to the structure of chapter II, this chapter offers Background on typological differences and similarities between Arabic and English in the behavior of generic singular nouns when first introduced into discourse. In the Methods section, the chapter offers details on participants in the study, tasks and scoring procedures followed.

The Results section offers results of the study in the L1 English-L2 Arabic direction. It makes in-group and between group comparisons between the matching and the mismatching conditions across the three proficiency levels in general to do two things: First to find out the effect of L1 transfer, and second to track the development in interlanguage of the definite marker in the singular noun phrase configurations. The
Discussion section couches results of this investigation in a bigger article system acquisition theory with special emphasis on the fine-tuned distinction between form or syntactic transfer (Sans & Bever, 2001) and meaning transfer.

1.6.3. Chapter IV/study III: The acquisition of the definite marker in the Arabic nominal construct state by L1 English-L2 Arabic learners

Chapter IV offers results of data collected by two instruments, written translation and forced choice elicitation, to examine the effect of L1 syntactic transfer in the acquisition of Arabic nominal construct state (Iḍāfah construction) and its equivalent noun phrase configurations in English in the two directions: Arabic-English and English-Arabic. The Background section offers a typological overview of the nominal Iḍāfah construction in Arabic and the matching alternates in English. The Methods section offers details on participants in the L1 English-L2 Arabic and its L1 Arabic-L2 English directions, the tasks used and the scoring procedures followed. The Results section offers findings of in-group and between-group comparisons to probe further into the effect of L1 form transfer. It briefly compares between results of this investigation and the previous two studies.

Since the Arabic nominal construct state gets more intensive focus-on-form instruction, the Discussion section discusses results of this investigation in relation to the effect of form-focused instruction with L1 English-L2 Arabic learners.
1.6.4. *Chapter V: Conclusion and implications*

Chapter V summarizes results of the study and patterns the findings in relation to the overarching hypotheses that the overall project tests. It couches the results in a bigger article system acquisition theory. Theoretical discussions in terms of the interface hypothesis (see Sorace, 2004; Tsimpli & Sorace, 2006; Sorace, 2011), fluctuation versus transfer (Ionin et al., 2008) and feature reassembly versus selection (Lardiere 2008, 2009) are further presented.

This chapter devotes a substantial part to discuss how to foster the bond between its overall results and practices in L2 Arabic pedagogy. It discusses pedagogical implications in two fundamental dimensions. First, it offers solid guidelines for structured input activities (VanPatten, 2004:5) that foster form-meaning mapping. Examples of these activities for teaching the three-targeted constructions in which the definite marker surfaces are offered. The aim of these activities is to convert much of the input into richer intake that may make its way into the developing linguistic system (VanPatten, 2002: 762). These activities also aim at accelerating recovery from the L1 effect. Pedagogical approaches that focus on form may not be sufficient for making stronger form-meaning mappings.

Second, Chapter V offers recommendations for L2 Arabic and English pedagogical textbooks and materials that highlight the role of integrating definite marker semantics earlier in the pedagogical sequence. Common textbooks for teaching Arabic as a foreign language (see for example, *Al-Kitaab Fii Ta’allum Al-’arabiyya Book Series, 2013-2014*)
do not offer explanations for the semantics of the definite marker in multiple noun phrase configurations. These recommendations bridge this apparent gap.
Chapter II

Acquisition of the definite marker in L2 Arabic and English plural noun phrases: a bidirectional study

2.1. Introduction

Throughout the past four decades, the growing interest in the second language acquisition of article system in Modern Standard Arabic (hereof MSA) and English has not stopped. Studies focusing on the acquisition of the definite marker as an integral component of MSA and English article systems have caught more attention. This is partially because errors in the English definite marker as shown in L2 research persist until very advanced stages of L2 learning (see for example Sarko, 2008; Butler, 2002; Master, 1997; Collier, 1987; Anderson, 1984; Kharma, 1981). Accordingly, earlier SLA studies ranked definite article acquisition as one of the most difficult tasks for L2 learners (see for example Master, 1995; Thomas, 1989; Tarone & Parish, 1988; Parish, 1987; Pica, 1983; Huebner, 1983) and one of the most difficult constructions to teach (Dulay, Burt, & Krashen, 1982). Practitioners and teachers in a study by Yamada and Matsuura (1982: 50) concluded frustratingly that L2 learners’ use of English articles in general and the definite marker in particular “bears little or no resemblance to established English practice; L2 learners seem to use articles almost randomly”.

With L1-English-L2 Arabic learners, the situation is even more problematic; the acquisition of the definite marker in noun phrases in L2 Arabic has not been well-investigated in previous studies despite the persistence of errors in its use. Thus, the phenomenon remains undocumented in the first place. This is true of other Arabic SLA acquisition data, which Al-hawary (2009:48) characterized as a whole as “parsimonious
and sporadic”. Earlier studies (see Al-Ani, 1972-1973 & Rammuny, 1976) that followed
the contrastive analysis and error analysis approaches in Arabic SLA studies aimed to
identify written production errors in compositions with a fleeting reference to errors in
definiteness.

Part of this perplexing picture in the definite marker acquisition studies in L2
Arabic and English is that some previous studies did not specify certain features or aspects
of the definite marker that should be explored in a systematic way. The definite marker is
often studied as a whole. Thus, mixed conclusions are made and many of the errors remain
unexplained within certain acquisition hypotheses. Second, most if not all, previous
studies used a unidirectional methodological approach that investigates the acquisition of
the definite marker in one direction with a single L1 group learning L2 with the attempt to
capture how it is acquired. This approach does not offer the opportunity to look into what
Eckman (2008) termed “the difficulty direction” within the same study. In other words, it
did not known specifically if there will be similar error types if data is collected in a
different direction with the same two languages. In the context of our study, the
unidirectional approach would not allow us to see the errors types in L1 English-L2
Arabic and L1 Arabic-L2 English directions.

Given this difficulty, research often offers mixed interpretations with no definitive
answer to how the definite marker is acquired. At the initial state of L2 learning in
particular, explanations vary about the effects of L1 transfer; the complexity of the definite
marker by itself as an interface area where syntax, semantics, and pragmatics comes into
interplay (Matthewson & Schaeffer, 2005); the mechanics of language learning strategies
as overgeneralization; lack of effective instructional techniques and extraneous performance factors.

In this investigation, I am balancing between the effects of two possible explanations for errors in the definite marker: the *Interface Hypothesis* (IH) and the *L1 Full Transfer (FT) Hypothesis*. Very recently, the interface hypothesis (which first appeared in Sorace & Filiaci (2006) and was further developed in Tsimpili & Sorace (2006) and Sorace (2011)) claimed that constructions that offer an internal interface (see Ramchand & Reiss, 2007 for further discussion of internal interfaces) are inherently more difficult for L2 learners than straightforward or narrow constructions. Various areas have recently been studied within the internal interface claim, especially at the syntax-semantics level. These areas include aspectual interpretation (Slabakova & Montrul 2003), quantifier scope (Marsden, 2004), and article acquisition (Ionin, Ko & Wexler, 2004).

The second account is the Full Transfer/Full Access (FTFA) hypothesis (Schwartz & Sprouse, 1996; Schwartz & Eubank, 1996) that postulates that the entirety of the L1 grammar forms the L2 initial state of L2 learning (hence the term ‘Full Transfer’). Regardless of whether they are learning an a syntax-semantics interface configuration or a straightforward one, L2 learners just transfer their L1 knowledge into their L2 initial stage of learning.

In this study, the acquisition of two cases by L2 learners of Arabic and English is explored in a bidirectional framework: (1) plural noun phrases that carry a generic reading (*type/kind reference*), a construction that offers syntax-semantics interface in the L1 English-L2 Arabic direction, but not in the L1 Arabic-L2 English direction; (2) and plural
noun phrases that carry a specific reading (maximal reference), a construction that does not offer such an interface in both directions.

The goal of this chapter is two-fold: First, it tests the predictions made by the two conflicting hypotheses (IH and FTFA) in the acquisition of the definite marker in both configurations to examine whether one of them has advantages over the other. Second, it examines the effect of instructed SLA in accelerating form-meaning mapping of the targeted constructions by comparing between multiple proficiency levels in the L1 English-L2 Arabic direction. It concludes with couching its results within a broader article system acquisition theory.

2.2. Background

2.2.1. Generic and specific plural noun phrases in English and Arabic

In English, three possible noun phrases are used to refer to genericity or kind reference in statements. These three variants are represented in (1) below:

1) a. A lion is dangerous.
   b. The lion is dangerous.
   c. Lions are dangerous.

These three variants as discussed in the semantics literature are not interchangeable; although all of them refer to the same proposition that ‘lions are dangerous animals’ there are some subtle differences between these types of generics. Although the focus of this investigation is on the generic plurals in (c), it may be important to introduce the reader briefly to the differences between them.
Krifka et al. (1995) is one of the earliest attempts to make a fine-tuned distinction between these three noun phrase constructions in English in subject distribution. With kind predicates such as ‘be extinct’, ‘be widespread’ or ‘be common’, definite singulars and bare plural subjects are grammatical whereas indefinite singulars subjects are not. Consider (2) below:

2) a. #A dodo bird is extinct. [indefinite singular NP: #kind-referring]  
b. The dodo bird is extinct. [definite singular NP: kind-referring]  
c. Dodo birds are extinct. [bare plural NP: p kind-referring]  
d. #The dodo birds are extinct. [definite plural NP: #kind-referring]  

[From Ionin, Montrul, Kim & Philippov (2011: 247)].

In the semantics literature (see Krifka et al., 1995; Smith, 1975, cited in Lyons, 1999:182) the difference in the two sets of sentences has been approached in terms of two types of genericity: sentence level genericity and noun phrase (NP) genericity. The examples listed above in (2) shows NP genericity. Consider (3) below for an example of sentence-based genericity:

3) Here’s something interesting I’ve read in a book about the behavior of predatory mammals:
   a. A lion usually hunts alone.  
   b. The lion usually hunts alone.  
   c. Lions usually hunt alone.  
   d. #the lions usually hunt alone.  

[From Ionin, Montrul, Kim & Philippov (2011: 246)].

Other semanticians (see Dayal 2004; Chierchia, 1998; Carlson, 1977 among others) made the conclusion that bare plural nouns in English are unambiguously kind denoting; they
refer to the whole kind of the category of lions. These are characterizing sentences that
denote the whole kind as in the following two sentences in (4) below:

4) a. Children like colors.
    b. Languages are means of communication.

For the purpose of this study, I focus only on the acquisition of generic bare (i.e.
indefinite) plural nouns in English that refer to generic information. These make no
particular reference to specific entities of that kind. These can be used in both subject and
object distributions in the sentence for first mention in discourse.

Although there is sufficient literature on the semantics of indefinite and definite
plural nouns in English, there is not much in MSA. Overall, MSA uses a definite plural
noun phrase for generic reading and kind reference for first mention in discourse. This use
of the definite marker ‘al-’ is known as ‘al-al-jinsiyyah’ that refers to the whole kind
‘jins’ in MSA.

Relating this typological difference between MSA and English to semantic
accounts in the literature, the definite marker in plural nouns (e.g. the lions) in English
lexicalizes *maximality*, the semantic operation that maps specific individuals to the set in
the category (Dayal, 2004; Chierchia, 1998), but it does not refer to generic or *kind
reference*. In Arabic, on the other hand, the definite marker in plural noun phrases denotes
both *maximality* and *kind reference*.

This difference between MSA and English is in accord with the account outlined
by Chierchia (1998) that languages with articles are predicted to always pattern with what
he termed the *Avoid Structure Principle*. This hypothesis postulates that the use of a
determiner/definite configuration for generic interpretation is blocked when the same
interpretation is available to a bare/indefinite noun phrase. However, other semanticians argued against this principle claiming that in some languages both configurations co-exist within the same language (see Krifka et al., 1995 for German; Müller, 2002; Schmitt & Munn, 1999 for Brazilian Portuguese).

A better understanding of the behavior of generic plural nouns may be made by analyzing this construction in terms of the intricate relationship between definiteness (whether the configuration is definite or indefinite) and specificity (whether the noun refers to specific entity/ies of the type (see Ionin et al., 2004) for more information). Thus in English generic plural nouns constitute a straightforward configuration between syntax (i.e. form) and semantics (i.e. meaning); there is a consistent relationship between definiteness and specificity. It is straightforward because a typical noun phrase of this category, as in ‘lions’ for example, is indefinite and it does not refer to specific exemplars or entities. Thus it is annotated as [- Definite – Specific]. In MSA, on the other hand, generic reference to kinds as in ‘the lions’ is realized in noun phrase configurations that offer an interface between definiteness and specificity, thus annotated [+ Definite – Specific]. Consider (5) below:

5) 1. al-ʔusuud ḥayawaanaat khaTirah.
   Lions. Def. animals. dangerous
   Lions are dangerous animals.
2. al-kilaab tanbah.
   Dogs. Def. bark.
   Dogs bark.
3. al-ʔaTfaal yuḥibuuna al-ʔalwaan.
   Children. Def. like colors. Def.
   Children like colors.
Definite plurals in English do not offer generic or kind reference reading as (d) in (2) and (3) respectively demonstrated. Thus when a definite plural noun is used in a characterizing sentence as the one in (6) below, it is not bound by any generic operator. In other words, it is a statement about specific or maximal entities in discourse that does not make any generic statements about the taxonomic kind of dogs. Consider (6) below:

6) 1. **The dogs** which I saw yesterday on my uncle’s farm were very friendly.  
2. Do you know any information on **the lions** that live in this part of the forest? No one really knows any.

MSA, on the other hand, allows the definite marker with plural noun phrases to refer to statements about specific or maximal entities in the discourse and statements about generic kinds or types.

The previous overview of the typological differences between generic and specific plural noun phrases in MSA and English shows an intricate relationship between *definiteness* and *specificity* involved in both. These typological differences are depicted in table 2.1 below:

<table>
<thead>
<tr>
<th>Table 2.1. Generic and specific reference in Arabic and English plural nouns: A typological overview</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Generic reference</strong></td>
</tr>
<tr>
<td><strong>Language</strong></td>
</tr>
<tr>
<td>MSA</td>
</tr>
<tr>
<td>English</td>
</tr>
</tbody>
</table>

**Specific reference**

<table>
<thead>
<tr>
<th><strong>Language</strong></th>
<th><strong>Definiteness and specificity configuration</strong></th>
<th><strong>Match or mismatch</strong></th>
</tr>
</thead>
</table>
For genericity and kind reference, whereas English uses a straightforward (i.e. matching) configuration in [– Definite –Specific], Arabic uses an interface (i.e. mismatching) configuration [+Definite –Specific]. For specific reading, on the other hand, a matching [+Definite + Specific] configuration is used in both languages.

2.2.2. Definite marker in noun phrases in Arabic-English SLA studies

Although there is much literature on the behavior of noun phrases that carry a generic interpretation in English and other languages, little is known about how they are acquired (Ionin, Montrul, Kim & Philippov, 2011). The previous literature does not address this area specifically. The definite marker has been addressed within the article system in general.

In SLA studies conducted with L1 English-L2 Arabic learners, for example, errors in the definite marker are studied in classical error analysis studies. Very early, Al-Ani (1972-1973) analyzed a limited number of written compositions in search for ‘major’ errors. The study does not specify the number of the samples analyzed nor does it provide any statistical figures of the errors found. Three types of errors were listed: orthographic and phonological, diction and dictionary usage, and grammatical errors. In particular, errors in the definite marker with noun phrases, although listed as one of the major errors, were attributed to at least three sources: interference, overgeneralization strategies and competence versus performance errors. The study does not probe deeply to uncover the systematic reasons for the definite marker errors by L1 English-L2 English adult learners.
Al-Ani’s conclusion was that it was difficult to identify the categories of these errors and to identify their true sources.

Rammuny (1976), in a more extensive study than that of Al-Ani, analyzed common errors in written Arabic compositions in proficiency tests. He identified errors in the following categories: phonological, lexical, structural and stylistic. Errors in definiteness were categorized as structural errors along with 16 more error types under the same category. Along with these diverse error types, causes remained ambiguous: they may be attributed to L1 interference, competence and performance issues or insufficient teaching-learning strategies. There is nothing to show how to divide the errors into types other than the researcher’s intuition. No further investigation was made into the systematic causes and the nature of the interlanguage development across different proficiency levels.

Nielsen (1997) referred to definiteness among other structural features in the attempt to examine the predictions made by the Processability Theory (PT) proposed by Pienemann (1998). This theory claimed that L2 grammatical development follows a fixed sequence. The definite marker was listed among other structural features that show the production of the definite marker in combination with nouns in the first phase. In the second phase of L2 acquisition the define marker is acquired as and as part of agreement features. In the third, it is acquired as part of the nominal construct state (Iḍāfah) construction.

To examine the predictions made by Pienemann (1998), Alhawary (1999, 2003) relied on the same emergence criteria used in Nielsen to study the emergence of the
definite marker as part of noun-adjective agreement in Arabic in the acquisition line after subject-verb agreement. This result refuted the predictions made by the speech-processing hierarchy in the Processability Theory that listed intraphrasal agreement as a prerequisite for the interphrasal agreement. This result was debated in a further study by Mansouri (2000, 2005).

With L1 Arabic-L2 English learners, although there are a number of studies that focused on the acquisition of article system, there is no final say on the systematic reasons for these errors. Research shows reasons that range between L1 transfer, overgeneralization as a learning strategy and performance issues. Al-Zahrani (2011), using the specificity contexts framework (see chapter I) developed by Ionin et al., (2004), tested two hypotheses in the L1 Arabic-L2 English direction: the first is that since Arabic and English both are definiteness-based article systems, adult Arabic-English speaking learners will show accurate use of the definite marker in all definite categories and accurate use of the indefinite marker a in all indefinite categories. Second, since neither Arabic nor English encode specificity in their article systems, will adult L1-Arabic-L2 English learners show no sensitivity to context specificity in their article choice? Results partially confirmed the transfer claim and refuted completely the fluctuation hypothesis.

In the same direction of L1 Arabic-L2 English, Al-Sulmi (2010) contrasted between article system interlingual errors that are attributed to L1 effect and article system intralingual errors that are attributed to individual language learning strategies such as overgeneralization. The study used a forced choice elicitation task conducted on 24 subjects. Contradictory to the results made by Zahrani (2011) that Arabic learners of
English are heavily influenced by L1 transfer, Al-Sulmi (2010) concluded that they are heavily influenced only by the operation of learning strategies. Even with this conclusion, some errors in the study remained unexplained by either factor. Al-Sulmi recommends conducting studies in a more systematic way to identify these reasons.

2.3. Motivation for current investigation

The previous section has attempted to do two things: first, it established the typological differences between MSA and English in the syntax-semantics mapping of the definite marker in plural generic and specific noun phrases. Second, it introduced the reader to some of the relevant work that has been done in the article system acquisition studies. It simply showed that whereas the definite marker errors seem to be well-documented with L1-Arabic L2-English learners and what is left to explore are the systematic reasons for these errors, they are not documented with L1 English-L2 Arabic learners. To the best of our knowledge, there is no single systematic study conducted exclusively to examine the acquisition of the definite marker in L2 Arabic.

Moreover, a simple observation of the aforementioned research studies shows that studies of the definite marker in noun phrases were not exclusively conducted to examine how the semantics is acquired or the systematic reasons for the errors made by L2 learners of Arabic and English. In L2 Arabic studies in particular, the focus on the definite marker came as part of definiteness agreement within nominal constructions. In other studies, the focus was the developmental sequence in relation to other constructions. This necessitates the need to explore the semantics of the definite marker in an independent and systematic
More importantly, the study aims at documenting these errors in Arabic SLA research that Al-hawary characterized as a whole as “parsimonious and sporadic” (2009:48).

Furthermore, it has been demonstrated that part of the difficulty of acquiring the article system stems from its complexity. A common methodological issue in some of the previous studies is that they look into the article system as a whole; this makes it hard to reach any generalizations about how it is acquired. A better framework may seek to identify certain well-defined areas in the article system and explore how they are acquired. This is one of the departure points for this investigation.

In addition, most article system studies are unidirectional; data is collected in only one direction. A more adequate methodological approach would be to collect data from L2 learners of English and Arabic while working on the same test items in both directions: L1 English-L2 Arabic and L1 Arabic-L2 English. This would help us uncover the systematic reasons for article system errors at the initial stage of L2 learning to explore the difficulty direction. Looking at performances of two communities of learners with particular L1 and L2 at matched proficiency levels may help us see a better picture of the underlying processes involved in acquiring the definite marker in both languages.

2.4. Research Questions

In addition to the goal of documenting the phenomenon in L2 Arabic and English, this investigation, asks the following specific research questions:
(1) For L1 English- L2 Arabic learners, which construction is more difficult to acquire: definite plural noun phrases that carry a generic reading or definite noun phrases that carry a specific reading? In other words, which configuration is harder to acquire: one that offers an interface between syntax and semantics in the [+ Definite - Specific] configuration or one that offers a straightforward relationship between them in the [+ Definite + Specific] configuration? The interface hypothesis (see Sorace, 2004; Tsimpli & Sorace, 2006; Sorace, 2011) predicts that the first configuration is harder to acquire.

(2) For L1 Arabic- L2 English low proficiency learners, do their responses pattern the same while working on plural noun phrases in the [- Definite - Specific] configuration used to refer to the generic nouns and plural noun phrases in the [+ Definite + Specific] configuration that offer a specific reading? In both configurations, no interface is involved.

(3) If the L1 transfer effect is found, are advanced L1 English- L2 Arabic learners able to recover from this effect as a result of instructed SLA?

For learning generic plural noun phrases in both languages, the task of L1 English- L2 Arabic learners is to add to reading definite plural noun phrases that denote a maximal meaning (that is the configuration in their L1) another feature or function, which is generic reference or reading. This mapping as predicted by the interface claim is a difficult one. The task of L1 Arabic-L2 English learners, on the other hand, is predicted to be less
difficult: they are learning a straightforward configuration that carries a generic reading in the indefinite configuration.

Given the possibility of L1 transfer, no difference in performance would mean that L2 learners in both directions are simply transferring their knowledge of the formal configuration of plural noun phrases from their L1 regardless of the interface claim. Consistent with the transfer claim is the prediction that accuracy rates in the case of specific plural nouns in the [+ Definite + specific] configuration will be higher in both L2 groups since the configuration is the same in both directions. Another question in this investigation asks whether L2 learners of Arabic are able to recover from the negative transfer effect and at what stage of acquisition they are able to recover from this effect.

2.5. Method
To address the questions formulated in (4) this investigation was conducted in two directions: L1 English-L2 Arabic and L1 Arabic-L2 English, in both directions participants are learning L2 (Arabic and English) in foreign language contexts.

2.5.1. Participants
2.5.1.1. L1 English-L2 Arabic Learners
The L1 English-L2 Arabic participants were from a public southwest university in the United States. They were from three proficiency levels: Low (n=18), intermediate (n= 19) and advanced (n =20). They were placed in their respective proficiency levels as measured by the American Council on Teaching of Foreign Languages (ACTFL) Guidelines for speaking and writing. The Oral Proficiency Interview (OPI) Scale for
divides proficiency into four levels: Novice (low), Intermediate, Advanced and Superior. Under each of these proficiency measures, there are three secondary scales: low, mid and high. The OPI proficiency rating scale has been chosen as it is one of the most common measures in assessing proficiency in Arabic in the United States. It is done by certified ACTFL testers. The OPI rating scale integrates components that assess linguistic, communicative, pragmatic, and discoursal competence. It covers among other aspects frequent error types and accuracy in language structures. Participants’ proficiency measures were reported at the main levels and not at the secondary levels for convenient comparisons. For the written component, writing samples from low, intermediate and high proficiency levels were analyzed using the ACTFL guidelines for writing. These guidelines evaluate written texts in terms of a number of benchmarks such as topic, function, lexical complexity, structural complexity and discourse.

The study did not depend on years of instruction as a measure of proficiency as this may not be accurate. Rather it split the participants’ classroom instruction levels into proficiency levels. It asked participants to report on their classroom levels and proficiency level as measured by the ACTFL scale. Twenty of the participants at the intermediate and advanced levels had their proficiency scores and the researcher scored the rest of the participants. For low proficiency learners, it was easy to assign them to their respective proficiency level since all of them did not have much extended exposure to Arabic before. Low proficiency level students were from first year Arabic classes; intermediate levels were from second and third year Arabic classes and advanced were from third and fourth year Arabic classes.
Other background information for L1 English-L2 Arabic Learners as reported in the short questionnaire asked for their first language, whether they speak other foreign languages, and how long have they been learning Arabic as a foreign language. Table 2.2 summarizes background information for L1 English-L2 Arabic learners for the three levels of proficiency.

<table>
<thead>
<tr>
<th>Proficiency level</th>
<th>(n)</th>
<th>Age range/ Std. Deviation</th>
<th>Years of instruction / Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>18</td>
<td>2.0/.70</td>
<td>1.0/.48</td>
</tr>
<tr>
<td>Intermediate</td>
<td>19</td>
<td>3.0/.95</td>
<td>1.0/.23</td>
</tr>
<tr>
<td>Advanced</td>
<td>20</td>
<td>10.0/.21</td>
<td>4.0/.94</td>
</tr>
</tbody>
</table>

There was no significant in-group difference in age in the three levels of proficiency. Also there was no significant difference in years of instruction or exposure to L2 Arabic or in how comfortable they feel while speaking Arabic. For low proficiency L1 English-L2 Arabic participants, they all reported either studying Arabic for one semester or two. Most of them were in Arabic 101 and 102 classes around the end of the fall semester 2013. For intermediate proficiency L1 English-L2 Arabic participants, they reported studying Arabic for one full year and they were in their third semester when the study was conducted. For advanced proficiency L1 English-L2 Arabic participants, they reported studying Arabic for at least two years and they were in different classes of Arabic.
2.5.1.2. L1 Arabic-L2 English Learners

For reasons of comparison, the study collected data from L1 Arabic-L2 English low proficiency learners (n=20) who are learning English as a foreign language in a foreign language academy in the Middle East. Proficiency in this direction was measured by the Test of English as a Foreign Language (TOFEL). They were studying English as a foreign language in two introductory level classes and their scores were under 300 in the TOEFL test. There was no significant in-group difference in age, or in years of instruction or exposure to L2 English or in how comfortable they feel while speaking English. Table 2.3 summarizes background information for L1 Arabic-L2 English low proficiency learners:

2.5.2. Tasks and procedures

Three experimental tasks were used in this study in both directions of L1 English-L2 Arabic and L1 Arabic-L2 English: (1) written translation, (2) error detection and correction and (3) forced choice elicitation task. The same items were used in both directions. Items were developed in Arabic and English in a way that matches the aims developed for each direction.

Items used in the three tasks were all highly frequent: a simple content analysis of the first part of Al-Kitaab fi Ta'allum Al-‘arabiyya used for teaching elementary Arabic was conducted to come up with a list of nouns used in the instruments. These items were also highly frequent ones in the textbooks for teaching elementary English classes. In case I thought that any of these items would be difficult for L2 learners in both directions, they were excluded from the final list.
To facilitate the reading of the sentences (whether generic or specific) in the test sentences, some vocabulary items were provided in the context. The same items were tested in both directions. This procedure was shown to be adequate as it made it easy for the L2 learners to grasp the targeted reading of the sentence, whether generic or specific. Before the administration of the three tasks, a short pilot study was done with 10 students to make sure that they would not develop strategic guessing that might affect the validity of their responses. They were asked whether they can guess the targeted constructions in each task. They gave multiple responses as the items in the pilot study covered a wide variety of structures in Arabic and English. There’s something missing in this sentence. Further details about each task are provided below:

**Table 2.3. L1 English-L2 Arabic Participants’ Background Information**

<table>
<thead>
<tr>
<th>Proficiency level</th>
<th>(n)</th>
<th>Age range/ Std. Deviation</th>
<th>Years of instruction/ Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>20</td>
<td>1.0/.54</td>
<td>2.0/.53</td>
</tr>
</tbody>
</table>

**2.5.2.1. Translation**

Sentences of the translation task were developed in the participants’ L1 and elicited responses in their L2, which are Arabic and English in the context of this study. The task included thirty sentences: twenty related items and ten unrelated. The related sentences were divided into ten sentences to test the generic reading and ten items to test the specific reading. Table 2.4 presents sample-testing sentences in both directions in the translation task.
The overall number of sentences was randomized in a way that did not allow participants to make strategic routine guessing of the aim of the study. The generic and specific reading of plural noun phrases in the targeted sentences were counterbalanced in the subject and object distributions.

2.5.2.2. Error detection and correction

The error detection and correction task asked the participants to identify and correct any errors in 72 items: 37 related and 35 unrelated. For the 37 related items: 20 of them
targeted plural noun phrases that have a generic reading and 17 of them targeted plural noun phrases that have a specific reading. In a similar vein to the translation task, items were developed in the two directions with L1 Arabic-L2 English learners and L1 English-L2 Arabic learners. Sentences were written in the participants’ L2 this time. Examples of these sentences are provided below in table 2.5 below:

<table>
<thead>
<tr>
<th>Table 2. 5. Sample testing items in both L1 English-L2 Arabic and L1 Arabic-L2 English directions in the error detectin and correction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English → Arabic Direction</strong></td>
</tr>
<tr>
<td><strong>Generic reading</strong></td>
</tr>
<tr>
<td>الكتب تعلمنا أشياء جديدة.</td>
</tr>
<tr>
<td><strong>Arabic →English Direction</strong></td>
</tr>
<tr>
<td><strong>Generic reading</strong></td>
</tr>
<tr>
<td>The books teach us new things.</td>
</tr>
</tbody>
</table>

2.5.2.3. **Forced choice elicitation task**

The forced choice elicitation task asked the participants in both directions to choose between two options provided: one of them was definite and the other one was indefinite.

It included sixty sentences: Thirty of them were related and thirty were unrelated:

Sentences in the related condition were divided into two conditions: fifteen plural noun phrases carried generic reading and fifteen carried specific reading. Sentences were
developed in participants’ L2. Examples of the forced choice elicitation task are provided in table 2.6 below:

<table>
<thead>
<tr>
<th>Generic reading</th>
<th>Specific reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generic reading</td>
<td>Specific reading</td>
</tr>
<tr>
<td>good  المطاعم/ مطاعم) أماكن جيدة 1. (الأفلام/فلام) التي شاهدتها الأسبوع a. الماضي كانت جيدة.</td>
<td>watched  للمطاعم/ مطاعم) أماكن جيدة 1. (الأفلام/فلام) التي شاهدتها الأسبوع a. الماضي كانت جيدة.</td>
</tr>
<tr>
<td>Generic reading</td>
<td>Specific reading</td>
</tr>
<tr>
<td>(Restaurants- the restaurants) are good places for having lunch with the family.</td>
<td>(Films- the films) that I watched last week were very good.</td>
</tr>
</tbody>
</table>

**2.5.3. Procedure**

A group of native speakers in both directions were asked to provide their responses to the different tasks of the study to test the validity of the items in the generic and the specific reading and the definite marker choice. This was followed by administering short questionnaire to collect background information about participants of the study.

The three tasks of the study were administered in the following sequence: written translation, error correction and detection, and the forced choice elicitation task. This sequence was considered the least fallible to avoid any practice effect. I thought that participants would not make any strategic guessing from the items in the translation task.
Since translation requires the distribution of many resources for remembering vocabulary items and structuring the syntax of the sentence, it was not expected that they would transfer any practice effect to the subsequent tasks. Similarly, in the error detection and correction task, it was thought that since participants did not know the aim of the study, they were not expected to transfer any practice effect to the forced choice elicitation task.

2.5.4. Results

This section offers the results of the study in the following way: First in the L1 English-L2 Arabic direction, it offers results of in-group comparisons where results of the two contrasting conditions of generic and specific readings are presented. This will be followed by results of the between-group differences to compare between performances of three proficiency levels. In the L1 Arabic-L2 English direction, it offers results of in-group comparisons with low proficiency. In-group comparisons in both directions will be set side by side in the last section of the results.

2.5.4.1. L1 English-L2 Arabic Learners: In-group comparisons

2.5.4.1. 1. Translation task

The translation task aimed at examining definite marker accuracy in order to know whether errors are attributed to L1 transfer or to the interface effect at the initial stage of acquisition. Sentences were scored with one or zero: If the participant provided accurately the definite marker in combination with the targeted noun phrase, his/her response is scored with one and if not, it is scored with zero. If the responses included the definite
marker combined with the noun phrase the participants’ first language, it is scored with one as the focus of the task was on the accurate use of the definite marker. Incomplete sentences were excluded from the analysis.

For low proficiency L1 English-L2 Arabic learners (n =18), the accuracy rate in plural nouns that carried a generic reading (the interface configuration) was much lower than plural nouns that carried a specific reading (straightforward configuration). Compare 11% (SD .22%) to 80 % (SD .10%) respectively. It is clear that low proficiency learners at the initial state of acquisition did much better on the plural noun phrases that have a specific reading than those with a generic reading. To know whether there is a statistically significant difference in performance on both configurations of the noun phrases, the paired-sample t-test in ANOVA was used. Results showed an expected statistical difference between plural noun phrases with a generic reading and those with a specific reading: $t(17) = -13.2, p = .000, p < .001$.

For intermediate proficiency L1 English-L2 Arabic learners (n = 19), their scores showed a similar pattern to that of low proficiency participants. Accuracy rate in plural nouns that carried a generic reading was 41.3% (SD .14.3%) in comparison with the accuracy rate in the specific reading condition that scored 90.3% (SD .14.1%). With the use of a t-test to discern the difference between both conditions, the results showed a statistically significant difference between both conditions: $t (18) = -.32, p = .000, p < .001$.

As for high proficiency learners (n = 20), there was a surprising consistency with the previous results; the mean scores of the accuracy rate in the plural nouns that carried a
generic reading (45% /SD. 30%) was much lower than the accuracy rate in the plural noun phrases that offered a specific reading (91% /SD.09). Statistical difference as demonstrated by t-test was significant: \( t (19) = -6.8 \ p = .000, \ p < .001. \)

2.5.4.1.2. Error correction and detection

This task aimed at assessing L1-English-L2 Arabic learners’ grammatical judgment ability to identify and correct definite marker errors in noun phrase configurations that offered generic and specific readings. Overall, similar to the first task, the accuracy rate was higher in the specific reading condition than the generic one. Results came as follows: For low proficiency, the accuracy rate was 10% (SD: .21%) for the generic reading case and it was 52% (SD.18%) for the specific reading condition with a statistical difference between both conditions: \( t (17) = -11.4 \ p = .000, \ p < .001. \)

For intermediate proficiency, the accuracy rate was much higher in the case of specific reading than generic reading: compare 16% (SD=.10) to 42% (SD=.18) respectively, with a statistical difference between both: \( t (18) = -9.8 \ p = .000, \ p < .001. \) For advanced learners of Arabic, a similar pattern was found, but with variations and less statistical significance value: the accuracy rate for plural nouns that have a specific reading was 80% (SD =.16%) and 41% (SD =.38%) for plural nouns that have a generic reading. There as a statistically significant difference between both conditions: \( t (9) = -4.6 \ p = .001, \ p < .05. \)
2.5.4.1.3. Forced choice elicitation task

This task aimed at probing into L1 English-L2 Arabic learners’ definite marker choice tendencies when presented with two choices: a definite configuration and an indefinite one. The results of in-group comparisons are as follows: for low proficiency learners, the definite article accuracy rate in case of plural noun phrases with a generic reading was 25% (SD: 23%) and it was 76% (SD.19%) for plural noun phrases with a specific reading, with a statistical difference between both conditions: $t(17) = -4.7$ $p = .000$, $p < .001$.

For intermediate proficiency, the picture was not much different, although there was some improvement with the generic condition. The accuracy rate in the generic condition scored 65 % (SD = .17%) and 93% (SD =.05%) for the specific condition, with a statistical difference between both: $t(18) = -7.2$ $p = .000$, $p < .001$.

For advanced L2 learners of Arabic, the difference between the two conditions was less. The accuracy rate for the generic reading condition was 74% (SD =.21%) and 96% (SD=.06%) for the specific reading condition. With comparison to the other two tasks, the difference, although statistically different, it was less: $t(9) = -3.42$ $p= .008$, $p < .05$.

A graph representation of these results is shown in the figures below:
Figure 2.1. Accuracy rates on definite marker in generic and specific plural noun phrases in written translation

Figure 2.2. Accuracy rate on definite marker in generic and specific plural noun phrases in error detection and correction
In-group comparison between the two conditions as shown in the graphs above demonstrates that the overall accuracy rate in the generic reading condition is lower than in the specific reading condition. Discussion of the reasons for this difference is elaborated on in the discussion section.

2.5.5. L1 English-L2 Arabic Learners: Between-group comparisons

Now, let’s turn to compare the accuracy rates in the definite marker in both configurations across three proficiency levels in the generic reading condition. The aim of this multiple-
comparisons procedure is to examine the effect of proficiency level on the acquisition of plural noun phrases in the generic reading condition. This is the condition that offers inherent difficulties to L2 learners of Arabic.

The multivariate test in ANOVA showed an effect for proficiency levels across the three tasks of the study. For translation, multiple t-tests in the post Hoc multiple statistical comparisons were administered to know the direction of the effect. For the translation task, whereas there was no difference between low and intermediate (p = .081, p > .001) and between intermediate and advanced (p = .061, p > .001), there was a difference between low and advanced: (p = .001, p < .05).

For the error detection and correction task, the multivariate test showed an effect for proficiency level too. As for the direction of the difference, a slightly different pattern from translation was reported: all three proficiency levels differed significantly from each other: There was no difference between low and intermediate (p = .430 p > .05), nor between intermediate and advanced (p = .075, p > .05) nor between low and advanced (p=.085, p > .05).

For the forced choice elicitation task, the multivariate test showed an effect for proficiency level. A similar pattern of significance direction to that in the translation task was reported: there was no statistical significance between low and intermediate (p = .073, p > .05), between and intermediate and advanced levels (p = .175, p > .05), but there was a difference between low and advanced (p = .000, p < .001).

For plural nouns that carried a specific reading across the three tasks of the study, there was no statistical difference between any two proficiency levels, whether
consecutive or not. No difference was reported between low and intermediate levels (p = .052, p > .05), nor between advanced and intermediate (p = .948, p > .05) nor between low and advanced (p=. 057, p > .05).

2.5.6. Results of low proficiency L1 Arabic-L2 English Learners

Now let’s turn to the results of the low proficiency L1 Arabic-L2 English learners (n = 20). Items in the three tasks of the study in this direction were the same as the ones in the L1 English-L2 Arabic direction. For the translation task, L1 Arabic-L2 English low proficiency learners were asked to translate the same sentences from Arabic into English. The aim of this bi-directional procedure is to look into whether L1 Arabic-L2 English and L1 English-L2 Arabic learners at their matched proficiency level would show a similar pattern in the definite marker choice. Using the paired sample t-test in ANOVA to explore in-group differences between the generic versus the specific reading condition, the results showed a similar pattern to their proficiency-matched level in the L1 Arabic-L2 English direction. Consider the figure below:
Figure 2.4. Accuracy rates on definite marker in generic and specific plural noun phrases with L1 Arabic-L2 English learners across the three tasks

For the translation task, the accuracy rate for plural nouns that have a generic reading was 20% (SD =.32) and for plural nouns that carried a specific reading it was 77% (SD=.32). Results showed an expected statistical difference between both conditions: $t (19) = -5.1, p = .000, p < .001$. For error correction and detection, the accuracy rate was 10% (SD=.87) for the generic reading condition and 36% (SD =.16) for the specific reading condition with a statistical difference between both: $t (19) = -8.8, p = .000, p < .001$. For the forced choice elicitation task, the accuracy rate was higher than the previous two tasks in both conditions: the mean score for the accuracy rate for the generic reading condition was 25% (SD =.14) and 76% (.SD=95) for the specific reading condition, with a statistical difference between both: $t (19) = -14.7 p= .000, p < .001$. 
2.6. Discussion

Before I go on to discuss the results of the study within current theories of second language acquisition, it may be convenient to go back to the research questions developed in (4).

Question (4.1) asked which construction is more difficult to acquire by L1 English-L2 Arabic learners: definite plural noun phrases that carry on a generic reading in the interface configuration of [+ Definite - Specific] or definite noun phrases that carry on a specific reading in the straightforward configuration of [+ Definite + Specific]. The answer is that the interface configuration in generic plural nouns is harder to acquire than the straightforward configuration in specific plural nouns. Question (4.2) asked whether L1 Arabic- L2 English low proficiency learners face the same difficulty acquiring generic plural noun phrases in the configuration [- Definite - Specific] that does not offer any interfaces; the answer is “yes” since there was no real difference between the performances of both communities in accuracy rates.

As for questions formulated in (4.3.) the answer is also “yes”. Results support that claims that L1 transfer hypothesis overrides the interface effect with low proficiency learners in both directions. However, it is possible for L2 learners to recover from such effect at later stages in L2 development.

2.6.1. Interface Hypothesis (IH) or L1 Transfer effect at the initial state of acquisition

Results of this investigation refer to a clear difference in the case of plural noun phrases that have a generic interpretation and plural noun phrases that have a specific
interpretation in the two directions of the study, although some variations were recorded. Overall, L1 English-L2 Arabic and L1 Arabic-L2 English learners were significantly more accurate in definite marker choice in the specific condition than in the generic condition. Since these two directions pose variable difficulties in their respective directions, each one will be discussed individually.

For L1 English-L2 Arabic L2 learners, a seemingly plausible explanation for the finding that it is harder to acquire plural nouns with a generic reading is that this construction offers a syntax-semantics interface between definiteness and specificity or between form and meaning (See Sorace, 2011; Sorace, 2000; Tsimpli & Sorace, 2006). This claim simply postulates that the acquisition of structures involving an interface between syntax (i.e. form) and other formal domains (semantics in our case) are inherently difficult for L2 learners and are less likely to be acquired completely.

However, building on the interface claim, one prediction is that L1 Arabic-L2 English learners will not face such difficulty while learning generic plural nouns in L2 English. This is because the behavior of bare generic plural noun phrases in English does not offer any interface between definiteness and specificity. In other words, shifting from an interface configuration [+ Definite – Specific] to a straightforward configuration [-Definite – Specific], which is the task of L1 Arabic-L2 English learners, should be easy and simple. However, the comparison between performance mean scores of L2 learners in both directions shows that they also find it hard to make this mapping regardless of the interface claim. Consider the figure below for a comparison between the performance of
L1 English- L2 Arabic and L1 Arabic-L2 English low proficiency learners on the three tasks of the study:

![Bar chart showing performance on generic plural noun phrases](image)

**Figure 2.5.** L1 Arabic-L2 English and L1 English-L2 Arabic low proficiency learners’ performance on generic plural noun phrases

The accuracy rate for low proficiency learners in the two directions is low overall. It does not show statistical differences in performance across the three tasks of the study: $t (1) = 8.8$, $p = .072$, $p > .05$. This result supports the effect of L1 syntactic/form transfer regardless of the interface claim. Low proficiency L2 learners of Arabic and English transfer their knowledge of the noun phrase configuration from L1 to L2.

This result is consistent with Full Transfer/Full Access hypothesis developed in the generative paradigm in SLA. In the words of Schwartz and Sprouse (1996) this hypothesis postulates that:
The entirety of the L1 grammar...is the L2 initial state (hence the term ‘Full Transfer’). This means that the starting point of L2 acquisition is quite distinct from that of L1 acquisition: in particular, it contends that all the principles and parameter values as instantiated in the L1 grammar immediately carry over as the initial state of a new grammatical system on first exposure to input from the target language (TL). This initial state of the L2 system will have to change in light of TL input that cannot be generated by this grammar; that is, failure to assign a representation to input data will force some sort of restructuring of the system (‘grammar’), this restructuring drawing from options of UG (and hence the term ‘Full Access’). (p. 41. Italics added).

At the initial stage of acquisition in both directions of Arabic and English, L2 learners carried over into the L2 their knowledge of L1 grammar of the plural nouns when used for kind reference as an initial state of the new system of L2 grammar. L1-English-L2 Arabic learners transferred their L1 [-Definite- Specific] configuration used to refer to generic plural noun phrases into their L2 grammar. L1 Arabic-L2 English learners, in a similar vein, transferred their knowledge of [+Definite- Specific] used with generic plural nouns into their L2 grammar.

Analysis of individual responses by L2 learners in both directions shows strikingly similar patterns of error types in performance on the same items in both directions. While L1 Arabic-L2 English learners added the definite marker to plural nouns that carried generic reading in English, L1 English-L2 Arabic did the opposite; they used a bare/indefinite plural noun when a definite plural noun was the correct configuration.

Shifting from one mapping to the other by low proficiency L2 learners was hard for both learner groups regardless of the interface configuration. L1 Arabic-L2 English learners were predicted to find it easier to acquire bare plural noun phrases that carry on a generic reference easier since they offer a consistent relationship between both features of
specificity and definiteness. However, they found it equally hard, as did their counterparts in the other direction.

A recent rigorous proposal in SLA set forth by Lardiere (2008, 2009) considers L2 acquisition at its initial phase as a process of feature selection or (re)assembly. According to this framework, the task of the L2 learner is to “reconfigure features from the way they are represented in the first language (L1) into new formal configurations on possibly quite different types of lexical items in the L2” (p. 173). In other words, L2 learners have to either reassemble or select the appropriate functional features of the lexical items. Feature reassembly operates if the targeted feature exits in L1. Feature selection operates if the targeted feature does not exist in L1, but is allowed to be selected in the UG depository.

Since Arabic and English are article languages, L2 learners’ task is to reassemble existing features. How? For L1 Arabic-L2 English learners, their L2 task while learning generic reference in plural nouns is to get rid of the + definite feature associated with specific reference and reassembly or map the –definite feature with generic plural nouns instead. For L1 English-L2 Arabic learners, their task is different; they add one more feature to an existing one: they add the + kind reference feature to the + definite construction.

In a study of generics interpretation by L1 Spanish-L2 English, Ionin and Montrul (2010) concluded that that feature reassembly is in operation or effect. L1 Spanish-L2 English learners unlearn the feature +definite to refer to kind reference and restrict it to maximal or specific reference. The results of our investigation are compatible with this conclusion, but add further that the task is hard in its bidirectional mode. Whether L2
learners are shifting from a super-grammar (i.e. one in which one functional category as the definite marker is associated with more than one semantic feature) to a sub-set grammar (i.e. one in which one functional category as the definite marker is associated with only one semantic feature), they are heavily influenced by their L1 syntactic configurations (Sans & Bever, 2001).

These results refer to a clear effect of the dominant language in both directions of L1 Arabic-L2 English and L1 English-L2 Arabic at initial stage of learning. Transfer effects in article languages remain one of the main reasons behind developmental patterns of errors observed in the acquisition of the definite article. Serratrice, Sorace, Filiaci, & Baldo, (2009) with English –Italian learners; Slabakova (2006) with Italian- English learners; Ionin and Montrul (2010) with English-Spanish bilinguals and Montrul and Ionin (2012) with Spanish-English bilinguals recorded a similar effect. This over-reaching result, however, does not apply to article-less languages. Ionin et al. (2004) showed that the full transfer hypothesis is overridden by the fluctuation hypothesis that postulates that L2 learners of article-less languages fluctuate in their article choice till input drives them to set the parameter correctly to the appropriate value.

2.6.2. Typological proximity and L1 transfer effect

The difficulty documented in this investigation can be best approached by looking into the typological proximity or distance between the two languages. There was a clear negative transfer effect with low proficiency learners in both directions with generic plural nouns and a clear positive effect in the case of specific plural nouns. This calls for a revived interest in the role played by typological proximity and the classical contrastive analysis
(Lado, 1957) in L2 learning. This call has been revived in recent work on feature acquisition (see Lardiere, 2008, 2009 above). The closer the configuration is, the higher is the accuracy rate in definite marker choice regardless of the interface claim. In the specific reading condition, it has been demonstrated that in both directions the performance of L2 learners was much better than in the generic reading condition. This result is compatible with recent results in L2 learning and processing (see Håkansson et al., 2002 for more discussion).

This result can be couched within the classical and the revised version of the Differential Markedness Hypothesis (Eckman, 2008) that postulates that the less common features (i.e., marked) in L1 will be more difficult to acquire in L2 (Saville-Troike, 2006: 56). This hypothesis has been developed within the functional typology framework to explore L2 difficulties in terms of typological proximity or distance between L1 and L2. The semantic feature + kind/generic reference associated with the functional feature of + definite in plural noun phrases is a marked (i.e. unexpected or infrequent) feature. Thus, L1 English-L2 Arabic learners find it harder to acquire the generic plural noun configuration than the specific reading configuration. Further, both communities of L2 learners do not face any difficulty in acquiring the feature + definite to denote specificity since it is unmarked (i.e. common or frequent) in both languages. Difficulties in definite article choice in both directions in the generic plural are also predicted by the “the directionality of difficulty” claim (Eckman, 2008).

Error patterns showed what may be described as ‘mirror-image errors’ by low proficiency L2 learners of Arabic and English. With L1 English-L2 Arabic learners, when
the definite marker was needed, they deleted it. Their L1 Arabic-L2 English counterparts did the opposite. This pattern was clearly recorded in the translation task and in the forced choice elicitation tasks of the study.

2.6.3. Recovery from L1 Effect and the role of instruction

Although dominant language transfer is found to be in effect in both directions, between-group comparisons across various proficiency levels in the L1 English-L2 Arabic direction shows that it is possible to recover from such effect. Advanced L2 learners of Arabic, in comparison to low proficiency learners, made some progress in the acquisition of the semantics of the definite marker in kind reference. There was gradual development as a result of instruction that varied according to the tasks at hand.

In the translation task, L1 English-L2 learners of Arabic accuracy rate improved from 11% at the low proficiency into 41% in the intermediate to 45% in the advanced level with a clear difference between low and advanced levels. A similar pattern was found with the forced choice elicitation task, although the rate of improvement was much better. With the error detection and correction, the degree of improvement was the lowest; a result that may be attributed to the effect of task complexity. The highest accuracy rate reached was with the forced choice elicitation task, at 74%.

After 3 years of instruction, learners of Arabic did not reach the 80% accuracy rate, which is considered a satisfactory level of performance. This may be attributed to the insufficient integration of the semantics of the definite marker in generic and specific plural nouns in textbooks and in teaching methods. Reassembling the + kind reference feature to the functional feature of + definite seems to take longer in L2 learning. In
articleless languages, it has been concluded that feature selection takes a shorter time (see Ionin & Montrul, 2010 for more details).

2.6.4. Effect of task complexity

One possible explanation for the low performance on the error detection and correction by both L1 English-L2 Arabic (11% accuracy rate) and L1 Arabic-L2 English learners (10% accuracy rate) may be attributed to task complexity/demands. The demands imposed by error correction and detection seem to be higher than the demands of written translation and forced choice elicitation. It requires a higher degree of noticing. Detecting and correcting definite marker errors require L2 learners to distribute their resources on many features in the sentence. Some were morphological (i.e. word form), some were syntactic (i.e. sentence structure) and some were lexical (i.e. right lexical item choice).

The pattern reported in this investigation shows that the less demanding the task is, the more sensitive are the subjects to the semantic distinction they make in the definite marker. This task demands effect has been well-documented in other areas in SLA research (see Gutierrez et. al, 2012; Michael, et al., 2011; Pirvulescu & Hill, 2012).

2.6.5. Definite marker in generic plural noun phrases in L2 Arabic textbooks

The low accuracy rate in L1 English-L2 Arabic low proficiency learners’ performance on generic plural noun phrases may be attributed to insufficient integration of the semantics of the definite marker in L2 Arabic textbooks and learning materials. For example a simple content analysis of the third edition (2013-2014) of Al-Kitaab Fii Ta'allum Al-‘arabiyya book series, which is one of the most common textbooks for teaching Arabic for
L1 English-L2 Arabic learners, shows that article semantics is not integrated in the first place. In part I, when the textbook talks about definiteness and indefiniteness in Arabic, the authors talk about the syntax of noun-adjective combinations and noun phrase combinations in multiple distributions with almost nothing about the semantics of the definite marker neither in the genericity nor in the specificity reading. Likewise, when it gets to plural nouns in chapter III, the focus is on form, whether regular or irregular, with very little to say on the semantic behavior of plural noun phrases.

The semantics of the definite marker needs to be integrated in L2 curricula of Arabic. This integration needs to go hand in hand with explicit instruction techniques that shift the focus from only teaching the form of plural noun phrases into teaching the meaning, as well in multiple noun phrase configurations. Comparing and contrasting the behavior of the definite marker in L1 and L2 in Arabic and English to show the typological proximity or distance may raise L2 learners’ awareness of the behavior of the definite marker. This would correlate with accuracy rates in definite marker choice in written production.

In addition, structured input activities (see VanPatten, 2004) at the sentence and discourse levels need to be developed to foster form-meaning mapping of the definite marker in plural noun phrases. Activities that offer L2 learners with options to choose from, or to assign the right interpretation to a given form or to detect errors in the noun phrase configurations may maintain the acquisition of the definite marker in plural noun phrases. Further theoretical and practical implications of this study are elaborated on in chapter five of this dissertation.
2.7. Conclusion

The results of this investigation with L2 learners of Arabic and English are compatible with some previous studies and incompatible with others in article system acquisition in other languages. It is compatible with results of Ionin and Montrul (2010) that explored the interpretation (but not written production) of the definite marker only in generic readings with L1 Spanish-L2 English bilinguals. It is also compatible with the study of Ionin et al., (2008) that explored the effects of the Fluctuation Hypothesis and the effects of L1 Transfer across article and article-less language. It concluded that in article languages L1 transfer overrides fluctuation and in article-less languages the opposite happens.

However, it is incompatible with the results of Zdorenko and Paradis (2007) that L2 children who come from different language backgrounds show the same pattern in the definite marker choice regardless of their L1s. It concluded that fluctuation is a developmental process that overrides transfer in child L2 acquisition of articles in general. This conflicting result with ours may be approached by the Fundamental Difference Hypothesis (Bley-Vroman, 1990) that postulates that there is a number of differences between children and adult learning.

The findings that this investigation documented supports the claim that L1 transfer overrides the syntax-semantics interface claim. They add to the few studies that explore SLA at the syntax-semantics interface at other constructions and SLA phenomena (e.g. Oh, 2006; Slabakova, 2006; Gabriele, 2005; Slabakova & Montrul, 2003, Dekydtspotter & Sprouse, 2001, among many others).
Last, the bi-directional framework used in this study at the initial stage of acquisition has proven to be more adequate in SLA studies as it shows us the ‘difficulty directionality’. This study recommends that it be used for further SLA studies.
Chapter III

The role of L1 syntactic transfer in the acquisition of the definite marker in generic Arabic singular noun phrases by L1 English learners

3.1. Introduction

It has been demonstrated in chapter II of this dissertation that the effect of L1 syntactic Full Transfer (FT) overrides the effect of the Interface Hypothesis (IH) (see Tsimpli & Sorace, 2006; Sorace, 2011) in the acquisition of the definite marker in plural noun phrases in both L1 English-L2 Arabic and L1 Arabic-L2 English learners. This result has been couched within a theory of L1 syntactic transfer that postulates that when the same meaning is rendered in two different forms, L2 learners at the initial state most likely transfer syntactic configurations from their L1 into their L2. The IH predicted that acquiring the definite marker in plural noun phrases that carried a generic reading would be easier for L1 Arabic-L2 English learners. But it has been demonstrated that there is no real difference in performance in the acquisition of the definite marker in plural noun configurations that offer a form-meaning interface and in plural noun phrases that do not offer a form-meaning interface in the two directions of the study with low proficiency L1 Arabic-L2 English and L1 English-L2 Arabic learners. I have also seen that L1 English-L2 Arabic learners took at least two years of instruction to recover from the effect of L1 syntactic transfer in the acquisition of the definite marker in plural noun phrases.

The current investigation focuses on the acquisition of the definite marker in singular noun phrases. It does two things: First, it seeks to confirm the previous result in the acquisition of the definite marker in generic singular noun phrases in Arabic by L1
English learners. It does this by contrasting two conditions: a matching condition and a mismatching condition to L1 English. The behavior of singular generic noun phrases in L2 Arabic offers a good testing ground since it offers a number of similarities and differences with L1 English. Second, findings of this investigation may help support or refute the argument that typological proximity and distance are two determiners of language acquisition. In other words, the more similar the L1 system is to the L2 system, the higher the possibility that L1 positive transfer will take place. This typological similarity is thought to facilitate L2 learning (Kellerman, 1995). Contrastively, the farther the distance between the two systems, the more difficulties L2 learners may face as a result of negative transfer.

This argument has been in contrast to another claim that L1 often interacts with non-structural features, and the similarities and the differences between the two systems do not necessarily lead to substantial differences in L2 acquisition. In other words, there are standard developmental patterns in L2 regardless of the distance between L1 and L2. This argument has been supported by the claim that same errors are made by learners from different L1 backgrounds (see for example Larsen-Freeman & Long, 1991).

In addition, this investigation examines the effect of instruction and proficiency on the acquisition of the definite marker in generic singular noun phrases. It does this by comparing the accuracy rates in definite marker assignment across three levels of proficiency: low, intermediate and advanced.

Before I turn to discuss the details of the two conditions (matching and mismatching to L1) that I established and the results I got, it may be useful to offer a
typological overview of the behavior of definite marker in generic singular noun phrases in Modern Standard Arabic (hereof MSA) and English.

3.2. Background: typological overview

When first introduced to discourse, generic singular nouns in MSA are strikingly similar to and different from English. Let’s start first with the similarities. When introducing types in kind reference in subject distribution using singular generics, MSA and English use a definite noun phrase in the [+Definite – Specific] configuration. The classical example is “The lion is a dangerous animal.” This similarity is illustrated contrastively in (1) below:

(1)

<table>
<thead>
<tr>
<th>Example</th>
<th>English</th>
<th>MSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>The lion is a dangerous animal.</td>
<td>4. al-ʔasad ḥayaawan khaTir.</td>
<td>Lion-def. animal. Indef. dangerous.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“The lion is a dangerous animal”.</td>
</tr>
<tr>
<td><strong>Configuration</strong></td>
<td>[+ Definite – Specific]</td>
<td>[+ Definite – Specific]</td>
</tr>
</tbody>
</table>

Similarly, when introducing unique singular nouns for the first time in discourse in subject and object distributions, MSA and English use a definite noun phrase in the [+ Definite – Specific] configuration. For example, noun phrases used to refer to inventions are definite in both languages. The same applies to unique entities such as ‘the sun’, ‘the moon’, etc. This similarity is illustrated contrastively in (2) below:
The typological differences between MSA and English exceed the similarities.

Let’s start with generic singular abstract nouns. Whereas MSA consistently uses a definite noun phrase configuration, English consistently uses an indefinite one. For example, English indefinite abstract nouns such as ‘fear’, ‘happiness’, and ‘worry’, surface in the definite configuration in MSA. Thus, they are rendered as ‘the fear’, ‘the happiness’, ‘the worry’, etc. Consider (3) below for a contrastive example:

Another fundamental difference between Arabic and English in the behavior of the definite marker with generic singular noun phrases appears in the configuration of verbal nouns or gerunds, known in MSA as maSadar. Whereas English consistently uses an
indefinite verbal noun phrase configuration in subject distribution, MSA consistently uses a definite one. Consider (4) below for a contrastive example:

(4)

<table>
<thead>
<tr>
<th>Example</th>
<th>English</th>
<th>MSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Reading is my favorite hobby.</td>
<td>(3) <em>al-qira?ah hiwaayati almufaDDalam.</em></td>
<td><em>Reading.def. is my hobby favorite. def.</em></td>
</tr>
<tr>
<td><strong>Configuration</strong></td>
<td>[+ Definite – Specific]</td>
<td>[+Definite – Specific]</td>
</tr>
</tbody>
</table>

Other outstanding differences between both MSA and English in this respect are concrete singular nouns used to denote materials, drinks and foods in the subject distribution. Whereas MSA uses a definite singular noun phrase configuration, English consistently uses an indefinite one. The same applies to nouns used to refer to areas of study in the singular configuration. Consider the following example contrastively:

(5)

<table>
<thead>
<tr>
<th>Example</th>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Coffee is my favorite drink in the morning.</td>
<td>(4) <em>al-qahwa hiya mashruubi almufaDDalam fi al-SabaH.</em></td>
<td><em>Coffee.def. is my drink favorite.</em></td>
</tr>
<tr>
<td><strong>Configuration</strong></td>
<td>[+ Definite – Specific]</td>
<td>[+Definite – Specific]</td>
</tr>
</tbody>
</table>

3.3. Research Questions

Specifically, this investigation aims to answer the following three research questions:
In terms of in/definiteness, which construction is harder to acquire by low proficiency L1 English-L2 Arabic learners: generic singular nouns that offer a matching configuration to the L1 or generic singular nouns that offer a mismatching configuration to the L1? This question can be answered by analyzing the patterns of L1 English-L2 Arabic learners’ errors and accuracy rates in definite article choice in the production tasks of the study.

In case L1 syntactic transfer is supported, at which proficiency level/s do L1 English-L2 Arabic learners recover from this effect? This question can be answered by comparing the performance of low, mid and high proficiency participants on the three written production tasks of the study.

Does the acquisition of the definite marker in Arabic singular noun phrases reflect a developmental pattern similar to or different from that of the definite marker in plural nouns phrases? This question can be answered by comparing and contrasting the mean scores of accuracy rates in this investigation to that of the first investigation in chapter II.

3.4. Method

3.4.1. Participants

In order to answer the questions drafted above, this study collected data from L1 English-L2 Arabic learners at these proficiency levels: Low (n =15), intermediate (n=15) and advanced (n =14). They were from a public Southwest University in the United States.
Participants were matched into their proficiency levels as measured by the American Council on Teaching of Foreign Languages Guidelines for speaking and for writing. The ACTFL proficiency measure divides proficiency into four levels: Novice (low), Intermediate, Advanced and Superior. Under each of these proficiency measures, there are three secondary levels: low, mid and high. The ACTFL has been chosen, as it is one of the most common measures in assessing proficiency in Arabic in the United States and is done by Certified ACTFL testers. The oral component integrates components that assess linguistic, communicative, pragmatic, and discoursal competence. It covers, among other aspects, frequent error types and accuracy in language structures. Participants’ proficiency measures were reported at the main levels and not at the secondary levels for convenient comparisons.

For the written component, writing samples from low, intermediate and high proficiency levels were analyzed using the ACTFL guidelines for writing. These guidelines evaluate written texts in terms of a number of benchmarks such as topic, function, lexical complexity, structural complexity and discourse.

As I did in the first investigation, the study did not use years of instruction as a measure of proficiency. Rather, it split the participants’ classroom instruction levels into proficiency levels. It asked the participants to report on their classroom levels and proficiency level as measured by the ACTFL scale. In case a participant does not know his/her proficiency level, the researcher, who is certified by ACTFL to run advisory Oral Proficiency Interviews, did the rating.
For low proficiency learners, it was easy to assign them to their proficiency level since all of them did not have much exposure to Arabic before. Low proficiency level students were from first year Arabic classes; intermediate level learners were from second and third year Arabic classes; and advanced level learners were from third and fourth year Arabic classes. Other background information for L1 English-L2 Arabic Learners as reported in a short questionnaire asked about their first language background, whether they speak other foreign languages, and how long they have been learning Arabic as a foreign language. Table 3.1 summarizes background information for L1 English-L2 Arabic learners for the three levels of proficiency.

Table 3.1. L1 English-L2 Arabic Participants’ Background Information

<table>
<thead>
<tr>
<th>Proficiency level</th>
<th>(n)</th>
<th>Age range/ Std. Deviation</th>
<th>Years of instruction / Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>15</td>
<td>2.0/.70</td>
<td>1.1/.48</td>
</tr>
<tr>
<td>Intermediate</td>
<td>15</td>
<td>2.0/.9551</td>
<td>1.2/.2357</td>
</tr>
<tr>
<td>Advanced</td>
<td>14</td>
<td>9.0/ 2.1643</td>
<td>3.0/.9445</td>
</tr>
</tbody>
</table>

There were no significant differences between participants in terms of age across the three levels of proficiency. Also, there was no significant difference in years of instruction or exposure to L2 Arabic. Low proficiency learners reported learning the language for one semester or two; intermediate proficiency reported learning the language for three to four semesters; and advanced learners reported learning Arabic for three to four years. Only two advanced learners reported learning Arabic for four to five years in different contexts. There was no difference in how comfortable participants in each proficiency level felt while speaking Arabic.
3.4.2. Task and procedure

Parallel to the first investigation, three experimental tasks were used in this investigation in the L1 English-L2 Arabic direction: (1) written translation, (2) error detection and correction and (3) forced choice elicitation task. Items used in these three tasks were all of high frequency. I conducted a content analysis of the first part of *Al-Kitaab Fi Ta’allum Al-‘arabiyya*, second edition, used for teaching elementary and intermediate Arabic, to come up with a list of high frequency nouns, which were used in the instruments. In those cases when I thought that any particular items would be difficult for L2 learners of Arabic, they were excluded from the final list.

To facilitate the generic reading of the targeted noun phrases in the test sentences, some vocabulary items were provided in the context. This procedure has made it easy for the L2 learners to grasp the targeted reading of the sentence.

3.4.2.1. Translation

Items in the translation task were developed in the participants’ L1 and elicited responses in their L2, which are Arabic and English in the context of this study. This task included twenty five related items that were split into two conditions: a matching condition and a mismatching condition to L1 English. The task also included five unrelated items. Table 3.2 presents a sample-testing sentence in both conditions in the translation task.
In the matching condition participants were expected to give the same definite configuration that matches their L1 system. In the mismatching condition participants were expected to produce a definite configuration, which is a case of mismatching with their L1 in terms of definiteness.

Ten unrelated items were included in this task. This is because the pilot study showed that too many unrelated items would create extraneous factors that may affect the performance of the participants. The overall number of sentences in the matching and the mismatching conditions was randomized in a way that did not allow participants to make strategic routine guessing. The matching and the mismatching conditions were counterbalanced in the subject and in the object position where permissible in the systems of MSA and English.

### 3.4.2.2. Error detection and correction

The error detection and correction task asked the participants to identify and correct errors, if any, in 65 items: 35 related and 30 unrelated. The 30 related items were counterbalanced in the matching and the mismatching conditions. Sentences were written in the participants’ L2. Examples of the items used in this task are drafted in table 3.3 below:

**Table 3.2. Sample test items in written translation**

<table>
<thead>
<tr>
<th>Matching condition</th>
<th>Mismatching condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egyptians invented</td>
<td><strong>Teaching</strong> is a hard career</td>
</tr>
<tr>
<td><strong>the clock</strong> earlier in their history.</td>
<td>مهنة صعبة</td>
</tr>
</tbody>
</table>

In the matching condition participants were expected to give the same definite configuration that matches their L1 system. In the mismatching condition participants were expected to produce a definite configuration, which is a case of mismatching with their L1 in terms of definiteness.
Table 3.3. Sample test items in error detection and correction

<table>
<thead>
<tr>
<th>Do you like reading?</th>
<th>هل تحب قراءة؟ 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>hard work comes afterרך 2</td>
<td>النجاح يأتي بعد العمل الجاد</td>
</tr>
<tr>
<td>Success comes after hard work.</td>
<td>شمس جميلة في الشتاء 3</td>
</tr>
<tr>
<td>in winter Sun is beautiful.</td>
<td></td>
</tr>
</tbody>
</table>

Whereas the first and the second sentence address the mismatching condition, the third one addresses the matching condition. The first sentence elicits a definite singular noun phrase ‘the reading’ in MSA. It is rendered in the indefinite noun phrase configuration, ‘reading’, in English. Similarly, the second sentence elicits an abstract definite noun phrase ‘the success’, that is rendered in an indefinite noun phrase configuration, ‘success’, in English. Unlike the first and the second, the third sentence elicits a definite singular noun phrase ‘the sun’, that is rendered in the same definite configuration in English and MSA. This is because both elicit singular noun configuration when used to introduce unique nouns for first mention in discourse.

3.4.2.3. Forced choice elicitation

The forced choice elicitation task asked the participants to choose between two options provided: a definite option and an indefinite one. It included 40 related items and 30 unrelated ones. The related items were split into two conditions: a matching condition and a mismatching one to L1 English. The unrelated items included multiple structural features that were aimed to decrease strategic guessing routines while working on the task.
Sentences were developed in participants’ L2. Examples of the forced choice elicitation task are provided below in table 3.4:

**Table 3.4. Sample test items in forced choice**

<table>
<thead>
<tr>
<th>Sentence</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) (النجاح - نجاح) يحقق (السعادة - سعادة) دائماً.</td>
<td>The success - (success) always achieves (happiness) - (happiness).</td>
</tr>
<tr>
<td>(2) قليل من الطلاب يدرسون (تاريخ - التاريخ) في هذه الكلية.</td>
<td>Few students study (history - the history) in this college.</td>
</tr>
<tr>
<td>(3) (تجارة - التجارة) تخصص له مستقبل جيد.</td>
<td>(Commerce - Commerce) has a good future.</td>
</tr>
<tr>
<td>(4) (المقهى - مقهى) مكان جيد لقراءة الأخبار.</td>
<td>(Café - Café) is a good place to read the news.</td>
</tr>
</tbody>
</table>

Whereas sentences 1-3 elicit definite noun phrase configurations that mismatch L1 English, sentence 4 elicits a definite noun phrase configuration that matches L1 English.

**3.4.3. Procedure**

Procedures followed in this study were along the same lines of the first investigation. A group of native Arabic speakers were asked to provide their responses to the different tasks of the study to test the validity of the items in the matching and mismatching conditions. This was followed by administering a short questionnaire to collect background information about the participants of the study.

The three tasks of the study were administered in the following sequence: written translation, error correction and detection, and the forced choice elicitation task. This sequence was considered the least likely to cause a practice effect. I thought that the
participants would not make any strategic guessing from the items in the translation task. Since translation requires the distribution of many resources while remembering vocabulary items and structuring the syntax of the sentences, it is less likely that they will transfer any practice effect to subsequent tasks. Similarly, in the error detection and correction task, it was thought that since the participants did not know the aim of the study, they were not likely to transfer any practice effect to the forced choice elicitation task.

3.5. Results

Since the underlying aims of the study are to identify the effects of (1) the typological proximity or distance between L1 and L2, and (2) instruction about (and hence proficiency in) the acquisition of the definite marker in generic singular noun phrases, the results sections is going to offer the findings of this investigation in the following way: first, it offers results of the in-group comparisons between the matching and the mismatching conditions to test for the effect of L1 syntactic transfer. Second, it offers the findings of the between-group comparisons across three proficiency levels to test for the effect of instruction on recovery from L1 syntactic transfer.

3.5.1. In-group comparisons

3.5.1.1. Translation task

The translation task aimed at examining mean scores of accuracy in definite marker assignment in generic singular noun phrase configurations to know the effect of L1
syntactic transfer. It contrasted between two conditions: the matching and the mismatching condition to L1 English. Sentences scored one or zero: if the participant provided accurately the definite marker in combination with the targeted noun phrase, his/her response scored one, and if not it scored zero. If the responses included the definite marker combined with the noun phrase in the participants’ first language, it scored one as the focus of the task was on the accurate assignment of the definite marker. Incomplete sentences or fragmented responses were excluded from the analysis.

For low proficiency L1 English-L2 Arabic learners (n = 15), the accuracy rate in singular nouns that offered a mismatching configuration to participants’ L1 was much lower than generic singular noun phrases that offered a matching configuration: compare 26.6% (SD .21%) to 85% (SD .10%) respectively. At the initial stage of acquisition, low proficiency learners did much better on singular noun phrases that offer a matching configuration than on those that offer a mismatching configuration. To know whether there is a statistical difference between mean scores in both conditions, the paired-sample t-test in ANOVA was used. Results showed an expected statistical difference between generic singular noun phrases that offer a matching configuration and those that offer a mismatching configuration: t (14) = -13.2, p = .000.

For intermediate proficiency L1 English-L2 Arabic learners (n = 15), the accuracy rate in generic singular noun phrases that offered a mismatching configuration to participants’ L1 was also much lower than singular noun phrases that offered a matching configuration: compare 54% (SD .24%) to 100% (SD .00%) respectively. To know whether there is a statistical difference between both conditions, the paired-sample t-test in
ANOVA was used. Results showed a statistical difference between singular noun phrases that offer a matching configuration and those that offer a mismatching configuration: \( t(14) = -7.2, p = .000. \)

For advanced proficiency L1 English-L2 Arabic learners \((n = 15)\), the accuracy rate in generic singular noun phrases that offered a mismatching configuration to participants’ L1 was 67.8% (SD .28%), and it was 100% (SD 0.0%) for singular nouns that offered a matching configuration. To know whether there is a statistical difference between both conditions, the paired-sample \( t \)-test in ANOVA was used. Results showed a statistical difference in mean scores between singular noun phrases that offer a matching configuration and those that offer a mismatching one: \( t(14) = -4.3, p = .001. \)

3.5.1.2. Error detection and correction

This task aimed at assessing L1-English-L2 Arabic learners’ grammatical judgment ability to identify and correct errors in definite marker in generic singular noun phrase configurations. Responses were scored using zero, half or one. If a participant was able only to identify the error in definiteness, responses were scored as half, and if able to identify and correct the errors in definiteness, their responses were scored as one. In case an item was left blank, responses were scored as zero.

The results were as follows: For low proficiency, the accuracy rate was 18.6% (SD: .09%) for the mismatching condition, and it was 45% (SD: .079) for the matching condition with a statistically significant difference between both conditions: \( t(14) = -12.3, p = .000. \) For intermediate proficiency, the accuracy rate for the mismatching condition
was 26.6 % (SD: .21%) and it was 44.4% (SD: .13%) for the matching condition with a statistical difference between both: $t (14) = -2.5$, $p = .025$, $p < 0.05$. For advanced proficiency, the accuracy rate was 74.2 % (SD: .24%) for the mismatching condition, and it was 75.5% (SD: .02%) for the matching condition with no statistical difference between both conditions: $t (14) = -.15$, $p = .881$, $p > 0.05$.

### 3.5.1.3. Forced choice elicitation

This task aimed at probing into L1 English-L2 Arabic learners’ tendencies in assigning the definite marker when presented with two choices: a definite configuration and an indefinite one. As in the previous two tasks, the underlying difference was between a matching condition and a mismatching condition compared to L1. Scoring responses in this task was straightforward: in case the participants underlined the correct configuration in terms of definiteness, their responses were scored as one. In case they underline incorrect configurations, their responses were scored as zero.

The results of in-group comparisons were as follows: For the low proficiency learners, the mean scores of definite article choice accuracy in singular noun phrases that offered a mismatching configuration was 59.4% (SD: .07%) and it was 74% (SD: .07%) for singular noun phrases that offered a matching configuration with a statistically significant difference between both conditions: $t (13) = -11$, $p = .000$.

For the intermediate proficiency level, the accuracy rate in case of singular noun phrases that offered a mismatching configuration was 81 % (SD: 07%) and it was 91% (SD: 02%) for the matching configuration. There was a statistically significant difference
between both conditions: \( t (14) = -2.5, p = .025, p < .05 \). For the advanced proficiency level, the accuracy rate in the definite marker choice in case of singular noun phrases that offer a matching configuration was 94.6% (SD: .05%), and it was 98.2% (SD: 0.07%) with almost no difference between both conditions: \( t (14) = -2.5, p = .481, p > .001 \).

These results are represented cumulatively in the following three graphs:

**Figure 3.1.** Accuracy rates on definite marker in singular noun configuration in written translation
Figure 3.2. Accuracy rates on definite marker in singular noun configuration in error detection and correction

As shown in the three graphs above, there is a consistent pattern across the three proficiency levels: accuracy rate in the generic singular noun phrase configurations that offer a matching configuration to L1 is consistently higher than accuracy rate in
performance on generic singular noun phrases that offer mismatching configuration to L1 English. However, there are some variations that will be discussed in the discussion section.

### 3.5.2. Between-group comparisons

Now let’s turn to compare the mean scores of accuracy rates in the definite marker choice in generic singular noun phrase configurations that offer a mismatching configuration to L1 English. As I did in the first investigation, the aim of this multiple-comparison procedure is to examine the effect of instruction and proficiency level on the acquisition of the definite marker in generic singular noun phrases that offer a mismatching configuration. This condition has been found to be the problematic one for L1-English-L2 Arabic learners.

The multivariate test in ANOVA showed an effect for the proficiency level across the three tasks of the study. For the translation task, this effect came as follows: \( p(1, 162), p = .000 \), and the interaction between translation and proficiency was significant: \( p(2, 4.4) p = .017 \). Using multiple \( t \)-tests in the post Hoc multiple statistical comparisons to know the direction of the effect, the results were as follows: there was a statistically significant difference between low and intermediate proficiency levels \( (p = .000) \), and there was also a difference between low and advanced \( (p = .000) \). Also, there was a difference between intermediate and advanced \( (p = .189) \), although it was less in value in comparison to the other two directions.

For the error detection and correction, this effect came as follows: \( p(1, 16.1), p = .000 \) and the interaction between proficiency and task was significant: \( p(2, 3.8) p = .030 \).
Using multiple $t$-tests in the post hoc multiple statistical comparisons to know the direction of the effect, the results were as follows: there was almost no difference between the low and the intermediate proficiency levels ($p = .468$), but there was a significant difference between the low and the advanced levels ($p = .000$) levels as well as between the intermediate and the advanced levels ($p = .000$).

For the forced choice elicitation task, it was $p (1, 16.1), p = .000$ and the interaction between proficiency and task was significant: $p (2, 3.8) p = .030$. Using multiple $t$-tests in the post hoc multiple statistical comparisons to know the direction of the effect, the results were as follows: there was almost no difference between low proficiency and intermediate proficiency ($p = .468$), but there was a difference between the low and the advanced levels ($p = .000$), as well as between the intermediate and the advanced levels ($p = .000$).

A cumulative representation of these results is shown in the graph below:

![Figure 3.4](image-url)  
**Figure 3.4.** Accuracy rates in definite marker choice in singular noun configurations across tasks and proficiency levels.
3.6. Discussion

Before I begin to couch these results within a broader second language acquisition theory, let’s look at the three research questions that this study asked. Question # 1 asked which construction is harder to acquire by low proficiency L1 English-L2 Arabic learners: generic singular nouns that offer a matching configuration to L1, or generic singular nouns that offer a mismatching configuration to L1. The in-group comparisons have shown that L1 English-L2 Arabic learners in general, and those at the initial stage of learning in particular, find it harder to acquire the mismatching configuration. They did much better in the matching condition than in the mismatching one. They tended to transfer their knowledge of in/definiteness from the L1 configurations into the L2.

Question # 2 asked at which proficiency level/s L1 English-L2 Arabic learners recover from this effect in the mismatching condition. Since the answer to this question depends on what may be considered ‘satisfactory recovery’ that interacts intricately with task demands (as I will see in a later section in the discussion), the between-group comparisons showed that performance of learners at the intermediate proficiency level in definite article choice improved substantially. This means that they took almost one year of instruction to recover from the L1 syntactic effect.

Question # 3 asked whether the acquisition of the definite marker in Arabic singular noun phrases reflect developmental pattern similar to or different from that of the definite marker in plural nouns phrases. The answer to this question is that the pattern of responses shows some variations across constructions, proficiency levels and tasks of the study. However, a consistent pattern is generally noticed: low and intermediate
proficiency learners of Arabic did better with the definite marker in singular noun phrase configurations than with the definite marker in plural noun phrases. I am going to devote a substantial part of the discussion section to discuss the possible reasons for this variation.

3.6.1. Initial stage of L2 Learning, L1 syntactic transfer and typological proximity

The above results show that at the initial stage of L2 learning, low proficiency L1 English-L2 Arabic learners did much better in the matching condition than in the mismatching one. The accuracy rate in definite marker assignment at the low proficiency level across the three tasks was always lower in the mismatching case. This pattern shows that the L2 learning path is most likely driven by the typological proximity between L1 and L2 in terms of definiteness configuration. Low proficiency L2 learners of Arabic do not wait to develop any procedures that tell them how the definiteness feature works in their L2, but rather they resort to their L1 typological constellations in creating form-meaning mapping or connections (see VanPatten, Williams, Rott & Overstreet 2004). Thus, L1 typological constellations drive the process of assigning the definite or indefinite configurations of singular nouns at the initial stage of L2 learning. When L2 learners of Arabic embark on connecting a given meaning (a generic reading of a singular noun phrase) to form (whether definite or indefinite) there is a facilitation effect since they find it easier to assign the same meaning to the same form than assigning the given meaning to a different form. In case of generic singular noun phrases that show similarities to their L1, learners always call on their L1 knowledge in assigning meaning to form.

This finding was clear when patterns of errors in definite marker assignment were analyzed in the written translation task. When the task elicited definite noun
configurations in MSA, low proficiency learners gave responses that matched the in/definiteness configuration in L1. Most of the errors came in the noun phrase categories that did not match the L1 configuration. The following singular nouns were rendered in an indefinite configuration in MSA when they needed to be definite: ‘history’, ‘reading’, ‘teaching’, ‘photography’, translation’, ‘salad’, ‘swimming’, ‘business’, ‘milk’, and ‘happiness’. The accuracy rate in this group of noun phrases was only 26%.

On the other hand, the following noun phrases were rendered in a definite noun phrase configuration in a way that matched their L1 system: ‘the sun’, ‘ the weather’, ‘the dog’ and ‘the cat’, the telephone’, ‘the clock’ and ‘the car’, when all were used to denote generic entities in both languages. The accuracy rate in this category exceeded 85% with low proficiency learners. The same pattern, but with variations, was noticed with the other two tasks.

This pattern of findings confirms the effect of typological proximity or distance in the initial stage of L2 acquisition, and it partially resolves a classical debate in SLA theory. This debate centers on what the initial stage of L1 learning looks like. Two sources of knowledge have been debated for a long time: the first is that L2 learners transfer entirely their new grammar from their L1. This stance is taken by Schwartz and Sprouse (1994) in what is they termed ‘Full Access/Full Transfer Hypothesis'. It posits that the initial state of L2 learning shows substantial parallelism to the initial stage in L1 (Grüter et al., 2008). In other words, the initial value of L2 features is predicted to be the initial value for L1 acquisition.
On the other hand, there has been another stance that claims that Full Access to UG only mediates the initial state of L2 learning with no transfer. This stance is supported by Epstein, Flynn and Martohardjono (1996). Whereas the first hypothesis is straightforward and easy to explain, the second one seems to be less explicable and the evidence adduced to support it has been critiqued (see critique by Schwartz (1994) of the evidence adduced by Epstein, Flynn and Martohardjono (1996) in the acquisition of control verbs).

Results that I have shown confirm the un-debated fact that the grammatical form of generic singular noun phrases, whether definite or indefinite, is available to L2 learners at the initial stage of learning though direct transfer from L1. L2 learners of Arabic transfer their L1 knowledge of the singular noun phrase configurations into their L2. Although the meaning in the testing items was the same, L2 learners of Arabic transferred singular noun phrase configurations that match their L2 configuration in the three written production tasks. This path has been claimed to be the starting point in L2 development (Bohnacker, 2006; Grüter & Conradie, 2006).

This result has been confirmed in other structural areas in Arabic second language acquisition. Al-Hawary (2009) documented the same effect of L1 typological constellation in the acquisition of noun-adjective and subject-verb agreement by participants from three first language backgrounds: French, English and Japanese. His findings reveal that first year French LI participants performed significantly better than both their first year English LI and first-third Japanese LI counterparts despite the difference in the duration of exposure.
Overall, results of this investigation with L1 English-L2 Arabic low proficiency learners calls for “Transfer Analysis” as outlined in the work of James (1989). It revitalizes the role of error analysis and contrastive analysis approaches that have been discredited for some time in SLA theory after the communicative methodologies took hold. Language typological distance as it has been demonstrated is one of the determiners of the errors that L2 make in the definite marker assignment. However, some the classical research studies (e.g., Stockwell, Bowen, & Martin, 1965) concluded that typological distance is not a determiner of the difficulty of acquisition. The findings that I have presented shows show a clear effect of the typological proximity on L2 learning. L2 learners of Arabic at the initial stage of learning tend to produce structures that match their L1 configuration. With more exposure, intermediate and advanced levels recover from this effect.

In conclusion, the L1 syntactic effect has always remained one of the determiners of second language acquisition, whether in language comprehension (see Grüter and Conradie, 2006; Grüter, Lienerman & Gualmini, 2008) or in language production (see Chan, 2004). However, results show also that although there is a robust transfer effect, recovery from this effect is possible under certain circumstances of instruction.

3.6.2. Acquisition of definiteness as a feature in SLA theory

The syntactic errors made by low proficiency learners can be couched within a broader theory of syntactic transfer in the bilingual. Making a distinction between interpretable and un-interpretable features, Bever and Sanz (2001) approached L2 learning in the bilingual as a process of feature, both functional and lexical, learning. As the
interpretation of these features varies across languages, L2 learners embark on a process of reading and re-reading features.

With respect to the interpretation of the definite marker in singular noun phrases, English-Arabic learners first start with the process of reading definite noun phrases as denoting specific entities as it is encoded in their L1 system. This interpretation changes with gradual exposure to L2 input, as they begin to assign two meanings to the definite marker in singular noun configurations, which are [+generic reading] and [+kind reference]. However, it is noticed that this process of feature re-reading is not the same across constructions. The interpretation of the definite marker is a developmental process that happens faster in the case of the singular noun phrases than in the case of plural noun phrases.

Another framework in SLA approaches feature selection across languages either as a process of feature selection or feature reassembly (Lardiere, 2009). L2 learners are engaged in either (1) a process selecting appropriate features for the functional categories in the target language, or (2) a process of possibly reassembling the feature combinations from L1. With L1-English-L2 Arabic learners, they are reassembling the connections or the mapping between the [+ definite] configurations to the [generic reading] and [kind reference] meanings. In mapping the definite marker to the [kind reference] meaning, this process of reassembly is easier since this mapping is at work or available in L1. However, mapping the [+ definite] configurations to the [generic reading] meaning is harder, since it is not available through L1. Thus process of feature reassembly is also mediated by accessing L1 knowledge.
3.6.3. The effect of instruction and L2 input

It has been demonstrated in the second chapter of this dissertation that the acquisition of the definite marker in plural noun phrases that have a generic reading in Arabic is a very problematic construction to acquire. In this current investigation, a similar pattern of difficulty was found, although some variations were recorded. With singular noun phrases, restructuring the accurate configuration whether definite or non-definite takes place at a faster rate than with plural noun phrases.

Let’s start with the translation task. It is clear that L2 learners of Arabic did better with the definite marker in the singular case than the plural case although in both constructions, there was a negative L1 effect: compare for example 11% to 26% in the translation task and 41% to 54% in the intermediate levels and between 45% to 67% in the advanced levels. With error detection and correction a similar pattern can be noted: compare 10% to 19% in the low proficiency group, 16% to 26% in the intermediate level and 41% to 74% in the advanced level. With the forced choice elicitation task, the main pattern remained the same: compare 25% to 59% at low proficiency, and between 65% to 81% at intermediate proficiency, and between 74% to 95% at advanced proficiency.

From the means scores recorded above, a consistent pattern is noted: L2 learners of Arabic are doing better with the definite marker in the singular nouns than with plural nouns.

This variable rate of acquisition across the two constructions can be attributed to two intertwined factors: instruction and input. The textbook of *Al-Kitaab* that participants, especially at the low and the intermediate levels, were exposed to shows a different pattern of how the definite marker is presented. For example, singular noun phrases are always
presented in the definite noun phrase configuration. Verbal nouns (MaSdars) and singular nouns used to denote areas of study are always presented in the definite noun configuration. It has been noticed that the participants in the study did better on these subcategories of singular noun phrases than with other categories as abstract nouns for example. Thus, there is a close correlation between instruction and definite marker acquisition.

3.6.4. Task demands

What is left now is how to approach the variations in performance on the definite marker in singular nouns across the three tasks. When the same categories of singular noun phrases are tested in the translation task, the error correction and detection and in the forced choice elicitation task, some variations were recorded. Mean scores in the forced choice were consistently the highest in the matching and the mismatching conditions across three proficiency levels, and mean scores in the error-detection and correction were consistently the lowest in the two conditions across the three proficiency levels. These variations can be best approached in light of task complexities that interact not only with whether the condition was a matching configuration or a mismatching configuration, but also these task demands interact with the proficiency level.

This persistent difficulty in the grammaticality judgment task stems from the fact that it requires a higher level of attention. Detecting and correcting errors in the definite marker in singular noun phrases was more demanding than choosing between the two options provided in the forced choice elicitation task. This pattern of interaction between
task complexities and accuracy rates in definite marker assignment was also noticed in chapter II of this dissertation.

3.7. Conclusion and pedagogical implications

3.7.1. Textbook materials

The lower accuracy rate in L1 English-L2 Arabic direction in the mismatching configurations to L1 may be attributed to the insufficient integration of the typological differences and similarities between Arabic and English in the behavior of the definite marker in the singular nouns. The textbook that most of the participants in this study were taught with, which is *Al-Kitaab Fi Ta'allum Al-’arabiyya*, does not pay enough attention to these differences.

In chapter II on page 10, the section on the definite article does not provide extensive information on the semantics of the definite marker in singular nouns. No distinction is made between abstract and concrete nouns. Below is what is mentioned about the definite marker with singular nouns:

The use of Arabic ال differs from that of English the in an important aspect. In English, singular nouns maybe used with (a) the indefinite article a (n), as in a book, (b) the definite article the, as in the teacher, or (c) no article as in literature. In general, Arabic uses ال for both categories (b) and (c)... Use this as a rule of thumb to determine where you need to use ال when speaking and writing, and pay special attention to the use of لا given in new vocabulary (p.10).

In the third edition of *Al-Kitaab Fi Ta’allum Al-’arabiyya (2014)*, the edition that the subjects in this study were not taught with, the semantics of the definite article in singular nouns is clearer. On page 14-15 in chapter I, the authors wrote:
Abstract and generic concepts are expressed as definite nouns. ... The definite article ﺍﻟّـ refers to both specific and abstract or generic entities.

These fleeting statements on the semantics of the definite article do not capture the typology of the definite marker in MSA and English. In chapter V of this dissertation, I am going to discuss this aspect as part of our implications in some detail. I am going to recommend a balance between the Contrastive Analysis Approach that stresses accuracy and Communicative Methodologies that stresses fluency.

3.7.2. Structured-input activities

It has been demonstrated that L1 English-L2 Arabic learners did much better in the matching condition than the mismatching one. An important pedagogical implication concerns the question of how to develop pedagogical techniques and activities that accelerate the acquisition of the definite marker in singular noun phrases in the mismatching condition. Structured Input (SI) Activities (see VanPatten, 2004) that stress the role of form-meaning connections (VanPatten, Williams & Rott, 2004) in creating richer intakes from linguistic inputs serve this purpose.

These SI activities will make L2 learners pay attention to L1-L2 contrasts in the behavior of the definite maker in generic singular nouns. They also provide learners with the target form or feature, either morphological or syntactic, and “force the learners to attend to this form by asking them to decide, from two options, its meaning or function” (Marsden & Chen, 2011: 1057).
By asking learners to choose between two options or multiple alternatives and matching forms and meanings, these activities provide both positive and negative evidence (Marsden & Chen, 2011: 1061). They also provide constructive feedback. The core premise of these activities is the central role of the input (see Van-Patten, 2002: 295), without which SLA is not possible. Extended discussion of examples of these activities is presented in chapter V of this dissertation.
Chapter IV

Acquisition of nominal phrases in L2 Arabic and English: a bidirectional study

4.1. Introduction and motivation

Although the nominal construct state or the Iḍāfah construction in Modern Standard Arabic (thereof MSA) and its equivalent noun phrase configurations in English are very basic constructions in both languages, a common observation made by teachers of L1 English-L2 Arabic and L1 Arabic-L2 English learners is that errors in these constructions continue to persist until advanced stages in L2 learning in both directions. This makes it harder for L2 learners to reach what may be considered ‘acceptable performance’ in producing accurate configurations in written and spoken language.

Although errors in these constructions are persistent, they are not documented in the literature of Arabic and English SLA studies. Previous studies offer fleeting references to errors in these constructions either in the context of other structural errors in general or in the context of definiteness errors (for Arabic L2 learners of English see Crompton, 2011; Al-Sulmi, 2010; Bataineh, 2005; Abu-Ghararah, 1989; for English L2 learners of Arabic see Al-Hawary, 2009; Neilson, 1997; Rammuny, 1976; Al-Ani, 1972-1973). To the best of our knowledge, there is no single investigation exclusively conducted on the acquisition of the Iḍāfah construction in MSA and its equivalent noun phrase configurations in English. As a result, no systematic reasons that can account for errors in these constructions are offered.
It is unlikely that errors in these constructions are attributed to missing them in textbooks of teaching Arabic and English. This is because, being basic constructions, most textbooks (if not all) teach them early in their pedagogical sequence. In the L1 English-L2 Arabic direction, for example, *Al-Kitaab fi Ta’allum Al-’arabiyya Book Series*, which is one of the most common textbooks used in teaching Arabic in North America, integrates this construction early in the sequence in chapter III. In doing so, it teaches the form of the Iḍāfah construction with special focus on the use of the definite marker in it. Likewise, in the L1 Arabic-L2 English direction, similar attention is given to multiple noun phrase configurations that are equivalent to the Iḍāfah construction in MSA in textbooks for teaching English as a foreign language. For example, in *New Interchange: English for International Communication*, these noun phrase configurations are taught early in the sequence in the introductory units. Accordingly, these persistent errors in these constructions may not be attributed to missing them in the pedagogical sequence.

Our point of departure for exploring the acquisition of the Iḍāfah construction in L2 learning of MSA and its equivalent configurations in English is the potential methodological benefits of the bi-directional framework in L2 studies. This bi-directional framework allows for looking into the difficulty direction with two communities of L2 learners who are reversibly learning two different foreign languages. The basic advantage of this methodological approach is to see the patterns of responses and the types of errors by L2 learners who work on the *same* research instruments that introduce the *same* set of testing items in two directions, which are L1 Arabic-L2 English and L1 English-L2 Arabic in the context of this study. This advantage allows for a clearer and better understanding
of the learning process of the targeted constructions in both directions. This process may be mediated either by the effects of the dominant language or by the operation of general learning mechanisms such as overgeneralization. Thus, researchers may end up with a clearer picture of how SLA of these constructions proceeds, since they may not be able to form this understanding by looking into the acquisition of these constructions in one single direction.

To be specific, I am operationalizing the acquisition of the ḫāf construction in MSA and its equivalent configurations in English in terms of two components: (1) head-complement ordering and (2) head-complement definiteness (see section 3 for a typological overview of these two components). To characterize the systematic reasons for the common errors in these two features, I depart from a simple axiom: understanding later developmental stages of L2 learning of these constructions may depend, among other things, on characterizing its initial state (see Grüter & Conradi, 2006; Grüter, 2005; Schwartz & Eubank, 1996). This state remains a fundamental step in understanding how acquiring this construction proceeds and how form restructuring (see Ellis, 2008) takes place at later developmental stages of acquisition.

For L1 English-L2 Arabic learners, this initial state as well as later developmental stages has remained a missing gap in the literature (see Al-Hawary, 2009 for an overview of SLA of Arabic morpho-syntax). For L1 Arabic-L2 English, the studies I listed above did not explore this initial stage except for fleeting references in the study of Kharma, 1981).
Over three or four decades of research in SLA studies, multiple stances have been taken on how to characterize the initial state in L2 learning in general. First is the effect of L1 properties in the Interlanguage (IL) grammar (see White, 2003; Schwartz & Sprouse, 1996). Recently, the L1 transfer claim has been given renewed interest in SLA theory. This came as a result of a change of perspective. Not only is L1 transfer couched within the Contrastive Analysis framework, but also it is studied within a broader cognitive learning theory that explores the effect of existing knowledge on the internalization of new information. This new information also plays a dynamic role in the reorganization of the existing information (Sajavaar, 1986).

The second explanation is a developmental view of L2 learning. According to this view, instead of transferring syntactic forms and meanings from L1 into L2, second language learners follow standard developmental paths regardless of first language. Thus, L1 forms and meanings do not necessarily drive the initial state in this developmental path. One offshoot of this premise is the Processability Theory as outlined by Pienemann (1998) that claims that L2 learners follow standard phases or stages in L2 regardless of their L1s.

The third explanation is a combination of the previous two views. A strong proponent of this premise is Zobl (1980), who hypothesized that L1 transfer is possible when there is correspondence between L1 structures and developmental stages in L2. In other words, for L1 transfer to happen, L2 learners need to reach a specific level of structural development. In that sense, L1 transfer is selective along the developmental axis (see a similar view outlined earlier by Wode, 1977). This argument still predicts that
learner language in its initial state may not show the effect of structural L1 transfer. A recent milder view of this third perspective claims that L2 learners make use of a combination of knowledge stores, including but not limited to their L1 knowledge, to process the novel target language input to which they are exposed (Rast, 2010).

Although these three explanations have been debated for a long time in SLA theory, there is no final or definitive answer to whether the effect of one of them overrides or dominates the other. Research in different languages gives conflicting results with no definitive answer (I referred to these conflicting results in chapter I of this dissertation).

4.2. Aim

Given the motivation above, this investigation does two things: first, it attempts to characterize features of the initial state of L2 learning in the acquisition of the Iḍāfah construction in MSA and its equivalent noun phrase configurations in English. This characterization examines the tendencies in the main patterns of responses of L2 learners in both directions. This characterization enables us to know whether L2 learners transfer noun phrase configurations from their L1 into their L2 or they fluctuate between two or more noun phrase configurations before they internalize the canonical form/s into their developing linguistic system.

To achieve this aim, this study uses a bidirectional framework that collects data from L1 English-L2 Arabic learners and L1Arabic –L2 English learners at the initial state of L2 learning in two written production tasks: translation and forced-choice elicitation. Qualitative and quantitative analysis of learner responses in both directions will be
conducted to couch the patterns of responses in an error analysis framework. I think that the side-by-side examination of the responses of participants who worked on the same set of items may have explanatory adequacy that allows us to capture the underlying process of learning these constructions in both directions.

The second aim of this study is as follows: after characterizing the initial state of L2 learning of the Iḍāfah construction in MSA and its equivalent noun phrase configurations in English, this study turns to look into restructuring the form of the Iḍāfah construction in the English-Arabic direction at later developmental stages. It does this by conducting a quantitative analysis of accuracy rates across three proficiency levels: low, intermediate and advanced. Special focus is given to the process of restructuring head-complement ordering and head-complement definiteness in this construction. Achieving this latter aim allows us to look into the effect of Form-Focused Instruction (FFI) as outlined by Ellis (2001) and others. This is because in Arabic pedagogy the Iḍāfah construction, in particular, receives intensive focus on form. This latter aim enables us to understand how the form of the Iḍāfah is restructured over time from one stage to another in L2 learning.

Before I offer details of our investigation, it may be adequately important to introduce the reader briefly into the basic syntactic features of the Iḍāfah construction in MSA and its equivalent noun phrase configurations in English. I am going to look into two components in the surface form of these constructions: (1) head-complement ordering, and (2) head-complement definiteness.
4.3. Typological background

One reason why the acquisition of the Iḍāfah construction is a challenging task for L1 English-L2 Arabic learners may be the complexity of its syntactic features. In a typical true nominal construct state or Iḍāfah, two nouns are linked together in a way in which the second noun determines the first by “identifying, limiting, or defining it” (Ryding, 2005:205). The two nouns function as one syntactic unit that has two basic components: the head noun (termed al-muḍāf) and the complement noun (al-muḍāf-u ilih-i) (Beeston, 1970). The two nouns are connected semantically; the first noun usually constitutes the possessed element and the second constitutes the possessor.

In English descriptions of Arabic grammar, this unit is termed differently: ‘genitive construct’, ‘construct phrase’, ‘annexation structure’ and ‘construct state’ are some of the names that are used to describe it. In traditional Arabic grammar, this relationship is termed as Iḍāfah, which literally means “addition” or “annexation”. The analysis of this construction in MSA distinguishes between a simple Iḍāfah and a complex Iḍāfah. In the first configuration, only two nouns are annexed and in the second one more than two nouns are annexed. Consider the following examples in (1) and (2) below:

(1) bāb-u al-maktab-i
door-NOM the-office-GEN
‘The door of the office’ / ‘The office door’

(2) bāb-u maktab-i al-muḍīr-i
door-NOM office-GEN the-director-GEN
‘The door of the director’s office’
One basic feature of the Iḍāfah construction in MSA is the fact that no category (lexical or functional) can intervene between the head and the complement. Compare between (a) and (b) in (3) below:

(3) (a) bāb-u al-maktab-i
door-NOM the-office-GEN
‘The door of the office’ /’The office door’

(b) *bāb-u ila/Jiddan/ kabira al-maktab-i
door-NOM To/very/big the-office-GEN
* ‘The door very /big of the office’

Thus, they behave as one syntactic unit. Benmamoun (2000, 2003) provided evidence that both the head and the complement act as one unit, and this may justify the morphophonological changes noted in the head. Consider (4) and (5) below:

(4) bayt-aa-n ar-rajul-i → baytaa ar-rajul-i
house-NOM-dual- The-man-GEN-INDEF DEF
‘The man’s two houses’

(5) mu’allim-u-un ar-rajul-i → mu’allim-uu ar-rajul-i
teachers-pl. (NOM) The -man- DEF GEN
‘The man’s teachers’

In terms of definiteness in the Iḍāfah construction in MSA, a distinction is made between an indefinite Iḍāfah and a definite Iḍāfah. In both categories, the Iḍāfah construction always starts with an indefinite noun. As for the second noun, it has to be definite in the case of a definite Iḍāfah and indefinite in the case of an indefinite Iḍāfah. The attachment of the definite article to the head noun renders ungrammaticality. Consider the following examples in (6a) and (6b):

(6) (a) bāb-u al-maktab-i Kabir-un
door-NOM the-office-GEN big-NOM
In English, there are at least four noun phrase configurations that are equivalent to the canonical configuration of the definite Iḍāfah construction in MSA. These four are: the of construction (e.g., the director of the school), nominal compounds (e.g., the teapot; the school director), noun phrases with apostrophes that denote possessiveness (e.g., the boy’s shirt), and noun phrases headed by gerunds (e.g., reading books).

Now, let us focus in some detail on the behavior of the definite Iḍāfah construction in MSA since it is the focus of this investigation. Two underlying differences can be outlined between this canonical configuration in MSA and its equivalent noun phrases in English. The first underlying syntactic difference lies in the head-complement ordering. Whereas MSA allows a canonical head-complement ordering configuration that must start with the head, English allows multiple head-complement ordering configurations.

Consider table 4.1 below to see how multiple configurations in English are rendered in one in MSA.

<table>
<thead>
<tr>
<th>English</th>
<th>MSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The school director</td>
<td>Mudiir-u al-madarash</td>
</tr>
<tr>
<td>2. The President of the University</td>
<td>Raʔiis-u al-jaamiʕah</td>
</tr>
<tr>
<td>3. The boy’s shirt</td>
<td>Qamiṣ-u al-walad</td>
</tr>
<tr>
<td>4. Increasing production…</td>
<td>Ziiyadah-tu al-intaaj</td>
</tr>
</tbody>
</table>
The second underlying syntactic difference is definiteness: whereas in the canonical configuration in MSA the definite marker only surfaces before the complement and never before the head, in the English system there are more than one permissible configurations with variations where the definite marker may surface. This varies according to the configuration at hand.

Except for lexicalized nominal compounds (e.g., as in the case of teapot), English is tolerant of more than one configuration of the same noun phrase. For example, the Of-constructions (e.g., the director of the school) can be alternatively rendered in a noun phrase configuration headed by the complement as in ‘the school director’. Likewise, noun phrase configurations headed by gerunds as in ‘reading books’ in ‘Reading books is very useful’ can surface as ‘book reading’ or ‘the reading of books’. The difference between these alternative configurations in English is a difference of frequency and sometimes of meaning, but not a difference in grammaticality or well-formedness.

4.4. Method

4.4.1. Hypotheses and predictions

Predictions made by two views of the initial state of L2 learning are going to be tested. The first is a generative-theory–based view put forward by Schwartz and Sprouse (1996) in their Full Transfer Hypothesis. This hypothesis predicts that since the entirety of L1 grammar is the starting point of L2 learning, low proficiency learners at the initial state of
L2 learning just transfer their L1 knowledge of noun phrase configurations into their L2.

In testing this hypothesis with the targeted Iḍāfah construction in MSA and its counterpart configurations in English, I believe that producing noun phrases that show properties of L1 configurations in head-complement ordering and head-complement definiteness would support the L1 transfer claim. However, fluctuating between two or more noun phrase configurations may refute this hypothesis.

The second view is a milder one, put forward recently by Rast (2010), who, using word translation and word repetition tasks, provided evidence that multiple stores of knowledge drive the initial state of L2 learning. These multiple sources include, but are not limited to, effects from other languages that learners were exposed to. Thus, the L2 initial learning path is not necessarily driven by the dominant L1.

Also, I am going to test the effectiveness of Form-Focused Instruction (FFI) as a pedagogical technique discussed by Ellis (2001) in the acquisition of the Iḍāfah construction in the English-Arabic direction. Since this construction receives intensive FFI, I am predicting that L2 learners of Arabic recover from the L1 syntactic effect quickly. Restructuring the form of the Iḍāfah construction (in terms of head-complement ordering and definiteness) may take place at a higher rate in comparison to the other two constructions that I investigated in chapters II and III of this dissertation.

4.4.2. Research questions

To address the aims of this study and to test the hypotheses drafted above, I ask two specific research questions:
(1) Is there a real effect for L1 syntactic transfer at the initial state of L2 learning in the acquisition of the Iḍāfah construction in MSA and its equivalent noun phrase configurations in English? More specifically, I am asking whether different L1 noun phrase configurations trigger similar or different responses at the initial state of L2 learning. This question can be answered by examining responses of L1 English-L2 Arabic and of L1 Arabic-L2 English learners in the written production tasks of the study at the initial state of L2 learning in the 101 ARB and ENG class. I am also asking if there are other sources of knowledge that L2 learners employ at the initial state.

(2) What is the effect of Form-Focused Instruction on the acquisition of head-complement ordering and definiteness in the acquisition of the Iḍāfah construction in the English-Arabic direction? This question can be answered by analyzing the responses of L2 learners of Arabic at three proficiency levels on the two written production tasks of the study. This will allow us to track the developmental path that takes place over time.

4.4.3. Participants

To address the question about the initial state of L2 learning, this study collected data from L2 learners in two directions: L1 English-L2 Arabic learners (ARB 101, no=40) and L1 Arabic-L2 English learners (ENG 101, no= 20). Learners in the English-Arabic direction were from a public Southwest University in the United States and learners in the English-Arabic direction were from an academy for teaching English as a foreign language in the Middle East. In both contexts, Arabic and English were taught as foreign
languages, and the teaching approaches used the communicative method. Explicit grammatical instruction was integrated when needed.

L2 learners in both directions did not have enough exposure to Arabic and English as foreign languages. L1Arabic-L2 English learners scored the lowest on the Test of English as a Foreign Language (TOFLE). Their writing was at the very basic sentence level with very basic knowledge of grammar of English. Accordingly, they were placement-tested as Beginners. They were studying the INTRO textbook of *New Interchange: English for International Communication*. The L1 English-L2 Arabic learners were all at the Novice level. They were studying the introductory part of *Al-Kitaab Fi Ta‘allum Al-‘arabiyya, 2nd and 3rd edition*. In both directions, the researcher asked for written samples of their written Arabic and English and evaluated them against the ACTFL guidelines for writing. The quality of their writing was at the Beginning level.

Other background information for L1 English-L2 Arabic and L1 Arabic-L2 English learners as reported in a short questionnaire asked about their first language background, whether they speak other foreign languages, and how long they have been learning Arabic and English as foreign languages. This information is provided in the table 4.2 below:

<table>
<thead>
<tr>
<th>Table 4.2. Background information on English- Arabic and Arabic- English participants at initial Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proficiency level</td>
</tr>
<tr>
<td>Arabic-English</td>
</tr>
<tr>
<td>English-Arabic</td>
</tr>
</tbody>
</table>
There were no significant differences between participants in terms of age. Also, there was no significant difference in years of instruction or exposure to L2 Arabic or L2 English. They reported that they have been studying English or Arabic for only one semester.

To address the question of restructuring the form of the Iḍāfah construction in the English-Arabic direction were data from learners at a public Southwest University in the United States. They were at three proficiency levels: low (no =15), intermediate (no=15), and advanced (no=15). Participants in this direction were matched into their proficiency levels by using two things: Teaching of Foreign Languages (ACTFL) Oral Proficiency Interview (OPI) Scale (used for assessing speaking) and ACTFL guidelines for assessing writing.

For the speaking part, the ACTFL proficiency measure divides proficiency into four levels: novice (low), intermediate, advanced and superior. Under each of these proficiency measures, there are three secondary levels: low, mid and high. The OPI proficiency rating scale has been chosen, as it is one of the most common measures of proficiency in Arabic in the United States. Certified ACTFL testers do it. The OPI rating scale integrates components that assess linguistic, communicative, pragmatic, and discoursal competence. It covers, among other aspects, frequent error types and accuracy in language structures. Participants’ proficiency measures were reported at the main levels and not at the secondary levels for convenient comparisons.

For the written component, writing samples from low, intermediate and high proficiency levels were analyzed using the ACTFL guidelines for writing. These
guidelines evaluate written texts in terms of a number of benchmarks such as topic, function, lexical complexity, structural complexity and discourse.

This study did not use years of instruction as a measure of proficiency. Rather, I split the participants’ classroom instruction levels into proficiency levels. I asked the participants to report on their classroom and proficiency levels as measured by the ACTFL scale. In those cases where a participant did not know his/her proficiency level, the researcher, who is certified by ACTFL to run advisory Oral Proficiency Interviews, did the rating. For low proficiency learners, it was easy to assign them to a specific proficiency level, since all of them did not have much exposure to Arabic when the study started. Low proficiency level students were from first year Arabic classes; intermediate levels were from second and third year Arabic classes; and advanced levels were from third and fourth year Arabic classes.

Other background information on L1 English-L2 Arabic learners at the three proficiency levels as reported in a short questionnaire asked about their first language background, whether they speak other foreign languages, and how long they have been learning Arabic as a foreign language. A summary of this information is provided in the table 4.3 below:
Table 4.3. Background Information of English- Arabic learners

<table>
<thead>
<tr>
<th>Proficiency level</th>
<th>(n)</th>
<th>Age range/ Std. Deviation</th>
<th>Years of instruction / Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low: Initial state ARB 101</td>
<td>20</td>
<td>1.0/.55</td>
<td>.8/.48</td>
</tr>
<tr>
<td>Low: ARB 102</td>
<td>15</td>
<td>2.0/.70</td>
<td>1.1/.48</td>
</tr>
<tr>
<td>Intermediate</td>
<td>15</td>
<td>2.0/.95</td>
<td>1.2/.23</td>
</tr>
<tr>
<td>Advanced</td>
<td>15</td>
<td>3.0/2.1</td>
<td>3.0/.94</td>
</tr>
</tbody>
</table>

Low proficiency learners reported learning Arabic for one semester or two; intermediate proficiency reported learning Arabic for three to four semesters; and advanced learners reported learning Arabic for three to four years. At each proficiency level, there was no real difference between the learners in how comfortable they felt while speaking Arabic.

4.4.4. Tasks and procedures

This investigation used two written production tasks: written translation and forced choice elicitation. The translation task was used to collect data to answer the first question and both translation and the forced choice tasks were used to answer the second question (see research questions in section 4). Items used in these two tasks were all highly frequent: they were pooled from the first part of Al-Kitaab Fi Ta'allum Al- ‘arabiyya, 2nd edition, used for teaching elementary and intermediate Arabic. Items that were thought to be difficult were excluded from the final list. To facilitate the reading of the targeted noun phrases in the test sentences, some vocabulary items were provided in the context. This
procedure has been shown to be adequate, as it made it easy for the L2 learners in both directions to grasp the targeted reading of the sentence.

4.4.4.1. Translation

Items in the translation task in the English-Arabic direction were developed in the participants’ L1 English and elicited responses in L2 Arabic. This task included related twenty-five items and five unrelated ones. The related items were split into four noun phrase configurations as outlined in table 4.4. These were as follows: Of-constructions (e.g., the director of the school), nominal compounds with space between the head and the complement (e.g., the car key), possessive noun phrases (e.g., the boy’s shirt), and verbal noun phrases headed by gerunds (e.g., reading books). Seven items were included for each sub-category. An example of one item for each of these four sub-categories is provided in table 4.4 below:

| Table 4.4. Sample test items in written translation in the English-Arabic direction |
|-----------------------------------------|----------------------------------|
| 1. Do you still remember the name of the teacher who taught you Arabic? |  |
| 2. Do you like reading books in your free time? |  |
| 3. I live close to the university area. |  |
| 4. Do you know where the professor’s office is? |  |

When translated from English into Arabic, these items in their contexts pose two variable problems: first is head-complement ordering, and second is the head-complement definiteness. The expectation is that in items 1-2, L1 English-L2 Arabic learners will produce a configuration that matches the noun phrase linear order provided in English. In
items 2-4, participants are required to produce a configuration that mismatches the head-complement ordering. In terms of definiteness, they are expected to use the definite marker only before the complement across all of the different test items.

In the Arabic-English direction, I used exactly the same items but changed the language. In other words, the items were developed in L1 Arabic and elicited responses in L2 English. An example of an item of these four categories is provided in table 4 below:

<table>
<thead>
<tr>
<th>Table 4.5. Sample test items in written translation in the Arabic-English direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>هل تذكر اسم الأستاذ الذي درسك اللغة العربية؟</td>
</tr>
<tr>
<td>هل تذكر اسم الأستاذ الذي درسك اللغة العربية؟</td>
</tr>
<tr>
<td>هل تذكر اسم الأستاذ الذي درسك اللغة العربية؟</td>
</tr>
<tr>
<td>هل تذكر اسم الأستاذ الذي درسك اللغة العربية؟</td>
</tr>
</tbody>
</table>

The expectation in the above items is to keep or change the head-complement ordering and definiteness in a way that matches the English system, but not to match the canonical configuration of the Iḍāfah construction in participants’ L1.

If the Full Transfer claim is true, I may expect similar noun phrase configurations to those presented in the L1 prompt in the two directions of the study.

4.4.4.2. Forced choice elicitation

For the forced choice elicitation task, I collected data from L1 English- L2 Arabic learners at three proficiency levels: low (n=15), intermediate (n=15) and advanced (n=15). It included 24 related items and 20 unrelated items that asked the participants to choose between three options provided. These items were counterbalanced in the subject and object positions. These options offered different configurations in terms of head-
complement ordering and definiteness. Participants were expected to choose the right configuration of the Iḍāfah construction in which the definite marker surfaces before the complement, but not before the head. Examples of the items in this task are included in table 4.6 below:

4.5. Results

This section offers quantitative and qualitative analysis of the responses of the participants in the study. To answer the first question that aims at characterizing the initial state of L2 learning in both directions, I am going to draw in-group comparisons to explore the effect of L1 syntactic transfer in the Iḍāfah construction in MSA and the equivalent noun phrase configurations in English at the initial state of L2 learning. Then, I am going to compare between the performances of L2 learners in both directions. This will be followed by a qualitative analysis in both directions of the responses to look into the error types that may be attributed either to the L1 syntactic effect or to the operation of general learning mechanisms, especially overgeneralization.

To answer the second question that asked about the effect of Focus-on-Form Instruction as a pedagogical technique in teaching the Iḍāfah construction in the English-
Arabic direction, I am going to draw comparisons between multiple proficiency levels across the translation task and the forced choice elicitation task.

4. 5.1. Quantitative analysis

4.5.1.1. Translation: English- Arabic direction

The written translation task looked into how L2 learners of Arabic translate multiple noun phrase configurations from L1 English into L2 Arabic. The underlying purpose is to see whether multiple noun phrase configurations in L1 English translate into the one canonical configuration in L2 Arabic. I looked into two components while scoring the written responses: head-complement *ordering*, and head-complement *definiteness*.

For head-complement *ordering*, if the participant provided the correct ordering configuration, his/her response scored one. If not, it scored zero. I calculated the mean scores of the accuracy rates while translating items in English that trigger the *same* head-complement ordering (these are Of constructions and noun phrases headed by gerunds) versus items that would trigger *different* head-complement ordering (these are nominal compounds and possessive noun phrases with apostrophes).

Similarly, for scoring head-complement *definiteness*, if the participant provided the right definiteness configuration, his/her response scored one. If not, it scored zero. I also calculated mean scores of the accuracy rates while translating items in English that trigger *similar* definiteness configuration (e.g., *Of-constructions*) versus items that would trigger *different* definiteness configuration (these are all the other noun phrase equivalent configurations).
For low proficiency L1 English-L2 Arabic learners at the initial state in ARB 101 (no=40), the mean scores of the accuracy rates in the similar head-complement ordering configuration was 87% (SD.25) and it was 35% (SD.34) for the different head-complement configuration. To know whether there is a statistically significant difference in performance on both configurations of the noun phrases, the paired-sample t-test in ANOVA was used. Results showed an expected statistical difference between both conditions: $t (78) = 7.3, p = .000, p < .001$.

For low proficiency L1 English-L2 Arabic learners at the initial state in ARB 101 (no=40), the mean scores of the responses that rendered the head-complement definiteness in configurations that were similar to the ones presented in the L1 prompt were 85% (SD .23). The mean scores of the responses that provided head-complement definiteness configurations that were not presented in the L1 prompt were 30% (SD.31). To know whether there is a statistically significant difference in performance on both configurations of the noun phrases, the paired-sample t-test in ANOVA was used. Results showed an expected statistical difference between both conditions: $t (78) = 7.1, p = .000, p < .001$.

To make sure of this difference that seemingly is attributed to the L1 configurations, I looked into the mean scores of these two components in the written responses to noun phrases headed by gerunds. The reason this noun phrase configuration was selected is that it shows the same head-complement ordering, but different head-complement definiteness. This is because there is a general tendency in English to use an indefinite head followed by an indefinite complement (e.g., Reading books is useful). In MSA, on the other hand, the definite marker must surface before the complement. Accordingly, it has to surface as
Reading the books. The mean scores of the accuracy rates in head-complement ordering were 99% (SD.06) and they were .05% (SD.03) for the definiteness configuration. Results showed an expected statistical difference between both conditions: \( t (78) = -88.1 \), \( p = .000 \), \( p < .001 \).

These two results are represented cumulatively in the two graphs below:

**Figure 4.1.** L1 effect in the L1 English-L2 Arabic direction in the Iḍāfah construction
Figure 4.2. L1 effect in the L1 English-L2 Arabic direction in the Iḍāfah construction

The main pattern in these results shows a clear effect of L1 configurations in the written production in L2 in the Iḍāfah construction in Arabic. I will get back to couch this pattern in a broader SLA acquisition theory in the discussion section.

Overall, the mean scores of the accuracy rates in the Iḍāfah construction with the ARB 101 students across head-complement ordering and definiteness were 15% (SD.06).

4.5.1.2. Translation: Arabic-English direction

The written translation task in this direction looked into how L2 learners will translate multiple noun phrase configurations from L1 Arabic into L2 English. The underlying purpose is to see whether the one canonical configuration of the definite Iḍāfah construction in MSA will translate into the same or different noun phrase configurations in L2. Similarly to the English-Arabic direction, I looked into two components while scoring the written responses: head-complement ordering, and definiteness. In scoring the translation task in the English-Arabic direction I followed the same guidelines of the Arabic-English direction.

For low proficiency L1 Arabic-L2 English learners at the initial state in ENG 101 (no=20), the mean scores showed that 74% (SD.17) of the responses reflected a similar head-complement ordering to L1 Arabic. Mean scores also showed that 17% (SD.17) of the responses were rendered in a different head-complement configuration. To know whether there is a statistically significant difference in performance on both configurations of the noun phrases, the paired-sample *t*-test in ANOVA was used. Results showed an
expected statistical difference between both configurations: \( t (12) = 4.9, p = .000, p < .001. \)

For head-complement \textit{definiteness}, the mean scores of L1 Arabic-L2 English learners’ responses that reflected similar head-complement definiteness configuration to L1 Arabic were 75\% (SD .23). The mean scores of responses that \textit{fluctuated} between other head-complement definiteness configurations that were not presented in the L1 Arabic prompt were 30\% (SD.31). To know whether there is a statistically significant difference in performance on both configurations of noun phrases, the paired-sample \textit{t-test} in ANOVA was used. Results showed an expected statistical difference between both conditions: \( t (78) = 5.3, p = .000, p < .001. \)

As I did in the L1 English-L2 Arabic direction, I looked into mean scores of the same two components in the written responses to the gerund + noun configuration. This configuration shows the same head-complement \textit{ordering}, but a different \textit{definiteness} configuration. This is because this combination in English surfaces as an Iḍāfah construction in MSA where the definite marker surfaces only before the complement. In English, both the head and the complement must surface as indefinite. As expected, the accuracy rate in head-complement ordering was high (85\%; SD.17) and it was low for head-complement definiteness (15\%; SD.23).

These two results are represented cumulatively in the two graphs below:
Figure 4.3. L1 effect in the L1 Arabic-L2 English direction in noun phrase configurations in English

Figure 4.4. L1 effect in the L1 Arabic-L2 English direction in noun phrase configurations in English
4.5.2. Qualitative analysis

4.5.2.1. In-group comparisons

4.5.2.1.1. English-Arabic direction

The qualitative analysis of the responses in the translation task in the definite ʾIdāfah construction is going to be presented in terms of responses to the four categories provided in the test sentences. These were as follows: (1) *Of*-constructions; (2) noun phrases that denote possessiveness with apostrophes; (3) nominal compounds; and (4) noun phrases headed by gerunds. When rendered in L2 Arabic, these four configurations pose two variable problems for L2 learners: (1) the head-complement *ordering* and (2) the *position* where the definite marker will surface. Remember that in the canonical configuration in MSA the definite marker surfaces only before the complement.

Since the *Of-configuration* configuration in English is similar to the targeted configuration in MSA in terms of head-complement *ordering*, the accuracy rate in this configuration reached 96% in the responses. Only 4% of the responses reversed the head-complement ordering. In terms of definiteness, only 8% of the responses showed accurate head-complement definiteness configurations and 92% percent of the responses showed errors in definiteness.

A common error type in the written responses of low proficiency L1 English-L2 Arabic learners at the initial state was to have the definite marker surface before the complement and before the head in response to configurations that showed the same structure. For example, the nouns phrase ‘*the name of the teacher*’ elicited ‘ʾal-ʔīsm al-ʔustaadth’, where it should surface as ‘ʔīsm al-ʔustaadth’. Likewise, the nouns phrase ‘the
director of the program’ elicited ‘al-mudiir al-barnaamaj’, where it should surface as ‘mudiir al-barnaamaj’. The same pattern was observed in other noun phrases such as ‘the shirt of the boy’ and ‘the door of the room’.

Interestingly, when the Of-construction configurations were introduced again in possessive noun phrase configuration (e.g. ‘the teacher’s name’, ‘the boy’s shirt’, etc.), there was a common tendency to change the configuration by low proficiency L1 English-L2 learners of Arabic. In other words, they reversed the head-complement ordering in a way that followed the modeled sequence in English. Thus, they rendered ‘the teacher’s name’ as al-staadth ʔism and ‘the boy’s shirt’ as ‘al-walad qamis’. I will get back to this in some detail in the discussion section.

Noun phrases headed by gerunds were found to be the hardest for ARB 101 students in terms of head-complement definiteness, but were the easiest in terms of head-complement ordering as I demonstrated in the qualitative section. Consistently, noun phrases headed by gerunds (e.g., ‘reading books’, ‘studying English’, ‘watching TV’, ‘studying business’, ‘drinking coffee’, and ‘learning languages’) were rendered in the same indefinite configuration.

In MSA, however, they need to surface in a definite Iḍāfah configuration. They were rendered into ‘qiraaʔa kutub’, ‘diraasa ingiliizi’, ‘diraasa tijaara’, ‘taʕalum lughaat’, etc. Only eight of the 40 participants were sensitive to the fact that this configuration is rendered in a definite Iḍāfah construction in MSA. They consistently added the definite marker before the complement, rendering them as ‘qiraaʔa al-kutub’, ‘diraasa al-ingiliizi’, ‘dirasat al-tijaara’, ‘taʕalum al-lughaat’ etc.
In conclusion, noun phrase configurations in L1 English pose variable levels of difficulty for L2 learners of Arabic. In mapping these configurations to the Iḍāfah construction in MSA, *Of*-constructions and noun phrases headed by gerunds configurations seem to be easiest in terms of head-complement ordering, but the hardest in terms of the definite marker. Nominal compounds that need the head-complement ordering to be reconfigured seem to be the hardest.

4.5.2.2. Arabic-English direction

The common pattern in the quantitative analysis was to transfer the same linear order of the head and the complement from L1 into L2. I am going to look into some examples from the data. Out of the 20 participants, only one participant rendered the noun phrase ‘*ism al-ustaadth*’ into an *Of*-construction configuration ‘*the name of teacher*’. The rest of the participants rendered this noun phrase into ‘*name teacher*’, which runs in a similar linear word order to English, but with no definite marker. A similar pattern was observed in the noun phrase ‘*minṭaqat al-jaamiṣah*’. Only 3 participants rendered this configuration into *university area* and only one participant added the definite marker to the configuration. 17 participants rendered it in the linear order provided in Arabic.

As for noun phrases headed by gerunds in English (e.g., ‘*reading books*’, ‘*studying business*’, ‘*watching TV*’, etc.) the common pattern was to start linearly with a gerund or a verb followed by the noun. Only 4 participants rendered this configuration in a different sequence from the one provided in MSA. This sequence reversed the head-complement ordering in MSA. Examples from those 4 participants are ‘*the commerce study*’ or
'commerce studying' for studying commerce, and 'English study/studying' for 'studying English' or 'the study of English'.

Now, let us turn to definiteness in this configuration. This configuration is rendered in the Iḍāfah construction where the definite marker surfaces only before the head. 86% percent rendered this configuration in gerunds + definite marker + noun. Examples of these include ‘study the commerce’ (for studying commerce), ‘reading the books’ (for reading books) and ‘watching the TV’ (for watching TV).

In conclusion, the overall pattern in the two directions of the study is the general tendency of the L2 learners to model the same linear head-complement ordering and definiteness as surfaced in L1. It is ‘general tendency’ since there are individual responses that do not follow this main pattern. I am going to get back again to this point in some detail in the discussion section.

4.5.3. Between-group comparisons

Now I shift to look into the between-group comparisons in the English-Arabic direction. The aim of this comparison is to look into the effect of Form-Focused Instruction on the acquisition of head-complement ordering and definiteness in the acquisition of the Iḍāfah construction in the English-Arabic direction. This pedagogical technique should result in restructuring the form of the Iḍāfah construction at a quick pace ending in a configuration that matches the target language grammar. This is because this construction in MSA, in particular, receives intensive focus on form. I am going to compare between the performance of ARB 101 and ARB 102 (both low proficiency levels), intermediate and advanced levels on the two tasks of the study.
4.5.3.1. Translation

Overall, ARB 101 students’ accuracy rate in the acquisition of the Iḍāfah construction was 15%. As for ARB 102 students who were tested after around 12 weeks in second semester Arabic, they scored 38% (SD.14) with a statistical difference between them: $t(53) = -4.4$. $P=.000$, $p < .001$. For the intermediate level, the accuracy rate reached 63% and it jumped to 93% percent with advanced students.

![Restructuring the form of Iḍāfah construction](image)

**Figure 4.5.** Restructuring the form of Iḍāfah in proficiency levels in the translation task

To know whether there is a statistical difference between these four groups, multiple comparisons in the post hoc tests in ANOVA were used. This gave us the opportunity to know the direction of the effect. The main pattern of significance is that all levels differed from each other. In all directions: $p= .000$, $p < .001$. 
4.5.3.2. Forced choice elicitation

Now I move to look into the between-group comparisons in the forced choice elicitation task. In this task, learners were introduced to three choices that changed the two components of the Iḍāfah construction: the head-complement ordering and the definite marker. L2 learners of Arabic were expected to identify the correct configuration.

For low proficiency L1 English-L2 Arabic learners (no=20), the mean scores of accuracy rate in head-complement ordering and indefiniteness was 58% (SD: .08), and it was 66% (SD: .18) for intermediate, and 90% (SD: .08) for advanced. Consider the graph below to see the gradual development of L2 learning of the Iḍāfah construction.

![Figure 4.6](image)

**Figure 4.6.** Restructuring the form of Iḍāfah over proficiency levels in the forced choice elicitation task
To know whether there is a statistically significant difference in performance on both components in the Iḍāfah construction, the F test in ANOVA was used. There was an effect for proficiency as a variable: F (2, 12.3), p = .000, < .001.

However, the pattern of significance showed some variations in the direction of the significance level that I am reporting below as shown by the post hoc tests in ANOVA. For this one, the Tukey and LSD tests were used. In the LSD test, there was a statistically significant difference between low and intermediate proficiency levels (p = .223, p < .05) that was less in value in the Tukey HSD (p = .438, p < .05). But there was a clear statistical difference between low and high proficiency levels: p = .000, p < .05 in both tests. Likewise, there was a statistical difference between intermediate and advanced proficiency in both tests respectively: p = .004, p < .05 and p = .002, p < .05.

Regardless of the variations recorded in terms of the significance levels, the main pattern refers to a clear effect of instruction and proficiency level in the Iḍāfah construction. I will get back to this effect in the discussion section in some detail.

4.6. Discussion

4.6.1. Initial state of L2 learning: L1 transfer and general learning mechanisms

Before I turn to discuss these results, I want to remind the reader of the questions underlying this investigation. Question # 1 asked whether there is a real effect for L1 syntactic transfer at the initial state of learning the Iḍāfah construction in MSA and its equivalent noun phrase configuration in English by L2 learners.
The answer to this question is YES; there is a general tendency by L2 learners of Arabic and English to transform L1 noun phrase configurations into L2 learning. They transferred head-complement ordering and head-complement definiteness from L1 to L2. This pattern of results supports the arguments made by Schwartz and Eubank (1996) and Schwartz and Sprouse (1996) that the initial state of L2 learning is driven by L1 grammatical features.

However, the L1 effect poses problems that vary according to the typological proximity or distance between L1 and L2 in terms of head-complement ordering and definiteness. In the L1 English-L2 Arabic direction, the acquisition of the Iḍāfah construction posed different challenges that varied according to the L1 configuration at hand. The hardest configurations to acquire are the ones that show mismatches between L1 and L2 in terms of head-complement ordering and definiteness. When these two components combine to form a similar or a matching configuration to L1, the task of L2 learners or Arabic becomes easier. Accuracy rates in translating noun phrases in the Of-constructions configuration was consistently an easier task in terms of head-complement ordering than translating nominal compounds that do not run in the same linear ordering of MSA. The most difficult configurations were the ones that run in a reversible head-complement ordering.

In the L1 Arabic-L2 English direction, the acquisition of noun phrase configurations that are equivalent to the Iḍāfah construction poses variable challenges created by the L1 form. Most likely L2 learners of English were not sensitive enough to the fact that the one canonical configuration of Iḍāfah in MSA maps into multiple
permissible configurations in English. Accordingly, they initially started their L2 learning path by transferring the canonical form of the Iḍāfah construction from L1 Arabic into L2 English. They have not developed sufficient metalinguistic awareness that would enable them to map the one canonical form of the Iḍāfah construction into the multiple permissible configurations in English.

It is important to refer to the fact that the above characterization of the initial state of L2 learning is built upon identifying the main pattern of tendencies in learners’ responses in L2 Arabic and English. Still, there are individual responses that do not support the effect of L1 syntactic transfer. I am positing that a number of adequate explanations might account for these deviant patterns in these individual responses.

First is the operation of overgeneralization as a general learning mechanism. In the English-Arabic direction, in the translation task for example, when presented with a head-complement configuration that matches L1, the accuracy rate was 87%. What about 13% percent inaccuracies? I think that these may be systematically attributed to the operation of overgeneralization as a general learning mechanism. L2 learners of Arabic might have overgeneralized that head-complement ordering is different along English and Arabic.

Thus, they rendered the Of-constructions in reversed order where the complement surfaced before the head. Thus, ‘mudiir al-madrasah’ was rendered as ‘madrasat al-mudiir’. Likewise, while working on noun phrases headed by gerunds (e.g., reading books), 1% reversed the head-complement ordering, thus rendering ‘qiraaʔa al-kutub’ as ‘kutub al-qiraʔa’. Ostensibly, the role played by the linguistic input they were exposed to
cannot explain responses like these. This is because the input will never provide any negative evidence that would trigger these individual configurations.

The second adequate explanation for this pattern is that learners have been sensitive to a finely-tuned distinction between *alienable* versus *inalienable* (also known as *possessibles* versus *non-possessibles*) items in the possessive constructions across languages (see Young & Morgan, 1987). This distinction rests on the claim that *alienability* is a semantic universal that is reflected in the morpho-syntactic features of languages. Although languages like Arabic and English have only one class of possessives that does not distinguish between these two categories of possessive items, the possibility that L2 learners may have been sensitive to this distinction is not ruled out. This needs a further study that establishes two conditions that take alienability as a basis of distinction.

The third adequate explanation is the broader area of learner variability. In the L1 English-L2 Arabic direction, 35% of the responses were rendered in the correct head-complement configuration although it does not have the same linear order as in the L1. Similarly in head-complement definiteness, 30% of the responses rendered a correct configuration, although it does not follow L1 configurations. In addition, while working on noun phrases headed by gerunds (e.g., *‘reading books’*), 5% were sensitive to the fact that although the configuration is indefinite in English, in MSA, the definite marker must surface between the head and the complement.

In the L1 Arabic-L2 English direction, 17% of the responses did not follow the linear ordering of the head and the complement. They were sensitive to the fact that this canonical configuration does not necessarily trigger the same configuration in L2 English.
Likewise, when introduced with mismatching head-complement definiteness, 30% were sensitive to the fact that this definiteness configuration does not necessarily translate into a definite equivalent configuration in English.

The patterns that deviate from the main pattern of the responses can be explained by learner variables. Metalinguistic awareness (Bialystok, 1993), executive control (Bialystok, 2001) and noticing (Schmitt, 1990) of the input could have affected the L2 learning path. That is why those participants might have ended up by converting more of the input into intake (VanPatten, 2004). Although I did not have the opportunity to investigate learner variability in another systematic investigation, I believe that these factors played a role in triggering at least some of the response that I outlined above. In other words, noun phrase configurations in the case of those participants could have taken place at a quicker pace than their peers.

Overall, it is safe to conclude that the starting point of SLA is mostly structured by the effect of the dominant language grammatical features. However, it is not driven ONLY by L1 transfer; I found evidence for the operation of overgeneralization as a language learning mechanism. Thus, I conclude that SLA is a complex phenomenon and its initial state is driven by a multiplicity of factors that interact with the effect of the dominant L1.

4.6.2. Form restructuring in form-focused instruction

The second question underlying this investigation asked about the effect of Form-Focused Instruction (FFI) in the acquisition of the Iḍāfah construction in the English-Arabic direction. The results that were presented showed a clear effect of instruction. In the
translation task, there was a gradual improvement from 15% in ARB 101 at the initial state of L2 learning to 38% in ARB 102. In the case of intermediate proficiency at three or four semesters of instruction, the accuracy rate in the Iḍāfah construction jumped to 63%. It jumped to 93% at the advanced proficiency in third year and fourth year Arabic. In the forced choice elicitation task, a better gradual development than the other two tasks was noted. Compare 58% accuracy rate in low proficiency in Arabic 102, and 66% in intermediate and 90% in advanced proficiency.

I strongly believe that this improvement in the two tasks of the study is due to the Focus-on-Form Instruction in Arabic classes that combines both planned and incidental focus on form (see Ellis, 2001). Following Long (1996, 1991), the teaching of the Iḍāfah construction in MSA combines both Focus on Form and Focus on Forms. The textbook that the participants in the study were taught offers a number of sections in the drill and kill format that exclusively address the Iḍāfah construction. This comes in chapter III.

At the same time, there are other fleeting references to the Iḍāfah construction while presenting constructions in Arabic as al-maSdar (verbal nouns or gerunds) in combination with the Iḍāfah (on page 124) in chapter 6. In addition, the Iḍāfah construction is also integrated in meaning-based instruction while teaching how to express reason or cause and purpose. Also, Al-Kitaab 3rd edition on pp. 128-130 integrates the Iḍāfah construction with the preposition ‘li’. In these two types of instruction, Form-Based and Meaning-Based, the Iḍāfah construction receives planned focus on form in intensive coverage and also incidental focus on form in extensive coverage (see Ellis et al., 2001 for more information on the difference between both).
The effect of planned FFI has been found in other pedagogical contexts (e.g. Doughty & Williams; Long, Inagaki, & Ortega, 1998) and the pattern of improvement that I noticed in this investigation confirms this effect. Regardless of the debate about which paradigm to use in meaning-based instruction: explicit planned focus or implied and accidental focus, the results offered refer to potential benefits that L2 of Arabic learners made in the acquisition of the Iḍāfah construction.

The substantial improvement L2 learners made when they shifted from low proficiency (ARB 101 and 102) to intermediate proficiency is a result of pushing learners to attend to form in what Loewen (2005) phrased ‘Focus on Form Episodes’ (FFEs). This improvement was a result of joint processing of form and meaning that facilitates mapping or connections between form, meaning and usage (Doughty, 2001). Instead of focusing on meaning, form-focused instruction must have assisted learners to be engaged in noticing the input (see Schmitt, 2001) that goes unnoticed in purely meaning-based instruction.

Overall, although I did not measure the effectiveness of FFI as part of this investigation, I strongly believe that the gains L2 learners made in the acquisition of the Iḍāfah construction when they moved from one proficiency level to another is attributed to the heavy focus on form in Arabic classes.

4.7. Summary, conclusion and implications

In Arabic-English and English-Arabic directions, this investigation aimed at doing two things: the first was to characterize the initial state of L2 learning of the Iḍāfah construction in MSA and the equivalent noun phrase configurations in English.
I concluded that although the initial state is *mostly* driven by the dominance of L1, this does not exclude the operation of other factors. It has been demonstrated that overgeneralization as a general learning mechanism can adequately explain some of the individual responses in the data, but not all of them. The effect of other learner factors that can account for the variations in the responses was not excluded. The overall pattern is that most of L2 learners transfer noun phrase configurations from L1 into L2, but still there are some responses that show fluctuation between multiple noun phrase configurations.

The second aim of this investigation looked into the role of Focus-on-From Instruction (FFI) in restructuring the form of the Iḍāfah construction. I concluded that the substantial improvement that took place in the acquisition of the head-complement *ordering* and *definiteness* over time is a result of FFI as a pedagogical technique.

Building on the findings of this investigation, I am proposing a number of pedagogical implications for L2 teachers of Arabic and English. First, I am calling for a balance between the dominant communicative methodologies and contrastive analysis approach. This balance will raise learners’ metalinguistic awareness of the similarities and differences between Arabic and English noun phrases. Explicit teaching of these differences in learners’ L1 may have some effect on the internalization of the targeted forms in the developing linguistic system.

For a more effective mapping between form and meaning in teaching the Iḍāfah construction and its equivalent constructions in English I am recommending the
integration of structured input activities (see Van Patten, 2004). I will elaborate more on these activities in chapter V of this dissertation.

For SLA research methodologies, I am also recommending the integration of the bi-directional framework. Although no identical patterns of error types was observed, strikingly similar responses that came as a reaction to the workings of the L1 effect of the dominant language were noticed.

4.8. Weaknesses and future research

This research did not go without weaknesses. First, I still believe that for a systematic characterization of the initial state of L2 learning, documenting the input that L2 learners were exposed to would give us a closer access to the internal workings of the learning mechanisms that maintain interlanguage development. For this to happen, longitudinal studies are needed. These studies will make us form a better understanding of how second language development (see Larsen-Freeman & Cameron, 2008; de Bot, 2008) proceeds as a dynamic process.

The second weakness in this study is that I did not control for learner variables such as executive control and cognitive styles that may have affected the responses. I concluded that these variables might explain the individual responses that deviate from the main pattern of results. I did not proceed with exploring these variables systematically in this investigation, but this is a good starting point for a future research line.
5.1. Introduction

This three-article dissertation explored the acquisition of three categories of noun phrases (plural nouns, singular nouns and nominal compounds) in L2 Arabic and English, two of which were in a bi-directional framework. This research project was motivated by three aims: first is to explore the systematic reasons for errors in the definite marker in these three types of noun phrases in L2 Arabic and English. Second is to attempt to characterize the initial state of learning these three types of noun phrases, which is of much significance in understanding later stages of language development. Third, in the English-Arabic direction, this study aimed to document errors in these noun phrases and to explore the interlanguage development of noun phrases when L2 learners move from a proficiency level to another.

In this concluding chapter I do three things: first, the results of the three studies are summarized. Second, these results are situated in a broader SLA theory. Third, a number of pedagogical implications that integrate SLA theory and practice in teaching these noun phrases are offered. These implications act as pedagogical tools that help teachers of Arabic and English teach the three noun phrases effectively. In doing so, I depart from some insights from a form-meaning mapping approach (see VanPatten, 2004; VanPatten, William & Rott, 2004) and explicit knowledge (see Rebuschat & Williams, 2012) that help L2 learners attend to form while processing L2 input.
5.2. Summary

In the first study in chapter II, I explored the acquisition syntax-semantics interface of plural noun phrases that carry generic and specific readings in a bidirectional framework, L1 Arabic- L2 English and L1 English-L2 Arabic. Special focus was given to the definite and indefinite noun phrase configurations in these plural noun phrases. I started with a common difference between Arabic and English in generic plural nouns: whereas Arabic uses a definite plural noun phrase configuration, English uses an indefinite (i.e., bare) one.

This difference was couched in the definiteness-specificity distinction made by Ionin et al. (2009). I also characterized this difference as a case of interface between syntax (i.e., form) and semantics (i.e., meaning); whereas generic plural noun phrase configurations carry a straightforward relationship between definiteness and specificity in English, they carry an indirect/interface relationship in Arabic. Being an indirect configuration, the Interface Hypothesis (Sorace, 2011) predicted that this configuration will be harder in the L1 English-L2 English direction, but not in the L1 English-L2 Arabic one.

I concluded that L2 learners in both directions at the initial stage of L2 learning face similar difficulties and the accuracy rates do not reflect any real difference. This result was approached in terms of the effects of the dominant language at the initial stage of L2 learning and the Full Transfer Hypothesis (see Schwartz & Sprouse, 1996). It was also approached in term of Lardiere’s view (2008, 2009) of L2 learning as a process of feature selection versus feature (re)assembly. Since Arabic and English are +article languages, I concluded that the task of L2 learners in both directions is to
reassembly/reassign the meaning whether generic or specific to definite or indefinite configurations in both languages. The role of input in Instructed SLA was highlighted as a main tool in accelerating this reassembling process.

Although the main conclusion in this investigation refers to a clear effect of the dominant language, I posited that it is still possible to recover from this effect. The integration of the semantics of the definite marker in L2 teaching of Arabic and English was highlighted as a key implication in L2 teaching.

The second study in chapter III aimed at confirming the main conclusion of the first investigation. It did this by testing the effect of L1 syntactic transfer in the acquisition of generic singular noun phrase configurations at the initial state in the L1 English-L2 Arabic direction. Generic singular noun phrase configurations in MSA were selected as a case study because they are strikingly similar to and different from English. I contrasted between two conditions: a matching condition and a mismatching condition. Results showed that there are consistently positive and negative transfer effects that reflected the matching and the mismatching conditions respectively. However, there were some variations that I approached in term of the complexity of task demands. I concluded that form-meaning mapping is mediated by the effect of the dominant language. Although the acquisition of noun phrases is a developmental and gradual process, it is mostly affected by in its initial state by the typological proximity or distance between L1 and L2.

The third study explored a more complex type of noun phrases; namely the definite Iḍāfah construction in MSA and its equivalent noun phrase configurations in English in L1 Arabic-L2 English and L1 English-L2 Arabic directions. It started with a common
difference between MSA and English: although in MSA there is a canonical configuration in terms of head-complement ordering and head-complement definiteness, English is tolerant of more than one permissible configuration. I operationalized the acquisition of this construction in terms of head-complement *ordering* and head-complement *definiteness*.

Results showed a clear effect of L1 transfer in both directions; knowledge of L1 noun phrase configurations acts as the initial step in L2 learning. However, both communities of L2 learners face problems that vary according to the L1 noun phrase configuration at hand. L1 English-L2 Arabic learners at the initial stage of L2 learning have not developed sufficient metalinguistic awareness that enables them to map the multiple configurations from their L1 into their L2. Similarly their L1 Arabic-L2 English counterparts have not developed such an awareness that makes them able to map the one canonical configuration in MSA into the multiple noun phrase configurations in L2 English.

However, in the L1 English-L2 Arabic direction, learners reached a satisfactory level of performance in the Iḍāfah construction after two years of instruction in the intermediate level. I approached this finding as a result of intensive Focus-on-Form Episodes (see Loewen, 2005) that the Iḍāfah construction receives in Arabic instruction.

Overall, results of these three investigations refer to a clear effect of the dominant language in the acquisition of the noun phrase configurations in the initial state of L2 learning. Below this effect is situated in a broader SLA theory.
5.3. Implications to SLA theory

5.3.1. L1 effect and typological proximity in the initial state of L2 learning

The introductory parts in the three investigations referred to the long-standing debate in SLA theory on the initial state of L2 learning. I referred to three conflicting views: the Full-Transfer Hypothesis, the developmental view and the selective view, which is a combination of both.

The overarching results of the three studies strongly confirm the Full Transfer Hypothesis (Schwartz & Sprouse, 1996) that postulates that the entirety of L1 grammar drives the initial state of L2 learning. The three research studies in the three research instruments: translation, forced choice elicitation and grammaticality judgment, have offered strong evidence that there is a general tendency to transfer noun phrase configurations from L1 into L2. I posit that in L2 learning of noun phrases, when the same meaning (whether generic or specific), is rendered in different forms (whether definite or indefinite), second language learners at the initial stage tend to transfer their knowledge of these forms from their L1 into L2.

I came to this conclusion since in most of the testing items providing some guiding words facilitated the targeted reading of the sentences. Given that the reading was clear, the underling aim of this procedure was to see whether L2 learners would transfer their L1 noun phrase configurations to the L2 or not. I concluded that the form (definite or indefinite)-meaning (generic or specific) mapping of noun phrases across the three constructions of the study is mostly mediated in its initial state by L1 configurations.

The L1 effect that I documented in these three studies in the Arabic-English and English -Arabic directions has been recorded in the other noun phrase SLA studies.

However, I need to highlight that the results I provided and the ones that I referred to are all from + article languages, and what applies to + article languages may not necessarily apply to – article languages. Few studies (see Ionin et al., 2004) investigated this difference and provided evidence that in – article languages, learners at the initial state generally fluctuate between multiple noun phrase configurations. In either case, for restructuring L2 forms, input frequency and clarity and explicit instruction are necessary tools. When the restructured forms are internalized into the linguistic system, they become entrenched and this results in the ultimate stage in L2 learning.

This proposal of L2 learning processes of definite and indefinite noun phrases acquisition is captured in the representation below:

\[
\begin{align*}
\text{Initial State} \rightarrow \quad & (1) \ + \ 	ext{Article languages:} \\
& \text{L1 Transfer overrides} \\
& \text{OR} \quad + \\
& \text{Input clarity} \\
& \rightarrow \quad \text{Input frequency} \\
& \rightarrow \quad \text{Explicit instruction} \\
& \rightarrow \quad \text{Form restructuring} \rightarrow \\
& \rightarrow \quad \text{Entrenchment} \rightarrow \\
\text{Ultimate State} \\
\end{align*}
\]
Although the main pattern refers to a clear effect of L1, this effect shows variations across different noun phrase configurations. Let’s take one task in one direction and compare the accuracy rates across the three studies. For example, in the English-Arabic direction with low proficiency learners, the accuracy rate in selecting plural noun phrase configurations that matched L1 configurations was 80%, and it was 85% in case of generic singular nouns and 87% in case of the Iḍāfah construction.

Similarly, accuracy rates in selecting a noun phrase configuration that mismatched L1 configurations also showed some variations: it was 11% in case of plural nouns, 26% in case of singular nouns and for the Iḍāfah, it was 35% in case of head-complement ordering and 30% in case of head-complement definiteness. These variations have been noticed in the other two tasks of the study. Thus, there are variable difficulties that range according to the noun configuration at hand.

Among the three noun phrase constructions, results of the three studies show that the acquisition of the Iḍāfah construction, which is perceived by teachers of MSA to be one of the most difficult structures in SLA of MSA, follows a quicker pace than the other two constructions. The acquisition of the definite marker in plural noun phrases that carry generic reading in Arabic are the hardest. I believe that this effect is attributed to the

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**Figure 5.1.** L2 processes of noun phrase acquisition in +/- article languages

5.3.2. Variable difficulties
Focus-on-Form Instruction that was followed in teaching the ʾIdāfah construction in Arabic. I will get back to this implication in the pedagogical applications section.

5.3.3. Learner factors

The effect of the dominant L1 interacts with other learner factors in L2 learning. Although the main pattern that has been noticed across the three studies in the three different types of noun phrases is a clear effect of L1, there are variations and individual responses that remain to be explained by other factors.

In the first investigation on the acquisition of the definite marker in plural noun phrases, although the main pattern was a clear effect of L1, still 11% were able to assign a correct noun phrase configuration although it mismatches their L1 in the English-Arabic direction. This percentage was 20% in the Arabic-English direction. These variations raise complex questions about the multiplicity of factors that show the complex nature of L2 learning.

It has been demonstrated that general learning mechanisms, especially overgeneralization, can also explain some of the data that deviate from the main patterns. Another factor may be the role played by the frequency and the clarity of the input (Alhawary, 2013) that could have changed L2 learners’ knowledge of the noun phrase configurations from being declarative into procedural (Knight, 2006; Mitchell, Myles & Marsden, 2013). In other words, their knowledge of the differences between noun phrase configurations in L1 and L2 made their way into their developing linguistic system, and they are used in combination with other constructions in real time production.
5.4. Pedagogical implications

The pedagogical implications are going to be divided into two parts. The first part will offer practical implications in terms of textbook writing that will focus on the integration of the contrastive analysis in L2 teaching of Arabic and English noun phrases. The second part will focus on the integration of structured-input activities in teaching the three constructions that were explored in this investigation.

5.4.1. Textbook writing

One of the implications of the three results in this investigation is the balance between contrastive analysis and communicative methodologies. With the dominance of the communicative methodologies in the last decades in L2 teaching, there was some misunderstanding that there is a marginal role for grammar instruction. The main trend was to focus on meaning with less emphasis on form to improve fluency (Al-Hawary, 2009, 196-97). I am calling for a renewed interest in the contrastive/typological analysis of language forms across L1 and L2.

For the first investigation on generic and specific plural noun phrases, I am calling for integrating the semantics of the definite marker in textbooks when teaching plural nouns in L2 Arabic and English. Explicit instruction of the semantics of the definite marker whether they carry a generic or specific reading needs to be highlighted in textbooks.

The current focus in teaching materials is on teaching the forms of plural nouns whether they are regular or irregular. In the English-Arabic direction, for example, it can be easily observed that current textbooks do not highlight the differences between plural
nouns in terms of genericity or specificity. Textbooks and curricula designed from a structural perspective offer very brief references to the semantics of the definite marker with plural nouns (see the Revised Edition of Intermediate Modern Standard Arabic, page 159). Communicative-based textbooks (see Al-Kitaab fii Ta‘allum Al-CArabiyya) do not refer to the semantics of the definite article with plural nouns.

For the second investigation, I am recommending a systematic typology of the differences between Arabic and English generic singular nouns. Although textbooks for teaching Arabic as a foreign language refer to some of these differences (see the Revised Edition of Elementary Modern Standard Arabic, pp. 156-157 and Al-Kitaab fii Ta‘allum Al-CArabiyya Part I, third edition pp. 14-15), I recommend the integration of detailed typology of singular noun phrase configurations whether definite or indefinite. It is interesting that both Arabic and English show similarities and differences at the same time in the behavior of the definite marker with generic singular nouns. I highlighted these differences in at the introductory part of chapter III of this dissertation.

More importantly, in MSA the generic singular noun phrase configuration changes according to the distribution, whether in the subject or in the object distribution, and even these constraints vary between MSA and the dialects. I do recommend that these differences be taught while presenting these nouns as vocabulary items. A good way to integrate these differences is to highlight the definite versus indefinite configurations of these nouns when teaching basic functions. For example, when teaching likes, dislikes, and hobbies, special focus needs to be given to the definiteness configurations.
For the third investigation of the study, I recommend typological comparisons between noun phrase configurations in Arabic and English. Materials need to be integrated in the textbooks to activate L2 learners’ awareness of the typological differences between MSA and English. For L1 Arabic-L2 English learners they need to be explicitly taught that the one canonical configuration in MSA is mapped into multiple noun phrase configurations in English. Their L1 English-L2 Arabic counterparts need to know that multiple noun phrase configurations in English map into one canonical configuration in MSA. It has been demonstrated that L2 learners in both directions have not developed sufficient metalinguistic awareness of mapping these nominal noun phrases from L1 to L2. Two basic components that need to be highlighted in these nominal constructions are the head-complement ordering and head-complement definiteness.

Since textbook materials go hand in hand with pedagogical activities, the section below offers a number of these activities that train L2 learners on how to establish form-meaning mappings while learning multiple noun phrase configurations.

5.4.2. Pedagogical techniques

5.4.2.1. Form-meaning mapping in structured-input activities

I think that the Processing Instructional (PI) model (VanPatten, 2004) is one of the adequate models that can be used for teaching the three noun phrases that were explored in this study. This is for a number of specific reasons.

First of all, PI underscores form-meaning mapping strategies as the cornerstone of language acquisition. That is, a learner notices a form and at the same time determines its
meaning (VanPatten, 2004:5): “Input processing doesn’t mean only perception (getting the acoustic signal, Wolvin & Coakley, 1985) or noticing (conscious awareness of form, Schmidt, 1990), but it is a complex process that integrates form perception and noticing, and assigning meaning to that form. It is “an account of intake derivation that occurs in working memory during on-line comprehension (Sanz & VanPatten, 1998: 264)”. It looks at the form-meaning connection as an intermediate stage between inputs (linguistic data that surrounds learners) and intakes (data filtered correctly or incorrectly, restructured and internalized in the developing system) (VanPatten, 1996; Cadierno, 1992).

Second, as a framework in L2 pedagogy, the PI model maximizes form-meaning connections by identifying the internal incorrect processing strategies of L2 learners that delay acquisition. In the words of VanPatten (1996), PI is “a type of instruction whose purpose is to affect the ways learners attend to input data” (p. 2) whose purpose is “to alter how learners process input and to encourage better form-meaning mapping that results in grammatically richer intake. This in turn should have a positive effect on the nature of the developing system.” (p. 6). Thus, the primary role of L2 teachers is to intervene in such a way as to ensure that L2 learners make appropriate form-meaning mapping. L2 learners need to be informed about their wrong processing strategies.

The overarching conclusion that the three studies made across the three investigations is that L2 learners transfer their knowledge of L1 noun phrase configurations into their L2. If these configurations match their L1 forms, there is a positive effect and if these mismatch them there is negative transfer. But how to intervene in a way that alters the wrong form-meaning mappings or connections in noun phrases
should be of much significance in classroom practices. According to the PI model, referential structured input (SI) activities are a very good tool to foster these connections (Wong, 2004).

These activities aim at providing the target form or feature, either morphological or syntactic, and “force the learners to attend to this form by asking them to decide, from two options, its meaning or function” (Marsden & Chen, 2011: 1057). Therefore, they help learners overcome their tendencies to process the input using the wrong processing strategy by providing both positive and negative evidence (Marsden & Chen, 2011: 1061).

The first type of these activities is the choice between two or more options or alternatives. Since noun phrase configurations need to be contextualized in meaningful instruction, this study recommends the incorporation of these in contexts that fit into the proficiency level/s of the learners in both directions. In the case of plural and singular noun phrases, these options will force learners to decide on the right in/definiteness configurations. In the context of the Iḍāfah construction these options will offer multiple noun phrase configurations that offer variants in head-complement ordering and head-complement definiteness. These activities also provide constructive feedback.

The second type of activities asks learners to express different noun phrase configurations phases in L2. In the case of singular and plural noun phrase configurations these need to be incorporated in meaningful contexts. In the case of the Iḍāfah construction in the English-Arabic direction, this can be done in a way that moves from simple to complex: for the simple part learners are asked to prepare the language forms with the help of L1 prompts. This provides opportunities to test L2 learners’ knowledge of
how multiple configurations in English are rendered in one canonical configuration in MSA in the case of the Iḍāfah construction. This can be followed by pedagogical activities that incorporate these ready-made configurations in meaningful contexts.

I have noted that not so many pedagogical materials were sensitive to this idea of presenting the typology of multiple noun phrase configurations and training L2 learners on how to render these in the target L2, except for a few online tools. Arabic Without Walls 1, for example, is sensitive to this form-meaning mapping, but it provides only one type of activities, which asks L2 learners to provide the correct configuration in MSA.

The third type of activities is picture description. For this activity, learners can be provided with a picture that provides a context that triggers some noun phrase for first mention in discourse. This type of activities moves from the sentence level to the discourse level.

The fourth type of structured input activities is error detection and correction. This activity is straightforward: it offers learners a context that has multiple noun phrase configurations, some of which are wrong and others that are right. Learners are asked to identify the errors in these noun phrase configurations and correct them. Individual feedback should also follow.

One would ask about the difference between activities as the ones that I explained above and what is done in traditional instruction or in meaning-based instruction. First, all these activities in traditional classes come as part of the practice stage in the pedagogical sequence and not in the input presentation stage. The basic advantage of the structured-input activities in the PI model is that they move these activities earlier in the sequence so
that more form-meaning mapping is maintained. This will lead to more in/uptake from the
input that L2 learners are exposed to. In meaning-output instruction, few of these activities
are be used since the focus is purely on meaning. This difference between the PI model
and the traditional model is depicted in the representation below by Cadierno (1995):

![Diagram of differences between traditional instruction and input processing instruction]

**Figure 5.2.** Differences between traditional instruction and input processing instruction

Two basic critiques have been made against the PI model: decontextualizing the
language forms (see extended critiques by Batstone, 2002a, 2002b) and lack of output
activities (see Swain, 2000; Ellis, 2005). I believe that the integration of noun phrase
configurations that combine with other structural features in real life tasks that speak to
the functions of the language is a good pathway that minimizes these critiques.

**5.4.2.2. The role of explicit instruction**

The final implication that is recommended in this study is the role of explicit instruction. It
is recommended as an important step in the integration of the structured-input activities in
second language instruction. I call for a renewed interest in Contrastive Analysis as one of
the pedagogical tools that raise L2 learners’ awareness of the differences between L1 and
L2 noun phrase configurations. Presenting these typological differences in learners’ L1
does not impede the progression of L2 learning. In the third investigation of this dissertation it has been demonstrated that progression in the acquisition of the Iḍāfah construction was at a faster rate than the other two instructions. I approached this finding as a result of explicit instruction and focus on form.

The debate on which one is more effective in adult learning: explicit instruction or implicit instruction tends to be resolved for the side of explicit instruction in adult learning. This is an implication of the Fundamental Difference Hypothesis between L1 and L2 learning (Bley-Vroman, 1989) that postulates, “adult learners have lost most of their ability to acquire language implicitly” (Abrahamsson & Hyltenstam, 2008). Although still few research studies support the possibility of L2 learners to acquire some of the morph-syntactic features implicitly (see Williams, 2009), there is now consensus among SLA practitioners that although some of L2 learning is implicit, conscious and explicit knowledge is clearly related to improved L2 performance (Rebuschat & Williams, 2012).

The fact that the definite marker in particular as a frequent function word in the three noun phrase configurations that I explored is unstressed and hard to discern by L2 learners implies that it has to be taught explicitly. I do not expect many learning gains if definiteness versus indefiniteness configurations and head-complement ordering and definiteness were taught implicitly in L2 adult contexts.

Since there is no doubt that explicit instruction plays a role in the teaching approach that I am recommending, it can be integrated into the inductive or the deductive teaching of grammar in a way that matches the preference of L2 learners of which learning
and cognitive style (see Dörnyei & Skehan, 2003) they employ learning. Although the inductive approach to teaching grammar has been commonly associated with the implicit learning paradigms where learners may infer grammatical rules without awareness (DeKeyser, 1995), some researchers in L2 learning paradigms (see Jean & Simard, 2013) now posit that explicit instruction can be used in both inductive and deductive grammar teaching. The difference between them lies in when the explicit instruction appears in the pedagogical sequence in teaching grammar. For the inductive paradigm, it supports the presentation of many examples of the grammatical rule and then asking them to induce the rules from these examples; whereas in the deductive model they are introduced into the rules first then they are presented with the examples (Ellis, 2008b). The basic advantage of the first approach allows learners to discover the rules themselves, first they they are provided with the explicit explanation.

For the purpose of this dissertation, I am recommending this approach to teaching the noun phrase configurations that were explored in the three investigations. This can be procedurally done in the following way: for the first investigation, both L2 teachers of Arabic and English start with presenting learners with a number of authentic language samples and a number of guided questions that walk them through the process of discovery. They are asked to develop their own hypotheses for the differences between L1 and L2 noun phrase configurations. They finally come up with their own rules that sum up the differences between L1 and L2. They may not be presented with the ‘official’ rules as stated in the grammar books until they redefine these rules based on new authentic samples that offer variants until they are exposed to teacher feedback, peer feedback and
evidence and counter evidence in new linguistic input. This is followed by practice activities and communicative tasks that are integrated in the sequence for consolidation purposes.

### 5.5. Future research

This research project has some weaknesses that I take as starting points for future research projects in the near future. First, I aimed at characterizing the initial state of L2 learning and I used classroom levels (i.e., ARB 101 and ENG 101) and very low proficiency levels as preliminary ways to identify this initial state. I did not operationalize it in terms of how much input the participants in the two directions of the study were exposed to. I did not record the target language input and check it against early learners’ language. This needs a new project that may work on noun phrases configurations and other structural features in MSA.

I recently got in contact with the **VILLA** (Varieties of Initial Learners in Language Acquisition) research project team in Europe that looks specifically at five languages, French, German, Dutch, English, and Italian. The addition of Arabic as a Semitic language using a different script and a different morphological system, may add, I think, significant insights in the characterization of the initial state of L2 learning.

Building on this accurate characterization of the initial stage there is another aim that looks into interlanguage development as a dynamic process. Examining how interlanguage development is systematic and variable at the same time and exploring the
factors that underlie this systematicity and variability require longitudinal studies over extended periods of exposure.

Equally important as analyzing the main patterns of earlier learner language is the attempt to uncover the possible learner variables that may account for the individual paths in L2 learning. I think three possible areas need to be investigated in the future: (1) why some learners develop metalinguistic awareness of the differences between L1 and L2 earlier than others; (2) under which conditions exactly some learners change input into in/uptake; (3) whether individual cognitive styles play a role in attending to or noticing new inputs. It is established in SLA theory that L2 learners do not attend to input in the same way: some learners are able to dissect its components, and are thus categorized as analytic or field independent learners, while others are not, and are thus categorized as holistic or field dependent.

Third, although I documented a clear effect for L1 noun phrase configurations, I did not answer the question whether L2 learners access this knowledge consciously or unconsciously. In other words, were our participants aware whether are transferring their L1 knowledge at the initial state? I think that using think-aloud protocols may give us access to their internal mechanisms of L1 dominant language transfer. It may help them verbalize the procedures they followed while working on the tasks of the study.

I counterbalanced data collection by three research instruments, all of which looked into the written production: written translation, errors detection and correction or grammaticality judgment and forced choice elicitation. I recommend that other studies should look into the acquisition of the same types of noun phrases in spoken production.
It is also important to refer to the fact that what the three studies have shown about the acquisition of the definite marker in the three noun phrase configurations whether definite or indefinite demonstrates how the process of their acquisition proceeds. Complementary to this aspect is the attempt to explore in which areas in the brain definite and indefinite noun phrases are processed. Recently, there is an interest in investigating the processing of the definite and indefinite noun phrases in cases of agrammatism (Ruigendijk & Baauw, 2007), but very few studies were conducted on the processing of the determiners and other functional words across languages. Little is known about the areas that are activated in the brain on processing these functional words.

Since the behavior of the definite marker in plural noun phrases in MSA is similar to its behavior in some Romance languages, it is adequately important to look at the acquisition of the definite marker in Arabic by Spanish L1 speakers. Likewise, for Hebrew that is a Semitic language that has the same concept of the construct state or the Iḍāfah construction, it is may be also important to look into the acquisition of the construct state in Arabic by L1 Hebrew speakers.

Also for the acquisition of the Iḍāfah construction, in the third study the focused was on the acquisition of this construction in MSA. Since the spoken varieties of Arabic have their own canonical configurations that, it is very important to look in the future into the effect of these configurations on the acquisition of their equivalent noun phrase configurations in the Arabic-English direction.
Last, this dissertation focused only on three cases of definite and indefinite noun phrases in MSA and in English. Future research may consider the acquisition of other semantic and syntactic features of other aspects of the definite marker in the languages.

As for the pedagogical implications, future research may test the effectiveness of the Processing Instructional (PI) model in teaching the three noun phrases that were explored in this study. This study can compare and contrast between the effectiveness of the Structured-Input Activities combined with inductive teaching of grammar and Structured-Input Activities when combined with the deductive method.
APPENDICES

APPENDIX A: PLURAL NOUNS IN TRANSLATION IN ENGLISH-ARABIC

DIRECTION

Name (optional): ______________ Level: _________
First language: ______________

Read the following sentences then translate them into Arabic to the best of your knowledge:

1. This department has a lot of good teachers.

2. The new universities which I worked in New York were really good.

3. What is the best job you like to do in the future?

4. Dogs are pet animals.

5. The big libraries that I go to at the University of Arizona are very good.

6. What is the oldest university in America?

7. Stories attract children.

8. I like to read about history.

9. The students with whom I did Arabic last year loved the teacher just a lot.

10. Big cities are always crowded.

11. Do you listen to the radio every day?
12. The translators with whom I worked in this office used to work for 10 hours every day.

13. Cars run on petroleum.

14. Who wrote this letter you?

15. The stories which I read this summer were very boring.

16. I earned a lot of money from the jobs that I worked at this year.

17. They like to study Spanish this year.

18. Students always look for scholarships.

19. The TAs in this college are always busy as they study and teach.

20. Broad streets are important in any big city.

21. The teachers who joined this college teach very well.

22. Maha studies English literature at New York University.

23. Brothers usually help each other.

24. The banks that are close to the University of Arizona help new students a lot.

25. Newspapers usually come out in the morning.

26. My house has a beautiful garden.
27. The news that I read this morning about Syria is very bad.

28. Friends usually go to the cinema together.

29. Libraries are good places to read your favorite books.

30. My family has three new cars.
APPENDIX B
PLURAL NOUNS: TRANSLATION IN ARABIC-ENGLISH DIRECTION

Read the following sentences then translate them into English to the best of your knowledge.

1. هذا القسم فيه الكثير من الأستاذ.
   department

2. الجامعات الجديدة التي عملت فيها في نيويورك كانت جيدة.
   which

3. ما هي أفضل وظيفة تريده تعلمت فيها في المستقبل؟
   . pet animals

4. الكلاب حيوانات أليفة.
   good

5. المكتبات الكبيرة التي ذهبتها إليها في جامعة أريزونا جيدة جدا.
   جدا.

6. ما هي أقدم جامعة في أمريكا؟
   المقصص تجذب الأطفال.

7. القصص تجذب الأطفال.
   attract

8. أنا أريد أن أقرأ عن التاريخ.
   the translations who studied Arabic the past liked the professors a lot.

9. الطلاب الذين درست معهم العربية العام الماضية يحبون الأستاذ كثيرا.
   like

10. المدن الكبرى دائما مزدحمة.
    crowded always

11. هل تستمع إلى الراديو كل يوم؟
    . crowded always

12. المترجمون الذين عملت معهم في هذا المكتب كانوا يعملون لعشر ساعات كل يوم.
    office day
13. The cars run on oil.

14. From which book is this letter?

15. Which of the stories did you read?

16. Which accounts for the most money of the employees that worked here this summer?

17. I want to study Spanish this year.

18. The students always look for scholarships.

19. The faculty members who joined this college are very busy.

20. The wide streets are very important in any large city.

21. The teachers who joined this college are very busy.

22. The newspapers usually come out in the morning.

23. The garden in my house is very beautiful.

24. The news this morning was very bad about Syria.

25. The friends usually go to the cinema together.

26. The postcard near my house is very beautiful.

27. The news that she read this morning was very bad.

28. The friends usually go to the cinema together.
المكتبات أماكن جيدة لقراءة الكتب المفضلة.

عائلةي عندها ثلاث سيارات.
APPENDIX C
PLURAL NOUNS IN ERROR DETECTION AND CORRECTION IN ENGLISH-ARABIC DIRECTION

Name: ___________ Level/class: ___________
First language: ______________

Read the following sentences in Arabic then identify errors if any by underlying them. In case you identify any errors, correct them in the space provided next to each sentence as in the example provided in (1).

5. هذا البيت كبيرة جدا. ___________________ كبير

6. زميلتي تعمل أساتذة في جامعة القاهرة. ___________________

7. هذه الجامعة ليس لها تاريخ طويل. ___________________

8. هم يعملون في الأمم المتحدة. ___________________

9. الكلاب حيوانات أليفة. ___________________

10. أفراد أسرتي يذهبون إلى السينما كثيرا. ___________________

11. أطفال في هذه العائلة يحبون الكمبيوتر كثيرا. التلفزيون كثيرا. ___________________

12. بعض الناس اليوم لا يشاهدون some watch. ___________________

13. هو مشغول الدراسة. busy. ___________________

14. الجامعات التي عملت بها في مدينة نيويورك كانت كبيرة. worked. ___________________

15. في أي الساعة تعود إلى البيت؟ return. ___________________

16. هم درسوا الأسبانية العام الماضي. Spanish. Last year. ___________________

17. الطائرات سريعة جدا. very fast. ___________________

18. هم يخرجون إلى السينما كل يوم. go out. ___________________

19. أنا وأحمد ندرس في نفس الجامعة. the same University. ___________________

20. دجاج لذيذ جدا. very delicious. ___________________

21. الدراسة في جامعات اليوم أسهل من الماضي. easier. ___________________

22. صفوف في كلية دراسات الشرق الأوسط. college. ___________. ___________________

23. البنوك القريبة من الجامعة في مدينة توسان. help. ___________________
24. هم سوف يقضون كل الصيف في مصر.
25. القطر تجري بسرعة.
26. درس محمد وسامي وخالف اللغة الإسبانية السنة الماضية.
27. اشترتها العام الماضية كانت سريعة.
28. ما هي أكبر جامعة في مصر؟
29. أطفال يحبون الكمبيوتر.
30. قصص تجذب أطفال كثيرا.
31. زميلاني يدرسوا في جامعة كبيرة في فرنسا.
32. المساعات المصنوعة من الذهب في هذا المحل غالبة جدا.
33. ماذا تدرس في الجامعة؟
34. جامعة هارفارد هي قديمة جامعة في أمريكا.
35. المدن الكبرى دائما مزدحمة.
36. السنة القادمة أخواتي يحضرون إلى أمريكا للدراسة.
37. طلاب الذين يدرسون معي في صف العربية يحبون الصف كثيرا.
38. هذه الجامعة لها تاريخ طويل جدا.
39. أعود في عملي الساعة السادسة في المساء.
40. خضروات مفيدة جدا.
41. هو يسكن في بيت كبير مع أسرته.
42. المحاضرات التي يعطيها هذا الأستاذ ممتازة.
43. هل أنت تحب هذا المدينة؟
44. السيارات تسير بالبرول.
45. زميلي عنده سيارة جديدة.
46. عائلات التي سكنت معهم السنة الماضية في فرنسا كانت لطيفة جدا.
47. هي تدرس لتحصل على الماجستير في هذه السنة.
48. لا أعمل الآن بسبب دراستي. (I don't work now because I have studies.)
49. أطباء يساعدون المرضى. (The doctors help the patients.)
50. أنا أنزل من بيتي في الساعة الخامسة صباحاً. (I leave my house at 5am.)
51. المجلات التي تحبها ابنتي دائمًا ملونة. (The magazines that my daughter loves are always colorful.)
52. أنا سوف تدرس اللغة الإنجليزية. (I will study English.)
53. أطباء يساعدون المرضى. (The doctors help the patients.)
54. أنا أنزل من بيتي في الساعة الخامسة صباحاً. (I leave my house at 5am.)
55. المجلات التي تحبها ابنتي دائمًا ملونة. (The magazines that my daughter loves are always colorful.)
56. أنا أنزل من بيتي في الساعة الخامسة صباحاً. (I leave my house at 5am.)
57. المجلات التي تحبها ابنتي دائمًا ملونة. (The magazines that my daughter loves are always colorful.)
58. نفاد الذين سكنت فيها الصيف الماضي. (The people who lived last summer.)
59. فندق الذي سكنت فيه القدماء. (The hotel where we stayed.)
60. نفاد الذين سكنت فيها الصيف الماضي. (The people who lived last summer.)
61. أنا أنزل من بيتي في الساعة الخامسة صباحاً. (I leave my house at 5am.)
62. المجلات التي تحبها ابنتي دائمًا ملونة. (The magazines that my daughter loves are always colorful.)
63. نفاد الذين سكنت فيها الصيف الماضي. (The people who lived last summer.)
64. المجلات التي تحبها ابنتي دائمًا ملونة. (The magazines that my daughter loves are always colorful.)
65. نفاد الذين سكنت فيها الصيف الماضي. (The people who lived last summer.)
66. أنا أنزل من بيتي في الساعة الخامسة صباحاً. (I leave my house at 5am.)
67. المجلات التي تحبها ابنتي دائمًا ملونة. (The magazines that my daughter loves are always colorful.)
68. نفاد الذين سكنت فيها الصيف الماضي. (The people who lived last summer.)
69. المجلات التي تحبها ابنتي دائمًا ملونة. (The magazines that my daughter loves are always colorful.)
70. المجلات التي تحبها ابنتي دائمًا ملونة. (The magazines that my daughter loves are always colorful.)
البنايات في المدن الكبرى عالية جدا.

هذه هو أكبر مدينة في ولاية كاليفورنيا.

أخبار التي قرأتها عن سوريا اليوم ليست جيدة.

ال журائد تصدر كل صباح.

ابنتي الصغيرة تحب المكرونة كثيرا.

المهندسون الذين يعملون في هذه الشركة يسافرون كثيرا.

في هذا الصف الطلاب أردنيون يدرسون معنا.

أنا نسيت الأسماء العربية التي حفظتها.

very high

Syria

come out

macroni

who

company

which

forgot
APPENDIX D

PLURAL NOUNS IN ERROR DETECTION AND CORRECTION IN ARABIC-ENGLISH DIRECTION

Name: ___________ Level/class: _________ First language: ___________

اقرأوا الجمل التالية باللغة الإنجليزية ثم تعرفوا على الأخطاء إن وجدت. وفي حالة التعرف على الأخطاء قوموا بوضع خط أسفلها ثم قوموا بتصويبها في الفراغات أسفل كل جملة كما هو مبين في المثال الأول في رقم 1.

1. This house are very big. _________ is ___________
2. My colleague works as a teacher at Cairo University. ___________
3. This university does not has long history. ________________
4. They work for the United Nations. ________________
5. Dogs are pet animals. ________________
6. My family members goes to the cinema a lot. __________
7. The children in this family like computers a lot. __________
8. Some people do not watch TV a lot nowadays. __________
9. He is busy with work. ___________
10. The universities that I worked at in New York were very big. ____________

11. At what the time do you return home? __________
12. They studied Spanish last year. __________
13. Planes are very fast. __________
14. They go to the Cinema every day. __________
15. Mahmoud and I studies in the same university. __________
16. The Chicken is very delicious for lunch. __________
17. Studying in today’s universities is easier than the past. ________
18. The classes in this college are very interesting this year. ________
19. Banks that are close to the university help students a lot. __________
20. They will spend all summer in Egypt. __________
21. Cats run fast. __________
22. Mohammed and Samy studied Spanish last year. __________
23. Bikes that I bought last year were very fast. __________
24. What is the biggest university in Egypt? __________
25. The children like computers. __________
26. My colleagues study at a big university in France. __________
27. The watches that are made of Gold in this shop are very expensive. __________
28. What do you like to study at the university? __________
29. The stories attract the children. __________
30. Harvard University is the old university in America. __________
31. Big cities are always crowded. __________
32. Year next my brothers will come to study in America. __________
33. Students who joined the class late did not like the class a lot. __________
34. This university has long history. __________
35. I return home to my work at six o’clock at night. __________
36. The vegetables are very useful. __________
37. He lives in a big house with his family. __________
38. The lectures given by this teacher are very good. __________
39. Do you like this city? __________
40. Cars run on petrol. __________
41. My colleague has a new car. __________
42. The families with whom I lived last year in France were very nice. __________
43. She is studying to obtain an M.A. this year. __________
44. I do not work now because I am also studying. __________
45. The doctors help the patients. __________
46. I leave home at five o’clock in the morning. __________
47. The magazines that my daughter likes are always colorful. __________
48. I will studying English. __________
49. The children learn the languages fast. __________
50. My colleague have been working in Turkey since 2005. __________
51. Hotels at which I lived in last summer were very good. __________
52. They live in a beautiful house. __________
53. The women like shopping and the men like politics. __________
54. Samira teaches at the University of Arizona. __________
55. Mosques in the city of Cairo are full of people. __________
56. I will study geography next year. __________
57. Children like to read about animals.__________
58. I do not want to study at this university.__________
59. The departments at the college of arts كليّة الآداب at Cairo University are very good.__________
60. The libraries at the University of Arizona are very good.__________
61. They will start working for this university last year.__________
62. The teachers who teach for this university are very good.__________
63. The books teach us new things.__________
64. Ranya works as an employee موظفة in this bank.__________
65. The families in the Arab world العالم help their sons a lot.__________
66. Planes which I traveled سافرت in last summer were very good.__________
67. I wake up at seven o’clock every day.__________
68. Buildings in big cities are very high.__________
69. This is the big city in the state of California.__________
70. News that I read on Syria today is not good.__________
71. The newspapers come out تم تصدри every morning.__________
72. My young daughter likes Marconi a lot.__________
73. The engineers who work for this company تَسْتَيْقظُونَ travel a lot.__________
74. There are Jordanian students who are studying with us.__________
75. I forgot the Arabic names that I memorized.__________
APPENDIX E
PLURAL NOUNS IN FORCED CHOICE IN ENGLISH-ARABIC DIRECTION

Name: ____________ Level/class: _______ First language: ______________

Read the following sentences in their contexts and underline the correct answer from the two options provided between parentheses.

1. يا سامي! هل (يحب / تحب) العمل في هذه (الشركة / شركة)؟
   - تحب

2. أنا لا أعرف كيف memorize كل الكلمات (الجديد – الجدیدة).
   - مأمون

3. في هذا (كتاب / الكتاب) هناك الكثير من (الدروس / دروس).
   - قصص

4. القصة – قصبة) الجدیدة التي read قرأتها.
   -שות

5. (موظفون – الموظفون) دائماً يذهبون إلى العمل مبكراً.
   - اليوم

6. أنا أريد (أذهب / أن أذهب) إلى السينما اليوم.
   - أن أذهب

7. أنا حصلت على الكثير من المال money من (الوظائف – الوظائف) التي عملت فيها.
   - شركة القاهرة.

8. والدي كان (درس / يدرس) في جامعة القاهرة عندما كان صغيراً.
   - طالب

9. (الطلاب / طلاب) دائماً يبحثون عن منح دراسية search for.
   - Scholarships

10. (الأفلام – أفلام) التي شاهدتها في الأسبوع الماضي كانت جيدة.
    -watched

11. هي تحب مدينة شيكاغو (لأن إسبب) العمل هناك كثير.
    - هل (دراسة / الدراسة) في جامعة القاهرة صعبة؟

12. Middle East مختلفه (العلاقات – العلاقات) بين الناس different عن أمريكا.

    -live

14. ( الطلاب / الطلاب) الذين يسكنون who في هذا البيت من مدينة عمّان.

15. (النواتي / نواتي) التي زرتها في منطقة هليوبوليس Heliopolis جذا.

16. to have lunch لتناول الغداء good places،

17. (المطاعم – مطاعم) أماكن جيدة memorized لتناول الغداء.

18. أنا نسيت (الكلمات – كلمات) الجديدة التي حفظتها بالأمس.

19. (المطاعم – مطاعم) في هذه المنطقة area (ممتازة / ممتاز).
ماذا تحب (شرب في الصباح)?

(الشوارع/وادورة) الواسعة هامة جداً في المدن الكبرى.

أتريد أن أشرب في الصباح كثيراً

21.

22.

أنا طالب في السنة الثانية في هذه الجامعة.

23.

24.

25.

26.

27.

جامعة القاهرة (أقدم جامعات) جامعة في مصر.

28.

29.

30.

31.

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. هي (لا - لن) تُسافر إلى اليابان هذا الصيف.

(أشجار - الأشجار) دائمًا خضراء. في الربيع always green.

(يعمل - يعملون) كل أصدقائي في هذا المطعم.

(الأشجار) دائما خضراء في الربيع.

(الصفوف) التي أخذتها التي كانت كلها مكثفة intensive.

هم سوف يُسافرون (ظهر - ظهر).

(الشباب - الشباب) يحبون الخروج young men.

going out مع (البنات - بنات).

(عندها - في) هذه الجامعة صفوف كثيرة.

مكتبة مشغولون busy دائما Jehon يدرسون ويدرسون.

(العاملون - المعيدون) الذين يعملون في جامعة القاهرة في كلية التجارة trade/business دائما مشغولون لأنهم يدرسون ويدرسون.

(العاملون - المعيدون) الذين يعملون في جامعة القاهرة في كلية التجارة trade/business دائما مشغولون لأنهم يدرسون ويدرسون.

في أي (مدن - المدن) تسكن يا أحمد؟

العاملون في المدن الكبيرى يحتاجون (السيارات - سيارات) أكثر من يعملون في المدن الصغرى.

هل سوف (تدرسون - تدرسوا) في هذه الجامعة العام القادم؟

(الشخصيات - الشخصيات) التي قرأت عنها هذا الصيف this summer كانت كلها أمريكية.

ماذا تريد (تأكل - أن تأكل) اليوم؟

(الأتوبيسات - وسائل نقل رخيصة) للانتقال cheap means of transportation.

(الأساتذة الأساتذة الذين يعملون في هذه الجامعة غالبا يدرسون يومين) في الأسبوع two days.
APPENDIX F
PLURAL NOUNS IN FORCED CHOICE IN ARABIC-ENGLISH DIRECTION

Name: ______________ Level/class: ______________ First language: __________

Read the following sentences then choose the correct option from the ones provided:

2. Samy, do you like (working-works) in this (company-the company)?

3. I do not know how to memorize all (new-the new) words that I studied this semester.

4. In this (book-the book), there are a lot of (lessons-the lessons).

5. (Story- The story) that I read this week-end was very interesting.

6. (Employees- the employees) always go to work early at 8 am.

7. I want (going-to go) to the cinema tonight with my friends.

8. I made a lot of money out of (jobs-the jobs) that I worked in last year in California.

9. My father used to (study-studying) at Cairo University when he was young.

10. (Students- the students) always look for scholarships to get money for their education.

11. (Films- the films) that I watched last week were very good.

12. She likes the city of Chicago (because-because of) there are a lot of opportunities of work there.

13. Is (studying- the study) at Cairo University really hard?

14. (Social relations- The social relations) are now less strong because of technology.

15. They (study-studies) at the same university this year.

16. (Students- The students) whom live in this house are from the city of Amman in Jordon.

17. (Clubs-the clubs) that I visited in the area od Heliopolis in Cairo were very expensive..

18. (Restaurants- the restaurants) are good places for having lunch with family.

19. I forgot (new-the new) words that I memorized yesterday.

20. (Restaurants- The restaurants) in this area (is-are) excellent.

21. What do you like (drink-to drink) in (morning-the morning)?

22. (Wide streets- The wide streets) are very important in (big cities- the big cities).
23. (Neighbours- The neighbours) who live next doors stay up late every night.

24. I am (a second- second) year student in this university.

25. (Translators- The translators) whom I got to know in this office work for 10 hours every day.

26. Cairo University is (oldest- the oldest) university in Egypt.

27. (Students- The students) now depend on the internet in their studies.

28. (Exams- The exams) which I passed this summer were really hard.

29. This (area- the area) is very beautiful. I like it.

30. She visited Cairo (last- the last) summer with her family.

31. (Brothers - The brothers) often help each other.

32. (Hobbies- The hobbies) which people practice in this club are so many.

33. I have Lebanese (friend- friends) from the city of Beirut. They are really nice.

34. (Newspapers- The newspapers) usually come out in the morning.

35. How many (sister-sisters) do you have?

36. (Friends- The friends) that I got to know last year helped me a lot.

37. I read this (story-stories) last year.

38. (Cats- The cats) are not very big animals. Most of them are small.

39. How many (hours-hours) do you study every day?

40. (Arab- The Arab) armies that I read about this summer have long histories.

41. Ahmed (passed-pass) his job interview and got a great job.

42. (Streets - The streets) in (big-the big) cities are very broad.

43. What (time- the time) is it now?

44. (Pictures- The pictures) which my brother painted for the gallery in the City of New York were beautiful.

45. She (is-will not) travel to Japan this summer because she is busy.
46. *(Trees- The trees)* are always green in the Spring.

47. Most of my colleagues on campus *(work-works)* in this restaurant.

48. *(The classes- Classes)* which I took this summer were all intensive.

49. They will travel *(at- in)* noon today.

50. *(Young men- The young men)* like to talk to *(girls- the girls)*.

51. This university *(offers-offer)* a lot of classes.

52. *(Teaching assistants- The teaching assistants)* are always busy as they teach and study at the same time.

53. In which *(cities-the cities)* do you live, Ahmed?

54. Those who work in big cities need *(the cars- cars)* more than those who work in small cities.

55. Will you be *(study-study)* in this university next year?

56. *(Persons - The persons)* that I read about this summers were all American.

57. What do you want *(eat-to eat)* today?

58. *(Buses- The buses)* are cheap means of transportation.

59. *(Teachers- The teachers)* who work for this university usually gets some training in teaching methods before they start teaching.
APPENDIX G

SINGULAR NOUNS IN TRANSLATION IN ENGLISH-ARABIC DIRECTION

Name: ___________ Level/class: _______ First language: ______________

Read the following sentences then translate them into Arabic to the best of your knowledge.

1. The phone has made communications easier than before.

2. I want to travel to Canada next year.

3. I like history a lot.

4. Reading is very important for children.

5. The university is a good place to learn languages.

6. Where are living now?

7. Egyptians invented the clock earlier in their history.

8. Teaching is a hard career.

9. A lot of students travelling.

10. The sun is always good in winter.

11. The dog has four legs.
12. The cat is not always a nice animal.
13. My colleagues live in this area.
15. Salad is very good or health.
16. The family provides love.
17. He will graduate next year.
18. He is still reading this story.
19. Translation is a very hard job.
20. Do you like reading?
21. Who invented the camera?
22. Business has a good future.
23. The weather is cold in a lot of places in the world.
24. A lot of students like photography.
25. Happiness is important in man’s life.

26. There are five rooms in this house.

27. Children like to drink milk.

28. He likes swimming.

29. My brother studies engineering.

30. The Winter is cold in some places in America.
APPENDIX H
SINGULAR NOUNS IN ERROR DETECTION AND CORRECTION IN ENGLISH- ARABIC DIRECTION

Name: _______ Level/class: _______ First language: _______

Read the following sentences in Arabic then identify errors if any by underlying them. In case you identify any errors, correct them in the space provided next to each sentence as in the example provided in (1).

1. كثير من الموظفين يعمل في هذا البنك. ____________ يعملون

2. هذه الطائرة سريع جدا. ____________

3. خالد له ثلاثة أخوة. _________

4. الترجمة عمل صعب جداٌ. ____________ . very hard

5. هل تحيون هذا المدينة؟ ____________

6. شاي مشروب جيد في الصباح. _________ drink

7. هل أسرتك يسافر أمريكا كل سنة _________ every day

8. أخي يدرس الاقتصاد. ____________

9. هل معك سيارتك الآن؟ _________ your car

10. الكثير من الطلاب في جامعة القاهرة يدرسون التاريخ. study

11. والذي تعمل مترجمة في شركة كبيرة في بيروت. translator

12. هل تحب قراءة؟ _________

13. المال لا يشتري السعادة. does not buy

14. هل تحب العربية؟ _________

15. الكلب له أربعة أرجل _________ four legs

16. أفراد عائلتي لم يزوروا مدينة برلين visit

17. الحليب مهم جداٌ للأطفال. ____________

18. زميلي يعمل في تركيا منذ سنة 2004. ____________

19. نجاح يأتي بعد العمل الجاد comes after

20. أعرف طالب يتحدث خمس لغات جيدا. speaks
21. ماذا تحب أن تأكل الصباح؟
22. الطائرة أسرع من السيارة.
23. هذا الصيف، هل لن سافر إلى الشرق الأوسط؟
24. القهوة في الصباح تساعدني على العمل.
25. هم يسكنون في هذه المنطقة منذ عشرين سنة.
26. جوزيف نيزفو اخترع الكاميرا في سنة 1814.
27. هم يسكنون في بيت جميل.
28. السفر مفيد جداً.
29. أنا أقرأ كتاباً كل أسبوع.
30. التجارة تخصص له مستقبل جيد.
31. هم يسكنون في بيت كبير جداً فيه ستة غرف.
32. سميرة تدرس في جامعة أريزونا.
33. لي امتحان صعب اليوم.
34. قطة حيوان جميل.
35. محمد طالب Kuwaitية.
36. دجاج طبق لذيذ.
37. التكنولوجيا جعلت العالم مكان صغير.
38. أختي تخرجت من الجامعة منذ خمس سنوات.
39. رقص هو الهواية المفضلة لكثير من البنات.
40. ابني الصغير لا يحب هذا الكتاب.
41. زميلي سامي يدرس الهندسة.
42. أنا ذهبت إلى مصر العام الماضي.
43. المكتبة مكان جيد للقراءة.
44. أسرة توفر حب.
45. هم مترجمون يعملون في الأمم المتحدة.
العصير في الصباح مفيد جدا. 46

في هذه الكلية أقسام كثير. 47

الشأء باردة في كثير من الأماكن في أمريكا. 48

رانيا تعمل موظفة كبيرة في هذا البنك. 49

لاختي الصغيرة تحب ونيست جري. 50

لاس. 51

في هذه الكلية أقسام كثيرة. 52

لاس. 53

أنا سوف أدرس الهندسة السنة القادمة إن شاء الله. 54

أرز لذيذ جداً في الغداء. 55

للنادي مكان جميل لمقابلة الأصدقاء. 56

لاس. 57

العلميون هم أول من اخترعوا ساعة. 58

لاس. 59

أختي الصغيرة تعمل موظفة كبيرة. 60

لاس. 61

أختي الصغيرة مع ضد ساعة جيدة. 62

لاس. 63

الشمس جميلة جداً في الصباح. 64

لاس. 65

رانيا تحب السباحة كثيراً. 66

لاس. 67

الشمس جميلة جداً في الصباح. 68

لاس. 69

الشمس جميلة جداً في الصباح. 70
1. أنا أحب جري كثيرا.
2. هذه هي أكبر مدينة في ولاية كاليفورنيا.
3. الكتاب خير صديق وقت الفراغ.
4. أخي يحب السباحة كثيرا.
5. السلطة مفيدة جدا.
6. يسكنون الكثير من الطلاب في هذه المنطقة.
Read these sentences in their contexts and underline the correct answer from the two provided between parentheses.

1. محمد (يذهب – تذهب) إلى الجامعة كل يوم.
2. (عند – في) هذه الجامعة كليات كثيرة.
3. (يحب – يحبون) إخوة سميره الذهاب إلى مطعم قريب من بيتهم.
4. هم (يدرسون – يدرسوا) في نفس الجامعة.
5. أختي الصغيرة تحب (الرسم – رسم) كثيرا.
6. هم سوف يسافرون (صباح – صباح) ثم.
7. كارل بنز (السيارة – سيارة) عام 1886.
8. هو يذهب (إلى – في) السينما كل أسبوع.
10. هم سوف يزورون مدينة نيويورك الصيف (الماضي – القادم).
11. قليل من الطلاب يدرسون (التاريخ – تاريخ) في هذه الكلية.
12. الأصدقاء (الذين – التي) يسكنون في هذا البيت من مدينة عم.
13. (اللحم – لحم) فيه كثير من البروتينات.
14. سمية تخرج في (الساعة – ساعة) السادسة في الصباح إلى العمل.
15. (القلم – قلم) يستخدم (الكتابة – كتابة).
16. هذه هي (الأول – أول) مرة أذهب فيها إلى أسبانيا.
17. (الشمس – شمس) لها لون جميل.
18. جامعة القاهرة جامعة (قديم – قديمة) في مصر.
19. (الطب – طب) مهنة medicine جيدة.
20. سونيا (قرأ – قرأت) ثلاثة كتب هذا الشهر.
21. Graham Bell invented the telephone in 1876.

22. This is the big cap (large – the big).

23. Some people get lost (eastern – eastern) when they travel far away.

24. Harvard University is the oldest in America.

25. Do you love spring? (Spring – spring)


27. The restaurants in this area are great.

28. Smoking is harmful to health.

29. Why don’t you eat breakfast today?

30. The power of the green leaves is useful for health.

31. We spend this week at a good restaurant.

32. A good way to communicate with friends is to use good means to communicate.

33. This is the big cap (large – the big).

34. Sami does not like this city (because – because) the humidity.

35. One of my friends from Cairo loves to write letters (letter – letters).

36. Ahmed Zuweil is a famous Egyptian (Egyptian – Egyptian) in America.

37. Marco Polo invented the radio in 1905.

38. (Rice – rice) is my son’s favorite food.

39. The computer made the world smaller.
45. السيارات تسير ب- (البتروال - بترول).

46. أقاربها (تونسيون - التونسيون) يتعلمون في هذه الشركة.

47. (الدراسة – دراسة) في الصيف صعبة لأنها طويلة.

48. جورج واشنطن هو الرئيس الأول لأمريكا.

49. في أي (مدينة – المدينة) عربية تدرس الآن؟

50. (التدريس – تعليم) عمل صعب ولكنه ممتع جدا.

51. زميلي يدرس (اللغويات – اللغويات) في جامعة أريزونا.

52. المصريون هم أول من اخترعوا (الساعة – ساعة).

53. زميلي عمر يحب (السياسة – سياسة) كثيرا.

54. زميلي سامي لا يحب (سمك – السمك).

55. أنا أحب (أن أشاهد – أشاهد) الأفلام في السينما كثيرا.

56. (كم – بم) كيلو المانجو؟

57. كثير من أصحابي لا يحبون (التصوير – تصوير).

58. (السيرة - سيارة) أسرع من (الدراجة - دراجة).

59. في أي (مدينة – المدينة) تكتمين يا ساميا؟

60. أنا لا أحب (الازدحام – ازدحام).

61. (العلوم السياسية – علوم سياسية) لها مستقبل جيد جدا.

62. في أي (مدينة – المدينة) تسكن يا محمد?

63. (الطقس - طقس) في مصر حار جدا في (الصيف – صيف).

64. (الجامعة – جامعة) مكان جيد لتعلم اللغات.

65. يوم الاثنين هم (يخرجون – يخرجوا) إلى النادي.

66. (ينجح – نجح) أحمد في دراسته وحصل على تقدير ممتاز.

67. (تبدأ – تنطلق) السنة الدراسية في بعض الجامعات الأمريكية في شهر أغسطس.

68. هي تدرس في نفس (قسم – القسم).
يمكن الإنسان الآن أن يسافر إلى القمر.

سامي (لا - لن) يسافر إلى ألمانيا هذا الصيف لأنه مشغول.
APPENDIX J
IDAFAH IN CONSTRUCTION IN TRANSLATION IN ENGLISH-ARABIC DIRECTION

Name: ____________ Level: _________ First language: ____________

Read the following sentences then translate them into Arabic to the best of your knowledge and skill. Write your answer on the space provided under each sentence. You may make use of the guiding words provided under each sentence.

1. Do you study Arabic?

2. Do you still remember the name of the teacher who taught you Arabic last year?
   Name:  اسم Teacher:  مدرس

3. Are you studying now at the University of Michigan?
   University:  جامعة

4. I live in the University area.
   Area:  منطقة

5. Mohammed is a very good teacher.

6. I did not find the door key.
   Key:  مفتاح

7. Do you like football?
   Foot:  قدم

8. Do you like reading books in your free time?
   Reading:  قراءة Books:  كتب

9. The study of business has a good future nowadays.
   Business:  تجارة

10. Swimming is my favorite hobby.
   Swimming:  سباحة
11. Do you know where the professor’s office is?

Office: مكتب - Professor: أستاذ

12. Do you know the result of the exam?

Result: اختبار - Exam: نتائج

13. The area of Manhattan is very beautiful.

Area: منطقة

14. The director of the program has developed a new plan this year.

Director: مدير

15. The college of engineering in this university offers a good number of classes.

College: كلية - Engineering: هندسة

16. My mother does not like housework.

Work: شغل

17. Studying English nowadays helps to travel abroad.

Studying: دراسة

18. She does not want to look at the family’s picture. She used to have a miserable childhood.

19. The history of science in our world is very interesting.

Science: علم

20. The school director is very nice.

School: مدرسة - Director: مدير

21. I forget the car key at home.

Key: مفتاح

22. Will they travel to Turkey next summer?

23. Watching TV is one of my favorite hobbies.

Watching: مشاهدة
24. Studying engineering nowadays helps you to get a job.

Studying: دراسة

25. Do you have a computer at home?

26. Do you know the new teacher’s name?

27. The weather in the city of Tucson is very good in winter.

28. The linguistics department in this college is very good.

   Linguistics: لغويات   Department: قسم

29. The study of English is very important nowadays.

   هذه الأيام هامة

30. Do you like the teacher of Arabic this semester?
APPENDIX K

IDAFAH-EQUIVAMENT CONSTRUCTIONS IN TRANSLATION IN ARABIC-ENGLISH DIRECTION

Name: 
First Language: 
Level/Class: 

اقرأ الجمل التالية في سياقاتها ثم ترجمها إلى اللغة الإنجليزية قدر المستطاع:

هل تذكر اسم الأستاذ الذي درسك اللغة العربية؟

هل تدرس في جامعة القاهرة الآن؟

أنا أسكن في منطقة الجامعة.

محمد أستاذ جيد جداً.

لم أجد مفتاح الباب.

هل تحب قراءة الكتب في وقت الفراغ؟

. دراسة التجارة لها مستقبل جيد

. السباحة هي هوايتي المفضلة

. favorite

. good future

. free time

. did not find

. taught
هل تعرف اين مكتب الأستاذ؟

هل تعرف نتيجة الامتحان؟

شارع التحرير جميل جداً.

مدير البرنامج وضع خطة جديدة هذه السنة.

كلية الهندسة في هذه الجامعة جيدة جداً.

والدتي لا تحب شغل البيت.

محمد أستاذ جديد جداً.

هل تحب كرة القدم؟

دراسة الانجليزية تساعدني كثيراً عند السفر.

تاريخ العلم ا ممتع كثيراً.

مدير المدرسة لطيف جداً.
نسبت مفتاح السيارة في البيت.

هل سوف تسافر إلى تركيا هذا الصيف؟

مشاهدة التلفزيون هي هوايتى المفضلة.

دراسة الهندسة تساعد في الحصول على عمل جيد.

هل عندك كمبيوتر في البيت؟

هل تعرف اسم الأستاذ الجديد؟

الحلق في مدينة القاهرة جيد في الشتاء.

قسم التاريخ في هذه الكلية جيد جداً.

هل تحب أستاذ اللغة الإنجليزية لهذه السنة؟
APPENDIX L

IDAFAH CONSTRUCTION IN FORCED CHOICE IN ENGLISH-ARABIC DIRECTION

Name : __________________________ Level/class: __________________________ First language: __________________________

Read the following sentences in their contexts and underline the correct answer from the options provided between parentheses. Please do not leave any sentence blanks.

. photography 1. كثير من أصحابي لا يحبون (التصوير- تصوير) أنا لا أحب (كرة سلة - السلة كرة السلة).
   helps 2. أنا لا أحب (كرة سلة - السلة كرة السلة).
   . العمل كثيراً.
   (العلوم السياسية - علوم سياسية) لها مستقبل جيد جدا.
     . هل تحب (دراسة لغات - دراسة اللغات - الدراسة لغات) الأوربية؟
     . كتابة الكلمات - الكتابة الكلمات - الكتابة كلمات) الجديدة يساعدني على تذكرها.
     . (اللغات - بالصيف - الصيف) في مصر حار جدا في (الصيف - صيف).
     . في أي (مدن - المدن) تشكلين يا سامية؟
     . (الدخين - الدخين) ضار جدا (بالصحة - صحية).
     . (اللغات - اللغات) مرغفةFACT (اللغات - المعرفة اللغات) هامة جدا عند السفر إلى الخارج.
     . (كتابة الرسائل - الكتابة الرسائل - الكتابة الرسائل) باللغة العربية إلى أصدقائي ممتع
   . interesting
   . كام (ساعة - الساعة) الآن يا أحمد?
   . their going out (الشباب - شباب) يحبون الخروج مع زملائهم.
   . colleagues
   . (تبادل أفكار - تبادل الأفكار - التبادل أفكار) في الصف يساعدني على التعلم.
   . need (المالم - عاملون) في المدن الكبرى يحتاجون إلى أصدقاء (لبناني - لبنانيون) من مدينة بيروت.
   . broad (الشوارع - الشوارع) في (المدن - المدن) الكبرى واسعة.
   . (قسم الفلسفة - الفيلسوف - القسم الفلسفة) في جامعة تيكاغو له تاريخ طويل.
   . هل تذكر (الاسم الشاعر - اسم الشاعر - الاسم شاعر) حيث يسكن زميلنا سامي؟
20. (حياة طالب - حياة الطلاب - طالب حياة) ليست دائماً سهلة.
21. أختي الصغيرة تحب (الرسم -رسم) كثيراً.
22. قليل من الطلاب يدرسون (التاريخ - تاريخ) في هذه الكلية.
23. (عمل المدرسون - المدرسون عمل - مدرسون عمل) صعب.
24. سمية تخرج في (الساعة - ساعة) السادسة في الصباح إلى العمل.
25. (الطلب - طلب) مهنة profession.
26. (الغرفة النوم - غرفة النوم - غرفة نوم) في منزل صغير جداً.
27. (البرنامج الدراسية - البرنامج دراسة - برنامج الدراسة) في هذه الجامعة جيد جداً.
28. هل تحب (الريج - ريح)?
29. (كلية الهندسة - الكلية الهندسة - الهندسة كلية) في جامعة أريزونا جيدة جداً.
30. هل دخلت (كتاب العربية - الكتاب العربي - الكتاب العربي) الذي أعطيته؟
31. أريد أن أدرس في (كلية الأدب - الكلية الأدب - الكلية أدب) في المستقبل إن شاء الله.
32. (التهنئة - تهنيئة) ضعбар harmul جيداً (والصحة - بصحبة).
33. تجربة التاريخ - التاريخ التاريخ) في هذه الجامعة جيد جداً.
34. نحن اتصلنا (باب الغرفة - الباب) المكسور بالأمسي.
35. أعني مدرس هذه السنة في (كلية الاقتصاد - الكلية الاقتصاد - الكلية الاقتصاد).
36. (السلطة - سلطة) الخضراء مفيدة useful جداً للصحة.
37. (أسماء الأولاد - الأولاد اسماء - الأسماء الأولاد) في في هذا الصف متشابهة.
38. (مكان عملي - مكان عمل - مكان عمل) ليس بعيداً عن الجامعة.
39. (المقهى - مقهى) مكان جيد لقراءة الأخبار.
40. أنا لا أتذكر (رقم السيارة - الرقم السيارة - رقم سيارة) هذه السيارة.
41. (ولاية كاليفورنيا - ولاية كاليفورنيا) من أكبر الولايات في أمريكا.
42. (الโทรศافون - تليفون) وسيلة جيدة للاتصال good means.
43. درست الفرنسية العام الماضي لكن لا أتذكر (اسم الأساتذة - الاسم الأساتذة - الاسم الأساتذة).
44. هي لا تحب (شعل البيت - شعل بيت - الشعل البيت) كثيراً.
APPENDIX M
IDAFAH EQUIVALENT CONSTRUCTIONS IN FORCED CHOICE IN ARABIC-ENGLISH DIRECTION

Name: _________ Level/class: _______ First language: ___________

Read the following sentences in their contexts and underline the correct answer from the options provided between parentheses.

1. A lot of my friends do not like (the photography-photography).
2. I do not like (basketball-ballbasket-the ball basket).
3. (Drinking coffee- drinking the coffee-the drinking coffee) in the morning helps me to work..
4. (Political science- the political science) has a good future.
5. Do you like (studying languages-studying the languages- languages study)?
6. (Writing words-writing the words, the writing words) helps me to remember them.
7. (Weather-the weather) in Egypt is very hot in (summer-the summer).
8. In which (cities- the cities) do you live Samiyya?
9. (Smoking –the smoking) is very harmful to (health-the health).
10. (Knowing languages- knowing the languages-the knowing the languages) is very important when we travel abroad.
11. (Writing the messages- writing messages- the writing-the messages) in Arabic to my friends is very interesting.
12. What (time –the time) is it now?
13. (Young men-the young men) like to go out with their colleagues.
14. (Exchange of ideas- Exchange of the ideas- The exchange of the ideas) in class helps me to learn fast.
15. (Workers- The works) in big cities need cars more.
16. I have (Lebanese- the Lebanese) friends from the city of Beirut.
17. (Streets- the streets) in big cities need cars more.
18. (The department of philosophy- department of the philosophy) in the University of Chicago has long history.
19. Do you remember (the name of the street- name the street- the name the street) where our colleague Samy lives?
20. (Life students- life students- student life) is now always easy.
21. My younger sister likes (drawing- the drawing).
22. A few students study (history- the history) in this college.
23. (Teachers’ work- The teachers’ work- The teachers’ work) is very hard.
24. Sumayyia goes out at six (o’clock- the clock) in the morning.
25. (Medicine- the medicine) is a very good profession.
26. (Bedroom- The bedroom- The roombed) in my new home is very small.
27. (The program the study- Program the study- The study program) in this university is very good.
28. Do you like (Spring- the spring)?
29. (College the engineering- The college of engineering- The college engineering) in this college is very good.
30. Do you have (book the Arabic- the book of Arabic- the book of the Arabic) that I gave to you yesterday?
31. I want to study in (college the arts- the college of arts- the college the arts) in the future. (The department of history- Department history – Department the history) in this university is very good.
32. We contacted the police when we found (the room door- the door of the room- door the room) broken.
33. My brother is studying this year in (college economics – the college of economics- college- economics) in this university.
34. (Green salad- the green salad- The green salad) is very useful to health.
35. (Names the boys- The boys’ names- Boys the names) in this class are very similar.
36. (Place my work- My place work- My work place) is not far from the university.
37. (Café- The café) is a very good place to read the news.
38. I do not remember (number the car- the car number- the number car) that hit me yesterday.
39. (California State- California the state- State California) is one of the biggest states in the US.
40. (Phone- The phone) is a good tool to get in touch with your friends.
41. I studied French last year, but I do not remember (name the teacher- the name the teacher- the teacher’s name).
42. She does not like (housework- workhouse- the housework) very much.
APPENDIX N
LANGUAGE QUESTIONNAIRE

Dear Participant,

Before your start working on this project, please answer the following questions. Please note that the information that you will provide will be kept confidential:

1. What is your first/native language?

2. Do you speak any other languages fluently or with a high degree of proficiency? If so, please list the language(s) and describe your proficiency in the language.

3. Since you are now learning English as a second language, please us how language have you been learning English and which class/year you are in.

4. How comfortable do you feel speaking English? Please respond on a scale of 1 – 5, where 1 is ‘completely uncomfortable’ and 5 is ‘completely comfortable’.

5. How comfortable do you feel speaking your first/native language? Please rate this on a scale of 1 – 5, where 1 is ‘completely uncomfortable’ and 5 is ‘completely comfortable’.
APPENDIX O
CONSENT FORM

The University of Arizona Consent to Participate in Research

<table>
<thead>
<tr>
<th>Study Title:</th>
<th>Exploring Articles and Noun Phrase Acquisition in Arabic and English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Investigator:</td>
<td>Mahmoud Azaz</td>
</tr>
<tr>
<td>Sponsor:</td>
<td></td>
</tr>
</tbody>
</table>

This is a consent form for research participation. It contains important information about this study and what to expect if you decide to participate. Please consider the information carefully. Feel free to discuss the study with your friends and family and to ask questions before making your decision whether or not to participate.

You may or may not benefit as a result of participating in this study. Also, as explained below, your participation may result in unintended or harmful effects for you that may be minor or may be serious, depending on the nature of the research.

1. **Why is this study being done?**
   It aims at exploring how learning a second language happens. It looks at the acquisition of articles and noun phrases in both Arabic and English.

2. **How many people will take part in this study?**
   Around 60 people from the Center for English as a Second Language and 60 people from the School of Middle eastern and North African Studies

3. **What will happen if I take part in this study?**
   You will have indirect benefits by developing your understanding of how articles and noun phrases in English are learned in a better way.

4. **How long will I be in the study?**
   You will be in this study for 2 semesters

5. **Can I stop being in the study?**
   You can stop at any time.

   **Your participation is voluntary.** You may refuse to participate in this study. If you decide to take part in the study, you may leave the study at any time. No matter what decision you make, there will be no penalty to you and you will not lose any of your usual benefits. Your decision will not affect your future relationship with The University of Arizona. If you are a student or employee at the University of Arizona, your decision will not affect your grades or employment status.
6. **What risks, side effects or discomforts can I expect from being in the study?**
   No risks are involved

7. **What benefits can I expect from being in the study?**
   This will help you to learn both languages faster.

8. **What other choices do I have if I do not take part in the study?**
   You may choose not to participate without penalty or loss of benefits to which you are otherwise entitled.

9. **Will my study-related information be kept confidential?**
   Efforts will be made to keep your study-related information confidential. However, there may be circumstances where this information must be released. For example, personal information regarding your participation in this study may be disclosed if required by state law.
   Also, your records may be reviewed by the following groups (as applicable to the research):
   - Office for Human Research Protections or other federal, state, or international regulatory agencies
   - The University of Arizona Institutional Review Board or Office of Responsible Research Practices
   - The sponsor supporting the study, their agents or study monitors

10. **What are the costs of taking part in this study?**
   No cost

11. **Will I be paid for taking part in this study?**
   You will not be paid if you agreed to participate in the study
   By law, payments to subjects may be considered taxable income.

12. **What happens if I am injured because I took part in this study?**
   If you suffer an injury from participating in this study, you should seek treatment. The University of Arizona has no funds set aside for the payment of treatment expenses for this study.

13. **What are my rights if I take part in this study?**
   If you choose to participate in the study, you may discontinue participation at any time without penalty or loss of benefits. By signing this form, you do not give up any personal legal rights you may have as a participant in this study.
   You will be provided with any new information that develops during the course of the research that may affect your decision whether or not to continue participation in the study.
   You may refuse to participate in this study without penalty or loss of benefits to which you are otherwise entitled.
   An Institutional Review Board responsible for human subjects research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.
14. Who can answer my questions about the study?

For questions, concerns, or complaints about the study you may contact Mahmoud Azaz, the University of Arizona the SLAT Program. Email: mazaz@email.arizona.edu

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the Human Subjects Protection Program at 520-626-6721 or online at http://orcr.vpr.arizona.edu/irb.

If you are injured as a result of participating in this study or for questions about a study-related injury, you may contact Mahmoud Azaz, the University of Arizona the SLAT Program. Email: mazaz@email.arizona.edu

Signing the consent form

I have read (or someone has read to me) this form, and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study.

I am not giving up any legal rights by signing this form. I will be given a copy of this form.

<table>
<thead>
<tr>
<th>Printed name of subject</th>
<th>Signature of subject</th>
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<tbody>
<tr>
<td></td>
<td>AM/PM Date and time</td>
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<thead>
<tr>
<th>Printed name of person authorized to consent for subject (when applicable)</th>
<th>Signature of person authorized to consent for subject (when applicable)</th>
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<tr>
<td></td>
<td>AM/PM Date and time</td>
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</table>

Relationship to the subject

Investigator/Research Staff

I have explained the research to the participant or the participant’s representative before requesting the signature(s) above. There are no blanks in this document. A copy of this form has been given to the participant or to the participant’s representative.

<table>
<thead>
<tr>
<th>Printed name of person obtaining consent</th>
<th>Signature of person obtaining consent</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>AM/PM Date and time</td>
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REFERENCES


