THE USE OF MODERN STANDARD ARABIC WORD FORMATION PROCESSES BY ENGLISH-SPEAKING AND FRENCH-SPEAKING ADULT L2 LEARNERS AND NATIVE SPEAKERS

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
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Rabia Redouane, Ph.D. of Philosophy, 2001

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ABSTRACT

This study investigates the use of word formation processes in Modern Standard Arabic (MSA) by adult L2 learners of mainly English-speaking background.

Forty-four L2 learners, and 40 native speakers of Arabic took part in this study, and performed three tasks (a production task and two comprehension tasks). L2 learners also performed a vocabulary knowledge test.

On the production task, significant differences were revealed between L2 learners' and native speakers' innovations, with the L2 learners producing fewer innovations and leaving more blanks than native speakers. The learners' innovations comprised varied compound constructions, inappropriate derived patterns denoting other notions, as well as formally impossible patterns. These innovations indicate that even though the learners were
making productive use of the derivational system, they still lacked knowledge of patterns, the structural relationships between forms and meanings in MSA, as well as the lexical constraints in this language.

Significant differences were also found between L2 learners' and native speakers' use of MSA word formation processes, with L2 learners exhibiting a higher preference for compounding while native speakers preferred derivational processes, mainly Vinf.+gem. and affixation. L2 learners also opted for Vinf., and Vinf.+gem. to a lesser extent. However, affixation was hardly ever chosen by L2 learners. Similar orders of preference were found in both comprehension tasks. Certain acquisitional principles (Clark, 1980a) were proposed to account for the preferences of the L2 learners: the principle of semantic transparency takes first priority; second in importance were the principles of productivity and conventionality. An L1 effect could also be discerned in some of the choices of word formation processes.

Learners at higher relative levels of vocabulary knowledge made significantly more use of word formation processes than lower level learners to coin new meanings, suggesting that lexical knowledge in the target language influenced L2 learners' use of word formation processes. However, the behaviour patterns exhibited by the higher level L2 learners in choosing word formation processes did not resemble those of native speakers.

The findings of this study provide detailed information on the L2 learners' use of MSA word formation processes, and insights relevant to the teaching of MSA.
# Table of Contents

ABSTRACT ........................................................................................................................................ ii  
LIST OF TABLES .......................................................................................................................... viii  
TYPOLOGICAL CONVENTIONS USED IN THE TEXT ............................................................... xi  
MODERN STANDARD ARABIC PHONETIC TRANSCRIPTION USED IN THE TEXT .................... xii  

## CHAPTER 1: INTRODUCTION ................................................................................................... 1  
1.1 Statement of the Problem ......................................................................................................... 1  
1.2 Significance of the Study ......................................................................................................... 1  
1.3 Aims of the Study ................................................................................................................... 4  
1.4 Organization of the Thesis ...................................................................................................... 5  

## CHAPTER 2: WORD FORMATION PROCESSES IN ENGLISH, FRENCH AND MODERN STANDARD ARABIC (MSA) .................................................................................................................. 7  
2.1 Word Formation Processes in English and French ................................................................. 8  
  2.1.1 Affixation ......................................................................................................................... 8  
  2.1.2 Compounding .................................................................................................................. 9  
  2.1.3 Conversion ....................................................................................................................... 10  
  2.1.4 Blending .......................................................................................................................... 11  
  2.1.5 Clipping ........................................................................................................................... 11  
  2.1.6 Acronyms ....................................................................................................................... 11  
  2.1.7 Backformation ............................................................................................................... 11  
  2.1.8 Borrowing ....................................................................................................................... 12  
  2.1.9 Summary ....................................................................................................................... 12  
2.2 Word Formation Processes in MSA ....................................................................................... 12  
  2.2.1 Ishtiqāq (Derivation) ....................................................................................................... 13  
    2.2.1.1 Nominal Derivation .................................................................................................... 15  
    2.2.1.2 Verbal Derivation ..................................................................................................... 18  
  2.2.2 Summary ....................................................................................................................... 20  
  2.2.3 Naht (Compounding) ...................................................................................................... 20  
  2.2.4 Summary ....................................................................................................................... 25  
  2.2.5 Taʿrīb (Borrowing) ......................................................................................................... 26  
  2.2.6 Conversion ..................................................................................................................... 27  
  2.2.7 lḥyāʾ gharīb al-lugha (Revival of uncommon language) ................................................. 27  
  2.2.8 Summary ....................................................................................................................... 27  

## CHAPTER 3: THE ACQUISITION OF WORD FORMATION PROCESSES: THEORETICAL FRAMEWORK AND EMPIRICAL EVIDENCE ............................................................................................ 29  
3.1 Word Formation in First Language (L1) ............................................................................... 30
3.1.1 Principles in the Acquisition of Word Formation Processes in L1 Studies

- a) Productivity .......................................................... 30
- b) Semantic Transparency .............................................. 31
- c) Formal Simplicity ...................................................... 32
- d) Conventionality ......................................................... 33

3.1.2 Empirical Evidence .................................................. 35

3.1.3 Summary ............................................................... 40

3.2 Word Formation in Second Language (L2) ........................................ 40

3.2.1 Principles of Acquisition of Word Formation Processes in L2 Studies ........................................ 40

3.2.2 Summary ............................................................... 44

3.2.3 Transfer as an Added Principle ..................................... 44

3.3 Research on the Acquisition of MSA ..................................... 47

3.3.1 Classical Studies ...................................................... 47

3.3.2 Studies on the Acquisition of Arabic Word Formation Processes ............................................. 48

3.4 Predictions about the Order of Preference of Word Formation Processes to Coin Agency, Instrumentality, Location, and Causativity ............................................. 50

CHAPTER 4: RESEARCH METHODOLOGY ........................................... 54

4.1 Research Questions and Hypotheses ......................................... 54

4.2 Participants ................................................................. 56

4.3 Instruments .................................................................. 61

4.3.1 Vocabulary Knowledge Test .......................................... 61

4.3.2 Three Word Formation Tasks ......................................... 64

4.3.2.1 Production Task ....................................................... 64

4.3.2.2 Two Comprehension Tasks ......................................... 65

4.3.2.3 Background Questionnaire .......................................... 68

4.4 Procedure ................................................................. 71

4.4.1 Pilot testing ............................................................. 71

4.5 Data Collection of the Main Study ....................................... 74

4.5.1 Task Order .............................................................. 74

4.5.2 Scoring ................................................................. 75

4.5.3 Coding the Data ......................................................... 76

4.6 Data Analysis .............................................................. 79

4.6.1 Quantitative Analyses .................................................. 79

4.6.2 Qualitative Analyses .................................................... 79

CHAPTER 5: QUANTITATIVE FINDINGS .......................................... 81

5.1 Statistical Procedures .................................................... 81

5.2 Comparison of L2 Learners’ and Native Speakers’ Responses on the Production Task .................................................. 82

5.2.1 Summary ............................................................... 85

5.3 of Word Formation Processes ............................................. 85

5.3.1 Comparison of L2 learners’ and Native Speakers’ Use of Word Formation Processes on the Production Task .................................................. 85

v
5.3.2 Summary .......................................................... 88
5.3.3 Comparison of L2 Learners’ and Native Speakers’ Choice of Word Formation Options on Comprehension Task I (Invented Items) and Comprehension Task II (Real Items) .............................................. 89
5.3.4 Summary ................................................................ 93
5.4 Comparison between Lower, Mid, and Higher Level Learners’ Use of Word Formation Processes on the Production Task ................................................ 93
5.4.1 Summary ............................................................ 97
5.5 Comparison of Higher Level, Lower Level L2 Learners’ and Native Speakers’ Use and Choice of Word Formation Processes ................................ 97
5.5.1 Comparison of Higher Level, Lower Level Learners’ and Native Speakers’ Use of Word Formation Processes on the Production Task ........................................ 98
5.5.2 Comparison of Higher and Lower Level L2 Learners’ and Native Speakers’ Choice of Word Formation Options on Comprehension Tasks I (Invented Items) and II (Real Items) ........................................ 101
5.5.3 Comparison of Higher, Lower Level L2 Learners’ and Native Speakers’ Choice of Options in Comprehension Task II (Real Items) ........................................ 104
5.6 Summary of the Quantitative Findings ...................... 108

CHAPTER 6: QUALITATIVE FINDINGS........................................... 109

6.1 Qualitative Examination of L2 Learners’ and Native Speakers’ Innovations in the Production Task ........................................ 109
6.1.1 L2 Learners’ and Native Speakers’ Innovations .................. 110
6.1.2 Types of innovations produced by L2 learners and native speakers ........................................ 112
   a/ Innovative compound constructions for nominal notions .......... 112
   b/ Innovative periphrastic constructions for causatives .............. 115
   c/ Innovative derived patterns ........................................... 116
6.1.3 Summary ............................................................. 118
6.2 Acquisitional Principles in L2 Learners’ Use and Choice of MSA Word Formation Processes ........................................ 118
6.2.1 Principle of Productivity ............................................ 119
6.2.2 Principle of Semantic Transparency .............................. 120
6.2.3 Principle of Formal Simplicity ........................................ 122
6.2.4 Principle of Conventionality .......................................... 122
6.2.5 Summary ............................................................. 123
6.3 L1 Effects on the L2 Use of Word Formation Processes ....... 123
6.3.1 L1 Effects on the Word Order of Compound Constructions ........................................ 124
6.3.2 Summary ............................................................. 126

CHAPTER 7: DISCUSSION AND CONCLUSIONS............................ 127

7.1 Summary and Discussion of the Findings ....................... 127
7.1.1 On the Production of Innovations ............................... 128
<p>| Table 2:1 | Frequent nominal patterns in MSA derived from verbs by vocalic infixation alone, and/or gemination of the 2nd consonant | 16 |
| Table 2:2 | Agent, instrument, and locative patterns in MSA by affixation | 18 |
| Table 2:3 | Verbal patterns in MSA | 19 |
| Table 2:4 | Compound constructions denoting agent, instrument, and locative nouns in MSA | 24 |
| Table 2:5 | The different options in MSA to denote instrumentality | 28 |
| Table 3:1 | Summary of the predictions for each principle | 53 |
| Table 4:1 | Distribution of L2 learners by vocabulary knowledge level, gender, age, L1 background, and dominant language | 59 |
| Table 4:2 | Distribution of native speakers by gender, age, and language background | 60 |
| Table 4:3 | Learners' self-rating of their performance in some Arabic skills relative to classmates | 69 |
| Table 4:4 | Learners' self-ratings of their performance in some activities | 70 |</p>
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 4:5</td>
<td>Participants in the pilot study</td>
<td>71</td>
</tr>
<tr>
<td>Table 4:6</td>
<td>Learners’ scores on the vocabulary knowledge test (max. = 44)</td>
<td>76</td>
</tr>
<tr>
<td>Table 4:7</td>
<td>Alternatives provided in comprehension tasks I and II for each semantic notion</td>
<td>78</td>
</tr>
<tr>
<td>Table 5:1</td>
<td>Overall comparison between L2 learners’ and native speakers’ responses on the production task (max. = 24)</td>
<td>83</td>
</tr>
<tr>
<td>Table 5:2</td>
<td><em>T</em> tests comparing L2 learners’ and native speakers’ responses for each semantic notion on the production task</td>
<td>84</td>
</tr>
<tr>
<td>Table 5:3</td>
<td>Overall comparison between L2 learners’ and native speakers’ mean percentage use of word formation processes on the production task (max. = 24)</td>
<td>86</td>
</tr>
<tr>
<td>Table 5:4</td>
<td>L2 learners’ and native speakers’ mean percentage use of word formation processes for each semantic notion on the production task</td>
<td>87</td>
</tr>
<tr>
<td>Table 5:5</td>
<td>Overall comparison between L2 learners’ and native speakers’ mean percentage choice of word formation options on comprehension task I (invented items) (max. = 30)</td>
<td>89</td>
</tr>
<tr>
<td>Table 5:6</td>
<td>L2 learners’ and native speakers’ overall mean percentage of choice of word formation options on comprehension task II (real items) (max. = 30)</td>
<td>90</td>
</tr>
<tr>
<td>Table 5:7</td>
<td>Mean percentage of L2 learners’ and native speakers’ choice of word formation options for each semantic notion on comprehension task I (invented items)</td>
<td>91</td>
</tr>
<tr>
<td>Table 5:8</td>
<td><em>T</em> tests comparing L2 learners’ and native speakers’ mean percentage choice of word formation options for each semantic notion on comprehension II (real items)</td>
<td>92</td>
</tr>
<tr>
<td>Table 5:9</td>
<td>Lower, mid, and higher level learners’ overall use of word processes on the production task</td>
<td>94</td>
</tr>
<tr>
<td>Table 5:10</td>
<td>Means of lower, mid, and higher level learners’ use of word processes for each semantic notion on the production task</td>
<td>95</td>
</tr>
<tr>
<td>Table 5:11</td>
<td>Means of higher level learners’ and native speakers’ use of word formation processes for each semantic notion on the production task.</td>
<td>99</td>
</tr>
<tr>
<td>Table 5:12</td>
<td>T-tests comparing lower level learners’ and native speakers’ use of word formation processes for each semantic notion on the production task.</td>
<td>100</td>
</tr>
<tr>
<td>Table 5:13</td>
<td>Comparison between higher level L2 learners’ and native speakers’ mean choice of word formation options for each semantic notion on comprehension task I (invented items).</td>
<td>102</td>
</tr>
<tr>
<td>Table 5:14</td>
<td>Means of lower level L2 learners’ and native speakers’ choice of word formation options for each semantic notion on comprehension task I (invented items).</td>
<td>104</td>
</tr>
<tr>
<td>Table 5:15</td>
<td>T-tests comparing higher level L2 learners’ and native speakers’ choice of word formation options for each semantic notion on comprehension task II (real items).</td>
<td>105</td>
</tr>
<tr>
<td>Table 5:16</td>
<td>Lower level L2 learners’ and native speakers’ choice of word formation options for each semantic notion on comprehension task II (real items).</td>
<td>107</td>
</tr>
</tbody>
</table>
Lexical innovations in English and other languages: _Bold_

English gloss (translation of Arabic and foreign words and innovations):

Prefixes, suffixes, and lexical items in English and other languages: _Italics_

Root consonant: _Capital C_

Gemination of the same consonant: _Capital CC_

Root vowel: _Small v_

Phonetic transcription:

Long vowel:

- /ā/ (as in Arabic)

Geminated consonants are doubled. Eg., /kattaba/
MODERN STANDARD ARABIC PHONETIC SYMBOLS USED IN THE TEXT

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<th>Arabic</th>
<th>Phonetic</th>
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CHAPTER 1

INTRODUCTION

1.1 Statement of the Problem

The present study deals with the acquisition of word formation processes by learners of a second language (L2). More specifically, it aims at investigating the use of word formation processes by English- and French-speaking adult L2 learners of Modern Standard Arabic (henceforth MSA) as they coin lexical innovations. It also aims to find out how relevant the acquisitional principles of productivity, semantic transparency, formal simplicity, conventionality (Clark, 1980a), and transfer are in accounting for these L2 learners' use of MSA word formation processes.

1.2 Significance of the Study

Arabic is of interest to the study of the L2 acquisition of word formation processes because it is a Semitic language with a typological structure markedly different from that of the Indo-European languages on which most previous first language (L1) and L2 lexical research has been done (e.g., Clark, 1980a, 1980b, 1981a, 1981b, 1982; Clark & Hetch, 1982, Clark & Berman, 1984; Clark & Cohen, 1984; Olshtain, 1987; Broeder, Extra, van Hout, Stromqvist & Voionmaa, 1988; Broeder, Extra & van Hout, 1989; Broeder, Extra, 1991; Broeder, Extra, van Hout & Voionmaa, 1993; Broeder, Extra & van Hout, 1995). The study focuses on MSA, a modernized form of Classical Arabic, and one of the three forms
of Arabic defined by grammarians and language researchers\textsuperscript{1}, and on learners who are L1 speakers of Indo-European languages.

I have chosen word formation processes as the focal point for this study on both theoretical and educational grounds. From a theoretical perspective, it has been claimed that learning a language, and reaching an overall linguistic competence in that language, necessitates learning both a lexicon of well-established words and a repertoire of word formation processes through which the lexicon can be expanded (Clark et al., 1984, p.543; Olshtain, 1987, p.281).

Learning how words are formed in a language goes hand-in-hand with learning the specific composition of the entire vocabulary of that language (Clark et al., 1984, p.543). Learning word formation processes involves understanding the formation of various types of lexical items (Jackson & Ze Amvela, 2000, p.69), learning to analyse them into their various constituents, and to segment them into roots and patterns. It consists also of learning to identify relationships between forms and meanings and the various ways in which lexical items are distinguished in the lexicon (Clark et al., 1984, p.543). This means, for example, that learning Arabic word formation processes requires learning how root consonants are combined with different patterns to express specific meanings such as agency, instrumentality, and location in nouns, or causativity in verbs.

---

\textsuperscript{1} According to Chejne (1969, p.34), the oldest of these three forms of Arabic is the Classical Arabic of medieval times which is the language of pre-Islamic poetry and the Qur\textsuperscript{an}, and which gradually became standardized after codification. The second major category of Arabic is the Modern Literary or Standard Arabic common to all Arabic speaking countries. In written form it is used in formal contexts and for literary purposes, and is inspired by the Classical Arabic of medieval times. It has similar morphology, grammar, and syntax, although it has incorporated new lexicon. The third type exhibits many variations and is the spoken language used in casual day-to-day usage.
In addition, learning word formation processes involves learning to identify those patterns that are most common in the language concerned. This means that learners of Arabic, for instance, will have to learn that the different options available for coining content words are derivation (infixed, gemination, and affixation), compounding, and conversion, and that derivation is the most productive, while compounding and conversion are less frequent. Specifically, they need to learn that a common way of naming people with a particular profession is by means of the patterns CaCCăC, e.g., /xayyāt/ ‘tailor’, and that its feminine counterpart is CaCCăCa, also used to denote instrument nouns. They will also have to learn that the pattern CăCiC (active participle indicating the doer of the action) is formed from the triliteral (consisting of three consonants) verbal form CaCaCa, whereas the active participle muCaCCiC is formed from the second triliteral verbal form CaCCaCa.

Acquiring competence in word formation processes facilitates mastery of the target lexicon by providing generalizations that diminish the need for memorization and for heavy dependence on contextual clues (Adjemian, 1983). From a practical standpoint, this study should provide teachers with helpful insights concerning their students’ preferences for different MSA word formation processes, and with useful information about the strategies they use to form new words. It will also explore ways in which these strategies may be relevant to the teaching of word formation processes in MSA.

A further motivation for this study stems from the general paucity of research on L1/L2 acquisition of Arabic and on the lack of studies specifically dealing with the acquisition of MSA word formation processes. Indeed, to my knowledge, no studies about

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Throughout the text, the convention of representing root consonants by a capital C and the vowels by small v, and the affixal elements by the relevant consonants and vowel segments will be followed.
the acquisition of MSA word formation processes as L1 or L2 have previously been conducted.

1.3 Aims of the Study

The overall objectives of this study are threefold: (1) to compare learners’ and native speakers’ use of word formation processes to express new meanings, and their judgement of the appropriateness of specific MSA word formation processes for realizing such meanings; (2) to determine learners’ behaviour patterns in selecting word formation strategies at different relative levels of vocabulary knowledge; and (3) to find out if the acquisitional principles of productivity, semantic transparency, formal simplicity, conventionality, and transfer play important roles in acquiring MSA word formation devices, as various studies of L1/L2 acquisition of other languages have demonstrated (e.g., Clark, 1980a, 1981b; Clark et al., 1984, Bahat, 1986; Olshtain, 1987; Broeder et al., 1991, 1993 and 1995).

The six questions that guide this study are formulated on the basis of findings of different L1 and L2 studies (see chapter 3 for review of these studies). These questions are as follows:

1. What are the quantitative and qualitative differences between L2 learners and native Arabic speakers in production of innovations in MSA expressing notions such as agency, instrumentality, location, and causativity?

2. Compared with native Arabic speakers, what MSA word formation process(es) is (are) most commonly selected by L2 learners when choices are provided for naming notions of agency, instrumentality, location, and causativity?
3. Does relative L2 vocabulary knowledge reveal differential effects for the production of MSA word formation processes?

4. How do L2 learners with a higher level of vocabulary knowledge compare with native speakers in their production and choice of word formation processes in MSA?

5. Which principle(s) (productivity, semantic transparency, formal simplicity, conventionality) is (are) most revealing in predicting L2 learners’ use and choice of word formation processes in MSA?

6. Does the native language of the L2 learner (English or French) lead to differential use of word formation devices in MSA?

To address these questions, production and comprehension tasks were designed and administered to L2 learners at three levels of vocabulary knowledge and to native speakers of MSA.

1.4 Organization of the Thesis

This thesis is organized as follows: The present chapter has outlined issues to be investigated. Chapter 2 presents a description of different types of word formation processes in English, French, and MSA. Chapter 3 considers the theoretical background to the study, outlining the various principles that have been proposed to account for the acquisition of word formation processes, and reviewing the relevant research on word formation processes in L1 and L2 acquisition. Chapter 4 explains the methodology used in the present study, including the participants, the instruments, and the procedures for data collection and analysis. Chapter 5 reports the quantitative analysis of the findings, followed by a qualitative analysis in chapter 6. Finally, chapter 7 discusses the findings, the limitations of the present
study, and its implications for future research on word formation processes and for the teaching of this aspect of vocabulary in L2 classrooms.
CHAPTER 2

WORD FORMATION PROCESSES IN ENGLISH, FRENCH AND MODERN STANDARD ARABIC (MSA)

The term “word formation” designates that aspect of morphology that deals with the formation of lexical items (Matthews, 1974, p. 38). Languages resort to different word formation processes to construct new lexical items and to expand their lexicon. Given the word formation processes for a particular language, certain ways of coining new words may be preferred over others by native speakers (Dresser, 1981). For example, among the processes often used in English and French are derivational processes (suffixation and prefixation). In Arabic, by comparison, the widely favoured process is the Semitic device of combining a (mostly triliteral) consonantal root with vowels, and/or adding limited prefixes to form various nominal and verbal patterns.

In this chapter, I do not intend to provide an exhaustive survey of word formation processes. Rather, I attempt to present briefly word formation processes common to Indo-European languages with particular reference to English and French, and those typical in MSA, a Semitic language, in order to note similarities and differences between these two groups of languages.

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3 Only word formation processes that involve forming new words from existing words are dealt with here. For other types of processes that form new words that have no relationship with any previously existing word, see Jackson & Ze Amwela, 2000, p.43-44.
2.1 Word Formation Processes in English and French

Affixation, compounding, and conversion are considered the most frequent word formation processes in English and French (Wise, 1997; Katamba, 1994). These processes are first examined, followed by a brief description of other word formation processes. Examples from different sources for English and French are included for illustration.

2.1.1 Affixation

Affixation\(^4\) is the process of constructing a new word out of an existing one by appending an affix\(^5\) (either suffix or prefix) to the stem. For example, from the English stem \textit{touch}, such words that are formed by adding a suffix are: \textit{touching, touchable, touchability, touchstone}; and by adding a prefix are \textit{untouchable, untouchability}. Also from the French stem \textit{sabl}, words that can be formed by suffixation are: \textit{sabl-er, sabl-erie, sabl-eur, sabl-eux, sabl-ier, sabl-on, sabl-omm-er, sabl-omm-eux, sabl-omm-ier}, and by prefixation: \textit{en-sabl-er, en-sabl-ement, dés-en-sabl-er, dés-en-sabl-ement} (Fleisch, 1968, p.32).

In English and French, derivational prefixes do not change the word class of the lemma although they do change its meaning. Derivational suffixes, on the other hand, change the syntactic category or word class of the word to which they are added. Such suffixes are distinguished with respect to the grammatical class of the word they form. There are nominal suffixes that form nouns from an adjectival or verbal base (e.g., \textit{fairness}, and

\(^4\) In most grammar books dealing with morphology of Indo-European languages, "affixation" and "derivation" are used interchangeably to designate the same process. In relation to Arabic, however, "derivation" is used as a general term that comprises three processes: infixation, gemination, and affixation.

\(^5\) Two types of affixes exist: derivational affixes, which have the function of creating new lexical items, and inflectional affixes, which carry grammatical information (Wise, 1997, p.103). The derivational affixes are dealt with here.
payment); verbal suffixes that derive verbs from nouns, other verbs or adjectives (e.g., 
regulate, chatter, and activate); adjectival suffixes that form adjectives from nominal, 
adjectival or verbal bases (e.g., traditional, narrowish, and readable); and adverbial suffixes 
that construct adverbs from either adjectives or nouns (e.g., busily).

For detailed illustration of different types of suffixes and prefixes, see Bauer, 1983, 
p.223; Katamba, 1994; and Jackson & Ze Amvela, 2000, for English; and Guilbert, 1975, 
p.170; Leclerc, 1989; and Wise, 1997, for French.

2.1.2 Compounding

Another process also common in English and French is compounding, known as 
composition in French, which is the juxtaposition of two or more independent words to form 
one lexical unit (Fromkin, Rodman, Hultin and Logman, 1997, p.51). For example, the 
English compound dishwasher and the French compound portefeuille are formed from two 
independent words dish and washer, and porte and feuille respectively. Like derived words, 
compounds can be classified in many categories in terms of the word class of the 
constituent elements. Generally in English, the word class of the last element of the 
compound determines the category of the compound. Among the various types of compound 
constructions that English possesses, notable are: noun compounds (N+N, V+N, Adj+N and 
Adv+N), verb compounds (N+V, V+V, Adj+V, and Adv+V), adjective compounds (N+Adj, 
Adj+Adj, Adv+Adj), and adverb compounds such as (N+Adv, V+Adv, Adj+Adv, and 
Adv+Adv). French also possesses a considerable number of compound constructions, e.g., 
N+N, N+Adj, N+prep+N, Adj+N, Adj+Adj, Prep+N, Adv+PP, V+N, and V+V. Whatever 
their internal structure, compounds in French are generally considered nouns, except the
compounds Adj+Adj, Adv+PP, and V+N that function as adjectives (Wise, 1997, p.121). Some of these syntagms are more productive than others, for example, N+Adj, N+N, and V+N compounds are claimed to be more productive in French (Leclerc, 1989). (For a detailed description and examples of each category of English & French compound constructions, see, e.g., Bauer, 1983; pp.202-213, Katamba, 1994; Jackson et al., 2000; Leclerc, 1989; and Wise, 1997). In addition, compounds can be distinguished with respect to the word order principle of the compound. Two types of compounds exist: Head-initial compounds where the main word is followed by a modifying noun, and head-final where the main word is preceded by a modifying noun. English is described as a head-final language while French is head-initial.

2.1.3 Conversion

Another process which is frequently used in English and French to coin lexical items is conversion or zero-derivation (Marchand, 1969; Adams, 1973) where the base is reassigned to a new part of speech with no change in form. The major kinds of conversion in English are nouns into verbs, e.g., a bridge/to bridge; verbs into nouns, e.g., to call/a call; and adjectives into verbs, e.g., brown/to brown. In French, one type of conversion is converting adjectives to nouns, e.g., une voiture automobile/une automobile.

Besides derivation, compounding, and conversion, English and French make use of other word formation processes. Among these are blending, clipping, acronyms, backformation, and borrowing. Below is a brief description of these processes.
2.1.4 Blending

Blending is defined as the creation of a new word "from parts of two (or possibly more) other words in such a way that there may be no transparent analysis into morphs" (Bauer, 1983, p.234). Blends are also known as "telescope" or "portemanteau" words (Jackson et al., 2000, p.87). Some typical examples of English and French blends are smog from (smoke+fog); téléton from (téléphone+marathon); and franolais from (français+anglais).

2.1.5 Clipping

Clipping refers to the process by which a lemma of two or more syllables is shortened without changing its form class and function (Katamba, 1994, p.180). Among commonly-used English and French clipped forms are ad from advertisement, flu from influenza, and télé for télévision.

2.1.6 Acronyms

Acronyms refer to the process of coining words from the initial letters of the words of a phrase (Adams, 1973, p.136). Most acronyms have been constructed as short names for national organizations such as in English UNICEF for United Nations International Children's Emergency Fund, and in French la CEE for la Communauté économique européenne.

2.1.7 Backformation

Backformation consists of forming new words from existing words by removing affixes from a base. For example, the English verbs peddle and typewrite were formed from
the nouns *pedlar*, and *typewriter* (Marchand, 1969); and in French the adjective *aristocrate* from the noun *aristocratie*.

### 2.1.8 Borrowing

Finally, a word formation process that both English and French resort to is borrowing lexical items from other languages. Two types of borrowing exist: direct borrowing which involves borrowing a word directly from another language, e.g., the French word *omelette* into English; and indirect borrowing: that is, when a word is passed indirectly from one language to another by undergoing phonological modification, e.g., English *coffee* is originally from *kahveh* after having gone through Arabic *kahva* and Dutch *koffie*.

### 2.1.9 Summary

This examination of English and French word formation processes reveals that both languages similarly resort to various processes to coin new words, but affixation (comprising prefixation and suffixation), compounding, and conversion are the most frequent ones. It also reveals that unlike prefixation, suffixation changes the class of the word. The two languages, on the other hand, differ with respect to the order of words in compound constructions. English is a language with a head-final word order principle while French is a language with a head-initial word order.

### 2.2 Word Formation Processes in MSA

In this section, MSA word formation processes will be described in order to point out any similarities and/or differences between MSA, English and French. Most grammarians
claim that Arabic possesses only three word formation processes: ishtiqaq (derivation), naht (compounding), and tafrīb (borrowing). Others, on the other hand, argue that other processes exist in Arabic such as conversion (Reguigui, 1994), and the process of /ṭiḥyā? gharīb al-lūgha/ 'revival of uncommon language' or /ṭīstinbāt/ 'extraction' (Hamzaoui, 1975; Reguigui, 1994). In the following paragraphs, these processes are examined, and their related aspects and forms are presented. Examples from different sources for MSA are included for illustration.

2.2.1 Ishtiqaq (Derivation)

One of the most distinguishing features of Arabic derivational morphology and other Semitic languages is its system of consonantal roots and derived patterns. By drawing on existing Arabic verbal roots, an immense array of new words are formed through ishtiqaq. This process is considered the most natural method for lexical innovation and expansion of the lexicon, and is central to Arabic grammatical structure (Stetkevych, 1970, p.7; Badry, 1983). According to El-Khafaji (1985), ishtiqaq is the method:

---

6 "Tous s'accordent à reconnaître que, dans la morphologie (la sémantique ouvre d'autres voies), l'arabe dispose seulement de trois procédés de base, pour la constitution de son vocabulaire moderne: la dérivation étymologique (ishtiqaq), la composition (qualifiée, au sens large, de naht) et de l'emprunt de termes étrangers par arabisation (tafrīb). La structure de la langue n'autorise pas d'autres procédés" (Monteil, 1960, p.106).

7 "La racine est composée de consonnes (et seulement de consonnes).... Elle possède une véritable entité linguistique: un signifiant: un groupe de consonnes donné; un signifié: l'idée générale attachée au groupement de consonnes. La réalisation de cette idée en mots autonomes se fait par le jeu des voyelles à l'intérieur de cette racine" (Fleisch, 1968, p.32).

8 Derivation in Arabic also uses roots that have nominal core meanings. In MSA, there is evidence that new words can be derived from nominal roots. For example, the instrument noun /mīmlaḥa/ 'saltshaker', and the verb /tashammasa/ 'be unbathed' are derived from the roots /m-l-/ 'salt' and /sh-m-s/ 'sun' respectively which have a basic nominal core meaning.
to be preferred because, more than any other method, it adheres to the natural channels and character of Arabic, and thus the products of derivation are less likely to offend or repel the native user. (pp.181-182)

Arabic grammarians distinguish between three types of ishtiqāq: The first type, ishtiqāq al-kabīr known also as al-qalb (metathesis), involves switching the order of the consonantal root. The second type is ishtiqāq al-akbar or al-ibdāl, (root modification), which consists of changing one consonant of the root. These two types of ishtiqāq are less used than a third type, and are considered "marginal methods", and not true forms of derivation (Badry, 1983, p.16, Tarazi, 1967, p.102, El-Khafajī, 1985, p.72). The third type, al-istiqlāq al-dām (general), is argued to be the most prevalent and productive process, and "remains the characteristic method of word-creation in Arabic" (El-Khafajī, 1985, p.70). Only this third type of ishtiqāq will be discussed below. For the purpose of this study, derivation, the commonly accepted English equivalent for ishtiqāq will be used to refer to al-istiqlāq al-dām.

Derivation in Arabic consists of the combination of triliteral consonantal roots with vowel infixes and affixes to form verbal and nominal patterns. Derivation comprises three processes: 1) Vocalic infixation alone, which involves combining the consonantal root with a pattern of inserted vowels; 2) Vocalic infixation and gemination, which consists of inserting vowels in the root and doubling a root consonant, especially the 2nd consonant; 3) Affixation, which involves the appending of an affix, usually a prefix, to the stem (a consonantal root with vowel infixes) (Badry, 1983, p.17). For example, from the underlying consonantal root /-l-m-/ 'learn', among the nouns, adjectives, and verbs that can be formed by vocalic infixation alone are: /nālim/ 'scholar', /nīlm/ 'knowledge', /nālam/ 'world'; by
vocalic infixation and gemination of the 2nd consonant are /sallama/ 'to teach'; and by affixation are /aslama/ 'to inform', /mu'allim/ 'instructor', and /muta'allim/ 'knowledgeable'. etc. All these words contain the same root, and share the same meaning component of knowledge.

Multiple derivation from one root is one of the characteristics of Semitic languages in general, and of Arabic in particular. In Arabic, every root typically has a similar potential for derivation. In the following paragraphs, nominal and verbal derivation are described with a particular emphasis on the patterns investigated in this study that denote the notions of agency, instrumentality, location, and causativity.

2.2.1.1 Nominal derivation

A wide spectrum of simple nominal patterns in MSA are formed through the association of specific consonantal roots with a range of vowel infixes. According to Fück (1951), MSA nominal patterns range from the simplest forms CvCC, increased to CvCvCv, and further augmented to other patterns formed by doubling of the 2nd consonant. In MSA, there are many more nominal patterns than verbal patterns. According to Stetkevych (1970):

Considering the Arabic system of word derivation as a whole, it becomes clear that the possibilities of noun derivation are much more numerous and diversified than those of verbal derivation. At least theoretically, the verbal derivation is limited to the standard fifteen forms—always maintaining the premise of a basic verbal root as the initial point of any verbal derivative. Thus, within the purely theoretical possibilities of derivation from any triliteral root, an extremely small percentage of derived words would be verbs, with the rest falling into the broad category of the Arabic nouns. In practice, however, verbal derivations may constitute between 10 to 25 percent of a given root. (p.10)

However, nominal patterns are not as regular as the verbal patterns, and because of their irregularity "only a few are productive and frequent enough to allow any productive
use" (Badry, 1983, p.18). Among the most frequent and productive nominal patterns in MSA are verbal nouns (nouns indicating the action of the verb and functioning as regular nouns), active participles, agent nouns, and instrument nouns. For a more elaborated description of most nominal patterns, refer to Wright (1964), Holes (1995), and Fischer (1997). Table 2:1 illustrates examples of some of the most frequent patterns formed through vocalic infixation alone and/or gemination of the 2nd consonant.

Table 2:1

Frequent nominal patterns in MSA derived from verbs by vocalic infixation alone, and/or gemination of the 2nd consonant

<table>
<thead>
<tr>
<th>Patterns</th>
<th>Arabic Word</th>
<th>English Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Verbal Nouns</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CaCC</td>
<td>/qatī/</td>
<td>'killing'</td>
</tr>
<tr>
<td>CuCC</td>
<td>/nuzn/</td>
<td>'sadness'</td>
</tr>
<tr>
<td>CiCC</td>
<td>/nifd/</td>
<td>'keeping'</td>
</tr>
<tr>
<td>CaCaC</td>
<td>/talab/</td>
<td>'demand'</td>
</tr>
<tr>
<td>CaCâC</td>
<td>/samâʕ/</td>
<td>'hearing'</td>
</tr>
<tr>
<td>CaCâCa</td>
<td>/na ʕ āfa/</td>
<td>'cleanliness'</td>
</tr>
<tr>
<td><strong>Active Participles</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CâCiC</td>
<td>/kâṭib/</td>
<td>'writer'</td>
</tr>
<tr>
<td><strong>Agent Nouns</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CaCCâC</td>
<td>/najjâr/</td>
<td>'carpenter'</td>
</tr>
<tr>
<td><strong>Instrument Nouns</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CâCiC</td>
<td>/shâḥin/</td>
<td>'charger'</td>
</tr>
<tr>
<td>CâCiCa</td>
<td>/shâḥīna/</td>
<td>'truck'</td>
</tr>
<tr>
<td>CaCCâC</td>
<td>/xallât/</td>
<td>'mixer, blender'</td>
</tr>
<tr>
<td>CaCCâCa</td>
<td>/dabbâsa/</td>
<td>'stapler'</td>
</tr>
<tr>
<td>CiCâC</td>
<td>/wikâʕ/</td>
<td>'recliner'</td>
</tr>
<tr>
<td>CâCâC</td>
<td>/kânûn/</td>
<td>'stove'</td>
</tr>
</tbody>
</table>
A further group of Arabic nominal patterns is formed from triliteral consonantal roots through external affixation where either derivational suffixes or prefixes are appended to the stem. Derivational prefixes include /ṭa/, /ṭu/, /ma/, /mi/ and /mu/, and derivational suffixes are /ṭa/, /ā/, /ān/, /ṭa/, /iṭa/, and /ūt/. Only prefixes /ma/, /mi/, /mu/ are discussed here as they denote agents, instruments and locatives, the three nominal notions investigated in this study.

The prefix /ma/ attached to the stem leads to the nominal patterns maCaC, maCaCa, and maCCaC indicating locative nouns.

The prefix /mi/ appended to the stem yields the nominal patterns miCaC, miCCaC, miCCaCa denoting instrument nouns.

The prefix /mu/ attached to stem yields the nominal pattern muCaCCaC denoting agency as well as instrumentality. This prefix also yields the following patterns muCaCCaC, muCCaC, and musCaCCaC and their feminine counterparts, which denote instrument nouns. These patterns are active participles of the derived verb forms. Table 2:2 presents examples of these prefixed nominal patterns denoting agency, instrumentality, and location.
Table 2.2

Agent, instrument, and locative patterns in MSA by affixation

<table>
<thead>
<tr>
<th>Agent</th>
<th>Arabic Word</th>
<th>English Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>muCaCCiC</td>
<td>/mu'allim/</td>
<td>'instructor'</td>
</tr>
<tr>
<td>miCCaC</td>
<td>/miirqab/</td>
<td>'telescope'</td>
</tr>
<tr>
<td>miCCâC</td>
<td>/miňâh/</td>
<td>'key'</td>
</tr>
<tr>
<td>miCCaCa</td>
<td>/miknasa/</td>
<td>'broom'</td>
</tr>
<tr>
<td>muCaCCiC</td>
<td>/mujâssim/</td>
<td>'stereoscope'</td>
</tr>
<tr>
<td>muCaCCiCa</td>
<td>/mujammida/</td>
<td>'freezer'</td>
</tr>
<tr>
<td>muCâCaC</td>
<td>/muľâdir/</td>
<td>'equalizer'</td>
</tr>
<tr>
<td>muCâCiCa</td>
<td>/muhâšiya/</td>
<td>'adaptor'</td>
</tr>
<tr>
<td>muCCiC</td>
<td>/mushfiîl/</td>
<td>'indicator'</td>
</tr>
<tr>
<td>muCCiCa</td>
<td>/mursila/</td>
<td>'transmitter'</td>
</tr>
<tr>
<td>musCaCCiC</td>
<td>/mustaxlis/</td>
<td>'extractor'</td>
</tr>
<tr>
<td>musCaCCiCa</td>
<td>/mustaqbila/</td>
<td>'receiver'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Arabic Word</th>
<th>English Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>miCCâC</td>
<td>/miňâh/</td>
<td>'key'</td>
</tr>
<tr>
<td>miCCaCa</td>
<td>/miknasa/</td>
<td>'broom'</td>
</tr>
<tr>
<td>muCaCCiC</td>
<td>/mujâssim/</td>
<td>'stereoscope'</td>
</tr>
<tr>
<td>muCaCCiCa</td>
<td>/mujammida/</td>
<td>'freezer'</td>
</tr>
<tr>
<td>muCâCaC</td>
<td>/muľâdir/</td>
<td>'equalizer'</td>
</tr>
<tr>
<td>muCâCiCa</td>
<td>/muhâšiya/</td>
<td>'adaptor'</td>
</tr>
<tr>
<td>muCCiC</td>
<td>/mushfiîl/</td>
<td>'indicator'</td>
</tr>
<tr>
<td>muCCiCa</td>
<td>/mursila/</td>
<td>'transmitter'</td>
</tr>
<tr>
<td>musCaCCiC</td>
<td>/mustaxlis/</td>
<td>'extractor'</td>
</tr>
<tr>
<td>musCaCCiCa</td>
<td>/mustaqbila/</td>
<td>'receiver'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Locative</th>
<th>Arabic Word</th>
<th>English Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>maCCaC</td>
<td>/maktab/</td>
<td>'office'</td>
</tr>
<tr>
<td>maCCaCa</td>
<td>/maktaba/</td>
<td>'library'</td>
</tr>
<tr>
<td>maCCiC</td>
<td>/majlîs/</td>
<td>'council'</td>
</tr>
</tbody>
</table>

2.2.1.2 Verbal Derivation

Similar to nouns, verbs in MSA are constructed out of a triliteral consonantal verbal root. The verb root pattern CCC becomes the first basic verbal form through the interposing of short vowels (a, i and u) between its consonants, for example, /kataba/ 'to write', /shariba/ 'to drink, and /kabura/ 'to grow big'. This first verbal form is claimed to be "the most frequently used verbal pattern in Semitic languages and is usually referred to as the basic pattern in traditional grammars" (Badry, 1983, p.10).
Derived verbs are also constructed from the triliteral verbs (El-Tikaina, 1982). The first verbal form CvCvCv is modified either by lengthening vowels or consonants or by adding an affix, usually a prefix, to form other derived verbal patterns. MSA has fourteen derived verbs that express several semantic notions such as causativity, reflexivity, passiveness, inchoativeness, and reciprocity (Fleisch, 1968, p.112). Only ten are in common use. Table 2:3 presents the ten commonest verbal patterns in MSA and their meanings.

Table 2:3
Verbal patterns in MSA

<table>
<thead>
<tr>
<th>Verbal Patterns</th>
<th>Meaning</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI CaCaCa</td>
<td>simple</td>
<td>/kataba/</td>
</tr>
<tr>
<td>PII CaCCaCa</td>
<td>causative</td>
<td>/fahhama/</td>
</tr>
<tr>
<td>PIII CaCcaCa</td>
<td>reciprocal</td>
<td>/kataba/</td>
</tr>
<tr>
<td>PIV ?aCCaCa</td>
<td>causative</td>
<td>/?aq?ada/</td>
</tr>
<tr>
<td>PV taCaCCaCa</td>
<td>reflexive</td>
<td>/takassara/</td>
</tr>
<tr>
<td>PVI taCâCaCa</td>
<td>reciprocal</td>
<td>/tawâfaqa/</td>
</tr>
<tr>
<td>PVII ?inCaCaCa</td>
<td>reflexive</td>
<td>/?inqataîa/</td>
</tr>
<tr>
<td>PVIII ?iCtaCaCa</td>
<td>reflexive</td>
<td>/?iktataba/</td>
</tr>
<tr>
<td>PIX ?iCCaCCa</td>
<td>inchoative</td>
<td>/?i?marra/</td>
</tr>
<tr>
<td>PX ?istaCCaCa</td>
<td>estimative</td>
<td>/?istaîsana/</td>
</tr>
</tbody>
</table>

9 In addition to its use of denoting causative meaning, this derived form is also employed to express intensive action. The intensiveness is its major meaning. (El-Tikaina, 1982, p.12)
In practice, however, the maximum number of verbal forms found in any root is seven or eight, and most roots show fewer than this number. In the Orientalist tradition, verbal forms are usually referred to by the letter P for "pattern" followed by a Roman numeral. (e.g., PI, PII and so on).

2.2.2 Summary

This brief descriptive account of derivation in MSA reveals that this process is one of the features that distinguishes MSA from French and English. To form words, MSA uses a root which is composed only of consonants, and which carries a general idea. This root takes different bodies by either vocalic alternation, vocalic and/or consonantal gemination, or by adding monosyllabic affixes, mostly prefixes. English and French, however, use a radical composed of consonant and vowels which is lengthened by prefixes and/or suffixes. But derivation is by no means the only process that distinguishes MSA from English and French. Naft is another process.

2.2.3 Naft (Compounding)

Modern Arab philologists, grammarians and linguists, as well as Arabists, have often referred to the process of naft in the general sense of compounding as known in Indo-European languages. A close look at this word formation process, particularly in Classical Arabic works, shows that it corresponds closely to blending (e.g., words like smog in English). In this section, an analysis of naft as treated in classical Arabic philology and in Modern Arabic linguistics will be presented. Its applicability and its limits will also be examined.
The term naḥt is derived from the triliteral verbal root /n-n-t/ which means 'to chisel' or 'to carve in a hard material' (El-Mouloudi, 1986). In morphology, this word is used by the early Arab and non-Arab philologists and grammarians to mean the formation of one word out of two or more words as a kind of abbreviation (El-Khafaṣṭl, 1985). Ibn Faris, one of the old exponents of naḥt, considered that in the Arabic lexicon the majority of quadriliteral and quinquiliteral words (those that have either four or five consonants in their roots) are the result of this process. Al-Maghrībī (1947, p.15) also supports this claim by saying that quadriliteral and quinquiliteral words in Arabic are the result of blending pairs of triliteral verbs such as /harwala/ 'to walk fast' formed from /haraba/ 'to flee, escape' and /walla/ 'to run away'. In addition, Fleisch (1968, p. 124) states that naḥt for Arabs means to extract, from a phrase or sentence, four consonants deemed characteristic of the meaning of the constituents in order to form a quadriliteral verb. For example, /basmala/ is formed out of the sentence /bismil-l-lāh ar-raḥmān ar-raḥīm/ 'in the name of God the most merciful the most compassionate'.

Four types of naḥt (blending) are distinguished by Al-Maghrībī (1947, pp.13-14):

- *al-naḥt al-fīfir* (verbal naḥt) involves the creation of a verb, usually consisting of more than three consonants from elements taken from words in a phrase or short sentence as in /sam?ala/ 'to greet' formed from /qāla assalāmu ʿalaykum/ literally (he said) 'Peace be upon you'.

- *al-naḥt al-waṣṭ* (adjectival naḥt) consists in blending two words to create an adjective, e.g., diyaṭr 'firm, physically strong' from /dabaṭa/ 'to hold fast' and /dabar/ 'to leap'.

- *al-naḥt al-ismī* (nominal naḥt) is the formation of a noun blend from elements of two words, e.g., /julmūd/ 'a large rock' created from /jaluda/ 'to become hard' and /jamuda/ 'to congeal'.

- *al-naḥt nisbi* (relational naḥt) denotes the relation of something or somebody to a place, tribe, school of thought, etc, as in /Ṭabdāri/ (someone who is affiliated to the tribe Ṭabd ad-dar).
Thus, naḥt as traditionally used in Classical works corresponds to blending in Indo-European languages. But, in Modern Arabic works, the usage of the term naḥt has expanded to include the process of compounding as known in Indo-European languages, that is the juxtaposition of two or more words. Two terms are used by Modern Arab linguists to distinguish between blending and compounding processes in Arabic: Tarkib naḥti for the process of blending, and tarkib majzī for compounding. The originality of tarkib majzī as well as its applicability in MSA has been a controversial issue in Modern Arabic linguistics, and both Arab and non-Arab scholars have expressed contrasting opinions. Some consider it an unreliable process of Arabic word formation, and believe it to be essentially a marginal aspect of Arabic (al-Karmālī, 1932, Mustafā Jawād, 1955, and Fleisch, 1968). Importantly, they consider Arabic to be in essence a derivational language. Fleisch (1968) summarizes this point of view by stating that:

...aucun procédé normal de composition ne s'est établi dans la langue. L'arabe ne peut pas réunir deux ou plusieurs mots joints suivant les règles syntaxiques ordinaires pour en former un seul, ainsi que fait le français; habqurr - "grêle" (habbu qurrin "grain de froid") est proche de la manière française, mais reste un très rare exemple. L'arabe ne peut réunir deux mots par une voyelle thématique comme font le latin et le grec, ni les joindre selon les composés de l'anglais ou de l'allemand. La composition n'est pas dans son génie. Ceci est un grand handicap dans la constitution d'un vocabulaire technique scientifique. (p.124)

However, others (e.g., Al-Kawākibī, 1959; Al-Husari, 1958) have strongly supported the use of naḥt as a way of expanding the Arabic lexicon adequate for modern needs. For example, Al-Kawākibī (1959) considered naḥt most operative especially in translating the vocabulary of a science such as chemistry (p.8). According to Al-Husari (1958), it is imperative to resort to naḥt to coin new words and concepts in science and technology because the Arabic derivational system is restricted to a limited number of patterns and
paradigms, and because it lacks the ability to evolve, alone, the new vocabulary that is needed to express the ever-expanding domain of human thought (Mustafā Jawād, 1955, p.92).

In the current usage of Arabic, naḥt is not limited to science and technology, its need and usefulness are more general. A considerable number of compound constructions are found in modern usage in different domains. Among these compound constructions, notable is the idāfa compound (genitive construct or N-in-construct)¹⁰ that combines two nouns. The most common are: N+N, as in /miqyās, al-ishārāt/ (measure + radiation) = ‘radiometer’, and the AP+N construction, where the first noun is the active participle of either pattern CāCīC or muCaCCīC, as in /rāsim ʔalabābāt/ (marker+oscillation)= ‘oscillograph’; and /mujassim assawwar/ (amplifier+pictures)= ‘stereoscope’. The N-in-construct compound is also used to denote agent, instrument, and locative nouns where the nouns /rajul/ ‘man’, /lāla/ ‘machine’, or /makān/ ‘place’ are combined with another noun; and the AP+N construction for agent and instrument nouns (see Table 2:4 for examples).

Another type of compound is N+M combining a noun and a modifier. This type of compound is considered a one-word unit¹¹ (Wehr, 1943), and it is opted for in MSA when translating European technical terms that require two referential components (Bateson, 1967), for example, /ra?s mālliy/ (head + money+iy)= 'capital'.

¹⁰ According to Holes (1995), a noun is said to be in a construct state when it is dependent (annexed in Arabic grammar terminology) on another noun for its definition. This corresponds to the possessive in English. The first, "annexed" noun must always be grammatically indefinite. The second, amplifying, noun, must, in MSA, be in the genitive case (pp.166-167).

An additional type of compound construction consists of combining two nouns that are connected by a preposition (N+prep+N): for example, /qābilun li ssuknā/ (acceptable+to+habitation)= 'habitable'. This type of compound is also used in MSA to denote instruments (see Table 2:4 for examples).

Table 2:4

Compound constructions denoting agent, instrument and locative nouns in MSA

<table>
<thead>
<tr>
<th>N+N compound constructions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N-in-constructor</strong> (head initial)</td>
</tr>
<tr>
<td>/rajulu lʔaʔmāl/</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>/ʔālatur lḥaşād/</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>/makānu lghasīl/</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>AP+N (head initial)</strong></td>
</tr>
<tr>
<td>/kātibun yumūmiy/</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>/miṣfāʔatu ḥariq/</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>N+prep+N</strong></td>
</tr>
<tr>
<td>/ʔālaturlifāšārī ḥākiha/</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

A further type of compound in Modern Arabic is one that combines a prefixed particle and a noun. The prefix is mostly a negative particle such as /lā/ 'not', 'none', /ghayr/, /lādām/ 'without', /diddā/ 'against'. These negative particles constitute the first component of
the compound and the second component is either a noun or an adjective (Drozdik, 1967, Monteil, 1960). Examples of these compound forms are: /lā samīl/ 'anti-semitic', /ghayr qānūniy/ 'illegal', /didda jāsūsiya/ 'counterespionage'.

Except for this last compound construction, the word order principle in all types of compounds described above is head-initial.

2.2.4 Summary

The above analysis of naht has shown that this process has been treated as a type of blending or abbreviation in Classical Arabic philology. In modern Arabic linguistics, however, it has been considered either as an accidental linguistic phenomenon used only in cases of necessity, or as a productive word formation process including blending and compounding. The fact that naht involves both blending and compounding is one of the differences that distinguish naht in MSA from compounding in English and French. Another noteworthy difference is the fact that compounding in MSA is in general limited to N+N combinations, contrary to English and French where compounding covers different categories depending on the class of the first noun. A further distinction among the three languages is the principal word order of compounds. Unlike English, MSA is a head initial language, a word order principle that it shares, however, with French. Also, Arabic, like French, combines nouns in a head-initial principle by connecting head and modifying noun with a preposition. But this type of N+prep+N compound is limited in Arabic to instruments.
2.2.5 Ta指引 (Borrowing)

Another word formation process in MSA is lexical borrowing\(^\text{12}\) which involves the incorporation of foreign words into the language. The view of lexical borrowing among word formation processes in Arabic differs from one author to another. Some treat it as a topic unrelated to other word formation processes in Arabic (Drozdik, 1979, p.23), whereas others judge it as a word formation device, but one of last resort. Hamzaoui (1975) advances that ta指引:

... est conçu comme un procédé auquel la langue doit avoir recours après avoir épousé tous les autres procédés, à savoir la resurgence et al-Ishtiqaq... Néanmoins son emploi ne doit pas porter atteinte aux phénomènes et aux schèmes de la langue qui doivent être protégés dans la mesure du possible. Nous en déduisons que si les termes empruntés constituent des corps étrangers à la langue, voire des intrus, il n'en demeure pas moins qu'ils doivent être soumis à des normes établies par les grammairiens classiques. (p.361)

MSA resorts at times to ta指引, particularly in cases where there is no equivalent Arabic word, and where an indigenous Arabic translation might require a phrase or cumbersome explanation. MSA has a number of borrowings from English and French. Among these are /falsafa/ 'philosophy', /benisilin/ 'penicillin', /uţubis/ 'buses', /faytāmin/ 'vitamin', /bilāj/ 'plage' and /sīnamā/ 'cinéma'. Borrowed words can be assimilated and incorporated into the Arabic lexicon if they can be made to fit one of its derivational patterns. For example, the borrowed noun 'telephone' has in MSA, an equivalent noun /tiiifūn/ from which the quadrilateral root /t-l-f-n/ has been abstracted to produce the verb /talfana/ 'he telephoned'.

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\(^{12}\) According to Drozdik (1979), the technical term usually associated with lexical borrowing in Arabic is ta指引 (literally, arabization, translation into Arabic). A general meaning of ta指引 refers to language planning, that is the use of Arabic as the sole medium of instruction and promoting it as the only medium of communication.
2.2.6 Conversion

Besides derivation, compounding, and ta'rif, Reguigui (1994) argues that MSA resorts to conversion. The only time that MSA uses conversion is when adjectives are converted into nouns. According to Reguigui, nominalization of the adjective is a process becoming more frequent in Arabic, and is a source of numerous neologisms (p.72). The patterns that are most affected by conversion are active and passive participles. Among the examples provided by Reguigui: /muhawwil taraddud ʔiliktrūniyy/ ‘electronic frequency converter’; and /murakkab mānīf li takawwun al qushūf/ ‘antiscale compound’.

2.2.7 ʔiḥyāʿ gharib al-lugha (Revival of uncommon language)

The final source of word formation in Arabic is ʔiḥyāʿ gharib al-lugha. This process consists of unearthing and reviving archaic words and assigning them to new and modern semantic functions, usually related to their old ones (Hammoud, 1982, p.139; Reguigui, 1994, p.83). Examples of this resurgence include the word /qīṭr/ ‘caravan of camels’ which is assigned a new meaning in modern usage, ‘train’; and the word /qāṭirāt/ ‘head of caravan of camels’ which is used in MSA to mean ‘locomotive’, ‘engine’.

2.2.8 Summary

In this descriptive account of word formation processes in English, French, and MSA, I have pointed out that in English and French, affixation, compounding, and conversion are the most productive word formation processes. MSA, on the other hand, has two major devices, ishtiqaq ʔal-fām (derivation), and naht. The former is the most productive word formation process, and the latter, referring in Arabic to both blending and
compounding, is less productive. Although MSA relies heavily on these two major devices, it is nevertheless a more varied and complex system in comparison to Indo-European languages. This complexity is illustrated by the wide range of options that Arabic offers to express a single semantic notion. To demonstrate this variety and complexity, Table 2:5 presents the different options existing in MSA to express instrumentality.

**Table 2:5**

The different options in MSA to denote instrumentality

<table>
<thead>
<tr>
<th>Derivation</th>
<th>1</th>
<th>Vocalic infixation alone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CâCiC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CâCiCa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CiCâC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CâCiC</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Vocalic Infixation &amp; gemination of the 2nd consonant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CaCCâC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CaCCâCa</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Affixation (prefixation)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>miCCaC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>miCCaC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>miCCaCa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>muCaCCiC</td>
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<tr>
<td></td>
<td></td>
<td>muCaCCiCa</td>
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<tr>
<td></td>
<td></td>
<td>muCâCiC</td>
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<td></td>
<td></td>
<td>muCâCiCa</td>
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<td></td>
<td></td>
<td>muCCiC</td>
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<tr>
<td></td>
<td></td>
<td>muCCiCa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mustaCCiC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mustaCCiCa</td>
</tr>
</tbody>
</table>

| Compounding                                         | 1 | N-in-Construct          |
|                                                    |   | /ṭâla ‘machine’+noun/   |
|                                                      | 2 | AP+N                    |
|                                                      | 3 | N+prep+N               |
|                                                      |   | /ṭâla+li+N/             |
CHAPTER 3

THE ACQUISITION OF WORD FORMATION PROCESSES:
THEORETICAL FRAMEWORK AND EMPIRICAL EVIDENCE

This chapter outlines the various principles that have been proposed to account for the acquisition of word formation processes, and reviews the relevant research on word formation in L1 and L2 acquisition.

When learners need a word to express a specific meaning, they search their lexicon for an appropriate lexical item. But how do learners go about finding an appropriate word to convey a meaning for which they lack a well-established item in their lexical resources? In the absence of a conventional word to convey a concept or meaning, Clark (1981a, 1982) claimed that lexical innovation from the available lexical stock is a common strategy that learners rely on. Lexical innovation which involves forming new lexical items is a common phenomenon in the speech of both children and adults: novel words are created to serve the function of filling lexical gaps in their lexicon (Clark et al., 1981a, pp.300-301).

To coin new words, learners rely on several word formation processes, the most common of which are derivation and compounding. But which process(es) do learners choose at an early stage of acquisition? Why do they pick certain processes over others? The word formation options that learners use to form lexical coinages are said to be constrained by formal restrictions in language, and influenced by certain principles of acquisition (Clark, 1980a, 1981a; Clark et al., 1982; and Clark et al., 1984). In the following paragraphs, the general principles that are argued to account for the choice of word formation processes during the course of acquisition are outlined and examined.
3.1 Word Formation in First language (L1)

3.1.1 Principles in the Acquisition of Word Formation Processes in L1 Studies

Research on the gradual mastery of word formation processes by L1 learners (e.g., Badry, 1983; Berman et al., 1982; Clark, 1980a, 1980b, 1981a, 1981b; Clark et al., 1982, 1984) suggests that four general principles govern the course of acquisition of word formation processes. These are productivity, semantic transparency, formal simplicity, and conventionality. Evidence from data based on both observation of children's spontaneous speech and elicitation techniques is presented in section 3.1.2 to support the claim that these four factors play an important role in acquiring word formation processes.

a) Productivity

It is claimed by Clark (1981a) that when L1 learners acquire new word formation devices, they rely on the productivity of the devices in the language. Productivity in this context refers to "the degree to which a particular word formation device may be used as a model for new lexical items" (Clark, 1981a, p.312). Word formation devices that are more productive are more available to learners, and should therefore be acquired earlier and used in preference to less productive devices.

Based on this principle, learners will develop a strategy that will help them to look for and identify the most commonly used word formation process, then incorporate it in their repertoires and adopt it for creating innovations (Clark, 1981a; Clark, 1982, p.5). For instance, in English, it is predicted that children will acquire the suffix -er before -ist and -ian to express agency because -er is the most productive of the three. Clark (1981b) argues that this prediction can be tested "both within and across languages by examining sets of word formation devices and patterns closely related in meaning to see whether the most
productive ones are acquired earlier when meaning is held (relatively) constant" (Clark, 1981b, p.254).

b) Semantic Transparency

Clark also claimed that a word formation device that has a one-to-one mapping with meaning is semantically transparent and should be easier to acquire than devices that have multiple meanings (Clark, 1981a, p.313). This principle predicts that new words are more easily formed from elements with independent status which have conventional meanings already known to learners. According to this principle, compounding (involving elements with independent status) will be the first device opted for to coin new words because it is most readily accessible to learners. For example, in English, the conventional meanings of the words cut, man, and machine make it easier to form compounds like cut-man for 'someone who cuts things', or cut-machine for 'something that cuts things' rather than the word cutter with the suffix -er. The reason behind this, according to Clark et al., (1982), is that the words man and machine express the notions of agency and instrumentality more explicitly than the suffix -er (Clark et al., 1982, p.4) which can appear in other words without being a suffix, e.g., corner: hammer.

Semantic transparency also predicts that new words are more easily coined with elements that use a single form to express a single meaning. For example, in constructing new agents in English, suffixes such as -ist and -ian should be acquired before -er because the suffix -er expresses instrumental as well as agentive meaning (Clark, 1981b, p.313).

By relying on this principle, children use two strategies. The first strategy is to look for word formation processes comprised of words that mark only one meaning, and use them jointly to coin new compound words. The second strategy is to find a single process in the
repertoire and use it with only one meaning to coin the required word. For instance in English, learners may, in fact, first use the suffix -er to form new agent nouns only. Once they master the agency meaning of this suffix, they can expand its usage to include other meanings such as instrumentality, comparative, etc. (Clark et al., 1984, p.547).

c) Formal Simplicity

The third principle that Clark claimed to account for the acquisition of word formation processes is formal simplicity. Simplicity is defined in this context as the degree of change in a form. The less a word-form has to change, the simpler the process is held to be (Clark, 1980a, p.11). In application, this principle predicts that simpler processes are easier to acquire than more complex ones. Guided by this principle, the learner strategy entails choosing processes that make as few changes as possible in constructing new words from old ones.

Given the word formation options of English, this principle presumes that conversion (zero change) should be used before compounding and affixation. Clark (1980a) proposed that because of the interaction between semantic transparency and formal simplicity, conversion and compounding can be found to occur equally early in children's speech. She added that compounding may be more easily accessible to learners and easier to use than conversion because of the transparency of meaning of its elements. For instance, the term man in the English compound noun cut-man is available to make the meaning of the compound transparent to the learner. The change from the noun bicycle to the verb to bicycle although it is a formally simple process, is less transparent in meaning. This is because "the precise relation between this noun and verb is itself a conventional one that has to be learnt" (Clark, 1980a, p.12).
The principle of simplicity also presumes that compounding and conversion will be used before affixation to coin new words. Affixation in English, for example, is argued to be an opaque process compared to compounding and conversion. This is because affixation can cause pronunciation changes in the root, e.g. *activate/activity* in English. Thus, combining two independent nouns or converting nouns to verbs is seen to be easier than forming nouns from verbs by adding suffixes (Clark, 1980a). Even within affixation, this principle presumes that suffixes should be acquired before prefixes and infixes because suffixes appear to be "more salient perceptually than prefixes or infixes" (Clark et al., 1984, p.571. In addition, this principle presumes that affixes that require a great number of changes in the base will be acquired later than others which undergo fewer changes. According to Clark, in English for example, the suffix *-ness* should be acquired earlier than the suffix *-ity*. The reason behind this is that the former does not require any change in the base to which the suffix is added, e.g., *white/whiteness*. The latter, on the other hand, "requires a shift in word-stress and often a change in a vowel or consonant (or both) of the base as well". For example, coining the noun *electricity* from the adjective *electric* involves the shift in stress from the second syllable to the third, and also a change from the the final /k/ of the adjective to /s/ in the noun (Clark, 1980a, pp.12-13).

d) Conventionality

The fourth principle that, according to Clark, accounts for the acquisition of word formation processes is the principle of conventionality. This latter states that conventional words or word formation processes should be acquired and used earlier.

According to Clark, what children may implicitly assume to be conventional at any given time is exhibited in their repertoire of vocabulary and word formation processes. But
their implied beliefs about which words are conventional will change as they add more processes to their basic stock (Clark et al., 1982, p.6). For example, if compounding is the only process in the children's basic repertoire, it is assumed that this process is the conventional way to form new nouns, and it is used whenever children want to express a word. But once they come across more specialized options, they change their implied presumptions about what is conventional in the language.

An obvious strategy that learners depend on when they want to express new meanings is to pick up on the adult conventional device and use it in preference to other devices. For example, English-speaking children would replace innovative compounds such as car-smoke with the conventional word exhaust, and an innovative agent noun such as bicyclist and an instrument noun as drill with the conventional words cyclist and drill respectively. In each case, the conventional well-formed word already existing in the lexicon of the language supplants the child's innovation that is intended to express that meaning (Clark et al., 1982, p.6).

In summary, the four general principles (productivity, semantic transparency, formal simplicity, and conventionality) are argued to make for early acquisition of typical and available word formation processes, and play a role in children's choices of word formation processes in constructing new words. These general principles were tested in several studies on the acquisition of L1 word formation processes by exploring children's and adult formation of lexical innovations in different semantic domains and in different languages. In the next section, the outcomes of some of these studies are reviewed. Examples extracted from the relevant sources are used for illustration.
3.1.2 Empirical Evidence

A review of the literature on the acquisition of word formation processes reveals that research on children's gradual acquisition of L1 word formation devices is abundant in comparison to L2 research. L1 studies have looked at the role of these general principles in children's coinages of innovative agents, instruments, and negative verbs within and across languages.

Clark and associates (Clark, 1980a, 1980b, 1981a, 1982; Clark et al., 1982; Clark et al., 1984) have contributed a series of studies on English L1 acquisition in which they have demonstrated that transparent, productive, simple, and conventional word formation processes appear early in language acquisition. One noteworthy study by Clark et al. (1982) looked at how children acquire the conventional adult word formation processes for coining novel English agent and instrument nouns, the course they follow during acquisition, and the factors affecting their acquisition of word formation processes. In accordance with predictions from the transparency principle, the youngest children (aged two or three), depended initially on simple compounds of known elements and often used them for agents, e.g., wagon-girl for 'a girl who pulls wagons', a cleaner-people for 'a person who cleans'. Also, combining strategies from both the transparency and productivity principles, older children seemed to identify the -er suffix as an agentive marker and use it productively for coining agents in preference to the two other agentive suffixes, -ist and -ian. Examples of innovative agent nouns with -er that older children came up with are bitter, giver, and presenter.
Similar trends were reported in Clark’s (1980a) study dealing with the L1 acquisition of French agents and instruments. In this study, it was found that aside from compounding, the two most productive suffixes -ier and -eur, were acquired earliest by young children and were the only ones to appear in their coinages. Some examples of French lexical innovations carrying the suffixes -ier and -eur that the youngest children (aged two or three) came up with are marronier to designate ‘a seller of chestnuts’ based on marron ‘chestnut’, and cersonnier for ‘a mender of hoops’ based on cerceau ‘hoop’; crèmeur ‘for an eater of cream’, from crème ‘cream’, and ouvreur ‘for an opener’ from ouvrir ‘to open’.

Another study by Clark (1981b) investigated the effects of productivity in children’s coinage of negative verbs (verbs expressing reversals and misdeeds) across English, French, and German. To convey the notion of reversal, English uses the negative prefix un- as in the verbs undo, unbutton, and the particles off and out as in pull off or take out. English also uses lexicalized verbs such as come/go. To express the notion of misdeeds, English uses the prefix mis-, as in the well-established misguide. Of all these devices, the negative prefix un- is considered to be highly productive and is widely used to form new verbs expressing reversal. French, on the other hand, relies on a single device for the expression of reversal, the prefix dé-. As in English, French also uses lexicalized reversal verbs such as éteindre ‘turn off’ and allumer ‘turn on’. Of the two devices in French, the prefix dé- is the most productive device for coining new reversal verbs. To express misdeeds, French, like English, uses a prefix mé- as in méfaire ‘do someone ill’. German, on the other hand, uses the negative prefix ent- or a negative particle associated with the verbs, usually aus ‘out, off’ or ab ‘down, from’, to denote reversal. As in English and French, German uses lexicalized reversal verbs such as kommen ‘come’ and gehen ‘go’. None of these German devices is
productive. In addition, German uses two negative prefixes, ver- and mías to express misdeeds and both these prefixes are somewhat productive (Clark, 1981b, p.42).

In this study, findings showed that the principle of productivity had a direct influence on children's innovations in the three languages. Children opted for the most productive devices in coining their innovations, and where there is no productive device, they simply did not coin any. In the English data, the most productive device, the prefix un-, was found to be acquired relatively early by young English-speaking children, and was the only prefix used in coining new reversal verbs. Typical examples of these innovations were uncapture 'release', uncrowd 'make less crowded'. English-speaking children also opted for some negative particles.

In the French data, children as young as 2;6 relied on the single productive process, the negative prefix dé-, to express reversal of action. Among the innovations produced by French-speaking children were débatir 'to demolish' and déchauffer, 'to make less hot'. For misdeeds, neither English nor French-speaking children used the unproductive prefixes mis- and mé-. Instead they used dé-. Unlike English and French-speaking children, German-speaking children did not coin verbs denoting reversals of action because of the absence of a productive process denoting this semantic notion. For misdeeds, however, they produced innovations with the productive prefix ver-.

Berman and associates have contributed studies on the L1 acquisition of word formation in Hebrew - a Semitic language, which like Arabic has a rather different typological structure from Indo-European languages (e.g., Berman & Sagi, 1981; Berman, Hecht & Clark, 1982; and Clark et al., 1984). Of note is Berman et al.'s (1982) study which examined the devices used by native Hebrew-speaking children to coin agent and instrument
nouns in Hebrew, and the influence of general principles in coining these notions. Based on data from 60 children (aged three, four, five, seven, and eleven), and 12 adult native Hebrew speakers (most of them college students in their mid-twenties), Berman et al. demonstrated that different word formation devices were preferred at different ages.

In Hebrew, the commonest devices used to coin both agent and instrument nouns are: vowel insertion, as in /tsayar/ 'painter', /vasat/ 'regulator'; pattern CaCCan, e.g., /saxkan/ 'actor', and /mazgan/ 'air conditioner'; an association of word stem+ either suffix /an-/, /ar-/, /ay/, or /iya-/, as /yetsu-an/ 'exporter', /sandl-ar/ 'shoemaker', /iton-ay/ 'journalist', and /xanuk-iya/ 'Hanukah candlestick'; and conversion, which involves forming nouns from present tense participial verb forms known as benoni, e.g., /jofet/ 'judges' 'a judge', and /motsetd/ 'sucks' 'a pacifier'. Two other word formation processes, used mainly for instrument nouns, are the prefixed pattern ma-CCeC, e.g., /masrek/ 'comb', and its feminine nominal form ma-CCeCa, e.g., /mamtera/ 'sprinkler'. In addition, compounding in Hebrew is not common for agents and instruments. However, a number of lexicalized compounds expressing instruments exist in the current lexicon of Hebrew (Berman, et al., 1982, pp.18-20).

Findings of this study showed that for agents, children from age four on relied on semantic transparency by first using the agentive suffix /-an/ since it is specialized for agents (Berman et al., 1982, p.22). The suffix /-an/ was also preferred for instruments by children as well as adults. The /ma-/ prefix pattern, on the other hand, was not used at all by children for coining instruments. Formal simplicity was also relied on especially by the youngest children (three-year-old) when they used the present tense participial verb form (benoni) for agent and instrument nouns. Compounds were rarely opted for and they were
only used by seven-year-old children for instrument nouns. Findings of this study were compared with those of Clark et al. (1982) in order to distinguish patterns of response that may be language-specific from patterns reflecting more general and universal principles of acquisition, and to determine if the same general acquisitional principles apply across languages that are structurally different. In most cases, patterns produced by either L1 learners of English or Hebrew were shown to be similar. The only difference noted was the late appearance of compounding in Hebrew compared to English. According to these researchers, this is attributable to the low productivity, and lack of utility of compounding in Hebrew (Berman, et al., 1982, p.15).

Another study of Hebrew L1 acquisition that supports the primacy of Clark's acquisitional principles is Clark et al. (1984) which investigated the applicability of these acquisitional principles in Hebrew-speaking children's and adults' coinages of novel agentive and instrumental nouns, and compared their patterns of acquisition to those of English-speaking children. In the comprehension data, all children, even the youngest (3 year-olds), were most likely to opt for patterns with the suffix /-an/ for agents. The infixed pattern, however, was less used by all age groups (3 through 11). For instruments, patterns with the -an suffix were also used more by younger children than patterns with prefix ma-. The later acquisition of the instrumental prefix /ma-/ is perhaps due to degree of exposure. According to Clark et al. (1984), younger Hebrew-speaking children may not yet have heard enough instrument nouns in the /maCCeC/ pattern (Clark et al., 1984). In the production data as well, Hebrew-speaking children depended mostly on the suffix /-an/ to coin both agents and instruments rather than the prefix /ma-/. Younger children (three-year-olds) favoured conversion by producing some present tense participial verb forms for agents. Compared to
the results for English (Clark et al., 1984), compounding was produced only around age five, with a slight peak at age seven, in contrast to English-speaking children who often relied initially on compound forms (at age two or three). Hebrew-speaking children also gave more compounds for instruments than English-speaking children. "This evidently results from language-specific asymmetries among compound nouns in the current lexicons of the two languages" (Clark et al., 1984 p.567). Hebrew contains many compounds for instruments using the nouns /mexona/ 'machine', and /kli/ 'implement', while English contains many agent compounds like milkman and postman.

3.1.3 Summary

In sum, the above review of L1 studies indicates that younger children, as early as age three, possess the ability to coin new words, and this ability develops with age as differences in preference for word formation processes are found between younger and older children. The review also reveals that productive, simple, transparent, and conventional word formation processes are acquired earlier than unproductive, complex, unconventional, or opaque ones. Moreover, it shows that L1 learners generally rely on similar acquisitional principles regardless of the language being acquired, but because of the peculiarities of the specific L1, the patterns of acquisition can sometimes be different.

3.2 Word Formation in Second Language (L2)

3.2.1 Principles of Acquisition of Word Formation Processes in L2 Studies

Research on word formation in L2 is rare compared to such research in L1. The few studies that have been conducted on the acquisition of L2 word formation processes by children and adults are Kennedy-Jonker (1984); Bahat (1986); Olshtain (1987); Broeder

One case study of note (Kennedy-Jonker, 1984) investigated whether the acquisitional principles discussed above obtained in the lexical innovations of two bilingual children in English and Dutch, and whether these children used the same strategies in both languages. It was found that productivity, semantic transparency and conventionality principles guided the two bilingual children in producing innovative agents in English and Dutch. In their English innovations, both children adhered to the principles of productivity and conventionality by relying on the suffix -er for coining agents, e.g., smoker for 'somebody who smokes cigars', babyminder for 'somebody who minds babies'. In their Dutch innovations, they relied on both semantic transparency and productivity principles. Compounds with either meneer or vrouw, and the suffix -er were used equally in innovating agents. Examples of compound agents were postmeneer 'postman' for somebody who brings post, and automevrouw 'autowoman' for somebody who fixes cars, and with the suffix -er are harenwasser 'hairwasher' for somebody who washes hair, and bakker 'baker' for somebody who sells bread.

In another study, Olshtain (1987) investigated the acquisition of Hebrew word formation processes by intermediate and advanced adult L2 learners of different L1 backgrounds (English, Spanish, and other languages) and by native speakers. Findings of this study showed that the choice and the preference order of the L2 learners in Hebrew was subject to some of the acquisitional principles. In accordance with the principle of semantic transparency, compounding was found to be used more frequently than derivation by advanced learners. Intermediate learners, on the other hand, showed a stronger preference
for affixation. Suffixes such as /-an/ and /-ay/ were especially preferred for agents. According to Olshtain, the preference for affixation over compounding by intermediate learners was attributable to their exposure to, and familiarity with, this process as a result of instructional emphasis. Affixation had been covered in their course, and intermediate learners had spent time practising it (Olshtain, 1987, p.229). The findings also showed that advanced learners' behaviour patterns in selecting word formation strategies were similar to native Hebrew-speakers', indicating that the advanced L2 learners possessed a level of target language competence that enabled them to produce innovations in Hebrew in ways that approximated native speakers' responses (Olshtain, 1987, p.231).

Broeder in collaboration with other researchers has also contributed to research on L2 word formation with various longitudinal cross-linguistic studies on the acquisition of word formation processes in coining lexical innovations in different semantic domains such as entities, agency, instrumentality, location, kinship, and possession (e.g., Broeder et al., 1989, 1991, 1993, and 1995). The following paragraphs highlight some findings from these studies.

In a longitudinal cross-linguistic study, Broeder et al. (1993) examined the use of L2 Dutch, English and Swedish word formation devices by adult native speakers of different languages (Arabic, Finnish, Italian, Punjabi, Spanish and Turkish) in coining innovative agents, instruments, places, inhabitants, countries, etc. This study revealed that in the second languages studied (Dutch, English, and Swedish), all learner groups showed a high preference for compounding at an early stage of acquisition. They all made creative and innovative use of a variety of compounding constructions. N+N compounds, including N+prep+N and X+N+N (having complex modifiers), were by far the most frequent. Within
these categories, head-final compounds dominated over head-initial compounds for all learner groups, even those for whom the source language is head-initial (e.g., Moroccan Arabic learners). Examples of innovative agents from the three learner groups are provided below.


In English L2, among the N+N compounds produced by Punjabi learners were bread-man for ‘baker’, house-man for ‘husband’, and restaurant-s-gaffer for ‘restaurant manager’ while the Italian learners produced the innovative English compounds the manager the shop, and the boss the shop. In Swedish L2, head-final N+N compounds produced by L2 Finnish-speaking learners included affärs-mannen ‘sales-man’, bil-polis ‘car-police’, and by Spanish learners huvet-polisen ‘head police’.

Compared to compounding, derivation was rarely used in a productive way by the L2 learners. A few learners occasionally attempted to coin derived innovations at a late stage of acquisition. For example, in L2 Dutch, one of the Moroccan learners used the Arabic feminine gender suffix -a/ with the standard Dutch kinship term oom (male reference uncle) oom-a, (uncle-a) to refer to ‘aunt’, and with the word doctor-a to refer to a female doctor (Broeder et al., 1993, pp. 56-57). The same learner used non-agentive bakelrij ‘bakery’ to denote the agent bakker ‘baker’. Also in English L2, there was only one
occurrence of derivational innovation where one of the Italian speakers used the suffix -er for an agent noun, e.g., *blacker* 'black man'.

3.2.2 Summary

The above review of L2 studies supports the claim that Clark's general acquisitional principles account for learners' use of word formation processes in L2 Hebrew, Dutch, English, and Swedish. In most cases, the semantic transparency principle was found to guide children and adult L2 learners' coinages when they made use of compounding at an early stage of acquisition. In addition, this review reveals that in relation to Broeder's study, head-final compounds were prevalent even for learners with a head-initial L1 background. This suggests that L2 learners were influenced by the target language word order principle of compounds. Derivation, however, was rare and appeared late.

3.2.3 Transfer as an Added Principle

In the acquisition of L2 word formation processes, besides the four acquisitional principles (productivity, semantic transparency, formal simplicity, and conventionality), L1 transfer can be an added factor. "L1 transfer usually refers to the incorporation of features of the L1 into the knowledge systems of the L2 which the learner is trying to build" (Ellis, 1994, p.28). Although it is widely assumed that language transfer plays an important role in L2 acquisition, its nature and significance remain controversial. Transfer may manifest itself as errors (the focus of early studies), and impede the acquisition of L2. On the other hand, transfer can be positive, and thus facilitate the acquisition of L2. In his review of the phenomenon of transfer, Odlin (1989) defined it as "the influence resulting from the
similarities and differences between the target language and any other language that has been previously acquired" (p.27).

Evidence for transfer in all aspects of language - phonology, syntax, semantics, and pragmatics - is found in abundance in the L2 acquisition literature (e.g., Gass, 1979, 1980; Olshtain, 1983; Kellerman, 1979; Schachter & Rutherford, 1979; and Odlin 1990). However, in considering the acquisition of word formation processes in L2, transfer from L1 has not been given much attention, and the few studies that have dealt with this phenomenon (e.g., Olshtain, 1987; Broeder, 1991; Broeder et al., 1993; and Broeder et al., 1995) have revealed conflicting results.

In Olshtain's study, the advanced learners consisted of students of various language backgrounds, but two groups of learners (31 English speakers and 28 Spanish speakers) made up large enough sub-groups to investigate further their responses for L1 effect on the preferences for L2 word formation processes. Although the L2 learners had different L1 backgrounds, a similar preference for compounding, especially on an elicitation task, was found. English speakers, like Spanish speakers, exhibited a high preference for compounding (45% and 44% respectively). According to Olshtain, these two sub-groups of learners are representative of all advanced learners because overall results showed 46% for compounding among all their advanced learners. Also, these sub-groups' choice of other word formation devices was similar for the two large groups of learners.

However, in Broeder (1991), and Broeder et al.'s studies (1993, 1995), there was clear evidence of L1-based order preferences in compounds. In the following paragraphs, findings from Broeder (1991), and Broeder et al. (1993) are presented for illustration.
In Broeder's (1991) cross-linguistic comparison of the L2 acquisition of Dutch and German possessive relationships by Moroccan and Turkish learners, findings show that Moroccan learners of Dutch frequently produced the N-van-N construction which corresponds to the spoken Arabic construction N-dyal-N. Moroccan L2 learners used van 'of' in head-initial constructions, following the word order principle typical to their L1, e.g., boek van hem 'book of him', and boek van mij 'book of me'. However, Turkish learners, for whom there are no such similarities between L1 and L2, show evidence of L1 preferences in later stages of the acquisition process with the van-Pro-N construction. At an early stage, L2 Turkish learners of Dutch tended to use the construction Pro-N, e.g., mijn tas 'my bag', zijn vrouw 'his woman'. But, in the later stage of acquisition, they coined compound innovations with the preposition van 'of', following the order of their L1 word order principle head-final, e.g., van hem fiets 'of him bike', van hem familie 'of his family', and van mijn tas 'of my bag'.

Also in Broeder et al.'s (1993) cross-linguistic study, results show evidence of L1 influence in the production of innovative compounds. Moroccan learners tended to construct N+prep+N with a head-initial word order pattern, where Standard Dutch would favour head-final word order. Innovative compounds produced by Moroccan learners of Dutch included: kerk van Marokko 'church of Morocco', kleren van baby 'clothes of baby', and baas van winkel 'boss of shop', where Dutch speakers would say moskee 'mosque', babykleren 'baby-clothes', winkeleigenaar 'shopkeeper' respectively. Also in the Swedish L2 data, the Spanish learners appeared to be influenced by the compounding patterns of their L1 (Broeder et al., 1993). They produced N+prep+N constructions in Swedish using the Spanish preposition de 'of/in' that expresses both possession and location in their L1 (Broeder et al., 1993, p.54).
Among the compounds produced by Spanish learners is *tablettär de chokolad* 'bars of/in chocolate' for *choklad-tablettär* 'chocolate bars'.

Even though L1 influence on L2 word formation appears to be minor, and restricted to the coining of compounds in adult L2 acquisition, it should be taken into consideration and added to the general acquisitional principles which play a role in the acquisition of word formation processes.

To conclude, this review of L1 and L2 studies demonstrates that in extending their lexicon, both L1 and L2 learners of different languages (except Hebrew L1 learners) similarly make creative and innovative use of a wide range of compounding constructions in early stage of acquisition. According to Broeder, this similarity is a remarkable indication of universal processes of language acquisition (Broeder, 1993, p. 71). Additionally, in L2 studies, learners rely both on target and source language devices to coin compounds.

### 3.3 Research on the Acquisition of MSA

#### 3.3.1 Classical Studies

Most past research on Arabic has dealt with Arabic grammar and presented synchronic or diachronic descriptions of Arabic morphology and syntax. These classical studies have paid hardly any attention to the acquisition of Arabic. Recently, however, a new research trend has started to deal with the acquisition of Arabic. Lately, a few empirical studies have been conducted on the acquisition of MSA Arabic and its varieties as an L1/L2. These studies have investigated different areas of Arabic and various aspects of its acquisition including the role of instruction and learning strategies, communication strategies and other factors that may influence its acquisition (e.g., Fakhri, 1984; Irshled & Whelan, 1988; Khaledieh, 1991; Suleiman, 1991; and Aweisq, 1993).
3.3.2 Studies on the Acquisition of Arabic Word Formation Processes

Studies dealing with the acquisition of word formation processes in Arabic are scarce compared to studies on Indo-European languages, and to my knowledge none concerned with the L2 learning of MSA word formation has yet been conducted. The only study that has dealt with the acquisition of Arabic word formation processes is by Badry (1983) who investigated the acquisition and organization of Moroccan Arabic derivational patterns in L1. Forty Arabic-speaking Moroccan children carried out six tasks designed to assess their ability to use Semitic lexical derivation productively and receptively at different age levels, and to investigate the types of strategies they followed, and the general principles that account for their use of derivational processes to coin verbal and nominal patterns.

The findings of this study show that the children were able to use the derivational processes to coin new words from as early as age 3;5, and this ability increased importantly around age five (Badry, 1983, p.165). Because both verb production and comprehension tasks examined which of the three different verbal forms (causatives, reciprocal, mediopassive, and basic form) was the most frequently used, and because the purpose of the present study is to investigate the use of different word formation options available to express the same semantic notion, discussion of the findings of these two verb-focused tasks is irrelevant here. In Badry’s noun production and comprehension tasks, the notions investigated were agents and instruments. Findings from the noun production task indicated that in their innovations, all children in all age groups adhered to the principles of semantic transparency and productivity by depending exclusively on the most productive and semantically transparent pattern CeCCaC in naming agents. Among the agentive innovations
produced by these children were /lebbas/ 'dresser' and /neqqaz/ 'jumper'. The patterns ĈăCēC and muCCaCiC were not used to name agents ostensibly because they are both less productive in Moroccan Arabic. In addition, the pattern ĈăCēC lacks transparency in that it has both agentive and participial functions (Badry, 1983, p.158). In naming instruments, children also relied on productivity by opting only for the most productive feminine pattern CeCCaCa, e.g., /lebbasa/ and /neqqaza/. Neither the derived pattern miCCaCa nor the compound constructions N-in-construct and N+prep+N were used in naming instruments.

In the noun comprehension task, children were given the three options (CeCCaC, ĈăCēC and muCCaCiC) for the agentive nouns, and the two options (CeCCaCa and miCCaCa) for the instrumental nouns, and were asked to describe the activity carried out by selecting one of the options. Findings from this task showed that the children’s choices were subject to some of the acquisitional principles. In accordance with the productivity principle, the CeCCaC form was mostly preferred to express both agent and instrument notions in all age groups. This high preference was manifested by the children’s tendency to transform other patterns into the pattern CeCCaC. According to Badry (1983), “this conversion suggests that children may have developed a strong relation between the notion of doer of an action, either human or machine, with the pattern CeCCaC, which is the most productive pattern in the adult system” (p.174). The use of the pattern CeCCaC especially for agents was also evidence of the one-to-one mapping strategy between form and meaning. The pattern ĈăCēC was not opted for at all apparently because it expresses two semantic notions: active participle and agentive meaning.
3.4 Predictions about the Order of Preference of MSA Word Formation Processes to Coin Agency, Instrumentality, Location, and Causativity

Since Arabic makes heavy use of derivation in the coining of new content words, learners would be more likely to discover the productivity of the derivational system first and overgeneralize it, in preference to the other principles of semantic transparency and formal simplicity. Learners in early stages of acquisition might function with the hypothesis that all words are formed through derivation, and once they have abstracted the rule that their lexical system is based on derivation they would tend to use it everywhere to coin new words.

Given the various MSA word formation processes for coining agents, instruments, locatives, and causatives (see Table 2:4), and based on (a) the results of studies on L1 and L2 Hebrew (a Semitic language with a derivational system quite similar to MSA), (b) Badry's predictions (1983, pp.91-95) about Moroccan Arabic word formation processes, and (c) the judgment of some native speakers, a number of the predictions about the order of preferences of MSA word formation processes in coining these semantic notions are formulated. Some of these predictions conflict.

First, in accordance with Eve Clark's (1981a) productivity principle and with Badry's prediction (1983), one might expect that for agent nouns in MSA, learners would rely more on the very productive pattern CaCCaC than on the less productive patterns CāCiC, muCaCCiC, and N-in-construct (/rajul/+ N). With respect to instrument nouns, the very productive pattern CaCCēCa could be relied on before the less productive patterns CēCiCa, and miCCaCa. For locatives, the prefixed pattern maCCaCa, being the only derived pattern to express location, would likely be most frequently used than the N-in-construct
(makān/ N). For causatives, because of its high productivity, the verbal pattern CaCCaCa should be used before the verbal pattern aCCaCa and the periphrastic construction with jašala/ 'to make someone (do something)'.

Secondly, the principle of semantic transparency would predict that devices with one-to-one mapping between form and semantic notion would be used earlier by learners than devices with two meanings. Thus, N-in-construct compounds which consist of combining either the word rajul/ 'man', ṭala/ 'machine', or makān/ 'place' with a noun would be the easiest to identify and to use as these words express the notions of agency, instrumentality, and location explicitly. Next for agents, learners might be expected to use the pattern muCaCCiC having only the agentive meaning, then the pattern CaCCāC which can have either agentive or instrument meaning, and pattern āCiC which can have either a masculine agentive or active participle meaning. For instruments, beyond compounding, they would be expected to use the pattern miCCaCa with only instrumental meaning, and then CaCCāCa and āCiCa, both of which can have either a feminine agentive or instrumental meaning. For locatives, next after compounding, it would be the pattern maCCaCa having only the locative meaning. Also, for causatives, semantic transparency could mean that the periphrastic construction with jašala/ 'to make someone (do something)' will be easier to produce and to identify than the derived verbal forms CaCCaCa and aCCaCa. The periphrastic construction is considered semantically transparent because of the idea of causativity that the verb jašala/ conveys. This assumption is borne out in different studies of the L1 acquisition of English (Bowerman, 1974; Clark, 1982) where periphrastic causatives with 'make' and 'get' are found to appear prior to other causative verb forms. In Arabic, this principle conflicts with productivity.
Third, in line with Eve Clark's formal simplicity principle (Clark, 1980a), one might expect that stem-external affixes would be relied on before, and used in preference to, infixes. This means that for agents, learners would use the prefixed pattern muCaCCiC before the infixed and/or geminated patterns CaCCiCa and CaCiCi. With regard to instruments, learners might be expected to use the prefixed pattern miCCaCa more frequently than the infixed and/or geminated patterns, CaCCiCa and CaCiCa. For locatives, the prefixed pattern maCCaCa would be used before any other option. Finally, for causatives, the prefixed pattern ?aCCaCa would be used before the infixed CaCCaCa. This principle conflicts with productivity in Arabic.

Fourth, the conventionality principle as defined by Clark et al., (1983) would predict that pattern CaCCiC for agents and pattern CaCCiCa for instruments, being most often conventionally used in the MSA lexicon, and pattern maCCaCa for locatives, would be opted for and overused. For causative verbs, the conventionality principle could also mean that L2 learners would choose the pattern CaCCaCa and overuse it to coin lexical innovations.

In addition to these four acquisitional principles, the transfer principle would predict that there will be significant differences between French-speaking and English-speaking learners in coining lexical innovations due to L1 influence. Differences in the word order of compounds in French and in English, for example, may differentially privilege the choice of certain orders over others in Arabic.

Moreover, it is predicted that L2 vocabulary knowledge in the target language will reveal differential effects for the use of word formation processes. The more advanced a learner is, the more words there are in his or her repertoire, and the more innovations are
likely to be produced (Broeder et al., 1995). Also the more advanced the learner is, the higher the level of word formation knowledge they reach. This knowledge will enable them to produce and judge innovations in ways that approach native speakers’ performance (Olshtain, 1987). Table 3:1 summarizes the predictions for each principle.

Table 3:1  
Summary of the predictions made by each principle

<table>
<thead>
<tr>
<th>Principles</th>
<th>Agent</th>
<th>Instrument</th>
<th>Locative</th>
<th>Causative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity</td>
<td>CaCCāC</td>
<td>CaCCāCa</td>
<td>maCCāCa</td>
<td>CaCCāCa</td>
</tr>
<tr>
<td></td>
<td>CāCiC</td>
<td>?āla+N</td>
<td>makān+N</td>
<td>?aCCāCa</td>
</tr>
<tr>
<td></td>
<td>muCaCCīC</td>
<td>miCCāCa</td>
<td></td>
<td>jašala+Pro+Adj</td>
</tr>
<tr>
<td></td>
<td>rajul+N</td>
<td>CāCiCa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semantic transparency</td>
<td>rajul+N</td>
<td>?āla+N</td>
<td>makān+N</td>
<td>jašala+Pro+Adj</td>
</tr>
<tr>
<td></td>
<td>muCaCCīC</td>
<td>miCCāCa</td>
<td>maCCāCa</td>
<td>CaCCāCa</td>
</tr>
<tr>
<td></td>
<td>CaCCāC</td>
<td>CaCCāCa</td>
<td></td>
<td>?aCCāCa</td>
</tr>
<tr>
<td></td>
<td>CāCiC</td>
<td>CāCiCa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal simplicity</td>
<td>muCaCCīC</td>
<td>miCCāCa</td>
<td>maCCāCa</td>
<td>?aCCāCa</td>
</tr>
<tr>
<td></td>
<td>CaCCāC</td>
<td>CaCCāCa</td>
<td></td>
<td>CaCCāCa</td>
</tr>
<tr>
<td></td>
<td>CāCiC</td>
<td>CāCiCa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conventionality</td>
<td>CaCCāC</td>
<td>CaCCāCa</td>
<td>maCCāCa</td>
<td>CaCCāCa</td>
</tr>
</tbody>
</table>
CHAPTER 4
RESEARCH METHODOLOGY

L2 learners divided into three levels of relative vocabulary knowledge (‘lower’, ‘mid’ and ‘higher’), as well as native speakers of MSA, participated in this cross-sectional study. The study attempts to: a) examine learners’ and native speakers’ production of lexical innovations in MSA word formation processes and their judgment of innovations based on MSA word formation processes; (b) determine their preferences for word formation processes at different levels of vocabulary knowledge; and (3) investigate the influence of the acquisitional principles of productivity, semantic transparency, formal simplicity, conventionality, and transfer on the learners’ use and choice of word formation processes in MSA. These questions were investigated both productively, when participants were asked to construct innovative forms to denote new meanings not expressed in the language, and receptively, when they were asked to judge for both invented and real items which of the given alternatives was the most suitable form.

4.1 Research Questions and Hypotheses

The research questions and hypotheses of this research have been formulated on the basis of theoretical views on the acquisition of word formation processes, research findings on this aspect of lexicon (discussed in chapter 3) and the characteristics of MSA word formation processes (discussed in chapter 2).
The six research questions guiding this research were originally stated in Chapter 1. They are reiterated here for reference in relation to the hypotheses of the study.

**Research Question 1:** What are the quantitative and qualitative differences between L2 learners and native Arabic speakers in production of innovations in MSA expressing notions such as agency, instrumentality, location, and causativity?

**Hypothesis 1a:** There will be a quantitative difference between L2 learners and native speakers. L2 learners will provide fewer lexical innovations, and give more frequent non-responses than native speakers.

**Hypothesis 1b:** There will be a qualitative difference between L2 learners and native speakers in their production of innovations. L2 learners will demonstrate more variability of patterns and forms in their production of innovations.

**Research Question 2:** Compared with native Arabic speakers, what MSA word formation process(es) is (are) commonly selected by the learners when choices are provided for naming notions of agency, instrumentality, location, and causativity?

**Hypothesis 2:** L2 learners will tend to produce and choose compounding and/or periphrastic constructions more often than native speakers in naming agency, instrumentality, location, and causativity.

**Research Question 3:** Does relative L2 vocabulary knowledge reveal differential effects for the production of MSA word formation processes?

**Hypothesis 3:** Level of vocabulary knowledge will influence the use of L2 learners' word formation processes, in that learners with a lower level of vocabulary knowledge will find it harder to make creative use of word formation processes than higher proficiency learners.
Research Question 4: How do L2 learners with a higher level of vocabulary knowledge compare with native speakers in their production and choice of word formation processes in MSA?

Hypothesis 4: Higher level L2 learners' production and choice of word formation processes will be more like those of native Arabic speakers than lower level learners' will.

Research Question 5: Which principle(s) (productivity, semantic transparency, formal simplicity, and conventionality) is (are) most revealing in predicting L2 learners' use and choice of word formation processes in MSA?

Hypothesis 5: L2 learners will tend to use productive, transparent, simple, and conventional patterns in preference to unproductive, opaque, complex, and unconventional ones to express agents, instruments, locatives, and causatives.

Research Question 6: Does the native language of the L2 learner (English or French) lead to differential use of word formation devices in MSA?

Hypothesis 6: There will be transfer from L1 to the L2 at all levels of vocabulary knowledge in the use of MSA word formation processes.

4.2 Participants

When I planned the study, my goal was to conduct the research entirely in Canada, and have larger numbers of adult participants in two L1 groups: English-speaking and French-speaking classroom learners of MSA as a foreign language\textsuperscript{13}. It was impossible to achieve this for the following reasons. In most Canadian universities that offer Arabic, the level offered was not sufficiently advanced, or too many of the students that were enrolled

\textsuperscript{13} In this study, L2 covers both 'foreign' language learning and 'second' language learning in the L2 environment.
came from Arabic-speaking homes. I was able to collect data in only one Canadian university that satisfied my needs. Because the number of participants was too low for the purposes of the research, I turned to the United States, and after many attempts, managed to enlist further participants from two different American universities. I also looked to France for French-speaking learners, but unfortunately my attempts there were unsuccessful.

The initial learner sample thus consisted of a total of 70 adult L2 learners from three North American universities where MSA is taught as a second language. These adult L2 learners were enrolled in the second year\(^\text{14}\) of a MSA language program. The Arabic program in the three universities differed with respect to the materials and the teaching methods used by the instructors. In one of the universities, the textbook used was *Modern Standard Arabic Intermediate Level* by Abboud, Altoma, Erwin, McCarus, and Rammuny (1971). In this book, grammar and derivational rules are introduced gradually in each text. The instructional approach placed an emphasis on form rather than meaning. Students were introduced to structural and lexical rules gradually and separately in each teaching unit with explicit explanation of patterns and their formal constraints. Through drills and rote practice, students had to memorize the rules and forms. The other two universities, on the other hand, use a different textbook entitled *Taf\'îm alughaha Sarabiyya* by Brustad (1997). The content of this book focuses on the development of communicative competence, and stresses context and meaning much more than form. Students are taught vocabulary in different contexts with the aim of allowing them to communicate effectively and in a manner appropriate to a context rather than gaining and mastering grammatical accuracy.

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\(^{14}\) The choice of the level was based on findings from a pilot test which revealed that L2 learners with one year of MSA did not possess enough vocabulary to perform the tasks.
Of the 70 students originally tested in this research, 26 were not included in the statistical analysis. For 22, Arabic was the first language and the language used at home, and for one, Hebrew was the first language (a Semitic language with word formation devices markedly similar to Arabic). The other three learners were not included because their answers in the three tasks were identical to those sitting close to them. There were three identical pairs of response sheets, and for each such pair, I eliminated one test set of the students whose vocabulary knowledge test score was low. The similarity of answers in these copies may be attributed to these students’ proximity in the classroom which was small and crowded.

Of the remaining 44 participants, who constituted the final L2 learner sample, 30 were native speakers of English, 6 were native speakers of French, and 8 were of other home language backgrounds (1 German, 1 Italian, 1 Persian, 3 Somali, 1 Spanish, and 1 Urdu). The dominant language used at home by these eight learners was English. There were roughly equal numbers of male (23) and female (21) learners. These learners were assigned to three groups (lower, mid, and higher) based on their performance on a vocabulary knowledge test. (See section 4.5.1 for details on how vocabulary knowledge levels were determined).

According to responses to a question asking about place of birth, the majority were born in Canada and the United States (20 in Canada, and 14 in the US). The remaining ten participants were born in different countries (Africa, France, Germany, Iran, Pakistan, Rome, and Somalia). When asked about level of education, 24 were in their 1st year of an undergraduate program, 11 in their 2nd year, 6 in their 3rd year, and 3 were special students. Table 4:1 summarizes the information on the L2 learners’ gender, age, and L1 background.
Table 4:1

Distribution of L2 learners by vocabulary knowledge level, gender, age, L1 background, and dominant language

<table>
<thead>
<tr>
<th>Gender</th>
<th>L2 Learners</th>
<th>N (Number of Students)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>L2 Learners</th>
<th>N (Number of Students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-20</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>21-24</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>24-30</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>31-35</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>36 &amp; up</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L1 background</th>
<th>L2 Learners</th>
<th>N (Number of Students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>French</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>German</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Italian</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Persian</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Somali</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Spanish</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Urdu</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dominant language</th>
<th>L2 Learners</th>
<th>N (Number of Students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>French</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>
There was also a comparison group of 40 native speakers of MSA. The purpose of including this group was to find out to what extent the behaviour exhibited by L2 learners of MSA, at various levels of vocabulary knowledge, resembled that of these native speakers with respect to the use and choice of word formation processes. These native speakers were university students in Morocco, and all of them were in their second year of an undergraduate law program. There were more males than females, and most of them had some knowledge of other foreign languages (see Table 4:2 below).

Table 4:2

Distribution of native speakers by gender, age, and language background

<table>
<thead>
<tr>
<th>Gender</th>
<th>L2 Learners</th>
<th>N (Number of Students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Males</td>
<td>32</td>
</tr>
<tr>
<td>Female</td>
<td>Females</td>
<td>8</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-20</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>21-24</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>24-30</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>31-35</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>36 &amp; up</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Knowledge of other languages than Arabic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>French/English/Spanish</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>French/English/Italian</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>French/English</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>French/German</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>French/Spanish</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>French/Italian</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>French/</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
All participants responded positively to a consent letter soliciting their participation for this study and explaining their roles. Teachers were also given a consent letter asking for their permission to approach their students for the research (see Appendix A for both letters).

4.3 Instruments

The data to be analysed in the present study were collected by means of five instruments: a vocabulary knowledge test in MSA, three Arabic word formation tasks (a production task and two comprehension tasks), and a background questionnaire. Since there was no appropriate L2 vocabulary knowledge test and there were no tasks on word formation processes available in MSA, all tasks were designed by me. The appropriateness of the task materials was determined by the judgments of two L2 university Arabic teachers and then by pilot testing of L2 learners and native speakers of Arabic before the tests were administered to participants in the final study (see relevant section 4.4.1 on piloting).

4.3.1 Vocabulary Knowledge Test

The L2 participants received a vocabulary knowledge test in Arabic (see Appendix B). The purpose of this test was to measure L2 learners' overall lexical knowledge in MSA. In designing this test, I was inspired by Nation's *A Vocabulary Levels Test* (1990). The test in Arabic included words that varied in frequency. It was divided into 5 sections representing 5 levels of word frequency: Levels 1 & 2 consisted of high- frequency Arabic words that were chosen respectively from among the 500 and 1,000 most frequent words. Level 3 comprised words at the 2,000-word level that are lower in frequency than words in
levels 1 & 2. Level 4 consisted of words at the 3,000-word level, and level 5 contained even lower frequency words at the 5,000-word level. The specific words in the test were selected from the following sources. Words used in levels 1-4 were selected from two recent Arabic word frequency books: *Arabic keywords* by D. Quitregard, (1994), and D.E. Kouloughli’s (1991) *Basic Lexicon of Modern Standard Arabic*, which consists of the 3,000 most frequent MSA words. Because these two books only cover words at levels 1 to 4 (500-3,000), lower frequency words at the 5,000 were selected from Landau’s (1959) *A Word Count of Modern Arabic Prose* containing words at the 5,000 level and up. A more recent Arabic source dealing with lower frequency words at 5,000-word level was impossible to find. Besides frequency criteria, my teaching experience was also relied on in selecting words that are usually taught early and that most participants potentially know. The selected items consist of content words (nouns, verbs, and adjectives) that are mostly derived from verbal consonantal roots, and represent the three derivational processes in MSA (infixation, gemination and affixation. For each level of the test, there were three questions, each one dealing with one of the word classes (verb, adjective, or noun).

In each case the learner had to choose three words from a list of six possible words to match three given synonyms, and write the letter of that word next to its meaning.
The following is a sample verb question:

<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>to come</td>
<td>اتى</td>
</tr>
<tr>
<td>to permit</td>
<td>ب أتى</td>
</tr>
<tr>
<td>to begin</td>
<td>ت شرع</td>
</tr>
<tr>
<td>to try</td>
<td>ث حاول</td>
</tr>
<tr>
<td>to declare</td>
<td>ج أعلن</td>
</tr>
<tr>
<td>to fall</td>
<td>ح سقط</td>
</tr>
<tr>
<td>to announce</td>
<td>صرح</td>
</tr>
<tr>
<td>to arrive</td>
<td>جاء</td>
</tr>
<tr>
<td>to start</td>
<td>بدأ</td>
</tr>
</tbody>
</table>

As part of the development process for this test, a check on validity was conducted. Besides myself, two independent adult test takers, who were native speakers of Arabic and who were blind to the purpose of this study, were given instructions to answer the vocabulary knowledge test. There was 100% agreement in responses between these two. Also, to assess the reliability of this vocabulary knowledge test, an item analysis was conducted on the final L2 learner sample (N=44). The item-test reliability yielded a value of Cronbach’s alpha of .90. Apart from its validity and reliability, this type of test also met practical needs, being easy to mark and not time-consuming to administer. Individual scores on the test were categorized as higher, mid, or lower as an indication of the relative vocabulary knowledge level of learners (see section 4.5.2 for scoring system).

15 Glosses are not included in the original test, but they are included here for the reader.
4.3.2 Three Word Formation Tasks

The production and receptive choice of word formation devices in MSA was examined using three tasks that were administered both to the L2 learners and to the native speakers of Arabic.

4.3.2.1 Production Task

The first task was a production task that required participants to coin innovations in MSA for agent, instrument, locative, and causative concepts (see Appendix C). It was designed to investigate the types of innovations produced by L2 learners and native speakers for concepts unnamed in the conventional lexicon of MSA, and to analyse their productive use of MSA word formation devices. The production task was administered before two comprehension tasks in order to ensure that responses were not influenced by the patterns provided in the two multiple choice comprehension tasks.

There were 24 items in the production task eliciting innovations for four semantic notions: agent, instrument, locative, and causative. Each notion was elicited via six items, with all items presented in random order. The choice of the three nominal notions (agent, instrument, locative) was based on the Olshtain (1987) study in Hebrew (see chapter 3, section 2). This was in order to provide additional data from MSA which would allow testing of the proposed general principles that are believed to govern the acquisition of word formation processes. In the present study, I added a verb notion in order to see if learners would opt for the same formal options and follow the same strategies for both nominal and verbal innovations. The causative was the notion chosen. The reason for the choice of the causative was that among the ten derived verb patterns that express different semantic
notions, two patterns denote causativity. The two verb patterns are the infixed and geminated pattern II CaCCaCa and the prefixed pattern IV ?aCCaCa.

For L2 participants, the items were written in either English or French for the respective learner groups. A glossary was provided in a separate list, giving translation equivalents in MSA for English or French vocabulary used in the items (see Appendix D). However, for native Arabic speakers, the task was given in Arabic with no glossary. In each question, the stimulus to the lexical item was in bold, and participants were called upon to produce novel words in MSA.

For example, to elicit an agent innovation, one of the items was:

- In Arabic, how would you call a person who sets fires?

To elicit instrument innovations, an example item was:

- In Arabic, how would you call a machine that hugs people?

4.3.2.2 Two Comprehension Tasks

The two comprehension tasks were in multiple choice format. The aim of both comprehension task I based on invented items (Appendix E) and comprehension task II based on real items (Appendix F) was to provide insight into the L2 learners' and native speakers' choice of alternatives that they judged the most appropriate for labelling either existing or unnamed agents, instruments, locatives and causatives. The real items (comprehension task II) were included in this study to establish the validity of native speakers' use of word formation processes, and to determine if these native speakers would choose the same processes for both invented and real items. The two tasks focussed on the
same four semantic categories: agent, instrument, locative, and causative. In each test, there were 30 items presented in random order: 8 agents, 8 instruments, 7 causatives, and 7 locatives. Unfortunately, for comprehension task II, an error occurred in the proportional number of questions which was noticed at the analysis stage. I ended up with 7 real agent items and 8 real causative items instead of 8 agents and 7 causatives, as was the case for comprehension task I.

In both tasks, the four alternatives were based on the four word formation processes: vocalic infixation alone, vocalic infixation and gemination of the 2nd consonant, affixation, and compounding or periphrastic constructions. The patterns CâCiC(a)\textsuperscript{16}, CaCCâC(a), muCaCCciC(a) representing the three types of derivational processes were included as options for agents. The compound construction N-in-construct (/rajul/+N) was included to represent the fourth alternative.

For instrument items, out of all the instrument patterns presented in Table 2:4, only the derived patterns CâCiC(a), CaCCâC(a), and miCCaCa were represented as the three derivational options. The inclusion of these patterns reflects their relative productivity in MSA. Patterns CâCiC(a), and CaCCâC(a) are most frequently used in technical and scientific coinages in MSA (Al-KhafafI, 1985; Holes, 1994). Pattern miCCaCa is most frequently used in the context of education (Badry, 1983). The fourth choice consisted of the compound construction N-in-construct (/Tāla/+N).

For locative notions, the prefixed form (ma+stem), the only productive option in MSA to denote this notion, was provided as one option. In addition, a pattern CâCiC(a)\textsuperscript{a}

\textsuperscript{16} (a) attached to the patterns here represents the feminine suffix. For both comprehension tasks I & II, questions related to the three nominal semantic notions (agent, instrument and locative) ask randomly about either a masculine or feminine noun.
based on vocalic infixation, and a pattern CaCCâC(a) based on vocalic infixation and
gemination of the 2nd consonant, were included as distractors. Also a compound construction
N-in-construct (/makān/+N) was included to make up the fourth alternative.

For causatives, besides the infixed and geminated verbal pattern CaCCaCa, and the
prefixed pattern ʔaCCaCa, a distractor pattern was included to represent the process of
vocalic infixation alone: the verbal pattern CâCaCa denoting reciprocity. A periphrastic
form (/jaʕala/+Pro+Adj.) was included as the fourth alternative.

For L2 participants, the stimulus questions were written in either English or French
for the respective learner groups. For each item, the four choices were written in Arabic with
large print and diacritics in order to promote the learners’ reading of the items, and were
numbered 1-4 representing the four alternatives. L2 participants were required to choose out
of the four alternatives (ordered in the same way for each item) the one that they judged the
most suitable for a specified concept. For native speakers, both the questions and the choices
were written in Arabic with regular print and without diacritics.

A sample item from comprehension task I designed to elicit an agent was:

- In Arabic, how would you call a person who makes bubbles with soap?

  /fæqiʔun/\(^{17}\)  1- فاطع
  /faqqâʔun/  2- فقاع
  /mufaqqiʔun/  3- مفقاع
  /rajulu lfaqâqiʔiʔ/  4- رجل فقاع

\(^{17}\) The phonetic transcription is included here for the reader.
For instruments, a sample item was:

- In Arabic, how would you call a machine that breaks pencils?

\[
\begin{align*}
1. & \text{/kāṣiratun/} \\
2. & \text{/kassāratun/} \\
3. & \text{/miṣaratun/} \\
4. & \text{/ʔāluṭa kasri lʔaqlāmi/}
\end{align*}
\]

4.3.2.3 Background Questionnaire

A questionnaire was administered to all L2 participants (see Appendix G). The questions on the background questionnaire fall into three categories: The first eight questions asked about personal background, including gender, age group, level of education, place of birth, and L1 and dominant language; the next seven questions dealt with knowledge of other languages. Learners were asked if they knew other languages, and if so, where they learned them, if they spoke and wrote them, and where they used them. The last ten questions asked about the Arabic language, reasons for studying it, and learning experience. Questions also asked about learners’ self-rated performance in some areas, and their self-ratings of the level of difficulty they had with some activities in MSA. Learners’ responses to four questions of the last category are presented below.

When learners were asked how they found learning Arabic, 34 considered it a difficult language. Eight viewed it as neither easy nor difficult, while two considered it easy.
When they were asked: "What makes Arabic a difficult language to learn?" out of 44 learners, 16 perceived it as vocabulary. 20 claimed it was grammar, five said that it was the writing system, and three said it was pronunciation.

Also, when asked to rate on a three-point scale (below average, average, above average) how well they are doing in learning Arabic compared to other learners, 26 learners claimed that their learning of Arabic was below average, while 15 learners claimed that it was average, and only three learners that it was above average. Moreover, when asked to rate on a four-point scale (same-better-worse-can’t say) their performance in speaking, listening, writing, reading, and spelling compared to the other learners, the majority answered negatively that they performed worse than the other learners. Table 4:3 presents the percentage of learners' responses for each skill which show that many of these learners perceive themselves as performing poorly in each skill.

Table 4:3
Learners' self-ratings of their performance in some Arabic skills relative to classmates

<table>
<thead>
<tr>
<th></th>
<th>Better (%)</th>
<th>Worse (%)</th>
<th>Same (%)</th>
<th>Can't say (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaking</td>
<td>10.7</td>
<td>55.3</td>
<td>23.0</td>
<td>11.0</td>
</tr>
<tr>
<td>Listening</td>
<td>11.3</td>
<td>45.3</td>
<td>23.1</td>
<td>20.3</td>
</tr>
<tr>
<td>Spelling</td>
<td>9.6</td>
<td>40.3</td>
<td>27.1</td>
<td>23.0</td>
</tr>
<tr>
<td>Writing</td>
<td>10.8</td>
<td>48.7</td>
<td>17.9</td>
<td>22.6</td>
</tr>
<tr>
<td>Reading</td>
<td>7.0</td>
<td>59.9</td>
<td>11.1</td>
<td>22.0</td>
</tr>
</tbody>
</table>

Furthermore, when asked to rate on a four-point scale (unable to do, with much difficulty, with little difficulty, without difficulty) their communicative performance in Arabic of some activities such as talking to a native speaker, watching and understanding a
TV program, reading newspapers and magazines, writing a letter, and understanding a radio program, the majority saw themselves as performing the activities with difficulty and often as unable to do them. Table 4:4 lists the L2 learners' self-ratings for each activity.

Table 4:4
Learners' self-ratings of their performance in some activities

<table>
<thead>
<tr>
<th></th>
<th>Unable to do (%)</th>
<th>With much difficulty (%)</th>
<th>With little difficulty (%)</th>
<th>Without difficulty (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talk to a native speaker</td>
<td>52</td>
<td>39.9</td>
<td>6.1</td>
<td>2</td>
</tr>
<tr>
<td>Watch and understand a TV program</td>
<td>56</td>
<td>39.4</td>
<td>4</td>
<td>0.6</td>
</tr>
<tr>
<td>Read newspapers and magazines</td>
<td>69</td>
<td>23.4</td>
<td>7.6</td>
<td>0</td>
</tr>
<tr>
<td>Write a letter</td>
<td>58</td>
<td>32.8</td>
<td>7.2</td>
<td>2</td>
</tr>
<tr>
<td>Understand a radio program</td>
<td>60</td>
<td>39.2</td>
<td>0.6</td>
<td>0.2</td>
</tr>
</tbody>
</table>

An examination of the above questions reveals that the majority of learners perceived learning Arabic to be difficult, and found vocabulary and grammar to be the aspects that make it a difficult language. The examination also reveals the learners' limited knowledge of MSA according to their low perceived performance in various skills and activities. A comparison between the responses of learners exposed to a communicative approach to language teaching and the ones taught through a more formal instructional method reveals no difference in self-ratings of performance in Arabic skills and activities. Native Arabic speakers were also given a version of the questionnaire seeking information on gender, age, and general education (see Table 4:2).
4.4 Procedure

4.4.1 Pilot testing

Prior to the main study, pilot testing was undertaken. This was a necessary step before conducting the research to ensure that the vocabulary used and the instructions in each task were clear and effective, and to determine the time required for administration.

The pilot study took place in the winter term of 1996 in a Canadian university. Ten students were involved: 4 males and 6 females. They were in their second term of a beginner MSA class. Information on participants' gender, age, L1 background, place of birth, and level of education is presented in Table 4:5.

Table 4:5
Participants in the pilot study

<table>
<thead>
<tr>
<th>Age</th>
<th>L1 background</th>
<th>Place of birth</th>
<th>Level of university education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4 Males</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>English</td>
<td>Britain</td>
<td>2nd year</td>
</tr>
<tr>
<td>22</td>
<td>English</td>
<td>Canada</td>
<td>2nd year</td>
</tr>
<tr>
<td>27</td>
<td>German</td>
<td>U.S.A</td>
<td>Graduate student</td>
</tr>
<tr>
<td>34</td>
<td>Japanese</td>
<td>Japan</td>
<td>Visitor</td>
</tr>
<tr>
<td><strong>6 Females</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Arabic</td>
<td>Canada</td>
<td>2nd year</td>
</tr>
<tr>
<td>20</td>
<td>English</td>
<td>Canada</td>
<td>1st year</td>
</tr>
<tr>
<td>20</td>
<td>French</td>
<td>Canada</td>
<td>1st year</td>
</tr>
<tr>
<td>22</td>
<td>French</td>
<td>Canada</td>
<td>2nd year</td>
</tr>
<tr>
<td>23</td>
<td>English</td>
<td>Kenya</td>
<td>Graduate student</td>
</tr>
<tr>
<td>32</td>
<td>Indonesian</td>
<td>Indonesia</td>
<td>Graduate student</td>
</tr>
</tbody>
</table>
The experiment was carried out in the MSA classroom in my presence, and the time set to perform the vocabulary knowledge test, the production task, and the two comprehension tasks was one hour. Only two participants out of 10 completed all the tasks.

In the vocabulary knowledge test, one of the participants scored 52 out of 54 points, and another scored 26 points. The remaining eight scored between 3-10 points. The participant who scored high was eliminated from the sample because he came from an Arabic-speaking home.

The pilot testing of the production task revealed the following results. Only the participant who scored 26 points in the vocabulary test nearly completed the task. Some of the lexical innovations that this participant came up with were based on compounding. Among the compound constructions produced, N+N was by far the most productive. A few innovations were supplied based on derivation particularly vocalic infixation alone. Other participants gave up on the task.

In the two comprehension tasks I and II, however, most of the learners answered at least half of the items. It was revealed from the apparent randomness of most responses that learners were only guessing, and that they were not familiar with the derivational system of MSA and its constraints.

With regard to the background questionnaire, the overall findings showed that the questions in the questionnaire were clear to the learners.

At the end of the piloting, the participants were asked for their feedback and to explain why they did not complete the tasks. They responded that the vocabulary was difficult and hard to understand, and that the format was confusing. They also responded
that the tasks were too long and time-consuming, and the time set to perform all the tasks was insufficient.

In the light of these findings, the vocabulary knowledge test, and the three tasks were modified, and simplified. The questionnaire, on the other hand, did not need any change or modification, and remained basically intact in the main study.

The pilot version of the vocabulary knowledge test in Arabic included words from the 2,000 to 10,000-word levels, and beside each word a phonetic transcription was noted to facilitate the reading and understanding of the words. The test had to be redesigned and simplified because it was difficult for these L2 learners to complete. I went lower than the 2,000-word level, and I eliminated the 10,000-word level. The new version of the test included 500-, 1,000-, 2,000-, 3,000- and 5,000-word levels. The phonetic transcription was removed as students were not familiar with the phonetic symbols.

In the production task and comprehension tasks, most low frequency words in the stimuli were replaced by higher frequency words. The glossary for the production task was also modified. In addition, the production task was reduced to 24 questions from 30 questions, and the time to perform all tasks was lengthened by adding another 30 minutes to enable every participant to finish the tasks.

Preliminary piloting was carried out as well with five native speakers of Arabic living in Canada (three males and two females). These individuals came from three different Arab countries; namely, Iraq, Lebanon, and Morocco. Four were between 21-24 years of age, and one was between 25-30. They all spoke English or French besides Arabic, and they all had university educations. Their length of residence in Canada ranged between 7-12 years.
Contrary to the L2 learners, the native speakers' performance showed that the tasks did not seem to be difficult for them to perform. All five native speakers completed the pilot tasks. In the production task, they provided various lexical innovations including derivational patterns and compounding constructions. The former, however, were widely favoured. In the two comprehension tasks, derivational patterns were also most often chosen for each semantic notion.

4.5 Data Collection of the Main Study

4.5.1 Task Order

In the main study, the tasks were performed in the Arabic classroom, and were administered by me. Each participant received a package compiled in the following order: The vocabulary knowledge test, the production task, the comprehension task I (based on invented items), the comprehension task II (based on real words), and the background questionnaire. With respect to the word formation tasks, the participants were informed that there was no "right" or "wrong" answer, that they were not being "tested" in the traditional sense of the word, and that their responses would provide valuable information on learners' use and choice of word formation devices. It was also made clear that in any reporting of findings, their confidentiality was ensured. They were told that they had one and half hours to complete the tasks, and that they had to work individually and could work at their own pace. They were also encouraged not to leave blanks and respond to all items. In general, participants were able to finish all tasks in one hour and fifteen minutes. As they completed all tasks, they returned them to me where they were immediately placed in a box.
4.5.2 Scoring

Only the vocabulary knowledge test was scored for accuracy. To score this test, one point was awarded to each correct answer matching a word to its meaning. This yielded a maximum of 9 points per frequency level, and of 45 points for the whole test. Nation (1990), in his guidelines on the use of his test as an evaluation instrument, suggests that a score of 12 or below at a particular level (out of a maximum of 18) indicates that the learner needs further work at that particular lexical level. In determining the learners' level of vocabulary knowledge in the present study, an adjustment was made to the scoring because the maximum score at each level was 9 points instead of 18. Therefore, learners were categorized as higher, mid, or lower on the basis of the scores obtained in combining levels. Learners who scored less than 15 points for levels 1, 2 and 3 were categorized as low scorers. Learners in this category did not answer correctly any question in levels 4 and 5. Learners who scored between 15-26, at levels 1, and 2 and up to 26 points for all levels combined were considered mid scorers, and those who scored 27 and up for all levels combined were considered to be high scorers. These latter were at the 3000-word level. Most of them obtained 9 points out of 9 for the first level and 6 points out of 9 for each of levels 2, 3, 4, and 5. Based on this categorization, there were 10 lower, 19 mid, and 15 higher scorers (see Table 4:6 for the scoring).
Table 4:6

L2 learners’ scores on the vocabulary knowledge test (max. = 44)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower scorers (N=10)</td>
<td>less than 15 points at levels 1, 2 and 3 combined</td>
</tr>
<tr>
<td></td>
<td>1 learner scored 5</td>
</tr>
<tr>
<td></td>
<td>9 learners scored between 7-14</td>
</tr>
<tr>
<td>Mid scorers (N=19)</td>
<td>At least 15 points at levels 1 and 2 combined, and up to 26 points including 1 to 5 combined</td>
</tr>
<tr>
<td></td>
<td>9 learners scored between 15-20</td>
</tr>
<tr>
<td></td>
<td>10 learners scored between 21-26</td>
</tr>
<tr>
<td>Higher scorers (N=15)</td>
<td>27 points &amp; up at levels 1, 2, 3, 4 and 5 combined</td>
</tr>
<tr>
<td></td>
<td>2 learners scored between 27-30</td>
</tr>
<tr>
<td></td>
<td>12 learners scored between 31-40</td>
</tr>
<tr>
<td></td>
<td>1 learner scored 43</td>
</tr>
</tbody>
</table>

4.5.3 Coding the data

In coding the data for the production task, the participants’ responses were grouped into three main categories:

- **Category 1**: lexical innovations. This category includes derived nominal and verbal patterns as well as compounding and/or periphrastic constructions.

- **Category 2**: suppletives, that is existing or real words supplied by participants instead of lexical innovations.

- **Category 3**: non-responses where blanks were left by participants. This category also included cases where the whole input question was repeated. There were a few instances in the data where L2 learners answered by repeating all words bolded in the question.
In order to investigate the participants' use of word formation processes, only category 1 (lexical innovations) was considered. Lexical innovations were classified into four subcategories for the four word formation processes: vocalic infixation alone, vocalic infixation and gemination of the 2nd consonant, affixation, and compounding/or periphrastic constructions.

- **Subcategory 1a:** derived patterns coined through vocalic infixation alone.

- **Subcategory 1b:** derived patterns formed via vocalic infixation and gemination of the 2nd consonant.

- **Subcategory 1c:** derived patterns based on affixation.

- **Subcategory 1d:** compounding constructions, namely N-in-construct, N+N, AP+N, N+N+N, N+prep+N, and V+N, as well as periphrastic constructions that consist of combining the periphrastic verbs /jaʃala/, /sabbaba/, or /daʃala/ with either pronoun, adjective or preposition, and noun.

For comprehension tasks I and II, participants' responses were tallied based on the alternatives given on the two tasks that represented the four word formation options investigated in this study for each semantic notion. Table 4:7 displays the four alternatives for each semantic notion.
Table 4:7

Alternatives provided in comprehension tasks I and II for each semantic notion

<table>
<thead>
<tr>
<th>Agent</th>
<th>Instruments</th>
<th>Locatives</th>
<th>Causatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/Pattern CâCiC(a)</td>
<td>Vocalic infixation alone</td>
<td>Vocalic infixation alone</td>
<td>Vocalic infixation alone</td>
</tr>
<tr>
<td>2/Pattern CaCCâC(a)</td>
<td>Vocalic infixation and gemination of the 2\textsuperscript{nd} consonant</td>
<td>Vocalic infixation and gemination of the 2\textsuperscript{nd} consonant</td>
<td>Vocalic infixation and gemination of the 2\textsuperscript{nd} consonant</td>
</tr>
<tr>
<td>3/Pattern muCaCCiC(a)</td>
<td>Affixation</td>
<td>Affixation</td>
<td>Affixation</td>
</tr>
<tr>
<td>4/N-in-construct</td>
<td>Compounding</td>
<td>Compounding</td>
<td>Compounding</td>
</tr>
<tr>
<td>1/Pattern CâCiC(a)</td>
<td>Vocalic infixation alone</td>
<td>Vocalic infixation alone</td>
<td>Vocalic infixation alone</td>
</tr>
<tr>
<td>2/Pattern CaCCâCa</td>
<td>Vocalic infixation and gemination of the 2\textsuperscript{nd} consonant</td>
<td>Vocalic infixation and gemination of the 2\textsuperscript{nd} consonant</td>
<td>Vocalic infixation and gemination of the 2\textsuperscript{nd} consonant</td>
</tr>
<tr>
<td>3/Pattern miCCaCa</td>
<td>Affixation</td>
<td>Affixation</td>
<td>Affixation</td>
</tr>
<tr>
<td>4/N-in-construct</td>
<td>Compounding</td>
<td>Compounding</td>
<td>Compounding</td>
</tr>
<tr>
<td>1/Pattern CâCaCa</td>
<td>Vocalic infixation alone</td>
<td>Vocalsic infixation alone</td>
<td>Vocalic infixation alone</td>
</tr>
<tr>
<td>2/Pattern CaCCaCa</td>
<td>Vocalic infixation and gemination of the 2\textsuperscript{nd} consonant</td>
<td>Vocalic infixation and gemination of the 2\textsuperscript{nd} consonant</td>
<td>Vocalic infixation and gemination of the 2\textsuperscript{nd} consonant</td>
</tr>
<tr>
<td>3/Pattern maCCaCa</td>
<td>Affixation</td>
<td>Affixation</td>
<td>Affixation</td>
</tr>
<tr>
<td>4/N-in-construct</td>
<td>Compounding</td>
<td>Compounding</td>
<td>Compounding</td>
</tr>
<tr>
<td>1/Pattern CâCaCa</td>
<td>Vocalic infixation alone</td>
<td>Vocalsic infixation alone</td>
<td>Vocalic infixation alone</td>
</tr>
<tr>
<td>2/Pattern CaCCaCa</td>
<td>Vocalic infixation and gemination of the 2\textsuperscript{nd} consonant</td>
<td>Vocalic infixation and gemination of the 2\textsuperscript{nd} consonant</td>
<td>Vocalic infixation and gemination of the 2\textsuperscript{nd} consonant</td>
</tr>
<tr>
<td>3/Pattern ?aCCaCa</td>
<td>Affixation</td>
<td>Affixation</td>
<td>Affixation</td>
</tr>
<tr>
<td>4/\textit{ja}\textordmasculine \textit{ala}+Pro+Adj</td>
<td>Periphrastic construction</td>
<td>Periphrastic construction</td>
<td>Periphrastic construction</td>
</tr>
</tbody>
</table>
4.6 Data Analysis

In order to investigate the learners' and native speakers' production of lexical innovations, and their use and choice of word formation processes in MSA, both quantitative and qualitative data analyses were carried out.

4.6.1 Quantitative Analyses

The quantitative analyses of the data allow us to draw tentative conclusions on the L2 learners' preferences in MSA word formation. An initial quantitative analysis was carried out with the data from the production task in order to compare L2 learners' and native speakers' use of innovations, as opposed to their use of suppletives and non-responses. Further analyses were carried out on the production task, and both comprehension tasks I and II to compare L2 learners' and native speakers' use and choice of word formation processes according to the semantic notions investigated (agency, instrumentality, location, and causativity). Another analysis was a group comparison among the lower, mid, and higher level L2 learners to see if the level of L2 vocabulary knowledge revealed differential effects for the use of MSA word formation devices. Finally, an analysis was carried out to compare higher level L2 learners' and native speakers' use and choice of word formation processes to see if the former were able to make creative use of word formation processes that was comparable to those of native speakers.

4.6.2 Qualitative Analyses

Qualitative analyses were carried out to examine the learners' production of innovations and their strategies and patterns in using MSA word formation processes, and to assess the applicability of the principles of productivity, semantic transparency, formal
simplicity, and conventionality in explaining the learners' use of different word formation processes for each semantic notion. The L2 learners' use of word formation processes was also examined in order to find out if the L1 had any effect on the choice and use of these processes in the L2.

The following chapter presents the quantitative findings.
CHAPTER 5

QUANTITATIVE FINDINGS

Chapter 5 reports the results of the quantitative analyses. It is organized as follows: First, statistical procedures used to analyse the data collected by means of the production task, comprehension task I (based on invented items), and comprehension task II (based on real items) are described. Secondly, a quantitative comparison between L2 learners’ and native speakers’ responses in the production task is presented, followed by more detailed quantitative comparisons between L2 learners’ and native speakers’ use and choice of word formation processes in coining innovations. Next, the lower, mid, and higher level L2 learners’ production of MSA word formation processes is compared. Finally, comparisons are made between higher level L2 learners and native speakers and between lower level L2 learners and native speakers with respect to use and choice of word formation processes on the three tasks.

5.1 Statistical Procedures

The computer program for statistical data analysis, SPSS for Windows, was used in all analyses. L2 learners’ and native speakers’ responses on the three tasks (production, and comprehension I & II) were coded in the manner delineated in Chapter 4 and means for their responses were calculated.

T tests were then used: (a) to compare the overall number of innovations, as opposed to suppletives and non-responses, provided by the learners and native speakers; and (b) to
compare these types of responses for each semantic notion (agency, instrumentality, location, and causativity).

T tests were also used to compare the processes each group used as a percentage of their innovations on the production task. The same analysis was conducted for comprehension tasks I and II where percentages of the L2 learners' and native speakers' overall responses were calculated and compared for each word formation option in the two tests.

The comparison of the lower, mid, and higher level L2 learners' use of word formation processes on the production task was conducted using one way-analysis of variance (ANOVA). A post-hoc analysis (the Tamhane test) was used to determine where any significant differences lay.

Group comparisons using t tests again were also carried out between higher level L2 learners and native speakers, and between lower level L2 learners and native speakers for the three tasks. In every case, for a difference to be considered statistically significant, the level of significance was set at p < 0.05 for all tests.

5.2 Comparison of L2 Learners' and Native Speakers' Responses on the Production Task

The first hypothesis 1a predicts that there will be a quantitative difference between L2 learners and native speakers in that L2 learners will provide fewer lexical innovations and give more frequent non-responses. To test this hypothesis, learners' overall responses as well as their responses for each semantic notion on the production task were compared statistically via t tests with those of the native speakers. Responses were grouped into three categories (innovations, suppletives, and non-responses), and the means were calculated and
compared. Tables 5:1 and 5:2 display the means, standard deviations, and level of significance of L2 learner versus native speaker differences on the production task.

Table 5:1

Overall comparison between L2 learners’ and native speakers’ responses on the production task (max. = 24)

<table>
<thead>
<tr>
<th></th>
<th>L2 learners n=44</th>
<th>Native Speakers n=40</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovations</td>
<td>17.18 2.60</td>
<td>18.32 4.94</td>
<td>1.34</td>
<td>n.s.</td>
</tr>
<tr>
<td>Suppletives</td>
<td>1.22 1.99</td>
<td>5.68 2.60</td>
<td>8.73</td>
<td>.000</td>
</tr>
<tr>
<td>Non-responses</td>
<td>5.60 5.70</td>
<td>0.00 .00</td>
<td>-6.50</td>
<td>.000</td>
</tr>
</tbody>
</table>

The overall results in Table 5:1 show statistically significant differences between the two groups for suppletives and non-responses. Native speakers resorted more often to suppletives, and L2 learners sometimes gave non-responses, while no native speakers did so. The lexical innovations category had the highest means for both groups compared to suppletives and non-responses, and the t test did not reveal any significant difference between the two groups with respect to this category.

As shown in Table 5:2, the comparative analysis of the two groups’ responses for each semantic notion (agents, instruments, locatives, and causatives) revealed the following trends: With respect to the innovation category, the difference was statistically significant between L2 learners and native speakers for agents, instruments, and locatives. Native speakers produced more innovations than L2 learners for agents and instruments. However, for locatives, L2 learners produced significantly more innovations (M=3.77) than native speakers (M=2.97, p=.011). With regard to suppletives, the
difference was statistically significant for instruments, locatives, and causatives, with native speakers resorting to significantly more suppletives than L2 learners for these notions. For locatives and causatives, native speakers' mean use for suppletives was much higher than the L2 learners' (3.03 compared to .71 for locatives, and 1.78 compared to .29 for causatives). For the non-response category, the difference was statistically significant for all four notions. L2 learners left some blanks for all four notions while native speakers left none.

Table 5:2

T tests comparing L2 learners' and native speakers' responses for each semantic notion on the production task

<table>
<thead>
<tr>
<th></th>
<th>L2 learners</th>
<th>Native Speakers</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>p=44</td>
<td>p=40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGENTS (max=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovations</td>
<td>4.87</td>
<td>5.75</td>
<td>3.65</td>
<td>.001</td>
</tr>
<tr>
<td>Suppletives</td>
<td>.11</td>
<td>.25</td>
<td>1.31</td>
<td>n.s.</td>
</tr>
<tr>
<td>Non-responses</td>
<td>1.02</td>
<td>.00</td>
<td>-4.47</td>
<td>.000</td>
</tr>
<tr>
<td>INSTRUMENTS (max=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovations</td>
<td>4.64</td>
<td>5.38</td>
<td>2.98</td>
<td>.004</td>
</tr>
<tr>
<td>Suppletives</td>
<td>.11</td>
<td>.62</td>
<td>3.88</td>
<td>.000</td>
</tr>
<tr>
<td>Non-responses</td>
<td>1.25</td>
<td>.00</td>
<td>-5.72</td>
<td>.000</td>
</tr>
<tr>
<td>LOCATIVES (max=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovations</td>
<td>3.77</td>
<td>2.97</td>
<td>-2.61</td>
<td>.011</td>
</tr>
<tr>
<td>Suppletives</td>
<td>.71</td>
<td>3.03</td>
<td>9.06</td>
<td>.000</td>
</tr>
<tr>
<td>Non-responses</td>
<td>1.52</td>
<td>.00</td>
<td>-5.46</td>
<td>.000</td>
</tr>
<tr>
<td>CAUSATIVES (max=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovations</td>
<td>3.90</td>
<td>4.22</td>
<td>.86</td>
<td>n.s.</td>
</tr>
<tr>
<td>Suppletives</td>
<td>.29</td>
<td>1.78</td>
<td>5.64</td>
<td>.000</td>
</tr>
<tr>
<td>Non-responses</td>
<td>1.81</td>
<td>.00</td>
<td>-6.04</td>
<td>.000</td>
</tr>
</tbody>
</table>
5.2.1 Summary

The above findings in the production task partially support the hypothesis 1a. As predicted, L2 learners supplied fewer innovations than native speakers for agents and instruments, and unlike native speakers gave some non-responses for all four semantic notions. Contrary to predictions, however, L2 learners produced more innovations than native speakers for locatives, and for causatives their mean was almost equal to, and not significantly different from, that of native speakers.

5.3 Comparison of L2 Learners’ and Native Speakers’ Use and Choice of Word Formation Processes

According to hypothesis 2:

L2 learners will tend to produce and choose compounding and/or periphrastic constructions more often than derivational processes in naming agency, instrumentality, location, and causativity.

To test this hypothesis, L2 learners’ and native speakers’ innovations in the production task were broken down into percentage use of each process for each semantic notion and the two groups’ responses were compared using t tests. The same analysis was conducted for comprehension tasks I and II where L2 learners’ and native speakers’ percentage choice of each word formation option in labelling invented items and existing items was compared.

5.3.1 Comparison of L2 Learners’ and Native Speakers’ Use of Word Formation Processes on the Production Task

In the production task, only the category of lexical innovations was considered in order to compare the learners’ and native speakers’ use of word formation processes in
coining new words. Innovations were broken down into four processes: 1)vocalic infixation alone (henceforth Vinf.), 2)vocalic infixation and gemination of the 2nd consonant (henceforth Vinf.+gem.), 3)affixation (henceforth Affix.), and 4)compound or periphrastic constructions (henceforth Comp.Const./Periph.Fm.). Tables 5:3 and 5:4 display the mean percentages, standard deviations, and level of significant differences between L2 learners and native speakers.

Statistically significant differences between the two groups were revealed for all four processes. L2 learners opted much more frequently for compounding constructions to coin their innovations while native speakers most often used derivational processes, namely Vinf.+gem. and affixation (see Table 5:3). However, L2 learners tended to use Vinf. more frequently than native speakers.

Table 5:3

Overall comparison between L2 learners’ and native speakers’ mean percentage use of word formation processes on the production task (max.=24)

<table>
<thead>
<tr>
<th></th>
<th>L2 learners</th>
<th>Native Speakers</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M %</td>
<td>SD</td>
<td>M %</td>
<td>SD</td>
</tr>
<tr>
<td>Vinf.</td>
<td>16.86</td>
<td>17.14</td>
<td>6.55</td>
<td>5.27</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>19.63</td>
<td>15.05</td>
<td>50.71</td>
<td>12.72</td>
</tr>
<tr>
<td>Affix.</td>
<td>1.25</td>
<td>2.42</td>
<td>30.82</td>
<td>9.79</td>
</tr>
<tr>
<td>Comp.Const./Periph.Fm.</td>
<td>62.25</td>
<td>28.08</td>
<td>11.92</td>
<td>8.00</td>
</tr>
</tbody>
</table>

M % = Mean percentage
Vinf. = Vocalic infixation alone
Vinf.+gem. = Vocalic infixation and gemination of the 2nd consonant
Affix. = Affixation
Comp.Const. = Compounding constructions
Periph.Fm. = Periphrastic forms
Differences also emerged in L2 learners’ and native speakers’ use of word formation processes in coining each semantic notion (see Table 5:4).

Table 5:4

L2 learners’ and native speakers’ mean percentage use of word formation processes for each semantic notion on the production task

<table>
<thead>
<tr>
<th></th>
<th>L2 learners</th>
<th>Native Speakers</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>AGENTS (max.=6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>15.15</td>
<td>26.27</td>
<td>20.54</td>
<td>16.17</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>32.31</td>
<td>30.10</td>
<td>63.25</td>
<td>22.57</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>16.21</td>
<td>17.36</td>
</tr>
<tr>
<td>Comp(Const./Periph.Fm.)</td>
<td>52.54</td>
<td>34.04</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td><strong>INSTRUMENTS (max.=6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>15.79</td>
<td>26.56</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>18.64</td>
<td>23.63</td>
<td>55.67</td>
<td>22.46</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>12.50</td>
<td>14.41</td>
</tr>
<tr>
<td>Comp(Const./Periph.Fm.)</td>
<td>65.57</td>
<td>38.09</td>
<td>31.83</td>
<td>23.16</td>
</tr>
<tr>
<td><strong>LOCATIVES (max.=6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>10.16</td>
<td>.21</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>18.86</td>
<td>28.43</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Affix.</td>
<td>3.75</td>
<td>8.95</td>
<td>89.29</td>
<td>18.90</td>
</tr>
<tr>
<td>Comp(Const./Periph.Fm.)</td>
<td>67.23</td>
<td>41.41</td>
<td>10.71</td>
<td>18.90</td>
</tr>
<tr>
<td><strong>CAUSATIVES (max.=6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>24.81</td>
<td>26.59</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>18.16</td>
<td>22.09</td>
<td>59.96</td>
<td>32.20</td>
</tr>
<tr>
<td>Affix.</td>
<td>1.70</td>
<td>5.56</td>
<td>33.29</td>
<td>30.66</td>
</tr>
<tr>
<td>Comp(Const./Periph.Fm.)</td>
<td>55.33</td>
<td>38.48</td>
<td>6.75</td>
<td>8.43</td>
</tr>
</tbody>
</table>

For agents, t tests revealed significant differences between L2 learners and native speakers for compounding, Vinf.+gem., and affixation. L2 learners often used compounding while native speakers did not use it at all. Instead, native speakers were significantly more likely to use Vinf.+gem. Native speakers also opted some of the time for
the affixation process whereas L2 learners did not use it at all. The two groups did not differ in their use of Vinf.

For instruments, t tests showed significant differences for all processes. L2 learners used compounding more often than native speakers who were most likely to use Vinf.+gem. Also, L2 learners used Vinf. while native speakers did not. Instead, native speakers sometimes used affixation, while no learners did so.

Similarly for locatives, t tests revealed significant differences for all four processes. L2 learners opted for compounding much more often than native speakers who opted massively for affixation. L2 learners also used Vinf.+gem. and Vinf. which native speakers did not use at all.

Finally, for causatives, t tests again revealed significant differences for all four processes. L2 learners resorted much more frequently to periphrastic constructions whereas native speakers opted most commonly for Vinf.+gem. Native speakers also opted for affixation more often than L2 learners. These latter made some use of Vinf. which was not produced by native speakers.

5.3.2 Summary

The above findings on the production task confirm hypothesis 2, since L2 learners used compounding significantly more often than native speakers in coining the three nominal notions (agents, instruments, locatives), and periphrastic constructions significantly more often for causatives. Native speakers, on the other hand, used derivational processes significantly more often. Vinf.+gem. was the option the native speakers used most commonly for agents, instruments, and causatives; for locatives, it was affixation.
5.3.3 Comparison of L2 Learners’ and Native Speakers’ Choice of Word Formation Options on Comprehension Task I (Invented Items) and Comprehension Task II (Real Items)

The comparison of L2 learners’ and native speakers’ overall choice of word formation options across the four semantic notions on the two comprehension tasks (see Tables 5:5, and 5:6) also showed a high mean percentage choice of compounding and periphrastic forms by L2 learners and a high mean percentage choice of derivational processes by native speakers. On both tests, significant differences were observed for all four processes. Among derivational processes, native speakers chose most commonly Vinf.+gem. and affixation. Vinf., however, was selected more often by the L2 learners than by the native speakers.

Table 5:5

Overall comparison between L2 learners’ and native speakers’ mean percentage choice of word formation options on comprehension task I (invented items) (max.=30)

<table>
<thead>
<tr>
<th></th>
<th>L2 learners</th>
<th>Native Speakers</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M %</td>
<td>SD</td>
<td>M %</td>
<td>SD</td>
</tr>
<tr>
<td>Vinf.</td>
<td>13.33</td>
<td>12.53</td>
<td>8.33</td>
<td>3.92</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>27.65</td>
<td>21.10</td>
<td>42.08</td>
<td>7.98</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>29.92</td>
<td>8.01</td>
</tr>
<tr>
<td>Comp.Const./Periph.Fm.</td>
<td>59.01</td>
<td>20.25</td>
<td>19.67</td>
<td>8.53</td>
</tr>
</tbody>
</table>

M %  = Mean percentage  
Vinf.  = (C&CiC(a), CaCaCa)  
Vinf.+gem.  = (CaCCaCa, CaCCaCa)  
Affix.  = (maCCaCa, miCCaCa, muCCCiC(a), tCCaCa)  
Comp.Const. = (/rajul/+noun, /tala/+noun, /makfin/+noun)  
Periph.Fm. = (jañala+Pro+Adj.)
Table 5:6

L2 learners’ and native speakers’ overall mean percentage choice of word formation options on comprehension task II (real items) (max.=30)

<table>
<thead>
<tr>
<th></th>
<th>L2 learners</th>
<th>Native Speakers</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=44</td>
<td>n=40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M %</td>
<td>SD</td>
<td>M %</td>
<td>SD</td>
</tr>
<tr>
<td>Vinf.</td>
<td>18.01</td>
<td>8.79</td>
<td>3.48</td>
<td>2.21</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>30.96</td>
<td>16.32</td>
<td>43.14</td>
<td>7.55</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>37.22</td>
<td>9.00</td>
</tr>
<tr>
<td>Comp.Const./Periph.Fm.</td>
<td>51.01</td>
<td>14.65</td>
<td>16.16</td>
<td>9.83</td>
</tr>
</tbody>
</table>

With respect to the choice of word formation options for each semantic notion, significant differences were revealed between L2 learners and native speakers for all options for each semantic notion in both comprehension tasks.

In comprehension task I (Table 5:7), L2 learners selected compounding most often to name invented agents, instruments, and locatives, while native speakers most often chose Vinf.+gem. for agents and instruments, and affixation for locatives. Also, for causatives, L2 learners selected the periphrastic form (/ja’Tala/+Pro+Adj.) more often than native speakers who were again more likely to select Vinf.+gem. Unlike native speakers, L2 learners did not select affixation at all to name invented and real agents, instruments, locatives, and causatives. Instead, they selected Vinf. more often than native speakers for invented agents, and for invented instruments, locatives, and causatives, they sometimes selected Vinf. whereas native speakers did not do so at all.
Table 5:7

Mean percentage of L2 learners’ and native speakers’ choice of word formation options for each semantic notion on comprehension task I (invented items)

<table>
<thead>
<tr>
<th></th>
<th>L2 learners</th>
<th></th>
<th>Native Speakers</th>
<th></th>
<th>( t ) value</th>
<th>( P )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( n=44 )</td>
<td></td>
<td>( n=40 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGENTS (max=8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CaCiCa(a)</td>
<td>4.26</td>
<td>19.80</td>
<td>31.25</td>
<td>14.71</td>
<td>7.13</td>
<td>.000</td>
</tr>
<tr>
<td>CaCCaC(a)</td>
<td>24.71</td>
<td>43.34</td>
<td>47.19</td>
<td>15.11</td>
<td>3.23</td>
<td>.002</td>
</tr>
<tr>
<td>muCCaCCaC(a)</td>
<td>0.00</td>
<td>0.00</td>
<td>21.56</td>
<td>14.43</td>
<td>9.45</td>
<td>.000</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>71.02</td>
<td>45.33</td>
<td>0.00</td>
<td>0.00</td>
<td>-10.39</td>
<td>.000</td>
</tr>
<tr>
<td>INSTRUMENTS (max=8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CaCiCa(a)</td>
<td>6.10</td>
<td>9.06</td>
<td>0.00</td>
<td>0.00</td>
<td>-3.74</td>
<td>.001</td>
</tr>
<tr>
<td>CaCCaC(a)</td>
<td>27.53</td>
<td>26.64</td>
<td>66.27</td>
<td>22.64</td>
<td>7.19</td>
<td>.000</td>
</tr>
<tr>
<td>miCCaCa</td>
<td>0.00</td>
<td>0.00</td>
<td>9.00</td>
<td>10.91</td>
<td>5.23</td>
<td>.000</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>66.37</td>
<td>31.11</td>
<td>24.73</td>
<td>20.41</td>
<td>-7.30</td>
<td>.000</td>
</tr>
<tr>
<td>LOCATIVES (max=7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CaCiCa(a)</td>
<td>15.91</td>
<td>37.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-2.85</td>
<td>.007</td>
</tr>
<tr>
<td>CaCCaC(a)</td>
<td>28.59</td>
<td>25.20</td>
<td>0.00</td>
<td>0.00</td>
<td>-7.52</td>
<td>.000</td>
</tr>
<tr>
<td>maCCaCa</td>
<td>0.00</td>
<td>0.00</td>
<td>57.82</td>
<td>18.12</td>
<td>20.19</td>
<td>.000</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>55.50</td>
<td>32.76</td>
<td>42.17</td>
<td>18.11</td>
<td>-2.33</td>
<td>.023</td>
</tr>
<tr>
<td>CAUSATIVES (max=7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CaCaCa</td>
<td>30.52</td>
<td>31.05</td>
<td>0.00</td>
<td>0.00</td>
<td>-6.52</td>
<td>.000</td>
</tr>
<tr>
<td>CaCCaCa</td>
<td>29.22</td>
<td>45.06</td>
<td>50.71</td>
<td>20.95</td>
<td>2.84</td>
<td>.006</td>
</tr>
<tr>
<td>taCaCa</td>
<td>0.00</td>
<td>0.00</td>
<td>35.36</td>
<td>18.30</td>
<td>12.22</td>
<td>.000</td>
</tr>
<tr>
<td>Jafa+Pro+Adj</td>
<td>40.26</td>
<td>35.83</td>
<td>13.93</td>
<td>11.88</td>
<td>-4.60</td>
<td>.000</td>
</tr>
</tbody>
</table>

As in comprehension task I, there were significant differences on all processes in comprehension task II. L2 learners also selected compounding most commonly for real instruments and locatives in comprehension task II (see Table 5:8). Only for real agents did
they, like native speakers, select the Vinf.+gem. option more frequently than the other processes. For agents, Vinf. was also selected more often than compounding by L2 learners.

For instruments, locatives, and causatives, they sometimes chose Vinf. while native speakers did not so at all. As in comprehension task I, affixation was not chosen at all by L2 learners.

Table 5:8

T tests comparing L2 learners' and native speakers' mean percentage choice of word formation options for each semantic notion on comprehension task II (real items)

<table>
<thead>
<tr>
<th></th>
<th>L2 learners</th>
<th>Native Speakers</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>AGENTS</strong> (max=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CaCi(a)</td>
<td>27.27</td>
<td>16.25</td>
<td>13.93</td>
<td>8.85</td>
</tr>
<tr>
<td>CaCCCa(a)</td>
<td>47.08</td>
<td>24.57</td>
<td>75.36</td>
<td>11.66</td>
</tr>
<tr>
<td>muCaCC Ci(a)</td>
<td>.00</td>
<td>.00</td>
<td>10.71</td>
<td>12.00</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>25.65</td>
<td>23.78</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td><strong>INSTRUMENTS</strong> (max=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CaCi(a)</td>
<td>4.83</td>
<td>9.03</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>CaCCCa(a)</td>
<td>32.24</td>
<td>25.71</td>
<td>51.55</td>
<td>17.72</td>
</tr>
<tr>
<td>miCCCa</td>
<td>.00</td>
<td>.00</td>
<td>17.50</td>
<td>13.22</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>61.64</td>
<td>28.97</td>
<td>30.94</td>
<td>22.46</td>
</tr>
<tr>
<td><strong>LOCATIVES</strong> (max=7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CaCi(a)</td>
<td>10.39</td>
<td>10.38</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>CaCCCa(a)</td>
<td>29.22</td>
<td>24.44</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>miCCCa</td>
<td>.00</td>
<td>.00</td>
<td>82.86</td>
<td>19.20</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>60.39</td>
<td>25.93</td>
<td>17.14</td>
<td>19.20</td>
</tr>
<tr>
<td><strong>CAUSATIVES</strong> (max=7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CaCa</td>
<td>29.54</td>
<td>20.01</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>CaCCCa</td>
<td>14.20</td>
<td>13.64</td>
<td>45.62</td>
<td>21.47</td>
</tr>
<tr>
<td>?aCCa</td>
<td>.00</td>
<td>.00</td>
<td>37.81</td>
<td>24.10</td>
</tr>
<tr>
<td>jaśala+Pro+Adj.</td>
<td>56.25</td>
<td>18.97</td>
<td>16.56</td>
<td>15.60</td>
</tr>
</tbody>
</table>

M % = Mean percentage
Vinf. = (CaCi(a), CaCCa)
Vinf.+gem. = (CaCCa, CaCCCa)
Affix = (miCCaCa, muCCaCa, muCC Ci(a), ?aCCa)
Comp.Const. = (tajul+noun, tāla+noun, /mākañ/+noun)
Periph.Fm.=(jaśala+Pro+Adj.)
5.3.4 Summary

To sum up, statistically significant findings on both comprehension tasks consistently support hypothesis 2. L2 learners showed a high preference for compounding over derivational processes to name the nominal notions, and for periphrastic constructions to name causatives. Native speakers, on the other hand, exhibited a high preference for Vinf.+gem. for agents, instruments and causatives, and affixation for locatives.

5.4 Comparison between Lower, Mid, and Higher Level Learners’ Use of Word Formation Processes in the Production Task

Quantitative group comparisons were carried out among learners of different levels of vocabulary knowledge (as measured by the vocabulary knowledge test) to find out whether relative level of vocabulary knowledge in the target language would influence the use of L2 learners’ word formation processes, in keeping with the expectation that learners with a lower level of vocabulary knowledge will find it harder to make creative use of word formation processes than higher level learners (hypothesis 3).

To test this third hypothesis, an ANOVA was conducted to compare lower, mid, and higher level learners’ overall use of word formation processes in the production task, then their use of word formation processes for each semantic notion.

The ANOVA reveals a main effect of vocabulary knowledge on the overall use of each of the four processes: Vinf., Vinf.+gem., affixation, and compounding (see Table 5:9).

Lower level learners produced more compounding than mid and higher level learners. Higher level learners opted more often for Vinf.+gem., Vinf., and affixation than did mid and lower level learners. The Tamhane test indicated that the differences in means
were statistically significant between lower and higher ($p<.020$) and mid and higher level learners ($p<.004$) for Vinf., between lower and mid ($p<.015$), and lower and higher level learners ($p<.000$) for Vinf.+gem., between lower and higher ($p<.018$) for affixation, and between mid and higher ($p<.023$) for compounding.

Table 5:9

Lower, mid, and higher level learners' overall use of word formation processes on the production task

<table>
<thead>
<tr>
<th></th>
<th>Lower n=10</th>
<th>Mid n=19</th>
<th>Higher n=15</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinf.</td>
<td>1.90</td>
<td>1.79</td>
<td>5.40</td>
<td>9.89</td>
<td>.000</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>.80</td>
<td>2.95</td>
<td>6.80</td>
<td>25.90</td>
<td>.000</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.16</td>
<td>.53</td>
<td>4.94</td>
<td>.012</td>
</tr>
<tr>
<td>Comp.Const./Periph.Fm.</td>
<td>11.50</td>
<td>11.42</td>
<td>7.53</td>
<td>4.09</td>
<td>.024</td>
</tr>
</tbody>
</table>

Vinf. = (CaC(a), CaCaCa)
Vinf.+gem. = (CaCCaCa, CaCCaCa)
Affix. = (maCCaCa, miCCaCa, maCCaCCiC(a), taCCaCa)
Comp.Const. = (/rajul/+noun, /Nila/+noun, /makân/+noun)
Periph.Fm. = (jaYala+Pro+Adj.)

The comparison between lower, mid, and higher level learners' use of word formation processes for each semantic notion revealed the following results.

For agents, there was an overall main effect of vocabulary knowledge on the use of Vinf. +gem. only. The means for use of this process tended to increase with the level of vocabulary knowledge. For example, the lower level learners' mean for Vinf.+gem. was .40, increasing to 1.58 by mid level learners, and to 2.87 for higher level learners (see Table 5:10). The Tamhane test indicated that for Vinf.+gem. the difference in means was statistically significant between lower and mid, ($p<.049$), lower and higher ($p<.000$) where
lower level learners produced Vinf.+gem. significantly less often than mid level learners and higher level learners. The difference in means for Vinf.+gem. was also significant between mid and higher level learners ($p<.050$) where mid and lower level learners produced this process less often than higher level learners.

**Table 5:10**

Means of lower, mid, and higher level learners' use of word formation processes for each semantic notion on the production task

<table>
<thead>
<tr>
<th></th>
<th>Lower N=10</th>
<th>Mid n=19</th>
<th>Higher n=15</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AGENTS (max.=6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>1.20</td>
<td>.37</td>
<td>.87</td>
<td>1.651</td>
<td>n.s.</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>.40</td>
<td>1.58</td>
<td>2.87</td>
<td>9.756</td>
<td>.000</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Comp.Const.</td>
<td>2.40</td>
<td>2.63</td>
<td>2.07</td>
<td>.500</td>
<td>n.s.</td>
</tr>
<tr>
<td><strong>INSTRUMENTS (max.=6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>.10</td>
<td>.31</td>
<td>1.87</td>
<td>10.270</td>
<td>.000</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>.30</td>
<td>.63</td>
<td>1.40</td>
<td>3.077</td>
<td>n.s.</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Comp.Const.</td>
<td>3.70</td>
<td>3.47</td>
<td>2.00</td>
<td>3.617</td>
<td>.036</td>
</tr>
<tr>
<td><strong>LOCATIVES (max.=6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>.20</td>
<td>.16</td>
<td>.73</td>
<td>3.039</td>
<td>n.s.</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>.10</td>
<td>.21</td>
<td>1.80</td>
<td>18.923</td>
<td>.000</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.16</td>
<td>.27</td>
<td>1.602</td>
<td>n.s.</td>
</tr>
<tr>
<td>Comp.Const.</td>
<td>2.70</td>
<td>3.37</td>
<td>1.33</td>
<td>4.870</td>
<td>.013</td>
</tr>
<tr>
<td><strong>CAUSATIVES (max.=6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>.40</td>
<td>.95</td>
<td>1.93</td>
<td>5.894</td>
<td>.006</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>.00</td>
<td>.53</td>
<td>.73</td>
<td>2.285</td>
<td>n.s.</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>.27</td>
<td>4.913</td>
<td>.012</td>
</tr>
<tr>
<td>Periph.Fm.</td>
<td>2.70</td>
<td>1.95</td>
<td>2.13</td>
<td>.751</td>
<td>n.s.</td>
</tr>
</tbody>
</table>

* The total does not add up to 6 because suppletives and no-responses are not included.

For instruments, there was an overall main effect of vocabulary knowledge on performance groups for two of the processes: Vinf., and compounding. Lower level learners
used compounding more often than mid and higher level learners whereas higher level learners used Vinf. more often than mid and lower level learners. The Tamhane test revealed a statistically significant difference in means between lower and higher level learners (p<0.005), and between mid and higher level learners (p<0.015) for Vinf. For compounding, the mean difference was significant between lower and higher level learners: where lower level learners used compounding more than higher level learners (p<0.023).

For locatives, the Anova showed a main effect for Vinf.+gem., and for compounding. Higher level learners used the Vinf.+gem. process more than mid and lower level learners. Compounding was used more often by mid level learners than by either lower or higher level learners. The Tamhane test showed a significant difference in means between lower and higher level learners with (p<0.000), and between mid and higher level learners with (p<0.000) for Vinf.+gem. For compounding, the mean difference was only significant between mid and higher level learners: mid level learners used compounding more than higher level learners (p<0.009).

Finally, for causatives, there was an overall main effect for level of vocabulary knowledge with respect to Vinf. and affixation processes. Higher level learners used Vinf. more often than mid and lower learners. Higher level learners also used affixation while mid and lower level learners did not. The Tamhane test showed the difference in means to be statistically significant between lower and higher level learners for Vinf. with (p<0.003), and between lower and higher level learners for affixation with (p<0.034).
5.4.1 Summary

To sum up, hypothesis 3 was partially borne out by the comparison of the use of the various word formation processes by L2 learners at lower, mid, and higher levels of vocabulary knowledge. Level of vocabulary knowledge revealed differential effects some of the time: e.g., with respect to Vinf. for coining instruments and causatives, Vinf.+gem. for coining agents and locatives, affixation for coining causatives, and compounding for coining instruments and locatives. For the three processes (Vinf., Vinf.+gem., and affixation), higher level learners tended to opt for them more often than mid and lower level learners. Only for compounding did higher level learners tend to use it less often than mid and lower level learners. The significant differences in means for these processes were mostly between higher level learners and the other two groups.

5.5 Comparison of Higher Level, Lower Level L2 Learners' and Native Speakers' Use and Choice of Word Formation Processes

The final quantitative analysis of data collected in this study addresses hypothesis 4 which states that:

Higher level L2 learners' production and choice of word formation processes will be more like those of native Arabic speakers than lower level learners' will.

To test this hypothesis, higher and lower level learners' use of word formation processes was compared to that of native speakers on the production task and on comprehension tasks I and II.
5.5.1 Comparison of Higher, and Lower Level L2 Learners' and Native Speakers' Use of Word Formation Processes on the Production Task

T tests performed on higher level learners' and native speakers' production of the four word formation processes to name the four semantic notions revealed that higher level L2 learners differed significantly from native speakers in their use of Vinf: for instruments, locatives, and causatives: L2 learners relied some of the time on this process in coining their innovations while native speakers did not (see Table 5:11). Only with respect to agents were the means for Vinf: similar for the higher level learners and the native speakers. Another significant difference was revealed in the use of Vinf:+gem. to coin instruments and locatives: for locatives, higher level L2 learners used it and native speakers did not. In contrast, for instruments, native speakers used Vinf:+gem. more often than the learners.

The higher level L2 learners and native speakers also differed in their use of affixation for agents, instruments, locatives, and causatives: the learners used affixation less often than native speakers for locatives and causatives, and for agents and instruments, they did not use it at all.

In addition, higher level learners and native speakers differed in their use of compounding for agents and locatives: for agents, the learners used compounding and native speakers did not; and for locatives L2 learners used this process more often than native speakers. In short, the use by higher level learners of word formation processes was comparable to that of native speakers only for Vinf: and Vinf:+gem. processes to coin agents, and for compounding to coin instruments.
Table 5:11

Means of higher level learners’ and native speakers’ use of word formation processes for each semantic notion on the production task

<table>
<thead>
<tr>
<th></th>
<th>Higher L2 learners</th>
<th>Native Speakers</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>AGENTS (max.=6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>.87</td>
<td>1.41</td>
<td>1.17</td>
<td>.90</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>2.87</td>
<td>1.46</td>
<td>3.63</td>
<td>1.31</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>.96</td>
<td>1.04</td>
</tr>
<tr>
<td>Comp.Const.</td>
<td>2.07</td>
<td>1.33</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td><strong>INSTRUMENTS (max.=6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>1.87</td>
<td>1.77</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>1.40</td>
<td>1.50</td>
<td>3.00</td>
<td>1.32</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>.65</td>
<td>.77</td>
</tr>
<tr>
<td>Comp.Const.</td>
<td>2.00</td>
<td>2.03</td>
<td>1.73</td>
<td>1.30</td>
</tr>
<tr>
<td><strong>LOCATIVES (max.=6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>.73</td>
<td>1.03</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>1.80</td>
<td>1.15</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Affix.</td>
<td>.27</td>
<td>.46</td>
<td>2.67</td>
<td>1.21</td>
</tr>
<tr>
<td>Comp.Const.</td>
<td>1.33</td>
<td>1.63</td>
<td>.30</td>
<td>.52</td>
</tr>
<tr>
<td><strong>CAUSATIVES (max.=6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>1.93</td>
<td>1.27</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Vinf.+gem.</td>
<td>.73</td>
<td>1.03</td>
<td>2.62</td>
<td>1.56</td>
</tr>
<tr>
<td>Affix.</td>
<td>.27</td>
<td>.46</td>
<td>1.42</td>
<td>1.28</td>
</tr>
<tr>
<td>Periph.Fm.</td>
<td>2.13</td>
<td>1.64</td>
<td>.17</td>
<td>.38</td>
</tr>
</tbody>
</table>

* The total does not add up to 6 because suppletives and non-responses are not included.

Vinf. = (CtCiC(a), CaCaCa)
Vinf.+gem. = (CaCCaC(a), CaCCaCa)
Affix. = (maCCaCa, miCCaCa, nuCCaCCiC(a), ?aCCaCa)
Comp.Const. = (/rajul/+noun, /tala/+noun, /makän/+noun)
Periph.Fm. = (jafula+Pr+Adj.)
T-tests performed on lower level learners' and native speakers' use of the four word formation processes to name the four semantic notions showed that lower level learners also differed significantly from native speakers in their production of word formation processes. With respect to Vinf+gem, lower level L2 learners opted less often for it than native speakers in coining innovative agents, instruments; and for causatives, lower L2 learners did not opt for this process while native speakers did so (see Table 5:12).

Table 5:12

T-tests comparing lower level learners' and native speakers' use of word formation processes for each semantic notion on the production task

<table>
<thead>
<tr>
<th></th>
<th>Lower L2 learners</th>
<th>Native Speakers</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>AGENTS (max=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>1.20</td>
<td>.95</td>
<td>3.62</td>
<td>1.31</td>
</tr>
<tr>
<td>Vinf+gem.</td>
<td>.40</td>
<td>.97</td>
<td>1.72</td>
<td>1.30</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>1.64</td>
<td>1.03</td>
</tr>
<tr>
<td>Comp.Const.</td>
<td>2.40</td>
<td>1.84</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>INSTRUMENTS (max=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>.10</td>
<td>.32</td>
<td>.07</td>
<td>.00</td>
</tr>
<tr>
<td>Vinf+gem.</td>
<td>.30</td>
<td>.67</td>
<td>3.00</td>
<td>1.32</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>.07</td>
<td>.00</td>
</tr>
<tr>
<td>Comp.Const.</td>
<td>3.70</td>
<td>1.89</td>
<td>1.72</td>
<td>1.30</td>
</tr>
<tr>
<td>LOCATIVES (max=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>.20</td>
<td>.42</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Vinf+gem.</td>
<td>.10</td>
<td>.32</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>2.86</td>
<td>1.21</td>
</tr>
<tr>
<td>Comp.Const.</td>
<td>2.70</td>
<td>1.95</td>
<td>.80</td>
<td>.52</td>
</tr>
<tr>
<td>CAUSATIVES (max=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinf.</td>
<td>.40</td>
<td>.70</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Vinf+gem.</td>
<td>.00</td>
<td>.00</td>
<td>2.62</td>
<td>1.56</td>
</tr>
<tr>
<td>Affix.</td>
<td>.00</td>
<td>.00</td>
<td>1.42</td>
<td>1.28</td>
</tr>
<tr>
<td>Periph.Fm.</td>
<td>2.70</td>
<td>1.57</td>
<td>.17</td>
<td>.38</td>
</tr>
</tbody>
</table>
Another significant difference was shown in the use of affixation in coining agents, instruments, locatives, and causatives: for the four semantic notions, lower level L2 learners did not use it and native speakers did so. A further significant difference was revealed in the use of compounding for agents, instruments, and locatives, and of periphrastic constructions for causatives: for instruments, and locatives, lower-level L2 learners used compounding more often than native speakers, and for agents lower learners did use compounding and native speakers did not. Also, for causatives, lower learners used periphrastic constructions more often than native speakers.

Thus, the findings in the production task did not support hypothesis 4. Higher level learners as well as lower level learners did differ in most cases from native speakers in their use of word formation processes.

5.5.2 Comparison of Higher and Lower Level L2 Learners’ and Native Speakers’ Choice of Word Formation Options on Comprehension Task I (Invented Items)

The comparison of the higher level learners’ word formation options with those of native speakers on comprehension task I (see Table 5:13) revealed that the two groups differed significantly in their choice of Vinf. to name agents, locatives, and causatives, where higher level learners did not choose this process at all for agents, but for both locatives and causatives they selected it while native speakers did not choose it all.

Both groups also differ in their choice of Vinf.+gem. to denote agents, instruments, and locatives with higher level L2 learners selecting Vinf.+gem. less often than native speakers for agents and instruments; for locatives, on the other hand, higher L2 learners chose it while native speakers did not. A significant difference was also found between the two groups on the choice of affixation for all four semantic notions: the higher level L2
learners, unlike native speakers, did not choose this process at all. No significant differences were found on higher level learners' and native speakers' choice of the Vinf. process to coin instruments, of compounding to coin locatives, or of Vinf.+gem. to coin causatives.

Table 5:13
Comparison between higher level L2 learners' and native speakers' mean choice of word formation options for each semantic notion on comprehension task I (invented items)

<table>
<thead>
<tr>
<th>Table 5:13</th>
<th>Higher L2 learners</th>
<th>Native Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agents (max.=8)</td>
<td><strong>n=15</strong></td>
<td><strong>n=40</strong></td>
</tr>
<tr>
<td>CáCiC(a)</td>
<td>.00</td>
<td>2.50</td>
</tr>
<tr>
<td>CaCCa</td>
<td>1.60</td>
<td>3.78</td>
</tr>
<tr>
<td>C(a)</td>
<td>1.60</td>
<td>3.78</td>
</tr>
<tr>
<td>muCaCCCiC(a)</td>
<td>.00</td>
<td>1.72</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>6.40</td>
<td>3.31</td>
</tr>
<tr>
<td>Instruments (max.=8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CáCiC(a)</td>
<td>.27</td>
<td>.00</td>
</tr>
<tr>
<td>CaCCaC(a)</td>
<td>1.60</td>
<td>5.30</td>
</tr>
<tr>
<td>miCCCa</td>
<td>.00</td>
<td>.73</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>6.13</td>
<td>1.97</td>
</tr>
<tr>
<td>Locatives (max.=7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CáCiC(a)</td>
<td>1.40</td>
<td>.00</td>
</tr>
<tr>
<td>CaCCaC(a)</td>
<td>2.33</td>
<td>.00</td>
</tr>
<tr>
<td>maCCaCa</td>
<td>.00</td>
<td>4.05</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>3.27</td>
<td>2.95</td>
</tr>
<tr>
<td>Causatives (max.=7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CáCaCa</td>
<td>1.93</td>
<td>.00</td>
</tr>
<tr>
<td>CaCCaCa</td>
<td>1.80</td>
<td>3.55</td>
</tr>
<tr>
<td>?aCCaCa</td>
<td>.00</td>
<td>2.47</td>
</tr>
<tr>
<td>Periph.Fm.</td>
<td>3.27</td>
<td>.98</td>
</tr>
</tbody>
</table>

Vinf. = (CáCiC(a), CaCaCa)  
Vinf.+gem. = (CaCCaC(a), CaCCaCa)  
Affix. = (maCCaCa, miCCaCa, muCaCCCiC(a), ?aCCaCa)  
Comp. Const. = (/rajul/+noun, /tala/+noun, /makān/+noun)  
Periph. Fm. = (jañala+Pro+Adj.)
In comparing lower level learners’ and native speakers’ choice of word formation options in the comprehension task 1, it was found that lower level learners differed significantly from native speakers in their choice of compounding in naming invented agents, instruments, and locatives (see Table 5:14).

For instruments and locatives, lower level learners’ mean of compounding was significantly higher than native speakers. For agents, however, lower level learners often chose compounding while native speakers did not at all. The difference was also significant between the two groups for affixation: Lower level learners did not select this process at all in naming the four semantic notions whereas native speakers did so.

Other significant differences were revealed for Vinf., and Vinf.+gem. With respect to Vinf., the significant difference was revealed for both groups in naming agents and causatives: for the former, lower learners did not choose Vinf. while native speakers did, and for the latter, some lower learners chose it whereas native speakers did not. With respect to Vinf.+gem., a significant difference was shown between lower level learners and native speakers in naming instruments where lower level learners chose it less often than native speakers, and in naming locatives where they selected it some of the time while native speakers did not.
Table 5:14

Means of lower level L2 learners' and native speakers' choice of word formation options for each semantic notion on comprehension task I (invented items)

<table>
<thead>
<tr>
<th></th>
<th>Lower L2 learners n=10</th>
<th>Native Speakers n=40</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AGENTS (max=8)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CäCiC(a)</td>
<td>.00</td>
<td>2.50</td>
<td>1.18</td>
<td>-13.43 .000</td>
</tr>
<tr>
<td>CaCCäC(a)</td>
<td>2.30</td>
<td>3.77</td>
<td>1.21</td>
<td>-1.24 n.s.</td>
</tr>
<tr>
<td>muCaCCiC(a)</td>
<td>.00</td>
<td>1.72</td>
<td>1.15</td>
<td>-9.45 .000</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>5.70</td>
<td>.00</td>
<td>.00</td>
<td>4.85 .001</td>
</tr>
<tr>
<td><strong>INSTRUMENTS (max=8)</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CäCiC(a)</td>
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<td>.00</td>
<td>.00</td>
<td>1.80 n.s.</td>
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<tr>
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<td>5.30</td>
<td>1.83</td>
<td>-5.30 .000</td>
</tr>
<tr>
<td>maCCaCa</td>
<td>.00</td>
<td>.72</td>
<td>.88</td>
<td>-5.23 .000</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>6.00</td>
<td>1.97</td>
<td>1.64</td>
<td>5.19 .000</td>
</tr>
<tr>
<td><strong>LOCATIVES (max=7)</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CäCiC(a)</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>5.22 .001</td>
</tr>
<tr>
<td>CaCCäC(a)</td>
<td>2.70</td>
<td>.00</td>
<td>.00</td>
<td>-20.01 .000</td>
</tr>
<tr>
<td>maCCaCa</td>
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<td>4.05</td>
<td>1.28</td>
<td>2.43 .032</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>4.30</td>
<td>2.95</td>
<td>1.28</td>
<td>2.43 .032</td>
</tr>
<tr>
<td><strong>CAUSATIVES (max=7)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CäCaCa</td>
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<td>.00</td>
<td>3.00 .015</td>
</tr>
<tr>
<td>ACCäCa</td>
<td>2.10</td>
<td>3.55</td>
<td>1.47</td>
<td>-1.32 n.s.</td>
</tr>
<tr>
<td>7aCCaCa</td>
<td>.00</td>
<td>2.47</td>
<td>1.28</td>
<td>-12.22 .000</td>
</tr>
<tr>
<td>Periph.Fm.</td>
<td>2.40</td>
<td>.97</td>
<td>.83</td>
<td>1.71 n.s.</td>
</tr>
</tbody>
</table>

* t cannot be computed because the standard deviations of both groups are 0.

5.5.3 Comparison of Higher, Lower Level L2 Learners' and Native Speakers' Choice of Options in Comprehension Task II (Real Items)

In comparing the choice of higher level learners of word formation options with that of native speakers to denote the four semantic notions on comprehension task II, it was
found that only with respect to Vinf.+gem. was the higher level learners' choice comparable to that of native speakers' in naming instruments (see Table 5:15).

Table 5:15

T-tests comparing higher level L2 learners' and native speakers' choice of word formation options for semantic notion on comprehension task II (real items)

<table>
<thead>
<tr>
<th></th>
<th>Higher L2 learners</th>
<th>Native Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>AGENTS (max.=7)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CaciC(a)</td>
<td>1.73</td>
<td>1.16</td>
</tr>
<tr>
<td>CaCCaC(a)</td>
<td>3.73</td>
<td>1.58</td>
</tr>
<tr>
<td>muCaCCaC(a)</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>N-in-construct</td>
<td>1.53</td>
<td>1.60</td>
</tr>
<tr>
<td><strong>INSTRUMENTS (max.=8)</strong></td>
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<tr>
<td>CaciC(a)</td>
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<td>0.63</td>
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<tr>
<td>CaCCaC(a)</td>
<td>3.73</td>
<td>1.90</td>
</tr>
<tr>
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<td>0.00</td>
</tr>
<tr>
<td>N-in-construct</td>
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<td>1.96</td>
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<tr>
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<td></td>
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<td>1.64</td>
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<tr>
<td>CaCCaC(a)</td>
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<td>1.75</td>
</tr>
<tr>
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</tr>
<tr>
<td>N-in-construct</td>
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<td>1.12</td>
</tr>
<tr>
<td><strong>CAUSATIVES (max.=9)</strong></td>
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<td></td>
</tr>
<tr>
<td>CaciC(a)</td>
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</tr>
<tr>
<td>CaCCaC</td>
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</tr>
<tr>
<td>Periph.Fnm.</td>
<td>4.60</td>
<td>1.68</td>
</tr>
</tbody>
</table>

For agents, higher level L2 learners selected Vinf. more often than native speakers, and for instruments, locatives, and causatives, they sometimes chose Vinf. while native speakers did not. Higher level L2 learners and native speakers also differed in their choice of Vinf.+gem. to name agents, locatives, and causatives. L2 learners selected Vinf.+gem. more often than native speakers for agents; for locatives, they selected it while native speakers did
not, and for causatives, they selected it less often than native speakers. Moreover, higher level L2 learners differed from native speakers by not choosing affixation at all to name the four semantic notions. They also differed in their choice of compounding to denote the four semantic notions. For instruments, locatives, and causatives, they chose compounding more often than native speakers. For agents, the higher learners chose it while native speakers did not.

In comparing lower level learners’ and native speakers’ choice of word formation processes, findings show that there were two instances where the lower level learners were not significantly different from native speakers. In these two instances, the similarity lay in the use of Vinf. to coin instruments and locatives (see Table 5:16).

Unlike native speakers, however, lower level L2 learners selected Vinf. more often than native speakers for agents, and for instruments, locatives, and causatives, they chose it while native speakers did not. Also, lower level L2 learners selected Vinf.+gem. less often than native speakers for agents, instruments, and causatives, but for locatives, they used it more than native speakers. Unlike native speakers, they did not choose affixation at all to name the four semantic notions. The lower level learners also chose compounding significantly more often than native speakers to name instruments, locatives, and causatives, and for agents, they chose compounding while native speakers did not.
Table 5:16

Lower level L2 learners' and native speakers' choice of word formation options for each semantic notion on comprehension task II (real items)

<table>
<thead>
<tr>
<th>AGENTS (max.=7)</th>
<th>Lower L2 learners</th>
<th>Native Speakers</th>
<th>T value</th>
<th>P</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CäCiC(a)</td>
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<td>.84</td>
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<td>N-in-construct</td>
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<table>
<thead>
<tr>
<th>INSTRUMENTS (max.=8)</th>
<th>Lower L2 learners</th>
<th>Native Speakers</th>
<th>T value</th>
<th>P</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
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<td>CäCiC(a)</td>
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<td>CaCCäC(a)</td>
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<td>1.40</td>
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<td>N-in-construct</td>
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<td>2.47</td>
<td>1.80</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCATIVES (max.=7)</th>
<th>Lower L2 learners</th>
<th>Native Speakers</th>
<th>T value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CäCiC(a)</td>
<td>.60</td>
<td>.84</td>
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<td>.00</td>
</tr>
<tr>
<td>CaCCäC(a)</td>
<td>1.20</td>
<td>1.47</td>
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<td>.00</td>
</tr>
<tr>
<td>maCCaCa</td>
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<td>5.80</td>
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<tr>
<td>N-in-construct</td>
<td>5.20</td>
<td>1.75</td>
<td>1.20</td>
<td>1.34</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAUSATIVES (max.=9)</th>
<th>Lower L2 learners</th>
<th>Native Speakers</th>
<th>T value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CäCaCa</td>
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<td>CaCCäCa</td>
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<tr>
<td>Periph.Fm.</td>
<td>4.40</td>
<td>1.64</td>
<td>1.32</td>
<td>1.25</td>
</tr>
</tbody>
</table>

Findings in both comprehension tasks I and II also did not support hypothesis 4.

Higher level learners' choice of word formation processes was not comparable to that of native speakers. Lower level learners' choice of word formation processes also did not approach that of native speakers.
5.6 Summary of the Quantitative Findings

To sum up, the quantitative findings suggest partial support for hypothesis 1a. As predicted, L2 learners produced fewer innovations for agents and instruments, and gave some non-responses for all four semantic notions, whereas native speakers did not. But for locatives, L2 learners produced more innovations for locatives than native speakers, and a quite similar number of innovations as native speakers for causatives. However, complete support was found for hypothesis 2. L2 learners and native speakers exhibited different preferences with respect to the use and choice of word formation processes. Partial support was found for hypothesis 3 where level of vocabulary knowledge did reveal differential effects for a few word formation processes to denote some of the semantic notions. Finally, hypothesis 4 was not supported in that higher level L2 learners' use and choice of word formation processes did not resemble that of the native speakers more closely than lower level learners.

In the next chapter, a qualitative analysis of the findings will be presented to investigate hypotheses 1b, 5, and 6.
CHAPTER 6
QUALITATIVE FINDINGS

In this chapter, a qualitative analysis of the L2 learners' and native speakers' responses on the three tasks will be provided. The purpose of this descriptive account is to supplement the quantitative analyses, to examine more closely learners' and native speakers' lexical innovations in the production task, to assess the applicability of the acquisitional principles of productivity, semantic transparency, formal simplicity, and conventionality in explaining the learners' preferences for different word formation processes, and to determine the effect of L1 in the L2 learners' production of innovations in MSA. Samples of learner and native speaker data are provided in most cases along with the relevant test stimuli. In each example, the opening part of the stimulus "In Arabic, how would you call..." for the three nominal notions and "In Arabic, how would you express..." for causatives has been deleted since these are standard expressions in the production task.

6.1 Qualitative Examination of L2 Learners' and Native Speakers' Innovations on the Production Task

According to hypothesis 1b, there will be a qualitative difference between L2 learners and native speakers in their production of innovations. A close examination of learners' and native speakers' innovations on the production task reveals that learners exhibited more variability than native speakers. This variability is seen in their formation of
derived patterns, and in their production of a wide variety of innovative compound and periphrastic constructions. Some of these innovations were semantically inappropriate in the given context.

6.1.1 L2 Learners' and Native Speakers' Innovations

Native speakers almost always coined their innovations from a single verb conveying the exact meaning of the verb presented in the input. For example, for agent item 14: "... a person who draws with a pencil" the Arabic verb /rasama/ 'to draw' was used to coin the invented agent /rassām/, and for instrument item 21: "... a machine that cuts pumpkin", the verb /qatāfa/ 'to cut', was used to coin the invented instruments /qattāfa/ and /qātīfa/.

Again, for locative item 15: "... a place where you bum clothes", only the verb /haraqa/ that conveys the meaning 'to bum' was used by native speakers to construct the innovative locative /maḥraqa/. On only one test item did two native speakers use other verbs than the one presented in the input. This was when native speakers 12 and 24 used verbs that are semantically related to, or extend the meaning specified by, the input verb. For agentive item 9: "... a person who spreads rumors by phone", instead of using the verb /nashara/ which means 'to spread', native speaker 12 supplied the innovative agent /rawwāj/ using the verb /rāja/ 'to circulate', and native speaker 24 /muḍayyi/ used the verb /ʔadāya/ 'to broadcast'.

In comparison, L2 learners, besides coining innovations from a verb conveying the exact meaning of the verb presented in the input, also coined innovations for some items by using other verbs semantically unrelated or only distantly related to the verb in the input. For example, in responding to the agentive item 19: "... a person who pulls wagons", some L2 learners gave /sāʔiq/ or /sawwāq/ using the verb /sāqa/ 'to drive', and /qāʔid/ or /qawwād/
using the verb /qāda/ 'to lead' that are different in meaning from the verb /jarrā/ 'to pull' presented in the input. Also in response to the instrumental item 23: "...a machine that stops wind", some learners derived their innovative instruments from the verb /najaza/ 'to seize', supplying /nājīza/ or /najjāza/, and from the verb /manāfa/ 'to forbid' they derived the innovative instruments /māniḍa/ or /mannāḍa/ instead of /wāqīfa/, /waqqāfa/, or /miwqāfa/ from the verb /tawaaqqaḍa/ (which signifies more precisely 'to stop' as provided in the input).

In addition, L2 learners occasionally coined innovations from a phonologically similar but semantically unrelated verb. For instance, for agent item 19: "...a person who pulls wagons" learner 6 gave the agentive pattern /jarrāy/ 'runner' derived from the verb /jarā/ meaning 'to run' instead of /jarrār/ 'puller' derived from the verb /jarrā/ 'to pull'.

Other innovations were also coined by L2 learners, but not native speakers, by root transformation. This means replacing one element of the root, particularly a third consonant, by a semi vowel /y/ in the derived pattern. Examples are /fajjāy/ and /hammāl/ instead of /fajjār/ and /hāllām/ from the verbs /fajjara/ and /hālima/ respectively by learners 7, and 14. In addition, L2 learners, unlike native speakers, coined innovations by metathesis which consists of changing the order of the consonantal root. For example, the innovative instrument /jaṭṭāza/ from the verb /zaṭṭaja/ 'to disturb', instead of /zaṭṭāja/, and the innovative agent /farrāj/ from the verb /fajjara/ 'to burst', instead of /fajjār/ by learners 19 and 26.

Further cases where learners differed from native speakers include innovations coined from roots that have a basic nominal core. Some notable examples of these innovations by learners were found for agentive, instrumental, and locative notions. Examples include agent item 19, where the agentive noun /farrāb/ was coined from the noun
/Araba/ ‘wagon’; instrumental item 16 where the instrumental noun /zabbada/ was constructed from the noun /zabda/ ‘butter’; and locative items 6 and 7 where the locative nouns /malbana/ and /marbana/ were coined from the nouns [laban] ‘milk’, and /murabbâ/ ‘jam’ respectively by different learners.

To summarize, the above examination of learners’ and native speakers’ innovations on the production task reveals that L2 learners, unlike native speakers, manifested more variability in coining their innovations by using verbs that are distantly related or semantically unrelated to the verbs in the input, by transforming or changing the order of one of the consonant roots of the input verbs, and by using roots that have a nominal core.

6.1.2 Types of Innovations Produced by L2 Learners and Native Speakers

Although quantitatively L2 learners generally produced fewer innovations than native speakers (see Table S:2), qualitatively, L2 learners also demonstrated variability in coining various types of innovative compound and periphrastic constructions.

a/ Innovative compound constructions for nominal notions

When native speakers opted for compounding with nominal notions, they supplied the AP+N construction (where one of the nouns is an active participle), and the N-inconstruct construction consisting of /tala/+N or /makân/+N to name instruments and locatives. No compound constructions were produced for agents by the native speakers. Examples of compound constructions for instruments and locatives from the native speaker data include: the AP+N compound /jâfîdatu z zabda/ ‘curler butter’, and /qaṭṭâṭatu tyaqîn/ ‘cutter pumpkins’; and the /N-in-construct /tâlatu jâfîd/ ‘curling machine’, and /tâlatu lâṣîf/
for instrument item 16: "...a machine that curls butter"; and instrument item 21: "...a machine that cuts pumpkins" respectively. For locative item 18: "...a place where people fight dreams", they also supplied /makānu lḥulm/ 'place dreaming'.

In comparison, L2 learners supplied a wide range of compound constructions. Besides producing AP+N and N-in-construct compounds like native speakers, L2 learners produced N+M, N+N+N, V+N, and N+prep+N constructions. Below are typical examples of L2 learners' use of these compound constructions.

Unlike native speakers, L2 learners supplied the compound AP+N for agents, as well as for instruments and locatives. For example, for agentive item 9: "...a person who spreads rumors by phone", L2 learners produced /nāshiru lṭishāqāt/ 'spreader rumors', /nāshiru lṭaxbār/ 'spreader news', and for agent item 19: "... a person who pulls wagons", they supplied /jār lṭarabāt/ 'puller wagons'. For instrument item 21: "...a machine that cuts pumpkins", L2 learner 36 produced: /qāṭiṭatu lyaqṭtin/ 'cutter pumpkins'. For locative item 12: "...a place where people watch clouds", learner 5 provided /shāhidatu ssaḥāb/ 'watcher clouds'.

L2 learners also provided N+M (noun+modifier) compounds, mostly for instruments. For instance, learner 15 came up with /ʔāla muzīja/ 'disturbing machine' for instrument item 3: "... a machine that makes a disturbing noise", and /waraqa malfūfa/ 'paper streamer' for instrument item 10: "... a machine that makes paper streamers".

In addition, L2 learners supplied N-in-construct compounds, combining the word /rajul/ 'man', /ʔāla/ 'machine', or /makān/ 'place' with another noun to denote the three nominal notions. For example, for agentive item 5: "...a person who makes a practice of bursting balloons", learners 4 and 30 produced /rajulu lfaqāqiṭ/ 'man balloons', and for the
agentive item 9: "...a person who spreads rumors by phone", /rajul ʔishāfātu/ 'man news'.
For instrument item 8: "...a machine that lights candles", among the N-in-construct compounds produced by different L2 learners were: /ʔālātu shāmī/ 'machine candle' (learner 13), /ʔālātu shumūf/ 'machine candles' (learners 14 and 26), and /ʔālātu ʔidāʔa/ 'machine lighting' (learner 39). Also, for locative item 4: "...a place where people make soap sculptures", learner 5 provided /makan ṃnaft/ 'place sculpturing'. In all these compounds the order of words provided is head-initial characteristic of MSA.

Moreover, L2 learners provided N+N+N compounds where the first noun was either /rajul/, /ʔālā/ or /makan/ and the second noun was an active participle for agents, instruments, and locatives. For example, for agentive item 19: "... a person who pulls wagons", learners (e.g., 8, 12, and 33) supplied the compound construction /rajul jār ʔarabat/ 'man puller wagons'. Also, for instrument item 16: "...a machine that curls butter", same L2 learners produced /ʔālātu jāfād zābdā/ 'a machine curling butter', and /ʔālātu shāʔilat shumūf/ 'machine lighter candles' for instrument item 23: "...a machine that lights candles". In addition, for locative item 4: "...a place where people make soap sculptures", L2 learners 9, and 15 supplied /makan naft ʕābūn/ 'place sculpturing soap', and learner 29 /makan šināfāt ʕābūn/ 'place producing soap'; and for locative item 15: "...a place where people burn clothes", learners 13 and 26 produced /makan ɦarq ɪmalābiss/ 'place burning clothes', and learner 43 [makan ɦarq ʔaḥiyāb] 'place burning clothes'. (The words /ɪmalābiss/ and /ʔaḥiyāb/ are synonyms for the English word 'clothes').

Furthermore, L2 learners came up with the N+prep+N compound construction to name instruments in some cases as in /ʔālā li ʔidāfāti shumūf/ and /ʔālā li ʔishāfāli shumūf/
‘a machine for lighting candles’ for instrument item 8: "... a machine that lights candles"; and /ʕala li jaʃdi z zabda/ for instrument item 16: "... a machine that curls butter" by learners (10, 20, and 34).

Last but not least, L2 learners produced V+N compounds. Typical examples were: /yajurru ƙaraba/ ‘pulls wagon’ for agent item 19 "... a person who pulls wagons", and /tajʃadu z zabda/ ‘curls butter’ for instrument item 16: "... a machine that curls butter" (learner 14); and /ʔashʃal nnarı/ ‘sets fires’ for agentive item 1 "... a person who sets fires"; /rąqab suʃ hub/ ‘watched clouds’ for locative item 12: "... a place where people watch clouds" (learner 18).

To sum up, this brief examination of native’ and learners’ innovative compound constructions reveals that native speakers only supplied AP+N and N-in-construct compound constructions for instruments and locatives. L2 learners, on the other hand, produced varied compound constructions including AP+N, N-in-construct, N+N+N, N+M, and V+N for the three semantic notions (agent, instrument, and locative notions), and N+prep+N only for instruments.

b/ Innovative periphrastic constructions for causatives

In terms of periphrastic constructions, native speakers produced innovative causative constructions using only the verb /jaʃala/ conveying the idea of causativity in MSA. Examples of such constructions include: /jaʃala hu yaqfizu mina ınafida/

‘he made him jump from the window’ for causative item 13: "... the action of making somebody jump from the window" (native speaker 12). Also, /jaʃalahu yajmaʃ Süadəʃat/ ‘he made him gather seashells’ for causative item 22: "... the action of making somebody
gather seashells " supplied by the same subject. In comparison L2 learners produced various innovative causative periphrastic constructions composed not only of the verb /jašala/ 'make', but also /sabbaba/ 'cause', and /dafaša/ 'push'. Examples include: causative item 13: "... the action of making somebody jump from the window", learner 40 produced /jašala yaqfizu mina nnāfida/ 'he made jumping from the window'; and for the same item learner 33 produced /dafaša hu qafz mina nnāfida/ 'he pushed him jumping from window'. Also, for causative item 6: "... the action of making somebody land on another planet", learner 17 supplied the following innovative periphrastic construction /sabbaba nuzul kawkab/ 'he caused descent planet', and learner 24 produced /jašalahu yanzilu/ 'he made him descend'.

c/ Innovative derived patterns

Although L2 learners produced fewer innovative derived patterns for each semantic notion compared to native speakers (see Table 5:3), they produced a wider range of patterns and forms. These derived patterns, although formally appropriate in MSA, were considered semantically "inappropriate" in the given contexts because they expressed other semantic notions than the ones being investigated. Examples of these derived patterns are presented in the following paragraphs.

Among the inappropriate derived patterns that learners produced, notable was a verbal noun CiCāCa of pattern I verbs which is associated in MSA with professions and crafts. This pattern was sometimes supplied for locative and causative items. Examples of this type are /nišāta/ 'action of carving' coined by learner 20 for locative item 4 instead of
the prefixed pattern /manhata/, and /jimāřa/ for causative item 22 instead of the innovative causative patterns /jammařa/, or /rajmařa/.

Another inappropriate derived pattern offered by L2 learners was the verbal noun taCC CiC of pattern II verbs for locatives and causatives. Examples of these occurrences (all supplied by learner 11) are /tanhr̢/ ‘carving’ for locative item 4 instead of the innovative prefixed pattern /manhata; /taq̢fiz/ ‘jumping’ for causative item 13 instead of the causative verbal patterns /qaffazə/ or /aqq̢fazə/; and /tajmiz/ ‘pilling’ for causative item 22 instead of the verbs /jammařa/ or /rajmařa/.

Other inappropriate derived patterns used by L2 learners included pattern maCC CiC (the passive participle of derived verb pattern I), and pattern muC CiC (passive participle of derived verb pattern II). These patterns were provided mostly for locative and causative notions. The following examples were provided by different L2 learners. For instance, /mafruruq/ ‘burned’ for locative item 15 produced by learner 25 instead of /mafrq̢a/, and /mujämiz/ 'piled up' for causative item 22 supplied by learner 16 instead of /jammařa/ or /rajmařa/.

In some cases learners inappropriately produced the simple verbal form CaCaCa, or the reciprocal verbal form CâCaCa to name causatives. For example, for causative item 6: "... the action of making somebody land on another planet", learners sometimes produced the simple verb /habaṭa/ ‘to descend’ instead of the innovative causatives /habbaṭa/ or /rahbaṭa/, and for causative item 13: "... the action of making somebody jump from the window", learner 20 supplied the reciprocal verb /qâfazə/ instead of /qaffazə/ or /aqq̢fazə/.
Further inappropriate derived patterns include cases where L2 learners produced patterns that denote relational adjectives by adding the suffix /iy/ to the noun. Typical examples include [Ŷarabâ티] for agent item 19, and [ishlyîy] for agent item 9 where learner 5 added the suffix /iy/ to the word [Ŷaraba] 'wagon' and /ishlyîa/ 'rumor' respectively instead of coining agent patterns such as /Ŷarrâb/ and /shayyâf/.

6.1.3 Summary

To sum up, the results of native speakers' and learners' innovation responses in the production task were in accord with hypothesis 1b. A qualitative difference was found between L2 learners' and native speakers' production of innovations. L2 learners, unlike native speakers, exhibited more variability in coining their innovations by using verbs that are distantly related or semantically unrelated to the verbs in the input, by transforming or changing the order of one of the consonant roots of the input verbs, and by using a wider variety of nominal roots. The variability is also manifested by L2 learners' production of a wider range of compound and periphrastic constructions and derived patterns denoting other semantic notions.

6.2 Acquisitional Principles in L2 Learners' Use and Choice of MSA Word Formation Processes

As shown in Chapter 5, section 5:3, L2 learners demonstrated a strong inclination in favour of compounding in the three tasks. Vinf.+gem., and Vinf. were also common. Why did learners pick compounding more often than the other options? What principles guided their use and choice? In this section, the general acquisitional principles of productivity, semantic transparency, formal simplicity, and conventionality proposed by Clark (1980a) are assessed to find out which of these principles guided these L2 learners of MSA in
denoting agency, instrumentality, location, and causativity. Also examined is whether the same principles that are held to account for acquisitional orders in Indo-European languages (English and French) and in a Semitic language (Hebrew) also apply in MSA. My prediction was that L2 learners would tend to use productive, transparent, simple, and conventional patterns in preference to unproductive, opaque, complex, and unconventional ones to express agents, instruments, locatives, and causatives (hypothesis 5). To test this hypothesis, the L2 learners’ use of word formation processes in the production task and their choice of word formation in comprehension tasks I and II are examined.

6.2.1 Principle of Productivity

In line with Eve Clark’s notion of productivity (Clark 1980a) and with findings from other studies of language acquisition discussed earlier (see chapter 3), the principle of productivity states that word formation processes that are the most productive should be the most available and should be used in preference to less productive processes. This means that for agents in MSA the very productive Vinf.+gem. pattern CaCCaC (Badry, 1983) should be more easily identified by L2 learners and more frequently relied on than the less productive Vinf. pattern CaCiC, prefixed pattern muCaCCiC, and N-in-construct compound /rajul/+N. In the present study, the L2 learners’ preference for the productive pattern CaCCaC for agents in comprehension task II (real items) is in line with the prediction. However, their more frequent choice of compounding to coin agents in the production task and comprehension task I does not conform to this prediction.

For instruments, the very productive Vinf.+gem. pattern CaCCaC would be used more frequently than the N-in-Construct /?âla/+N, the less productive prefixed pattern miCCaCa, and the pattern CâCiCa. L2 learners’ preference for N-in-construct for
instruments in the production task and comprehension tasks I and II runs counter to the prediction.

For locatives, it was predicted that the prefixed pattern maCCaCa would be most frequently used, being the most productive pattern to express location. Next would be the N-in-construct /makân/+N, which is occasionally used in Arabic for locatives. The learners' preference for compounding both in production and in comprehension tasks I & II does not conform to this prediction.

For causatives, the principle of productivity would predict that the very productive Vinf.+gem. verbal pattern CaCCaCa would be used more often than the pattern ?aCCaCa and the periphrastic construction with /jaflala/ 'to make someone (do something)'. The learners' reliance on periphrastic constructions in all three tasks runs counter to this prediction.

6.2.2 Principle of Semantic Transparency

The principle of semantic transparency states that processes with one-to-one matches of meaning to form are easier to acquire than those with one-to-many or many-to-one matches (Clark, 1980a). This means that for agents, compound constructions combining the word /rajul/ 'man' with a noun should be more easily identified and more frequently opted for by learners of MSA as these words express the notion of agency most explicitly. Next would be the pattern muCCCiC, having only the agentive meaning, and finally the patterns CaCCâC and CâCiC which have various different meanings: CâCiC can have the masculine active participle, agentive, and instrument meanings, and CaCCâC can denote agentive and instrumental meaning.
The L2 learners in this study did in general seem to be operating with the one-to-one mapping strategy. Their preference for N-in-construct /rajul/+N for agents in the production task and comprehension task I reveals that semantic transparency plays a role in their use and choice of word formation processes. However, their use of the pattern CaCCâCa in the comprehension task II runs counter to the prediction.

For instrumentality, the semantic transparency principle means that the word /?âla/ ‘machine’ with a noun should be most frequently opted for. Next would be the pattern miCCaCa with only instrumental meaning, followed by patterns CaCCâCa and CâCiCa since both denote two meanings: either a feminine agent or instrument for CaCCâCa, and either active participle or instrument for pattern CaCCâCa. In the three tasks, this prediction was borne out as L2 learners relied most heavily on the compound /?âla/+N to coin instrument nouns. But their non-use of the prefixed pattern miCCaCa, and their reliance on patterns CaCCâCa, and CâCiCa run counter to this prediction.

For location, the transparency principle would point to the N-in-construct /makân/+N in preference to the pattern maCCaCa. This prediction was supported by L2 learners’ use of the N-in-construct /makân/+N for locatives in production task and in comprehension tasks I and II. The pattern maCCaCa was not opted for at all.

For causatives, semantic transparency would predict that periphrastic constructions with /jaßala/ ‘to make someone (do something)’ would be used more often than derived infixed and prefixed patterns. The explicit idea of causativity that the verb /jaßala/ conveys makes the construction semantically transparent. Learners’ frequent use of periphrastic constructions for causatives in the production task, and in comprehension tasks I & II indicates that semantic transparency influences their choice.
6.2.3 Principle of Formal Simplicity

According to Clark’s formal simplicity principle, it was predicted that affixation would be more relied on and used in preference to infixation. This means that for agents, the prefixed pattern muCaCCiC should be used more frequently than the infixed pattern CaCCâC. The L2 learner findings, however, contradict the suggested strategy of reliance on affixation before infixation as evidenced by their non-use of the prefixed patterns muCaCCiC for agents, and their use of Vinf. and Vinf+gem. processes on the three tasks.

For instruments, the principle of formal simplicity means that the prefixed derived pattern miCCaCa should be used more frequently than the infixed and/or the geminated pattern CaCCâCa, and CâCiC(a). The L2 learners’ non-use on any of the tasks of the prefixed pattern miCCaCa also runs counter to the prediction.

For locatives too, the principle of formal simplicity means that the prefixed pattern maCCaCa would be used more frequently than the infixed pattern. L2 learners’ use of the infixed pattern CâCiCa before the prefixed pattern runs counter to the prediction.

For causatives, the principle means that the derived verbal pattern ?aCCaCa should be acquired and relied on before the infixed and geminated pattern CaCCaCa to coin causatives. The L2 learners’ use of the infixed pattern CâCaCa and the infixed and geminated pattern CaCCaCa does not conform to the prediction.

6.2.4 Principle of Conventionality

This principle would predict that the pattern CaCCâC would be used most frequently for agents, the pattern CaCCâCa for instruments, the pattern maCCaCa for locatives, and the pattern CaCCaCa for causatives since these are the conventional devices used for the
respective notions in the MSA lexicon. It is worth noting that all these patterns were most commonly used by native speakers to coin the respective semantic notions in this study. The L2 learners’ general preference for compounding to denote agents, instruments, and locatives in the production task and comprehension task I, and instruments and locatives in the comprehension task II, and also their use of periphrastic constructions in production task and comprehension tasks I & II for causatives reflect that their strategies are not guided by the conventionality principle. Only the learners’ preference for pattern CaCCâC for agents in comprehension task II suggests that their strategy was influenced by conventionality.

6.2.5 Summary

To summarize, hypothesis 5 was only partially confirmed. The data on the L2 learners’ use and choice of MSA word formation processes indicate that not all the four acquisitional principles account equally well for their use and choice of word formation processes. Semantic transparency is the principle that best predicts the learners’ use and choice of word formation processes. This principle orients them towards compounding to coin innovative items for the different semantic notions. Productivity and conventionality also appear to have a bearing on learners’ coining of agents when they chose the Vinf.+gem. process in comprehension task II. The formal simplicity principle, however, has not guided learners’ use of word formation processes.

6.3 L1 Effects on the L2 Use of Word Formation Processes

This section is devoted to a discussion of the influence of L1 on the learners’ use of word formation processes in MSA. It was predicted that there would be transfer from L1 to the L2 in the use of these processes (hypothesis 6).
The L2 learners who participated in this study consisted of 30 English-speaking learners, 6 French-speaking learners, and 8 learners coming from different language backgrounds (namely, German, Italian, Persian, Somali, Spanish and Urdu). Because the last group contains a small number of representatives of each language (one for each different language, except for Somali where there are 3 representatives), and because all these 8 learners of different L1s claimed that English was their dominant language, they were not considered in this examination. Therefore two groups of learners were distinguished, 30 English speakers and 6 French speakers, and their responses were examined.

6.3.1 L1 Effects on the Word Order of Compound Constructions

When L1 English-speaking and L1 French-speaking learners' preferences for MSA word formation processes in the three tasks were compared, they were found to be generally similar. Both English and French speakers exhibited a strong preference for compounding. N+N compounds including AP+N, N-in-construct, N+M, and N+N/N+N+N were by far the most frequent choices. The frequent choice of compounding to coin innovative agents, instruments, locatives, and causatives in MSA by the two L1 groups could be seen as an influence from both L1s. But because in Broeder (1993) compounding was not restricted to L1 influence, where even Moroccan Arabic learners of L2 Dutch opted for compounding, this latter can be claimed to be an universal process of language acquisition. In this present study, because of the structural distinctions between the source languages (English and French) and the target language (Arabic) with respect to compounds, however, it was predicted that English- and French-L1 learners would show differential source language effects in their coinage of innovative compounds. There is some evidence from the learner data that lends support to this prediction.
The effect of L1 on L2 word formation is seen in the word order of compound constructions. In the production task, there are a few instances where L1 English-speaking learners occasionally follow the English head-final order when forming innovative N+N compounds in Arabic. For example, for agent 5: ".. a person who makes a practice of bursting balloons" learner 9 supplied the head-final compound construction N+AP /bálûnât fāqi?/ 'balloons burster' instead of head-initial compound /fāqi? bálûnât/ 'burster balloons'.

Also, for instrument item 2 ".. an instrument which makes a disturbing noise" learner 13 produced the head-final compound construction M+N /muzîjun sawt/ 'disturbing noise' instead of a head-initial compound /sawtun muzîjun/ literally translated in English 'noise disturbing'. Another example of the head-final is the locative item 4 ".. a place where people makes a practice of bursting balloons" where English L1 learner 13 produced the following (head-final) construction /sâbûn ʕamātil/ 'soap sculptures' instead of an innovation with head-initial order /ʕamātil sâbûniya/ literally 'sculptures soap'.

In contrast, L1 French-speaking learners produced only head-initial compound constructions, an order typical of French as well as of the target language (Arabic). For example, for the same item 2: ".. an instrument which makes a disturbing noise" French L1 learner 6 produced the head-initial compound construction N+M /sawt muzîj/ 'noise disturbing', and for instrument item 10: "... a machine that makes paper streamers", the same learner produced /ʔawrâq malfûfa/ 'papers streamer'. Also, L1 French-speaking learners came up with the N+prep+N type of compound contraction. This is typical of Arabic where this construction is used to denote only instrument nouns. Examples provided by L1 French-speaking learners were /ʔâla li qaṭṭî lyaqţîn/ 'machine for cutting pumpkins'; and
/raitha li ja'di za'da/ for instrument item 21: "...a machine that cuts pumpkins", and instrument item 16: "...a machine that curls butter" respectively.

6.3.2 Summary

To sum up, it was found that the findings supported hypothesis 1b. There was a qualitative difference between L2 learners' and native speakers' innovations in that L2 learners demonstrated more variability in their responses than native speakers. Findings only partially confirmed hypothesis 5. Only productivity, conventionality, and primarily semantic transparency were found to account for L2 learners' production and judgment of word formation processes. Hypothesis 6, on the other hand, was given some support. An L1 effect is manifested in the word order of compound constructions where a few L1 English learners were influenced by the word order principle of their (head-final) L1 in producing N+N compounds.
CHAPTER 7
DISCUSSION AND CONCLUSIONS

This chapter concludes the study. First, a summary and discussion of the findings will be provided. These findings will be discussed in relation to the six hypotheses formulated in chapter 4 and in the light of previous research and theory. The second section of this chapter will outline the limitations and shortcomings of the study. Implications for pedagogy and for future research will conclude the chapter.

7.1 Summary and Discussion of the Main Findings

The study examined adult L2 learners' use of MSA word formation processes to coin innovative agents, instruments, locatives, and causatives, and to choose invented and existing items denoting these semantic notions. It also investigated some acquisitional principles to account for these learners' use of MSA word formation processes to express these four semantic notions. Two groups took part in this study: A group of 44 adult L2 learners, and a group of 40 native speakers of Arabic. All participants were given a production task and two comprehension tasks to test the six hypotheses formulated for this study, as well as a background questionnaire designed to provide personal background about the participants, their knowledge of Arabic, their learning experience, and their self-ratings of some activities in Arabic. In addition, L2 learners were given a vocabulary knowledge test designed to determine their lexical knowledge in MSA. Quantitative and qualitative analyses were conducted to compare the L2 learners' and native speakers'
production of innovations, and their choice of MSA word formation processes in naming both invented and real agentive, instrumental, locative, and causative items.

The following seven main findings were drawn from both quantitative and qualitative analyses:

7.1.1 On the Production of Innovations

Hypothesis 1a was partially supported. There is evidence from the overall results on the production task that quantitatively L2 learners produced almost as many innovations as native speakers (M=17.18 by learners compared to M=18.32 by native speakers), and that L2 learners often gave non-responses (see Table 5:1). The L2 learners' and native speakers' findings for each semantic notion, however, revealed that L2 learners supplied fewer innovations for agents and instruments, and more innovations for locatives than native speakers. L2 learners also produced as many innovations as native speakers for causatives.

The L2 learners' lower production of innovations for agents and instruments in the present study could be attributed to the types of items provided in some agent and instrument questions. L2 learners seemed to produce innovations only for items that included precise and specific main verbs in the questions such as the agent item 19: "... a person who pulls wagons", the instrument item 8: "... a machine that lights candles", and the locative item 15: "... a place where you burn clothes". But L2 learners found it difficult to supply innovations and most often left blanks for agent and instrument items that did not contain specific main verbs in the question. Such items are agent item 5 that contained the expression 'makes a practice of bursting balloons' rather than the main verb 'bursts', and instrument item 3 that contained the expression 'makes a disturbing noise' rather than the main verb 'disturbs'.

Even though L2 learners produced fewer innovations than native speakers for agents and instruments, both groups showed similar patterns by supplying more innovations for agents than for instruments and locatives. The native speakers’ mean was 5.75 for agents, 5.38 for instruments, and 2.97 for locatives compared to learners’ means of 4.87 for agents, 4.64 for instruments, and 3.77 for locatives. This finding is in line with Olshtain’s study where agents were the most productive type of nouns (82% innovations for agents). This greater use of agents in the present study may be due to the fact that agents are salient items that are often introduced and taught in class.

As predicted by Clark et al. (1984), locative innovations were less frequent than agents and instruments. However, in Olshtain’s study (1987), it was found that instrument innovations were the least productive of the three semantic notions. In the present study, what accounted for the native speakers’ low mean of locative innovations was the greater use of real-words suppletives. Native speakers supplied suppletives mainly for six items (4, 7, 12, 15, 18, and 20), but items 12, 18, and 20 received more suppletives. Typical examples of the suppletives produced by native speakers were /faθâ/ ‘space’, /jabal/ ‘mountain’, /samâ/ ‘sky’, /nnâfida/ ‘window’, /shurfa/ ‘balcony’ for item 12: "..a place where people watch clouds”. Also, for item 18: "..a place where people fight dreams", suggested suppletives were /fîrâsh/ or /sarîn/ ‘bed’, /nulm/ ‘dream’, /hayât/ ‘life’, /yaqaθâ/ ‘awakening’, /wâqiYY ‘reality’, /nawm/ ‘sleep’, /shûfûr/ ‘feeling’, and for item 20: "..a place where birds fly and swim at the same time" elicited responses were /nadiqa/, ‘park’, /buŋhayra/ ‘lake’. One plausible explanation to account for native speakers’ use of suppletives may be that because native speakers possess a rich vocabulary from which they can draw, and because derivational means to express locatives are restricted mainly to
affixation, with the N-in-construct compound alternative being less frequent, native speakers preferred to resort to suppletics and real words as an alternative. This greater use of suppletics by native speakers for locatives in this study is in line with a finding in Olshtain’s study (1987) where Hebrew native speakers produced more suppletics than L2 Hebrew learners for locatives.

Even though L2 learners produced more innovations for locatives than native speakers, they were mainly inappropriate derived infixed and/or geminated patterns that denote other semantic notions. There are also a few cases when learners, especially higher level learners, tended to produce derived prefixed patterns such as maCCūC, muCāCiC, and taCCiC. These derived prefixed patterns are considered “inappropriate” because they denote not locatives but other semantic notions. The production of these inappropriate prefixed patterns is evidence that these L2 learners lack the knowledge to identify the appropriate patterns to denote specific locative meanings.

Besides producing innovations for locatives, a few L2 learners supplied suppletics for items 12 and 18. What is interesting is that when they produced suppletics for these items, they supplied similar words as native speakers, for example, /samāʔ/ ‘sky’, and /nnāfida/ ‘window’ for item 12, and /firāsh/ and /sarīť/ ‘bed’ for item 18.

For causatives, both native speakers and L2 learners coined a considerable number of innovations (Table 5:2). When native speakers failed to do so, they supplied real and existing words. Among the causative items that received real words were items 2, 11, and 13. Typical examples of these existing words were /hamāqa/ ‘craziness’, and /tāunftf/ ‘violence’ for item 2: “... the action of making a blind person drive a car”; and /tintifār/ ‘suicide’, and /talxawf/ ‘fear’ for item 11: “... the action of making somebody run
backwards". Also for item 13 ".. the action of making somebody jump from the window", suggested real words were /lhumub/ ‘escape’.

L2 learners, on the other hand, when they failed to coin causative innovations, mostly left blanks. This shows the learners’ unfamiliarity with causative patterns.

7.1.2 On the Types of Innovations

L2 learners exhibited greater variability than native speakers by forming innovations from different verbs than the ones provided in the input, and by producing a wide range of innovative compounds and derived patterns denoting the targeted notions, as well as inappropriate derived patterns denoting other semantic notions.

These findings support hypothesis 1b which predicted that there would be a qualitative difference between L2 learners’ and native speakers’ production of innovations. Although quantitatively L2 learners produced almost as many innovations as native speakers, qualitatively the two groups demonstrated many differences.

Unlike native speakers, L2 learners produced a wide range of innovative compounds to denote agency, instrumentality, and location, and innovative periphrastic constructions to denote causativity. It was also found that L2 learners produced varied derived patterns inappropriately denoting other notions, and produced formally impossible patterns through metathesis or transformation. This finding is in line with Badry’s study (1983) where L1 Moroccan-speaking children also produced inappropriate patterns such as verbal nouns CeCCan as in /hezzan/ ‘action of picking up’, and taCCiC as /taqtitf/ ‘action of cutting’, instead of the agentive patterns. They also produced misformed patterns by adding a consonant or semi-vowel to the root, for example, /lewwawa/ from the verb /luft/ ‘throw’ for instrumental noun instead /lewwalla/ ‘thrower’ (Badry, 1983, pp.162-163). The L2 learners’
production of these varied derived patterns suggests, on the one hand, that the learners are actively involved in constructive and productive use of the derivational system, and aware of the root and pattern system in MSA word formation which requires the association of consonantal roots with patterned vocalic infixes. On the other hand, it indicates learners' incomplete and limited grasp and knowledge of derivation as they do not know the structural relationships between forms and meanings in MSA, or the lexical constraints in this language.

7.1.3 On the Use and Choice of MSA Word Formation Processes

On the three tasks, the L2 learners tended to prefer compounding over the other word formation processes, but they also opted for Vinf., and Vinf.+gem. to a lesser extent. Affixation was hardly ever selected. Native speakers, on the other hand, tended to favour derivation, mainly Vinf.+gem. and affixation.

In the production task, compounding was found to be the preferred and primary process used by L2 learners to denote agents, instruments, and locatives (see Table 5:4). L2 learners at different levels of vocabulary knowledge made innovative use of compounds. The most frequent types of nominal compounds in the learner data were AP+N, N+M, N-in-construct, and N+N/N+N+N+N types of compound constructions. L2 learners also followed the same strategy for causative innovations by relying on periphrastic constructions more often than derivational processes.

The picture in both comprehension tasks I (invented items) and II (real items) is quite similar to the production task. In comprehension task I, L2 learners also favoured compounding for the three nominal notions and periphrastic constructions for causatives (see Table 5:7). In comprehension task II, learners also selected compounding most
commonly for instruments and locatives and periphrastic constructions for causatives. Only for agents did L2 learners choose Vinf+gem. over compounding (Table 5:8).

The finding that compounding was the main process that adult L2 learners relied on to coin innovations supports the theoretical claim first asserted by Clark in most of her L1 studies of English-speaking children (1981a, 1981b; Clark et al., 1982; 1984) that compounding is the first device learners utilize in the course of acquisition of word formation processes. Evidence from previous empirical studies and from observations of spontaneous speech and elicitation reveals that children relied on compounding and that compounding with the N+N pattern accounts for a large number of the innovations coined by English-speaking children to denote agents and instruments. A similar early innovative use of compounds has also been observed in L2 studies (e.g. Olshtain, 1987; Broeder et al, 1993). For example, in Broeder et al.'s study (1993), learners of different L1s (including Arabic) and L2s had a strong preference for compounding, and N+N was the most productive compound construction opted for. The preference for compounding in this study adds to Broeder's evidence of universal processes of language acquisition.

While compounding was found to be the primary choice, derivational processes, mainly Vinf+gem., and Vinf., appeared as common in some cases. L2 learners did also use infixed and geminated derived patterns to denote agents, instruments, and locatives. Sometimes, the mean percentages of these derived processes outnumbered the mean percentages of compounding as in the case of agents in comprehension task II, where mean percentages were 27.27%, and 47.08% for Vinf. and Vinf+gem. respectively, compared to 25.65% for compounding. Similarly, when L2 learners opted for derivation to coin the causative verbal notion, they opted for Vinf., followed by Vinf+gem. in the three tasks. Affixation was not used at all in both comprehension tasks for both nominal and verbal
notions. Only in the production task, did L2 learners supply the prefixed patterns for locatives and causatives, but these prefixed patterns were inappropriate in this context because they express other meanings than the targeted notions. The L2 learners’ virtual non-use of the affixation process runs counter to Clark et al.’s prediction (1984) that stem-external affixes should be used before infixes to coin new words. However, L2 learners’ non-use of affixation is in line with Badry’s study where L1 Moroccan speaking-children did not opt at any age group for the prefixed agentive pattern muCaCCiC or the instrumental miCCaCa. One plausible explanation is that these patterns are less productive and less frequent in the Arabic lexicon.

This discrepancy in the L2 learners’ use and choice of word formation processes may have been influenced by the type of instruction and the amount of exposure to MSA word formation processes the learners had had. A close examination of the learners’ responses revealed that compounding appeared to be provided most often by learners who were exposed to the communicative teaching method. These learners supplied numerous varied compound innovations. In coining most of these innovations, these learners did not limit themselves to the glosses for all words in the input. Instead, they used other words that did not appear in the definition, and combined them to make up compounds. This indicates that these learners possessed enough vocabulary in their stock from which they could choose to coin innovations. However, derivational processes (mainly Vinf., and Vin.+gem.) were supplied by learners who were exposed to formal instruction, and had been introduced to derivation rules and to derived patterns, mainly the ones based on infixation and gemination.

In comparison, native speakers showed a high preference for derivational processes over compounding, favouring Vinf.+gem. for agents, instruments, and causatives, and affixation for locatives for the three tasks. For agents, compounding was not opted for in
the production task or either comprehension task. A plausible explanation for native speakers' non-use of compounding for agents is its infrequency in MSA in expressing this notion. Also, native speakers did not use Vinf. for instruments, locatives and causatives in the three tasks. For instruments, the non-use of Vinf. represented by pattern CâCiC(a) is attributed to its restricted use in a scientific domain. In this study, instrument items are not associated with this specific domain. For locatives, the infixed pattern CâCiC(a) was not used because it expresses the notion of agent or instrument. In addition, native speakers did not opt for the Vinf.+gem. process represented by pattern CaCCâCa for locatives because it denotes instrumentality and feminine agency. Also, for causatives, the Vinf. process represented by pattern CâCaCa was not used because it is inappropriate in this context as it denotes reciprocity. Moreover, native speakers used the affixation process less often than Vinf. and Vinf.+gem. processes especially for agents and instruments. Two possible explanations can be proposed here: One may be because affixation represented by the patterns muCaCCiC(a) for agents and miCCaCa for instruments is infrequent in MSA, and the usage of these prefixed patterns is limited to items that are related to education. The other explanation may be because these two patterns are coined from the derived verbal pattern II, not from a simple verbal root. In the present study, there is one case in the comprehension task II where the verb in the input is related to the educational context. For example, the derived pattern /mimhât/ was judged as the suitable choice for the instrument item 22: "...a machine that erases mistakes". There are also few cases in the three tasks where the verb in the input is a derived verbal pattern II that requires the innovative derived prefixed pattern, and the native speakers use in these cases. For example, in comprehension task I, the pattern /mubayyîdâ/ was chosen as the appropriate choice for the agentive item 5: "...a woman who bleaches the floor", because the verb provided in the question is /bayyâda/ a derived verbal
pattern II. Also in comprehension task II, the pattern /muwazzĩy/ was chosen for the agentive item 17: "... a person who delivers mail" as it is formed from /wazzĩa/ a derived verbal pattern II, and the instrument item 10: "... a machine that squeezes juice", /miwũsara/ was chosen because it is derived from the verbal pattern II /ũsara/ provided in the input.

Native speakers, unlike L2 learners, were more consistent in their use and choice of word formation processes. This consistency is manifested by their preference for the same patterns for both invented and real items. This consistency is also shown by their choice of the appropriate, most productive, and frequent patterns. Even though L2 learners followed the same order of preference for each semantic notion in the three tasks, they tended to use and choose inappropriate patterns that denote other semantic notions for both invented and real items, for example, their choice of agentive and instrument patterns CâCiC(a) and CaCCãC(a) for locatives, and the reciprocal pattern CâCaCa for causatives. Learners' use of these patterns suggests that they are not aware of the association between patterns and meanings, and of the conventional constraints in MSA.

7.1.4 On the Effect of L2 Level of Vocabulary Knowledge on the Use and Choice of MSA Word Formation Processes

With respect to the effect of L2 vocabulary knowledge on learners' use of word formation processes to coin innovations, findings reveal that higher level learners tended to differ from mid, and lower level learners in using Vinf.+gem. to coin innovative agents and locatives for which they used it more often than the two level groups. Higher level learners also differed from mid and lower level learners in opting more often for Vinf. to coin innovative instruments and causatives. For this latter, higher level learners also opted for affixation while neither mid nor lower level learners did so. Finally, the effect of L2
vocabulary knowledge was revealed in the use of compounding for instruments and locatives. For the former, lower level learners opted more often for this process than mid and higher level learners while for locatives, it was mid level learners who relied more often on this process than lower and higher level learners.

For derivational processes (Vinf., and Vinf.+gem.), most of the significant differences in means lay between lower and higher level learners, and mid and higher level learners. These findings suggest that lexical knowledge in the target language did influence the L2 learners’ use of some of the word formation processes to coin their innovations. Higher level learners appeared to be more knowledgeable about derivation in MSA than mid and lower learners.

7.1.5 On the Higher Level L2 Learners’ Native-like Ability in the Production and Choice of Word Formation Processes

Findings in the three tasks revealed that the behaviour exhibited by higher level L2 learners of MSA did not resemble that of the native speakers with respect to the use and choice of word formation processes.

In the production task, the higher level L2 learners’ use of word formation processes was quantitatively similar to native speakers’ only with respect to Vinf., and Vinf.+gem. to name agents, and with respect to compounding to name instruments (see Table 5:11). In all other cases, the two groups differed significantly in their use of processes.

Findings in comprehension task I (see Table 5:13) also show that the higher level learners’ choice for word formation processes differed in general from that of native speakers. Only for Vinf. to denote instruments, for compounding for locatives, and for Vinf.+gem. for causatives did the higher level learners’ choice of word formation approximate that of native speakers.
In addition, results in comprehension task II show that only for Vinf.+gem. was the use of higher level learners similar to that of native speakers to label instruments (see Table 5:15). For everything else, higher level learners did differ from native speakers. These findings contrast with Olshtain's (1987) where advanced learners, unlike in this study, did reach a level of Hebrew competence that enabled them to produce and assess innovations in ways that approached native speakers' responses. The difference between these two studies maybe due to the learning context, and to the amount of exposure to the target language. In Olshtain's study, learners were living in Israel, and learning Hebrew as an L2. They were exposed to Hebrew in and outside class. Therefore, they were more experienced.

Similarly the lower level learners' strategy in using and choosing word formation processes in the present study did not approximate that of native speakers in the three tasks. In the production task, lower level L2 learners' use of word formation processes was quantitatively similar to native speakers' only with respect to Vinf. to name agents, instruments, locatives, and causatives, and Vinf.+gem. to denote instruments. In all other cases, significant differences were revealed between the two groups' use of word formation processes (see Table 5:12).

Findings on comprehension task I show that lower level learners' choice of word formation processes also differed significantly from that of native speakers on most response types (see Table 5:14). For Vinf. to name instruments, for Vinf.+gem. for agents, and for periphrastic construction for causatives, however, lower level learners' choice of word formation processes was not significantly different from that of native speakers.

In comprehension task II, the lower level learners' choice of word formation processes was similar to that of native speakers only to label instruments and locatives (see
Table 5:16). For everything else, lower level learners followed a different strategy in their choice of word formation processes.

In the three tasks, then, the behaviour of both higher and lower level L2 learners of MSA did not in general appear to resemble that of the native speakers with regard to the use and choice of word formation processes. Neither higher nor lower level learners appear to have reached a sufficiently high level of vocabulary knowledge in MSA to approximate native speaker choices of word formation processes.

7.1.6 On the Effects of Acquisitional Principles in the Use and Choice of Word Formation Processes

There is evidence in this study that semantic transparency played an important role in learners' use of word formation processes. Learners tended to rely on whole words rather than using derivation to coin innovations. Learners coined compound constructions for agents, instruments, and locatives mostly by combining two words. This finding is in line with most L1 and L2 studies (e.g., Clark, 1980a, 1980b, 1981a, 1982, Clark et al., 1982, 1984; Berman et al., 1982; Broeder et al.'s 1993, 1995) that have indicated that semantically devices were opted for by learners.

Other principles that account for learners' use of word formation processes in this study are productivity and conventionality. Learners sometimes relied on the most productive, frequent, and conventional process to coin their innovations. This finding adds to the evidence that productivity and conventionality help to account for the acquisition of word formation processes. Previous research on different L1s, and L2s (e.g., Clark, 1980a, 1981a; Badry, 1983; Olshtain, 1987; Broeder et al., 1991, 1993, 1995) has shown that both children and adult learners relied on productive processes in their language to coin
new words. For example, in Badry’s study (1983), L1 Moroccan-speaking children tended to rely on the productive and conventional patterns CeCCaC and CeCCaCa for agents and instruments respectively. Formal simplicity, however, did not account for L2 learners’ use of word formation processes in this study.

7.1.7 On the L1 Effect in the Use of MSA Word Formation Processes

In this study, it was also hypothesized that besides the four acquisitional principles, the L1 would influence L2 learners’ production of word formation processes (hypothesis 6). The findings of the production task provide some support for this hypothesis. Some cases of L1 transfer occurred in the word order of compound where L1 English-speaking learners sometimes followed the English head-final order in constructing compound constructions in MSA.

In coining innovations, English- and French-speaking learners exhibited a high preference for compounding by producing more compounding constructions than innovative derived patterns. This finding is in line with Olshtain’s (1987) finding indicating that the two groups who consisted of 31 English speakers and 28 Spanish speakers, and who made up the largest sub-groups of the advanced learners of 17 different L1s, similarly demonstrated a high preference for compounding. The high preference for compounding over derivation was also found in Broeder’s (1991) study where all adult learners of different L1s including Moroccan Arabic opted for compounding over derivation. Therefore, even though compounding is more productive and more often used in both target languages (English and French) than MSA, the higher preference for compounding over derivation by both English- and French-speaking learners in the present study could not be attributed to L1 influence.
However, L1 transfer was seen in the word order of compounding where L1 English-speaking learners sometimes followed the English head-final order in constructing compound constructions in MSA. This finding corroborates previous findings in Broeder et al. (1991, 1995) that showed that the opposite word order for Turkish (head-final) and for Arabic (head-initial) emerged as an L1 effect in Turkish- and Arabic-speaking learners' production of compounds in Dutch L2.

7.1.8 **Summary**

Thus, it may be advanced that the findings of this study have shed further light on learners' ability to use word formation processes at an early stage of acquisition, and on their preferences for MSA word formation processes. Also, some further insight has been gained into the role of acquisitional principles in the acquisition of MSA word formation processes. However, these findings should be considered with caution because the study involved some limitations which constrain the generalizability of the findings.

7.2 **Limitations of the Study**

7.2.1 **Size of the Sample**

One of the limitations can be attributed to the small sample of learners who participated in the present study. The sample consists of 44 learners, and 40 native speakers. It was difficult to have a larger sample of L2 learners because of the low enrolment in Arabic language classes. Most North American universities only offer one class of Arabic, and the number of students enrolled in one class usually does not exceed 10 students. Another reason is that most learners who enrolled in Arabic come from an Arabic background. L2 learners in this study also represent a small group of adult Arabic L2
learners because of their L1. This sample consisted of 38 learners whose English is their L1 or dominant language, and only six whose L1 is French. Findings from this study do not necessarily apply to learners of other L1s, especially speakers of Semitic languages whose word formation processes are close to Arabic. This sample is also limited because of learners’ educational background, level of L2 vocabulary knowledge, and learning situations. What is characteristic of these learners may not be generalizable to learners of different educational backgrounds in other learning situations.

7.2.2 Instructional Differences

Another limitation can be ascribed to instructional differences among the classes within the university Arabic programs that may have affected these learners’ performance. Learners who participated in the study were exposed to two different instructional methods: One was formally-oriented instruction and the other was a communicative teaching method. This factor of instruction might have been one cause for the wide variability in learners’ coinage of lexical innovations and their use and choice of word formation processes.

7.2.3 Lexical Items

A further limitation of the study is the selection of lexical items in the vocabulary knowledge test and production task. With regard to the vocabulary knowledge test, one of the problems encountered was a lack of recent MSA frequency books to choose from. For example, for 5,000 word levels, only one old word-counts book was available, the one by Landau (1959). Therefore, in choosing most of these low frequency words, I had to depend on my teaching experience. Also, since the main purpose of the study was to examine the use of word formation processes in expressing new meanings, items in the production task were carefully chosen to trigger innovations. In spite of making some revisions in the
production task to replace most low frequency verbs in the stimuli by higher frequency verbs, and to replace general verbs by more specific ones, a few problems still lingered with some of the items and seemed to cause difficulty for the L2 learners, as indicated by their failure to coin innovations and leave blanks in some instances. Some items also led to suppletives on the part of native speakers, especially locative items and causatives. It would have been preferable if all items selected in the production task had led to innovations. This was also a problem in Olshtain’s study where instrument items triggered real and existing items.

7.2.4 Instruments, Data Collection and Procedure

The limitations of instruments, data collection and procedure further limit the generalizability of the results of this present study, and need to be taken into account. The vocabulary knowledge test is not a general measure of L2 proficiency, and measures only L2 learners’ receptive knowledge of lexical items out of context. The study also consisted of a production task and two comprehension tasks based on multiple choice items. The aim of these tasks was to examine the learners’ use of word formation processes both productively and receptively. They do not provide any information on how the learners went about forming or selecting their innovations.

The procedure undertaken to collect the data also limits the generalizability of the study. Even though tasks were performed in the classroom under my supervision, it was hard to assure independent individual performance. Six copies were found containing identical answers. In the analysis, I had to eliminate three test sets (one from each pair), keeping only three copies. It is evident that these students were either sharing answers between them or copying from each other. This may be due to the level of difficulty of the
task or to the fact that the classrooms where the tasks were conducted were small and crowded, and students were sitting close to each other, and copying from each other.

In spite of these limitations, the findings of this study have implications for both pedagogy and L2 research. These implications will be discussed in the following paragraphs.

7.3 Implications of the Study

7.3.1 Pedagogical Implications

What implications do the findings of the present study have for the teaching of MSA vocabulary knowledge in general, and word formation in particular? The findings have demonstrated that some L2 learners were able to coin new lexical items by drawing upon compounding, the most typical and available word formation process in their basic stock. These learners were the ones exposed to a communicative teaching method. The findings also showed that some of L2 learners possessed some knowledge and skill in coining innovations through derivation, and did better than the other learners. These learners were the ones exposed to formal instruction. These learners possess some knowledge of the derivational system of MSA because they were taught lexical rules systematically in the course. An examination of the materials used in class confirmed that learners were in fact taught derivation in MSA. But their ability to use this process was limited to the production of infixed and/or geminated derived patterns only.

If we consider that this discrepancy in use of word formation processes by learners in different classes is likely attributable to method of instruction and amount of L2 exposure, it can be argued that a method of teaching MSA word formation processes is needed. Should it be implicit or incidental instruction where "learning can occur when one is using language
for communicative purposes”, and where words are exposed in a variety of contexts? (Schmitt, 2000, p.120) Or should it be explicit teaching of vocabulary that focuses attention directly on the forms?

Current research advances that both explicit and incidental teaching of vocabulary are necessary, and complement each other (Sökmén, 1997; Schmitt, 2000). According to Schmitt (2000), most frequent words in English “make excellent targets for explicit attention” (p.121). However, infrequent words are best taught through an incidental approach. Ellis (1990) adds that through formal instruction learners become aware of specific features of the target language and form explicit representations of what they are introduced to and taught.

As the Arabic lexicon is largely formed through derivational rules governing root and pattern combinations, acquiring the well-established lexicon of Arabic involves learning to use these rules. In this study, the majority of learners lacked an understanding of Arabic structural rules, their constraints, and the association between patterns and meanings, because, I would argue, they had not been introduced to them. This study suggests that MSA word formation should be included in a teaching approach geared to providing learners with a knowledge of the relevant lexical rules and formal structures, raising their consciousness of these rules, increasing their linguistic awareness, improving their word analysis skills, and enabling them to attain proficiency in the target language.

In the case of MSA, word formation processes should be introduced and explained at an early stage of acquisition with the most frequent devices and patterns, followed gradually by the less frequent ones. Teaching should first focus on forms that express one meaning. Once learners master one meaning of a pattern, they can be introduced to other meanings, and exceptions.
But explaining and presenting rules can sometimes lead to boredom. I argue that combining structural and communicative methods of teaching word formation processes would help learners develop their knowledge of formal structures and also extend their lexicon. Interactive and communicative tasks can be as effective as formal instruction in promoting a significant amount of noticing (Fotos, 1990, p.385). Many researchers such as Ellis (1990) and Lightbown (1992) argue that it is necessary for learners following explicit instruction to be exposed to communicative input that contains the target forms. This will allow learners to maintain proficiency gains and improve their accuracy.

Vocabulary knowledge and lexical rules should not be taught separately from meaning and context. According to Richards (1976), vocabulary knowledge entails knowing how often words occur, their use and appropriateness in different contexts, and their underlying form and derivations. Learners have a better understanding of the meanings of words and their use when they are met through a variety of activities and in different contexts (Sökmén, 1997, p.241). It is argued that words should be taught in a way that makes clear the relationship between forms and meanings: for example, teaching prefixes, suffixes, roots and ways of forming words by providing students with a set of different word families. By learning word families "students learn not only a set of words, but something about those words that enables them to independently improve their word meaning store, accomplishing two important goals at once" (Stahl & Shiel, 1992, p.226).
7.3.2 Implications for Further Research

Since this is the first attempt to study the acquisition of MSA word formation processes by adult L2 learners, more data is needed to test the validity of the findings and their generalizability. There is a need for further research to chart the order of acquisition of different word formation processes, and to identify further principles and strategies that learners may rely on in the course of learning such processes in MSA.

There is a need to repeat this study with adult learners of Arabic with a wider range of vocabulary knowledge levels. Further research is also needed to gather data from a variety of languages with similar or different morphologies and patterns of word formation and productivity to find out whether the same acquisitional principles also account for their acquisition by different L2 learners. This study of word formation by L2 learners of Arabic should be replicated with learners whose L1 is a Semitic language with a typological structure similar or close to Arabic in order to examine in depth and pursue further the factor of L1 transfer. Moreover, there is a need to investigate word formation processes via other data collection instruments and methods such as spontaneous speech, and oral elicitation techniques, in order to assess the effects of different data collection methods on learners' responses, to find out what learners do and do not know about word formation processes at different stages, and how they go about acquiring word formation processes. Finally, there is a need for longitudinal research involving more and varied semantic noun and verbal notions in order to chart L2 learners' order of acquisition of different word form types in MSA and their mastery of the conventions that govern their use.
7.4 General Conclusion

This study set out to investigate the MSA word formation processes used by L2 learners. It also aimed to determine which of the acquisitional principles (productivity, semantic transparency, formal simplicity, conventionality, and transfer) proved important in these learners' use and choice of MSA word formation devices. The quantitative and qualitative analyses I have presented in this study reveal significant quantitative and qualitative differences between L2 learners' and native speakers' production of lexical innovations. They also reveal differences between L2 learners and native speakers in their choice of word formation devices, with L2 learners exhibiting a higher preference for compounding while native speakers preferred derivational processes, mainly Vinf+gem., and affixation. The study also revealed that neither the higher nor lower level L2 learners' use and choice of word formation processes approached that of native speakers. In addition, these findings provided insights about L2 learners' relative frequency of use of MSA word formation processes. Furthermore, they provide teachers with useful information about principles that come into play when L2 learners form new words, and with preliminary insights for the teaching of MSA word formation processes.

As the first attempt at examining word formation processes of MSA, a Semitic language, this study contributes to the domain of word formation acquisition, adding information to Olshtain's study which looked at Hebrew, another Semitic language, and to Broeder et al.'s research. It provides us with an initial understanding of how word formation processes are used by learners of Arabic L2. Findings from previous MSA studies on L1 or L2 acquisition of word formation do not exist to support or run counter to the results obtained in this study. There is no doubt that more research will be undertaken on the L2 acquisition of Arabic lexicon and word formation processes.
REFERENCES


Leclerc, J. (1989). *Qu'est-ce que la langue?* Laval, Quebec: Mondia.


APPENDIX A

CONSENT FORM

Dear Student,

I am writing to ask you to participate in a study that I will conduct in the Department of Middle East and Islamic Studies where you are taking Arabic as a second language.

I am a Ph.D. candidate in the Department of Curriculum, Learning and Teaching, at the Ontario Institute of Studies in Education, University of Toronto. My area of interest is vocabulary learning in Arabic, and this particular study will aim at understanding better how learners develop their abilities to form new words in Arabic.

If you accept to participate, you will be asked to fill out a background questionnaire, to do a vocabulary knowledge test and three tasks (production task and two comprehension tasks). This will take between one hour and 1 1/2 hour of your time altogether. Confidentiality will be ensured by removing your name from the task sheets and replacing it with a code known only to my supervisor and myself. In addition, the information collected will not be the basis of any evaluation and will not have any effect on your course grades. Moreover, you are free to withdraw from the study at any time.

If you agree to participate in the study, please check ( ) the box below.

Sincerely,

Rabia Redouane
Ph.D. student

( ) Yes, I accept to participate in this study

Student's name ______________

Class ______________

Signature ______________

Date ______________
FORMULAIRE D'APPROBATION

Cher/Chère étudiant(e),

Je vous écris pour vous demander de participer à une enquête que je vais mener au département des langues vivantes et littérature dans lequel vous apprenez l'arabe comme deuxième langue.

Je poursuis des études de doctorat en didactique appliquée au département du "Curriculum", à l'Institut d'études pédagogiques de l'Ontario, Université de Toronto. Mon champ d'intérêt est l'acquisition du vocabulaire en arabe et ma recherche tente d'analyser la façon dont les apprenants développent l'habileté de former des mots nouveaux en arabe.

Si vous avez l'obligeance d'accepter de prendre part à ma recherche, il vous sera demandé de remplir un questionnaire de renseignements personnels, de participer à un test de connaissance lexicale et d'accomplir trois tâches (une de production et deux tâches de compréhension). Cela prendra entre une heure à une heure et demie de votre temps. Je tiens à souligner que la confidentialité sera respectée. Votre nom sera remplacé par un code connu seulement à ma directrice de thèse et à moi-même. Veuillez également noter que les renseignements rassemblés ne feront partie d'aucune évaluation dans votre cours et n'affecteront en rien vos notes. Il est important aussi de souligner que vous serez libre de vous retirer de la recherche à n'importe quel moment.

Si vous acceptez de participer à cette recherche, veuillez avoir l'amabilité de cocher la case ci-dessous et de donner les informations demandées.

Je vous prie d'agréer mes plus sincères remerciements.

Rabia Redouane
Étudiante en doctorat

[ ] Oui, j'accepte de participer à votre recherche.

Nom de l'étudiant (e) ____________

Signature ________________

Date ________________
طلب موافقة

إلى الطلبة الأعزاء،

أكتب لكم لأطلب منكم المشاركة في مشروع إنجازبحث دراسي قصد الحصول على دكتوراة الدولة.

أعلمكم بأنني طالبة دكتورة في جامعة طورنقو بكندا، تخصصي تعليم وتدريس اللغات. مجال هنتماي هو تعليم المفردات العربية، ود راستي ستمتي فهما أفضل لتطوير قدرات المتعلمين على بناء وخلق مفردات جديدة في اللغة العربية.

إذا وافقتم على المشاركة ستسألون بأن تتموا إستمارة تتضمن معلومات شخصية وكنذا إنجاز ثلاث مهمات: مهمة في الإنتاج واشنان في الفهم والإدراك. هذا كله سوف يستغرق ساعة أو ساعة ونصف.

سرية في هذه المهمة تتطلب مراعاة أمر خصوصيتكم بإستبدال أسماءكم على أوراق المهمات بأرقام خاصة، أعرفها مع المسؤل المبادر. سوف تكون الوحيد الذين لنا صلاحية الإطلاع على المعلومات المجمعة لغرض هذه الدراسة. ولن تكون المعلومات عنكم مجالا للإطلاع من قبل أي جهة. ولكل الحرية الكاملة للإنسحاب من هذه الدراسة في أي وقت.

لذا موافقتناكم على الإشترك في هذه الدراسة، أرجوا أن تفعلوا الفراغ أنتان.

رضوان ريبعة

__________________________

( ) نعم سوف أشترك في هذه الدراسة.

إسم الطالب (ة) ____________________________
الصف ____________________________________
الإضافة __________________________________
التاريخ ________________________________
CONSENT FORM

Dear Teacher,

I am writing to ask for your permission to approach students who are taking Arabic as a second language in your department as subjects for my doctoral research.

I am a Ph.D. candidate in the department of Curriculum, Learning and Teaching at the Ontario Institute of Studies in Education, University of Toronto. My area of interest is vocabulary learning in Arabic, and this particular study will aim at understanding better how learners develop their abilities to form new words in Arabic.

Students will be asked to fill out a background questionnaire, do a vocabulary knowledge test and three tasks (production task and two comprehension tasks) which will take between one hour and 1 1/2 hour of their time altogether.

Confidentiality will be ensured by removing students' names from the task sheets and replacing them with codes known only to my supervisor and myself. My supervisor and I will be the only people with access to the information collected in this study, and no information collected about individual learners will be the basis of any evaluation of individuals or of the teaching of Arabic in your department.

As a token of gratitude, you will have access to the final findings at the completion of the study.

If you agree to allow me to conduct the study in your department, please check ( ) the box below.

Sincerely,

Rabia Redouane
Ph.D. student

( ) Yes, I accept to allow you to conduct your study in our department

Teacher's name

Signature

Date
FORMULAIRE D'APPROBATION

Cher professeur,

Je vous écris pour vous demander la permission de m'adresser aux étudiant(e)s qui apprennent l'arabe comme deuxième langue dans votre (vos) cours en vue d'obtenir leur éventuelle participation à mon projet de recherche de doctorat.

Je poursuis des études de doctorat en didactique appliquée au département du "Curriculum", à l'Institut d'études pédagogiques de l'Ontario, Université de Toronto. Mon champ d'intérêt est l'acquisition du vocabulaire en arabe et ma recherche tente d'analyser la façon dont les apprenants développent l'habileté de former des mots nouveaux en arabe.

Les étudiant(e)s devront remplir un questionnaire de renseignements personnels, participer à un test de connaissance lexicale et accomplir trois tâches (une de production et deux tâches de compréhension). Cela prendra entre une heure à une heure et demie de leurs temps.

La confidentialité sera respectée. Les noms des étudiant(e)s seront remplacés par des codes connus seulement à ma directrice de thèse et à moi-même. Nous serons les seules à avoir accès aux informations rassemblées dans cette recherche, et aucun renseignement sur les individus ou sur l'enseignement de l'arabe dans votre département fera l'objet d'une évaluation.

En guise de remerciement, les résultats finaux de ma recherche seront mis à votre disposition une fois la thèse est terminée.

Si vous acceptez que ma recherche soit menée dans votre (vos) cours au département, veuillez cocher la case ci-dessous.

Je vous prie d'agréer mes plus sincères remerciements.

Rabia Redouane
Étudiante en doctorat

[ ] Oui, vous pouvez conduire votre recherche dans mon (mes) cours.

Nom du professeur

Signature

Date
طلب موافقة

إلى حضرة الأساتذة،

أكتب لكم طلبي هذا من أجل الحصول على موافقتكم بشأن السماح لطلاكم بالمشاركة في مشروع إجازي بحث دراسي قد الحصول على دكتوراة الدولة.

أعلامكم بأنه طالبة دكتوراة في جامعة طرطوس بكردكا، تخصصي تعليم وتدريس اللغات، مجل إهتمامي هو تعلم المفردات العربية، وراسي مستطي فيما أفضل تطوير قدرات المتعلمين على بناء وخلق مفردات جديدة في اللغة العربية.

سوف يصل الطلاب أن يملأوا إستمارة تتضمن معلومات شخصية و كذا إنجاز ثلاث مهام: مهمة في النماذج و اشتراك في الفهم والإبداع، هذا كلهم سوف يستغرق ساعتين أو ساعة ونصف.

السيرة في هذه المهمة تتطلب مراعاة أمر خصوصية الطلاب إذ سنبدل أسئلتهم على أوراق المهام بأرقام خاصة، أعرفها مع المسؤول المباشر. سوف تكون أولويتين الذين لنا صلاحية الإطلاع على المعلومات المجمعة لنفرض هذه الدراسة. وأن تكون المعلومات عن المشاركون ولا عن كيفية التدريس في جامعتنا مجالا للإطلاع من قبل أي جهة.

إقرارا بالجميع، يسرني أن أقدم لكم شكري الجزيل سلفا، مع الإشارة إلى وضع إسمكم ضمن ائتما هسساعدين في إنجاز هذا البحث، ولن تقونتي الفرصة أن أضع بين أيديكم نتائج بحثي عند تكميله.

إذا موافقتكم على الدراسة القائمة في جامعتنا، أرجوا أن تعلموا الفراغ لناء. ربيعة رضوان
طالبة دكتوراة

( )
نعم بإستطاعتك أن تقفوا على مشروع دراستكم في جامعتنا.

إسم الأساتذة
الإمتياز
التاريخ
Vocabulary Knowledge Test

In this test, you are asked to choose the appropriate word or expression to go with each meaning. Write the letter of that word next to its meaning.

The 500-word level

<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>to come</td>
<td>ب- آتى</td>
</tr>
<tr>
<td>to permit</td>
<td>ت- آتاح</td>
</tr>
<tr>
<td>to begin</td>
<td>ت- شرع</td>
</tr>
<tr>
<td>to try</td>
<td>ث- حاول</td>
</tr>
<tr>
<td>to declare</td>
<td>ج- أعلن</td>
</tr>
<tr>
<td>to fall</td>
<td>ح- سقط</td>
</tr>
<tr>
<td>to announce</td>
<td>صرح</td>
</tr>
<tr>
<td>to arrive</td>
<td>جاء</td>
</tr>
<tr>
<td>to start</td>
<td>بدأ</td>
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<tr>
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<tr>
<td>part</td>
<td>ج- قسم</td>
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<tr>
<td>city</td>
<td>ح- مدينة</td>
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<td>جديد</td>
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<td>أ- زعيم</td>
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<td>nationalist</td>
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<td>servant</td>
<td>ج- خادم</td>
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<tr>
<td>rider</td>
<td>ح- راكب</td>
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</table>

* The glosses are not included in the original test, but they are included here for the reader.
The 1,000-word level

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<td>عطلة</td>
</tr>
<tr>
<td>victory</td>
<td>فوز</td>
</tr>
<tr>
<td>to watch</td>
<td>شاهد</td>
</tr>
<tr>
<td>to create</td>
<td>خلق</td>
</tr>
<tr>
<td>to settle</td>
<td>قرر</td>
</tr>
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<td>family</td>
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<td>machine</td>
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<td>سقوط</td>
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<td>سيدا</td>
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<td>نجاح</td>
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<tr>
<td>attack</td>
<td>هجوم</td>
</tr>
<tr>
<td>work</td>
<td>عمل</td>
</tr>
<tr>
<td>to observe</td>
<td>لا حظ</td>
</tr>
<tr>
<td>to engage oneself</td>
<td>إرتبط</td>
</tr>
<tr>
<td>to believe</td>
<td>آمن</td>
</tr>
<tr>
<td>to establish</td>
<td>أنشأ</td>
</tr>
<tr>
<td>to issue</td>
<td>أصدر</td>
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<tr>
<td>to bless with</td>
<td>رزق</td>
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The 2,000-word level

<table>
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<tbody>
<tr>
<td>dishonest</td>
<td>خداع</td>
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<tr>
<td>faithful</td>
<td>أمين</td>
</tr>
<tr>
<td>composer</td>
<td>مؤلف</td>
</tr>
<tr>
<td>writer</td>
<td>كاتب</td>
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<tr>
<td>deceiver</td>
<td>خائن</td>
</tr>
<tr>
<td>innocent</td>
<td>برسي</td>
</tr>
<tr>
<td>honest</td>
<td>منافق</td>
</tr>
<tr>
<td>fair</td>
<td>عادل</td>
</tr>
<tr>
<td>reader</td>
<td>قارئ</td>
</tr>
</tbody>
</table>
to infer \(\rightarrow^{\text{حصل}}\) infer

- to bring an accusation \(\rightarrow^{\text{وجهتة}}\) to accuse

- to distress \(\rightarrow^{\text{اشقى}}\) to accuse

- to tire out

- to accuse

- to inform

- to conclude

- to say farewell

- to pursue

- sensation

- celebrity

- cure

- glory

- recovery

- struggle

- deception

- feeling

- honesty

The 3,000-word level

- tranquil

- traveler

- murderer

- lost

- tourist

- killer

- calm

- unsuccessful

- thief

- joy

- growth

- dispute

- worry

- prosperity

- conflict

- happiness

- ambition

- sadness

- \(\rightarrow^{\text{ضائغ}}\) lost

- \(\rightarrow^{\text{زائر}}\) tourist

- \(\rightarrow^{\text{قاتل}}\) killer

- \(\rightarrow^{\text{هدى}}\) calm

- \(\rightarrow^{\text{فشل}}\) unsuccessful

- \(\rightarrow^{\text{سراع}}\) thief

- \(\rightarrow^{\text{قلق}}\) worry

- \(\rightarrow^{\text{إزدهار}}\) prosperity

- \(\rightarrow^{\text{خلاف}}\) conflict

- \(\rightarrow^{\text{فرح}}\) happiness

- \(\rightarrow^{\text{طموح}}\) ambition

- \(\rightarrow^{\text{ألم}}\) sadness
### The 5,000-word level

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<td>to awaken</td>
<td>نبه</td>
</tr>
<tr>
<td>to ruin</td>
<td>شمر</td>
</tr>
<tr>
<td>balanced</td>
<td>متكافئ</td>
</tr>
<tr>
<td>falling behind</td>
<td>متاخر</td>
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<tr>
<td>civilized</td>
<td>محترم</td>
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<td>ترتيب</td>
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<td>خيصر</td>
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<td>glorification</td>
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<td>تأسس</td>
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<td>explanation</td>
<td>تفسير</td>
</tr>
<tr>
<td>old prisoner</td>
<td>قديم</td>
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<td>noble</td>
<td>أمير</td>
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<tr>
<td>jailed</td>
<td>سجين</td>
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<tr>
<td>laborious</td>
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<td>high-minded</td>
<td>نبيل</td>
</tr>
<tr>
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<td>عتيق</td>
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<tr>
<td>eloquent</td>
<td>جميل</td>
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<tr>
<td>offensive</td>
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TEST DE CONNAISSANCE LEXICALE

Veuillez choisir le mot ou l'expression qui va avec chaque sens. Ecrivez la lettre de ce mot à côté du sens approprié.

Les mots de niveau 500

1.films
2. yaptı
3. Çarşamba
4. başa
5._SCHEMA

Les mots de niveau 1000

1. Aşiret
2. ADDRESS
3. şefaat
4. Aile
5. ŞOKET
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<tr>
<td>ت- سبادة</td>
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<tr>
<td>ث- نجاح</td>
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<tr>
<td>ج- هجوم</td>
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Les mots de niveau 2000

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<td>أ- تعلم</td>
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<tr>
<td>ب- خذان</td>
<td>ب- إنهم</td>
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<tr>
<td>ت- بربئ</td>
<td>ت- أبلغ</td>
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<tr>
<td>ث- مسادق</td>
<td>ث- أنتج</td>
</tr>
<tr>
<td>ج- عادل</td>
<td>ج- ودع</td>
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<td>ح- قارئ</td>
<td>ح- إتبع</td>
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<table>
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<tr>
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<td>أ- حصل</td>
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<tr>
<td>ب- أمن</td>
<td>ب- اتهم</td>
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<tr>
<td>ت- مؤلف</td>
<td>ت- أبلغ</td>
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<tr>
<td>ث- قرر</td>
<td>ث- أنتج</td>
</tr>
<tr>
<td>ج- فرح</td>
<td>ج- ودع</td>
</tr>
<tr>
<td>ح- رزق</td>
<td>ح- إتبع</td>
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<tr>
<td>A</td>
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<td>---</td>
<td>-----</td>
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<tr>
<td>B</td>
<td>شفاء</td>
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<tr>
<td>T</td>
<td>جهاد</td>
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<td>ث</td>
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**Les mots de niveau 3000**

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<tr>
<td>ت</td>
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</tr>
<tr>
<td>ث</td>
<td>هادئ</td>
</tr>
<tr>
<td>ج</td>
<td>فاشل</td>
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<tr>
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<td>تنافس</td>
</tr>
<tr>
<td>ث</td>
<td>فرح</td>
</tr>
<tr>
<td>ج</td>
<td>طموح</td>
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<tr>
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<td>إنجم</td>
</tr>
<tr>
<td>ث</td>
<td>دبر</td>
</tr>
<tr>
<td>ج</td>
<td>وعد</td>
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Les mots de niveau 5000

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<tbody>
<tr>
<td>B - متعب</td>
<td>أسير</td>
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<td>C - عتيق</td>
<td>شريف</td>
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<table>
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<tr>
<th>A - جزيل</th>
<th>قبيع</th>
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APPENDIX C

WORD CREATION

In this task, you are asked to invent a new word or phrase in ARABIC for the English part in bold.

1/ In Arabic, what would you call a person who sets fires?

2/ In Arabic, how would you express the action of making a blind person drive a car?

3/ In Arabic, what would you call a machine that makes a disturbing noise?

4/ In Arabic, what would you call a place where people make soap sculptures?

5/ In Arabic, what would you call a person who makes a practice of bursting balloons?

6/ In Arabic, how would you express the action of making somebody land on another planet?
7/ In Arabic, what would you call a place where people taste jam?

8/ In Arabic, what would you call a machine that lights candles?

9/ In Arabic, what would you call a person who spreads rumors by phone?

10/ In Arabic, what would you call a machine that makes paper streamers?

11/ In Arabic, how would you express the action of making somebody run backwards?

12/ In Arabic, what would you call a place where you watch clouds?

13/ In Arabic, how would you express the action of making somebody jump from the window?
14/ In Arabic, what would you call a person who draws for children?

---------------------

15/ In Arabic, what would you call a place where you burn clothes?

---------------------

16/ In Arabic, what would you call a machine that curls butter?

---------------------

17/ In Arabic, how would you express the action of making somebody scatter buttons on the floor?

---------------------

18/ In Arabic, what would you call a place where people fight dreams?

---------------------

19/ In Arabic, what would you call a person who pulls wagons?

---------------------

20/ In Arabic, what would you call a place where birds fly and swim at the same time?

---------------------

21/ In Arabic, what would you call a machine that cuts pumpkins?

---------------------
22/ In Arabic, how would you express the action of making somebody gather seashells?


23/ In Arabic, what would you call a machine that stops wind?


24/ In Arabic, what would you call a person who shows people how to dream?
CREATION DE MOTS

Veuillez inventer un nouveau mot ou une phrase en ARABE pour la partie écrite en français en caractères gras.

1/ En arabe, comment appelleriez-vous une personne qui allume des incendies ?

____________________

2/ En arabe, comment exprimeriez-vous l'action d'amener une personne aveugle à conduire une voiture ?

____________________

3/ En arabe, comment appelleriez-vous une machine qui fait un bruit perturbateur ?

____________________

4/ En arabe, comment appelleriez-vous un endroit où les gens font des sculptures en savon ?

____________________

5/ En arabe, comment appelleriez-vous une personne qui s'occupe à faire crever des ballons ?

____________________

6/ En arabe, comment exprimeriez-vous l'action d'amener quelqu'un à atterrir sur une autre planète ?

____________________
7/ En arabe, comment appelleriez-vous un endroit où l'on fait goûter de la confiture ?

__________________________

8/ En arabe, comment appelleriez-vous un appareil qui allume les bougies ?

__________________________

9/ En arabe, comment appelleriez-vous une personne qui fait courir des rumeurs par téléphone ?

__________________________

10/ En arabe, comment appelleriez-vous un appareil qui fait des petits rubans de papier enroulés ?

__________________________

11/ En arabe, comment exprimeriez-vous l'action de faire courir quelqu'un à reculons ?

__________________________

12/ En arabe, comment appelleriez-vous un endroit où l'on observe les nuages ?

__________________________

13/ En arabe, comment exprimeriez-vous l'action de faire sauter quelqu'un d'une fenêtre ?

__________________________
14/ En arabe, comment appelleriez-vous une personne qui dessine pour les enfants?

15/ En arabe, comment appelleriez-vous un endroit où l'on brûle les habits?

16/ En arabe, comment appelleriez-vous un appareil qui fait des spirales de beurre?

17/ En arabe, comment exprimeriez-vous l'action d'amener quelqu'un à joncher le plancher de boutons?

18/ En arabe, comment appelleriez-vous un endroit où les gens combattent les rêves?

19/ En arabe, comment appelleriez-vous une personne qui tire des chariots?

20/ En arabe, comment appelleriez-vous un endroit où les oiseaux volent et nagent en même temps?
21/ En arabe, comment appelleriez-vous un appareil qui coupe les citrouilles ?

22/ En arabe, comment exprimeriez-vous l'action d'amener quelqu'un à accumuler des coquillages ?

23/ En arabe, comment appelleriez-vous un appareil qui arrête le vent ?

24/ En arabe, comment appelleriez-vous une personne qui montre aux gens comment rêver ?
تركيب الكلمات

في هذه المهمة المرجو منكم أن تختبروا كلمة أو جملة للجزء المكتوب بالأسود.

1 - ماذا نسمي الشخص الذي يقوم بإشعال الحرق؟

2 - ما هو الفعل الذي يستعمل للتعبير عن دفع شخص أعمى لقيادة سيارة؟

3 - ماذا نسمي الآلة التي تحث صوتاً مزعجًا؟

4 - ماذا نسمي المكان الذي يقوم فيه الأشخاص بنحت تماثيل من الصابون؟

5 - ماذا نسمي الشخص الذي يعتاد على فرقعة البالونات؟

6 - ما هو الفعل الذي يستعمل للتعبير عن دفع شخص للنزول على كوكب آخر؟

7 - ماذا نسمي المكان الذي ينتظى فيه المربي؟

8 - ماذا نسمي الآلة التي تشع بالشمع؟
9- ماذا نسمي الشخص الذي يعمل على نشر الإشعاعات تليفونياً؟

----------

10- ماذا نسمي الآلة التي تصنع شرائط ورقية؟

----------

11- ما هو الفعل الذي يستعمل للتعبير عن دفع شخص للجري بطريقة معاكسة؟

----------

12- ماذا نسمي المكان الذي نشا هد فيه الحبي؟

----------

13- ما هو الفعل الذي يستعمل للتعبير عن دفع شخص للقفز من النافذة؟

----------

14- ماذا نسمي الشخص الذي يرسم بالقلم؟

----------

15- ماذا نسمي المكان الذي تحرق فيه الملابس؟

----------

16- ماذا نسمي الآلة التي تعيد الزبدة؟

----------

17- ما هو الفعل الذي يستعمل للتعبير عن دفع شخص لنشر الأزور على الأرض؟
18 - ماذا نسمي المكان الذي يحارب فيه الأشخاص الأحلام؟

19 - ماذا نسمي الشخص الذي يجر العربات؟

20 - ماذا نسمي المكان الذي تطير وتسحب فيه الطيور في نفس الوقت؟

21 - ماذا نسمي الآلة التي تقطع البقترين؟

22 - ما هو الفعل الذي يستعمل للتعبير عن دفع شخص لجمع القواعب البحرية؟

23 - ماذا نسمي الآلة التي توقف الريح؟

24 - ماذا نسمي الشخص الذي يعلم الناس كيف يحلمون؟
## APPENDIX D

### GLOSSARY

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<td>أعمى</td>
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to drive

خادم

to fight

حارب

floor

أرض

to fly

طار

to gather

جمع

Jam

مربي

to jump from

قفز من

to land

نزل

to light

أضواء

machine

الآلة

to make

فعل

noise

صوت

paper

ورق

person

شخص

pencil

قلم

phone

هاتف

place

مكان

planet

كوكب

practice

ممارسة

to pull

جر

pumpkin

بكتينة

rumor

إشاعة
to run backwards
sculpture
seashell
to set fire
to show
soap
to spread
to stop
streamer
to swim
to taste
time
wagon
to watch
wind
window

جراء بالخلف
سعادة
نحت
صدفة
أشعل النار
عرض
صابون
نشر
توقف
ملفوف
سبح
تدوق
وقت
عربية
راقب
رجع
نافدة
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couper
courir à reculons
courir des rumeurs
crayon
créver
dessiner
endroit
enfants
enroulé
faire
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gens
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habits
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même
monter
nager
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observer
oiseau
papier
personne
perturbateur
petit
plancher
planet
rêver
ruban
sauteur
sculpture
spirale
soap
télémophone
temps
tirer
vent
voiture
voler

طائر
ورق
شخص
مزعم
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كوكب
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شريط
قنز
نحت
مكور
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وقت
جر
ريج
سياقة
طيار
APPENDIX E

COMPREHENSION TASK I

In this task, you are asked to choose from the four options the form that you judge appropriate and suitable in ARABIC to express the meaning of the English phrase written in bold.

1/ In Arabic, how would you call a man who makes bubbles with soap?

- 1. ـبـثـاـفـيـع
- 2. ـبـثـاـفـيـع
- 3. مـبـثـاـفـيـع
- 4. رـجـلـ بـثـاـفـيـع

2/ In Arabic, how would you call a machine that hugs people?

- 1. ـهـوـبـثـاـفـيـع
- 2. ـهـوـبـثـاـفـيـع
- 3. مـهـوـبـثـاـفـيـع
- 4. ـأـلـةـ الـمـهـوـبـثـاـفـيـع

3/ In Arabic, how would you express the action of making a man lock himself in a dark room?

- 1. نـقـمـلـه
- 2. قـمـلـه
- 3. أـقـمـلـه
- 4. جـمـلـه ~ مـقـفـولـاء
4/ In Arabic, how would you call a place where you make Mickey Mouse shirts?

- قَاَيَةَ مُكَيَّ مَارْسُ (Qāiyat Mūkī Marsū)
- فِقاَيَةَ مُكَيَّ مَارْسُ (Fīqāiyat Mūkī Marsū)
- مَيْكَيَةَ مَاَرْسُ (Mīkīyāt Marsū)
- مَيْكَانَ صَنَيعَ أَفِماَيْقَيَةَ مُكَيَّ مَارْسُ (Mīkān Sāniyy Áfimaqīyāt Mūkī Marsū)

5/ In Arabic, how would you call a woman who bleaches the floor?

- بَائِضةً (Bāyisāt)
- بَيْكَةَ مَيْكَانَ (Bīkayat Mīkān)
- مَيْكَانَةَ (Mīkāyät)
- إِسْمَّةً بَائِيَةَ مَيْكَانَةَ الْأَرْضَ (Ismā' Bāyisāt Mīkāyät Aalārḍ)

6/ In Arabic, how would you call a machine that kills people

- قَانَاةً (Qānāt)
- قَانَةً (Qānāt)
- مَيْكَانَةً (Mīkāyät)
- آلَةُ قَتَلُ الْكَانَسُ (Ala'ā Qatal al-Kānsū)

7/ In Arabic, how would you call the action of making a woman hit her head with a hammer?

- طَأْرَيْهَا (Tāraya)
- طَأْرَيْهَا (Tāraya)
- طَأْرَيْهَا (Tāraya)
- جَعِلْهَا طَأْرَيْهَا الرَّأسَ (Jā'ūlāhā Tārayārās)

8/ In Arabic, how would you call a place where you dry tomatoes?

- جَمَالُ الطَّماَياَمَ (Jamā'ūl Ṭama'yām)
- جَمَالُ الطَّماَياَمَ (Jamā'ūl Ṭama'yām)
- مَيْكَانَةَ الطَّماَياَمَ (Mīkāyät Ṭama'yām)
- مَيْكَانَةَ الطَّماَياَمَ (Mīkāyät Ṭama'yām)
- مَيْكَانُ الطَّماَياَمَ (Mīkāyāt Ṭama'yām)
9/ In Arabic, how would you call a man who pulls a car with a rope?

1. حايِل
2. حُكَال
3. دَفَبَل
4. رَجُلٌ حايِل السيَارَة

10/ In Arabic, how would you call a machine that breaks pencils?

1. كَاسِرة
2. كَسَارة
3. مِكَّسَة
4. آلة كَسَار الأفْلَام

11/ In Arabic, how would you call the action of making a man sit on nails?

1. سَامِرة
2. أَسْمَرة
3. سَمرَة
4. جَمْلة سَمْرُوراً

12/ In Arabic, how would you call a place where the air is polluted?

1. لَوْنَة
2. لَائِنة
3. مَلوحة
4. مَكَان اللَّوْن

13/ In Arabic, how would you call a woman who burns food?

1. حَارِقة
2. حَرَاقَة
3. مُحرَّقة
4. إِسْكَرِة حَارِقة الأَكْلِ
14/ In Arabic, how would you call a machine that knocks people down?

15/ In Arabic, how would you call the action of causing a woman to swim in icy water?

16/ In Arabic, how would you call a place where lights sparkle?

17/ In Arabic, how would you call a man who lifts things?

18/ In Arabic, how would you call a machine that mass-produces dolls?
19/ In Arabic, how would you express the action of making a man slide on a rainbow?

20/ In Arabic, how would you call a place where you wipe your feet?

21/ In Arabic, how would you call a woman who blinks her eyes?

22/ In Arabic, how would you call a machine used to inspect things?

23/ In Arabic, how would you express the action of making a woman count clouds?
24/ In Arabic, how would you call a place where people investigate supernatural events?

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25/ In Arabic, how would you call a man who buries people with their jewelry?

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26/ In Arabic, how would you call a machine that smooths paper?

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27/ In Arabic, how would you express the action of making a woman giggle?

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28/ In Arabic, how would you call a place where people sigh?

1. ناهدة
2. تَهَا دَة
3. مَنْهَة
4. مَكَانَ التَّهَا دَة

29/ In Arabic, how would you call a woman who smiles at people?

1. ضاحِكَة
2. ضُحَّاكَة
3. مُضَحَّكَة
4. إِمْشَآرَةٌ ضَحَّاَكَةٌ لِلنَّاس

30/ In Arabic, how would you call a machine that grabs things?

1. رَافِضَة
2. رَقَاسَة
3. مُرْفِضَة
4. أَلْثَةُ الرِّقَاسِ
Veuillez choisir parmi les quatres options la forme que vous jugez la plus appropriée à exprimer en ARABE le sens donné par la phrase française écrite en caractère gras.

1/ En arabe, comment appelleriez-vous un homme qui fait des bulles de savon ?

- 1. قَافِقٌ
- 2. فَتَّاغٌ
- 3. مَفْتَاغٌ
- 4. رَجُلُ الْفَتَّاغٍ

2/ En arabe, comment appelleriez-vous une machine qui enlace les gens ?

- 1. عَلَانَةٌ
- 2. سَلَناةٌ
- 3. مَعَالَانِةٌ
- 4. آلةُ الْمَعَالَانِةٍ

3/ En arabe, comment exprimeriez-vous l'action d'amener quelqu'un à s'enfermer dans une chambre sombre ?

- 1. قَافَّةٌ
- 2. لَقَافِحةٌ
- 3. قَفَّةٌ
- 4. جَعِلَةُ مَفْتَغَواً

4/ En arabe, comment appelleriez-vous un endroit où on manufacture les chemises Mickey mouse ?

- 1. قَمَسَةُ مِيْكِي مَوسُ
- 2. قَمَاَسَةٌ مِيْكِي مَوسُ
- 3. مَفَاسَةُ مِيْكِي مَوسُ
- 4. مَكَانُ مِنْصَعَ أَفْقَيْمَيْ مِيْكِي مَوسُ
5/ En arabe, comment appelleriez-vous une femme qui blanchit le sol ?

- 1 - "جَاهِزة" (Jā'ahizah)
- 2 - "بَطْرِقَة" (Btirqa)
- 3 - "مَطَرَقَة" (Matarqa)
- 4 - "إِمْسَرَةَ بَيْاضَةَ الْأَرْضِ" (Imsera bayazat al-ard)

6/ En arabe, comment appelleriez-vous une machine qui tue les gens ?

- 1 - "قَتَالِة" (Qatala)
- 2 - "قَتَالِة" (Qatala)
- 3 - "مَطَرَقَة" (Matarqa)
- 4 - "آلَةَ قَتَالِ النَّاسِ" (Ala qatal al-nas)

7/ En arabe, comment exprimeriez-vous l'action d'amener une femme à se donner des coups de marteau sur la tête ?

- 1 - "طَارِقَة" (Tarqa)
- 2 - "تَارِقَة" (Tarqa)
- 3 - "طَارِقَة" (TARQA)
- 4 - "جَعَلَهَا طَارِقَةَ الرَّأسِ" (Jalaha tarqa ar-ral)

8/ En arabe, comment appelleriez-vous un endroit où on fait sécher les tomates ?

- 1 - "جِبَالَةَ الطَّماَيطِ" (Jibalat al-tamait)
- 2 - "جِبَالةَ الطَّماَيطِ" (Jibalat al-tamait)
- 3 - "جِبَالةَ الطَّماَيطِ" (Jibalat al-tamait)
- 4 - "مَكَانُ تَجْمِيعِ الطَّماَيطِ" (Makan Tajmii tamait)
9/ En arabe, comment appelleriez-vous un homme qui tire une voiture avec une corde ?

10/ En arabe, comment appelleriez-vous une machine qui casse les crayons ?

11/ En arabe, comment exprimeriez-vous l'action d'amener un homme à s'asseoir sur des clous ?

12/ En arabe, comment appelleriez-vous un endroit où l'air est pollué ?

13/ En arabe, comment appelleriez-vous une femme qui brûle la nourriture ?
14/ En arabe, comment appelleriez-vous une machine qui renverse les gens ?

1- دا وسَة
2- دَوَاسَة
3- مَدْ وسَة
4- آَلَةٌ الدَوُس

15/ En arabe, comment exprimeriez-vous l'action d'amener une femme à nager dans des eaux glaciales?

1- سَبَحَنَهَا فِي مَاءٍ مَتَلَج
2- سَبَحَنَهَا فِي مَاءٍ مَتَلَج
3- أَسْبَحَنَهَا فِي مَاءٍ مَتَلَج
4- كَمْتَلَجَ سَبُحَنَهَا فِي مَاءٍ مَتَلَج

16/ En arabe, comment appelleriez-vous un endroit où les lumières scintillent?

1- ضَوْيَة
2- ضَوْءَة
3- ضَحْضَيَة
4- مَكَانُ الْإِضَاءَة

17/ En arabe, comment appelleriez-vous un homme qui soulève les choses ?

1- رَأَفَعَ
2- رَقَاع
3- مَرْفَع
4- رَجُلٌ رَأَفَعُ الْأَشْبَاء
18/ En arabe, comment appelleriez-vous une machine utilisée à la grande fabrication de poupées ?

1- مَكَّٰحٓ
2- مَكِّٰحٓ
3- مَكِّٰحٓ
4- آلَة مَكَّٰحٓ الدَّمِي

19/ En arabe, comment exprimeriez-vous l'action de faire glisser un homme sur un arc-en-ciel ?

1- مَكَّٰحٓ
2- مَكِّٰحٓ
3- مَكِّٰحٓ
4- مَكِّٰحٓ

20/ En arabe, comment appelleriez-vous un endroit où vous essuyez les pieds ?

1- مَكَّٰحٓ
2- مَكِّٰحٓ
3- مَكِّٰحٓ
4- مَكِّٰحٓ مَكِّٰحٓ الأَقْدَّٰر

21/ En arabe, comment appelleriez-vous une femme qui cligne ses yeux ?

1- طَارِقَة
2- طَارِقَة
3- طَارِقَة
4- آِسْرَةٰ طَارِقَة

22/ En arabe, comment appelleriez-vous une machine qui examine les choses ?

1- مَكَّٰحٓ
2- مَكِّٰحٓ
3- مَكِّٰحٓ
4- آلَة مَكَّٰحٓ الأَسْتِسٰمٓ
23/ En arabe, comment exprimeriez-vous l’action d’amener une femme à compter les nuages ?

1- تُمْلِئُها النَّجُوم
2- سَحَبُها النِّجُوم
3- أَسْلَكُها النَّجُوم
4- جَعَلَها سَجَبَةً النَّجُوم

24/ En arabe, comment appelleriez-vous un endroit où l’on enquête sur les événements surnaturels ?

1- حَيْثُ 2- كَأْسُ 3- مَجْلُونُ 4- مَكَانُ الأَحْدَاثِ

25/ En arabe, comment appelleriez-vous un homme qui enterre les gens avec leurs bijoux ?

1- دَافِنُ 2- دَفَانُ 3- مَوْفِنُ 4- ذَجَلُ دَافِنُ الموتى

26/ En arabe, comment appelleriez-vous une machine qui lisse les papiers ?

1- لَطْفَةُ 2- مَلْطِفَةٌ 3- مُلْطِفَةٌ 4- آلَةُ مُلْطِيفِ الأَورَايِ
27/ En arabe, comment exprimeriez-vous l’action d’amener une femme à pouffer de rire?

- 1. قَآَهِرَهَا
- 2. ظَهَرَهَا
- 3. مَتَهَأَهَا
- 4. جَعَلَهَا مُفَهَّقَهَا

28/ En arabe, comment appelleriez-vous un endroit où les gens soupirent ?

- 1. فَلَاهُدَة
- 2. نَيَّهَادَة
- 3. مَتَهَأَدَة
- 4. مَكانُ المشَهَير

29/ En arabe, comment appelleriez-vous une femme qui sourit aux autres ?

- 1. ضَحَاحَة
- 2. مَتَحَلَّكَة
- 3. مَتَطَأَّجَة
- 4. إِمْرَأَةٌ ضَحاَحاَةُ للسَّلِيم

30/ En arabe, comment appelleriez-vous une machine qui empoigne les choses ?

- 1. رَافْسَة
- 2. رَفْسَة
- 3. مَرْفَسَة
- 4. آلَةٌ الرَّفس
 مهمة الفهم 1

المرجو منكم أن تختاروا من بين الأربعة الاختيارات الثلاثية الصيغة المناسبة للتعبير عن الجملة المكتوبة بالأسود.

1- ماذا نسمي الرجل الذي يقوم بعمل فقاع من الصابون؟
   1- قاع
   2- قاغ
   3- مشقه
   4- رجل الفقاع

2- ماذا نسمي الألة التي تعني الذيل؟
   1- عقلة
   2- عنقة
   3- عادمة
   4- آلة المناقة

3- ما هو الفصل الذي يستعمل للتعبير عن حبس رجل داخل غرفة مظلمة؟
   1- قافله
   2- فغله
   3- أفصله
   4- جعله مرفولا

4- ماذا نسمي المكان الذي تصنع فيه قمصان مكي ماس؟
   1- صانعة أقمشة مكي ماس
   2- صناعة أقمشة مكي ماس
   3- مصنع أقمشة مكي ماس
   4- مكان صنع أقمشة مكي ماس

5- ماذا نسمي المرأة التي تنكشف الأرض؟
   1- بإسهالة
   2- بياضة
   3- مبيضة
   4- إمرأة بإسهالة الأرض
6- ماذا نسمي الأمواج التي تقتل الأشخاص؟
   1- قنطلة
   2- قنطينة
   3- مقطالة
   4- آلة قتلة النس

7- ما هو التعبير عن جعل إمرأة تطرق رأسها بالطرقة؟
   1- طارقها
   2- أطرقتها
   3- طرفتها
   4- جعلها طارقة الرأس

8- ماذا نسمي المكان الذي تقوم فيه بتجليف الطماطم؟
   1- جافة الطماطم
   2- جافة الطماطم
   3- سجوفة الطماطم
   4- مكان تجليف الطماطم

9- ماذا نسمي الرجل الذي يجر السيارة بالحبل؟
   1- حابل
   2- حبال
   3- محبل
   4- رجل حابل السيارة

10- ماذا نسمي الأمواج التي تكسر الأقلام؟
    1- كاسرة
    2- كمرة
    3- كسرة
    4- آلة كسر الأقلام
11- ما هو الفعل الذي يستعمل للتعبير عن جمل جل بجانب عل قبسا مير؟

1- سمره
2- أسمره
3- سمره
4- جعله مسمورا

12- ماذا نسمي المكان الذي يكون فيه الهواء ملون؟

1- لؤلؤة
2- لمانة
3- ملونة
4- مكان اللفت

13- ماذا نسمي المرأة التي تحرك الأكل؟

1- حرقة
2- حرقه
3- محراقة
4- إمرأة حرقة الأكل

14- ماذا نسمي الألحة التي تدوين على النفن؟

1- داوسة
2- دولمة
3- مروسة
4- آلة الدوس

15- ما هو الفعل الذي يستعمل للتعبير عن جمل إمرأة تحجب في ماء مثلج؟

1- سباحها في ماء مثلج
2- سباحها في ماء مثلج
3- أحياها في ماء مثلج
4- جعلها سباحها في ماء مثلج
16- ماذا نسمي المكان الذي تتألق فيه الأضواء؟
1- ضوء
2- ضوئ
3- مضيئة
4- مكان الإضاءة

17- ماذا نسمي الرجل الذي يرفع الأشياء؟
1- رفع
2- رفع
3- مرفع
4- رجل رفع الأشياء

18- ماذا نسمي الألة التي تصنع الدم؟
1- نسخة
2- نسخة
3- نسخة
4- آلية نسخ الدم

19- ما هو الفعل الذي يستعمل للتعبير عن جعل رجل يتزحلق على قوس قزح؟
1- قازج
2- قازج
3- أقزج
4- جعله قازجا

20- ماذا نسمي المكان الذي تمسح فيه الأقدام؟
1- مسحة
2- مسحة
3- مسئح
4- مكان مسئح الأقدام

21- ماذا نسمي المرأة التي تتظر بعينين طارفين؟
1- طارفة
2- طراحه
3- مطرفة
4- إمرأة طارفة
22- ماذا نسمى الألة التي تراقب الأشياء؟
1- راقية
2- قابضة
3- مرفقة
4- ألة رقب الأشياء

23- ما هو الفعل الذي يستعمل للتعبير عن فعل إمرأة تحسب السحاب؟
1- ساحبها النجوم
2- محبها النجوم
3- أصحبها النجوم
4- جعلها ساحبة النجوم

24- ماذا نسمى المكان الذي تقوم فيه بالأبحاث غير الطبيعية؟
1- حائطة
2- حداثة
3- محدثة
4- مكان الأحداث

25- ماذا نسمى الرجل الذي يدفن الموتى بحليلتهم؟
1- دافن
2- دفان
3- مدفن
4- رجل دافن الموتى

26- ماذا نسمى الألة التي تقوم بالتنظيف الأوراق؟
1- لفانة
2- لطافاة
3- ملطفة
4- ألة تنظيف الأوراق

27- ما هو الفعل الذي يستعمل للتعبير عن فعل إمرأة تظهر؟
1- قاها
2- قهرها
3- كثرها
4- جعلها مظهفة
28- ماذا نسمي المكان الذي ينتهي فيه الناس?

1- ناهدة
2- نهادة
3- منهدة
4- مكان المشهد

29- ماذا نسمي المرأة التي تضحك للناس؟

1- ضاحكة
2- ضمحة
3- مضحكة
4- إمرأة ضاحكة

30- ماذا نسمي الألة التي ترفع الأشياء؟

1- رافسة
2- رفعة
3- مرفعة
4- آلة الرفع
COMPREHENSION TASK II

In this task, you are asked to choose from the four options the form that you judge appropriate and suitable in ARABIC to express the meaning of the English phrase written in bold.

1/ In Arabic, how would you call a man who hunts animals?

/sá?idun/* 1-صائد
/sayyá?dun/ 2-صياد
/musayyidun/ 3-مصيّد
/rajulu sayd?i/ 4-رجل الصيد

2/ In Arabic, how would you call a harvesting machine?

/hâsidatun/ 1-خصادة
/hassâda/ 2-خصادة
/mih?sada/ 3-خصادة
/talutu l?hasâdi/ 4-آلة الخصاد

3/ In Arabic, how would you express the action of causing a woman grief?

/hâzanahâ/ 1-حازِنَتۡها
/hazzanahâ/ 2-كَزِنَتۡها
/ra?zanahâ/ 3-مُكَزِنۡتۡها
/jâfalahâ hazinatun/ 4-جعلها حزينَتۡها

* The phonetic transcription is used here for the reader
RI = real item
4/ In Arabic, how would you call a place where you lock up jewelry?

/xażinatun/
/xazzānatun/\(^{RI}\)
/maxzanatun/
/makānu xazni ljāwahiri

5/ In Arabic, how would you call a woman who cooks?

/tābixatun
/tabbāxatun/\(^{RI}\)
/muṭabbixatun/
/?imra?atu ṭabxi/
9/ In Arabic, how would you call a man who governs?

/ḥākimun/ RI
/ḥakkāmūn/
/muḥakkimūn/
/rajuul ʾināk/m

1/ حاكم
2- حكَّام
3- مُحكَم
4- رجل الحَكَم

10/ In Arabic, how would you call a machine that squeezes juice?

/ʾāsira/
/ʾassāra/ RI
/miʾsara/
/ʔālātu lʾassirī/

1- عاسِرة
2- كُسَّارَة
3- مُكسَّرة
4- آلة السَّيِّر

11/ In Arabic, how would you express the action of making a man read a story over and over again?

/qāraʔahu/
/qarraʔahu/
/ʔaqaʔahu/ RI
/ʔaʃalahu qāriʔan/

1- قَارِأ
2- قرأُوه
3- أقرأُوه
4- جَغَلَة كَارِنا

12/ In Arabic, how would you call a place where you swim?

/sabḥatun/
/sabbaḥatun/
/masbaḥatun/ RI
/makānu sibḥati/

1- ساحِة
2- سَبْحَة
3- مُسبَّح
4- مكان السَّبِحَة

13/ In Arabic, how would you call a woman who migrates?

/ḥājira/
/hajjāra/ RI
/muḥajira/ RI
/ʔimratu lhijrati/

1- مهاجرة
2- مِهاجرة
3- مهاجرة
4- إِمْرَاءَةٌ الْهَجْرَة
14/ In Arabic, how would you call a machine that cuts stones?

/qāṭṭāʿa/ 1
/qāṭṭāʿa/Ri 2
/miṣqāṭa/ 3
/ālatu qaṭṭi ḫaḍjār/ 4

15/ In Arabic, how would you express the action of making a man drunk?

/sākarahu/ 1
/sakkārahu/ 2
/ʔaskarahu/Ri 3
/ʔaʔalahu sakrānan/ 4

16/ In Arabic, how would you call a place where you do an experiment?

/xābirun/ 1
/xabhāratun/ 2
/maxbarun/Ri 3
/makānu ʔixtibārā/ 4

17/ In Arabic, how would you call a man who delivers mail?

/wāziʔun/ 1
/ważzāʔun/ 2
/muwazzāʔun/Ri 3
/rajula ʔabaridi/Ri 4

18/ In Arabic, how would you call a machine that sews clothes?

/xāʔitatun/ 1
/xayyātatan/ 2
/mixyatatun/ 3
/ʔālatu ʔixyātati/Ri 4
19/ In Arabic, how would you express the action of making a man learn?

/تَلَامَعُ / - 1
/تَلَامَعُ /\textsuperscript{RI} - 2
/تَلمِعُ / - 3
/سَيَلمَعُ / - 4

20/ In Arabic, how would you call a place where you display pictures?

/تَرِيَدَ / - 1
/تَرُيدَ / - 2
/مَرْيَدُ / - 3
/مَكَانُ ْتَرَّيَدُ / - 4

21/ In Arabic, how would you call a woman who writes books?

/كِتَابَةً / - 1
/كَتَابَةً / - 2
/مَكَتَابَةً / - 3
/مَكَتَابَةً / - 4

22/ In Arabic, how would you call a machine that erases mistakes?

/مَحَيَّاتٍ / - 1
/مَحَبَّةٍ / - 2
/مَحْبَّةٍ / - 3
/آلةٌ مَحَبَّةٍ / - 4

23/ In Arabic, how would you express the action of making a woman cry?

/بَكَّاءٍ / - 1
/بَكَّاءٍ / - 2
/بَكَّاءٍ / - 3
/جَعْلُهَا بَكَّاءٍ / - 4
24/ In Arabic, how would you call a place where animals are slaughtered?

/jāziratun/
/jazzāratun/
/majžaratun/Ri
/makānu jazri lḥayawānātū/

- 1. جِازِرَة
- 2. جَرَاءَة
- 3. مَجْرَة
- 4. مَكَانُ جَرِّ هذا الْحِيْوَانَاتِ

25/ In Arabic, how would you call a man who works on a farm?

/fāliḥun/
fīlāḥun/Ri
/mufāliḥun/
/rajulu lfilāḥati/

- 1. فَالِحٌ
- 2. فَلَحٌ
- 3. مَفَلِحٌ
- 4. رَجُلُ الْفِلَاحَةِ

26/ In Arabic, how would you call a machine that strains oil?

/sāfiyatun/
saffāyatun/
/misfātun/Ri
/ālātu tasfiyatī zayti/

- 1. صَافِيَة
- 2. صَمْفَيَة
- 3. مِشَفَيَة
- 4. أَلَّا تَصْفِيَةُ الْزَّبِيَةِ

27/ In Arabic, how would you express the action of causing a man to become informed?

/bālaghahu/
/ballaghahu/
/ṭablaghahu/Ri
/jaʕalahu balīghan/

- 1. بَلَّغَهُ
- 2. بَلَغَهُ
- 3. أَبْلَغَهُ
- 4. جَمَلَةُ بَليغَةَ

28/ In Arabic, how would you call a place where you pray?

/sājdatun/
sajjādatun/
/majṣidun/Ri
/makānu sallāti/

- 1. سَاجِدَة
- 2. تَسْجِدَة
- 3. مَسْجِدٌ
- 4. مَكَانُ السَّلَّاةِ
29/ In Arabic, how would you express the action of making a woman look better?

<table>
<thead>
<tr>
<th>Arabic Word</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>/jāmalahā/</td>
<td>جمالها</td>
</tr>
<tr>
<td>/jammalahā/ RI</td>
<td>جميلها</td>
</tr>
<tr>
<td>/rajmalahā/</td>
<td>جميلة</td>
</tr>
<tr>
<td>jā'alahā jamīlān/</td>
<td>جعلها جميلًا</td>
</tr>
</tbody>
</table>

30/ In Arabic, how would you call a machine that drills?

<table>
<thead>
<tr>
<th>Arabic Word</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>/Θaqibatun/</td>
<td>تَقَبَّعٌ</td>
</tr>
<tr>
<td>/Θaqqābatun/</td>
<td>تَقَبْعَةٌ</td>
</tr>
<tr>
<td>/miΘqābur/ RI</td>
<td>مَتَابَعٌ</td>
</tr>
<tr>
<td>/alat u Θaqbi/</td>
<td>آلة التُّقَبَّعِ</td>
</tr>
</tbody>
</table>
5/ En Arabe, comment appelleriez-vous *une femme qui fait la cuisine*?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>طبيبة</td>
</tr>
<tr>
<td>2</td>
<td>ملكة</td>
</tr>
<tr>
<td>3</td>
<td>خادمة</td>
</tr>
<tr>
<td>4</td>
<td>سرآة الطبيع</td>
</tr>
</tbody>
</table>

6/ En arabe, comment appelleriez-vous *un appareil qui fait cuire à la vapeur*?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>بخار</td>
</tr>
<tr>
<td>2</td>
<td>بخارة</td>
</tr>
<tr>
<td>3</td>
<td>بخاري</td>
</tr>
<tr>
<td>4</td>
<td>ألة التبخير</td>
</tr>
</tbody>
</table>

7/ En arabe, comment exprimeriez-vous *l'action de faire mentir un homme*?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>كاذب</td>
</tr>
<tr>
<td>2</td>
<td>كاذبة</td>
</tr>
<tr>
<td>3</td>
<td>كاذب باء</td>
</tr>
<tr>
<td>4</td>
<td>جعلته كاذبا</td>
</tr>
</tbody>
</table>

8/ En arabe, comment appelleriez-vous *un endroit où vous faites la lessive*?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>غاسلة</td>
</tr>
<tr>
<td>2</td>
<td>غسل</td>
</tr>
<tr>
<td>3</td>
<td>غسلة</td>
</tr>
<tr>
<td>4</td>
<td>مكان غسل الملاسج</td>
</tr>
</tbody>
</table>

9/ En arabe, comment appelleriez-vous *un homme qui gouverne*?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>حاكم</td>
</tr>
<tr>
<td>2</td>
<td>حاكمة</td>
</tr>
<tr>
<td>3</td>
<td>حكم</td>
</tr>
<tr>
<td>4</td>
<td>جل آل الحكم</td>
</tr>
</tbody>
</table>
QUESTIONNAIRE DE COMPREHENSION TASK II

Veuillez choisir parmi les quatre options la forme que vous jugez la plus appropriée à exprimer en ARABE le sens donné par la phrase écrite en caractère gras.

1/ En arabe, comment appelleriez-vous un homme qui fait la chasse aux animaux?

- 1- سائج
- 2- صيّان
- 3- آكل الصيّار
- 4- جّل الصيّار

2/ En arabe, comment appelleriez-vous une moissonneuse?

- 1- حَمِيْسَة
- 2- حِمِيْسَة
- 3- مـحمـيـسة
- 4- آلة الحمـيـسـة

3/ En arabe, comment exprimeriez-vous l'action de causer de la peine à une femme?

- 1- تَحَدَّرْ نِهَا
- 2- كَرَتْ نِهَا
- 3- أَكَرَتْ نِهَا
- 4- سِجَلَها حَزِيَّة

4/ En arabe, comment appelleriez-vous un endroit où vous enfermez les bijoux?

- 1- كَمَانُ كَرَنْ الجَواهر
- 2- حِكَّانُ الجَواهر
- 3- كَسْكَانُ الجَواهر
- 4- مَكَانُ كَرَنْ الجَواهر
10/ En arabe, comment appelleriez-vous un appareil qui extrait le jus?

1- عاصرة
2- عصير
3- مصنع
4- آلة ال‌عصير

11/ En arabe, comment exprimeriez-vous l'action d'amener un homme à relire une histoire plusieurs fois?

1- قارئة
2- قرآء
3- قراء
4- جمعة قراء نا

12/ En arabe, comment appelleriez-vous un endroit où on nage?

1- سباحة
2- سباحة
3- مسبح
4- مكان السباحة

13/ En arabe, comment appelleriez-vous une femme qui se déplace d'un lieu à un autre ?

1- ماجرة
2- مكرارة
3- مهاجرة
4- إقرازة الهجرة

14/ En arabe, comment appelleriez-vous une machine qui coupe les pierres?

1- قاطعة
2- قطاع
3- مقطع
4- آلة قطع الأحجار
15/ En arabe, comment exprimeriez-vous l'action de rendre un homme ivre?

1 - سَعْرَة
2 - سَكْرَة
3 - سَكْرَة
4 - جَعَلَةُ سَكْرَانَا

16/ En arabe, comment appelleriez-vous un endroit où on fait une expérience?

1 - بَابُ خَبَارَة
2 - خَبَارَة
3 - مُكَافِر
4 - مَكَانُ الْخِيَابَة

17/ En arabe, comment appelleriez-vous un homme qui livre le courrier?

1 - وَلَاء
2 - وَلَاء
3 - وُلَاء
4 - تَجَلُّ الْبَرِيء

18/ En arabe, comment appelleriez-vous une machine à coudre?

1 - خَيَاطَة
2 - خَيَاطَة
3 - خَيَاطَة
4 - آلةُ الخِيَاطَة

19/ En arabe, comment exprimeriez-vous l'action d'amener un homme à apprendre?

1 - عَلَّمَة
2 - عَلَّمَة
3 - عَلَّمَة
4 - جَعَلَةُ مَعُلَمة
20/ En arabe, comment appelleriez-vous un endroit où vous exposez des tableaux?

1- مَكَانٌ عَرْضِ الْمَصْرَفِ
2- عَرْضَةُ
3- مَعْرِضَةُ
4- مَكَانٌ عَرْضِ المَصْرَفِ

21/ En arabe, comment appelleriez-vous une femme qui écrit des ouvrages?

1- كَاتِبَةٌ
2- كَاتِبَةٌ
3- كَاتِبَةٌ
4- إِسْمَارَةُ الْكَتَابَةِ

22/ En arabe, comment appelleriez-vous une machine qui efface les erreurs

1- سَاحِجَةٌ
2- سَاحِجَةٌ
3- سَاحِجَةٌ
4- أَلْسُنَةُ مَكَحُولَةُ الْخَطَاءَ

23/ En arabe, comment exprimeriez-vous l'action de faire pleurer une femme

1- يُبْكَاهَا
2- يُبْكَاهَا
3- يُبْكَاهَا
4- يُجْعَلُهَا بَاكِيَةً

24/ En arabe, comment appelleriez-vous un endroit où se fait l'abattage des animaux?

1- جَمَازِرَةٌ
2- جَمَازِرَةٌ
3- جَمَازِرَةٌ
4- مَكَانَ جَمَازِرِ الْحيَوَاناتِ
25/ En arabe, comment appelleriez-vous un homme qui travaille à la ferme?

- فلاح
- مُلْخَّص
- مُلْخَّص
- رجل الفلاح

26/ En arabe, comment appelleriez-vous une machine qui filtre l'huile?

- صيافي
- تصفية
- مصبة
- آلة تصفية الزيت

27/ En arabe, comment exprimeriez-vous l'action de communiquer une information à un homme?

- بَلَغَة
- لَبَغَة
- بَلَغَة
- جمعة بلغا

28/ En arabe, comment appelleriez-vous un endroit où on prie?

- صَدَقَة
- سَجَاءة
- مسجد
- مكان الصلاة

29/ En arabe, comment exprimeriez-vous l'action d'amener une femme à paraître plus belle?

- جَمِيلَة
- جَمِيلَة
- جَمِيلَة
- جعلها جميلة

30/ En arabe, comment appelleriez-vous un appareil qui perce des trous?

- نافذة
- تَلْبَقَة
- مَنْافِق
- آلة التقطيع
مهمة الفهم

المرجو منكم أن تختاروا من بين الأربع الخيارات الثالثة الصيغة المناسبة للتعبير عن الجملة المكتوبة بالأسود.

1- ماذا نسمي الرجل الذي يقوم بصياد الحيوانات؟
   1- صائد
   2- صياد
   3- مصيد
   4- رجل الصيد

2- ماذا نسمي الآلة التي تحصد القمح؟
   1- حاصدة
   2- حصادة
   3- مصيدة
   4- آلة الحصاد

3- ما هو الفعل الذي يستعمل للتعبير عن جعل إمرأة حزينة?
   1- حازنها
   2- حزنها
   3- أحزنها
   4- جعلها حزينة

4- ماذا نسمي المكان الذي تحتفظ به بعدها؟
   1- خازنة
   2- خزانة
   3- مخازنة
   4- مكان خزن الجوارم
5- ماذا نسمي المرأة التي تنقيح؟

1- طاهية
2- طباخة
3- مطبخة
4- إمرأة الطبخ

6- ماذا نسمي الألة التي تقوم بالطهي بالبخار؟

1- بخارية
2- بخارة
3- مبخرة
4- آلة التخمير

7- ما هو الفعل الذي يستعمل للتعبير عن دفع رجل للنكذ؟

1- كاذبه
2- كذبه
3- كذبه
4- جعله كذابا

8- ماذا نسمي المكان الذي تغسل فيه الملابس؟

1- غاملة
2- غسالة
3- منغسسة
4- مكان غسل الملابس

9- ماذا نسمي الرجل الذي يحكم؟

1- حاكم
2- حكام
3- محكم
4- رجل الحكم
10- ماذا نسمى الأكمة التي تقوم بإستخلاص العصير؟

1- عاصرة
2- عصارة
3- معصرة
4- آلة العصير

11- ما هو الفعل الذي يستعمل للتعبير عن دفع رجل لقراءة الرواية مرتين؟

1- قرأ
2- قرأ
3- أقرأ
4- جعله قارنا

12- ماذا نسمى المكان للسباحة؟

1- سباحة
2- سباحة
3- مسبح
4- مكان السباحة

13- ماذا نسمى المرأة التي تهاجر من مكان إلى مكان؟

1- هاجرة
2- هجرة
3- مهاجرة
4- إمرأة الهجرة

14- ماذا نسمى الأكمة التي تقطع الأحجار؟

1- قاطعة
2- قطاعة
3- مقطعة
4- آلة قطع الأحجار
15- ما هو الفعل الذي يستعمل للتعبير عن جعل رجل سكرنا؟

1- صاكره
2- سكره
3- أسكره
4- جعله سكرانا

16- ماذا نسمى المكان الذي تقوم فيه بالتجارب؟

1- خابرة
2- خبارة
3- مخبر
4- مكان الاختبار

17- ماذا نسمى الرجل الذي يوزع الرسائل؟

1- وازع
2- وزاع
3- موزع
4- رجل البريد

18- ماذا نسمى الألة التي تخيط الملابس؟

1- خاتطة
2- خياطة
3- مخيطه
4- آلة الخياطة

19- ما هو الفعل الذي يستعمل للتعبير عن جعل رجل معلماً؟

1- عالمه
2- علمه
3- أعلمه
4- جعله معلماً
20- ماذا نسمي المكان الذي نعرض فيه الصور؟
1- عارضة
2- عرضة
3- معرض
4- مكان عرض الصور

21- ماذا نسمي المرأة التي تكتب الكتب؟
1- كاتبة
2- كتابة
3- مكتبة
4- إمرأة الكتابة

22- ماذا نسمي الألة التي نسمع الأخطاء؟
1- ماحية
2- محافة
3- محاة
4- آلة محال الأخطاء

23- ما هو الفعل الذي يستعمل للتعبير عن جعل إمرأة تبكي؟
1- باكاه
2- بكاه
3- أباكاه
4- جعلها باكية

24- ماذا نسمي المكان الذي تعيش فيه الحيوانات؟
1- جازر
2- جزاز
3- مجازر
4- مكان جزر الحيوانات
25 ماذا نسمى الرجل الذي يعمل في الحقل؟
1- فالح
2- فلاح
3- مفلح
4- رجل الفلاحة

26 ماذا نسمى الآلة التي تصفى الزيت؟
1- صافية
2- صفاية
3- مصغاة
4- آلة نصفية الزيت

27 ما هو الفعل الذي يستعمل للتعبير عن إبلاغ رجل بمعلومة؟
1- بالله
2- يبلغ
3- أبلغ
4- جعله بليغنا

28 ماذا نسمى المكان الذي يقام فيه الصلاة؟
1- ساجدة
2- سجادة
3- مسجد
4- مكان الصلاة

29 ما هو الفعل الذي يستعمل للتعبير عن趙هرة إمرأة بشكل جميل؟
1- جمالها
2- جملها
3- أجملها
4- جمالها جميلة
30- ماذا نسمى الآلة التي تقوم بالثقاب؟

1- ثاقبة
2- ثقابة
3- مثقب
4- آلة الثقاب
BACKGROUND QUESTIONNAIRE

A. The following questions ask about your personal background.

1. Are you.....?
   Male ☐ or Female ☐

2. What is your age group? (Please check one)
   a. 18-20
   b. 21-24
   c. 25-30
   d. 31-35
   e. 36+

3. What is your current student status? (Please check one)
   a. 1st year of undergraduate program
   b. 2nd or 3rd year of undergraduate program
   c. graduate student
   d. special student
   e. other (please specify) ___________________

4. Were you born in Canada or in the United-States?
   Yes ☐
   No ☐ If you answered YES please go to question 7
5. If the answer is NO, what is your country of birth?

____________________

6. How old were you when you came to Canada or to the United-States?

____________________

7. Which of these languages did you speak first as a child?

   English _________________
   French _________________
   Arabic _________________
   Other language ___________

B. The following questions ask about OTHER LANGUAGE(S) that you know and use besides your FIRST LANGUAGE.

1. Are there any languages you know other than your FIRST language?

   Yes [ ]

   No [ ] If you answered NO please go to SECTION C (page 4)
2. If the answer is YES, what is/are this/these language(s)?

   a ___________________________
   b ___________________________
   c ___________________________

3. Where did you learn this/these language(s)? (Please check one box for each language)

<table>
<thead>
<tr>
<th></th>
<th>At home</th>
<th>At school</th>
<th>Other environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>language a</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>language b</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>language c</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

4. Can you understand this/these languages when WRITTEN or SPOKEN or BOTH? (Please check one box for each language)

<table>
<thead>
<tr>
<th></th>
<th>written</th>
<th>spoken</th>
<th>both</th>
</tr>
</thead>
<tbody>
<tr>
<td>language a</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>language b</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>language c</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
5. How often do you use this/these language(s)? (Please check one box for each language)

<table>
<thead>
<tr>
<th></th>
<th>rarely</th>
<th>sometimes</th>
<th>frequently</th>
<th>very frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>language a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>language b</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>language c</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Where do you use this/these language(s)?

<table>
<thead>
<tr>
<th></th>
<th>At home</th>
<th>At school</th>
<th>At work</th>
<th>On trip</th>
</tr>
</thead>
<tbody>
<tr>
<td>language a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>language b</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>language c</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C. The following questions ask specifically about the ARABIC language, your purpose for taking it, and your learning experience.

1. Do you speak any Arabic dialect?

   Yes [square] If you answer YES, please specify __________________

   No [square]
2. What is/are your reason(s) for taking Classical Arabic? (Please check one or more as relevant)
   a. personal interest
   b. credit course
   c. major subject for my graduate study
   d. have arabophone background
   e. taking a trip
   f. other (please specify) _______________

3. Is Classical Arabic used in your home?
   Yes ☐
   No ☐ If you answer NO go to question 5

4. How often is Arabic spoken in your home? (Please check one)
   rarely ☐
   sometimes ☐
   frequently ☐
   very frequently ☐

5. In what way(s) do you use Arabic? (Please check as many as relevant)
   a. speaking to other arabophones
   b. use it in my field of study
   c. watching T.V.
   d. reading Arabic newspapers and magazines
   e. reading literature
   f. listening to radio
   g. other, please specify ___________
6. Compared to other language(s) that you know or you have learnt, how do you find learning Arabic? (Please check one)

   a. very difficult language
   b. difficult language
   c. neither easy nor difficult
   d. easy language
   e. very easy language

7. According to you, what makes Arabic a difficult language to learn? (Please check as many as relevant)

   a. grammar
   b. vocabulary
   c. pronunciation
   d. writing system
   e. other, please specify ________________

8. Compared to other learners in your class, how well are you doing in learning Arabic?

   below average  average  above average
   □         □         □

9. Compared to other learners in your class, how would you rate your performance in the following areas?

   Speaking  □  □  □  □
   listening □  □  □  □
   writing   □  □  □  □
   reading   □  □  □  □
10. Can you do the followings in Arabic, and how well can you do them? (Please check one box in each row)

<table>
<thead>
<tr>
<th></th>
<th>with much difficulty</th>
<th>with little difficulty</th>
<th>without difficulty</th>
<th>unable to do</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>talk to a native speaker</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b</td>
<td>watch and understand a TV program</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c</td>
<td>read newspapers and magazines</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d</td>
<td>write a letter</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e</td>
<td>understand a radio program</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
INFORMATION GÉNÉRALE

A. Les questions suivantes se penchent sur des informations personnelles.

1. Quel est votre sexe?
   Homme □   Femme □

2. À quel groupe d'âge appartenez-vous? (ne cochez qu'une seule réponse)
   a. 18-20
   b. 21-24
   c. 25-30
   d. 31-35
   e. 36+

3. Actuellement quel est votre statut d'étudiant(e)? (veuillez cocher qu'une seule réponse)
   a. 1e année d'un programme de premier cycle
   b. 2ème ou 3ème année d'un programme de premier cycle
   c. étudiant(e) de 2ème ou 3ème cycle
   d. étudiant(e) spécial(e)
   e. autre (veuillez préciser) ______________

4. Étes-vous né(e) au Canada ou aux États-Unis?
   Oui □
   Non □   Si vous répondez OUI veuillez passer à la question 7

5. Si la réponse est NON, quel est votre pays d'origine?
   __________________________
6. Quel âge aviez-vous quand vous êtes arrivé(e) au Canada ou aux États-Unis?

______________________________

7. Laquelle de ces langues avez-vous parlé en premier lieu durant votre enfance?

Anglais ______

Français ______

Arabe ______

Autre langue ______

B. Les questions suivantes se penchent sur les LANGUES que vous connaissez et que vous utilisez à part votre PREMIÈRE langue.

1. Y a-t-il d'autres langues que vous connaissez bien, en plus de votre langue première?

Oui [ ]

Non [ ] Si vous répondez NON  
veuillez passer à la section C page 4

2. Si la réponse est OUI, quelle(s) est/sont cette/ces langue(s)?

a. __________________

b. __________________

c. __________________
3. Où avez-vous **APPRIS** cette/ces langue(s)? (veuillez cocher la case appropriée)

<table>
<thead>
<tr>
<th></th>
<th>À la maison</th>
<th>À l'école</th>
<th>Autre environnement</th>
</tr>
</thead>
<tbody>
<tr>
<td>language a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>language b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>language c</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Pouvez-vous comprendre cette/ces langue(s) quand elle(s) est/sont **PARLÉE(S)** ou **ÉCRITE(S)** ou les **DEUX**? (veuillez cocher la case appropriée pour chaque langue)

<table>
<thead>
<tr>
<th></th>
<th>parlée</th>
<th>écrite</th>
<th>les deux</th>
</tr>
</thead>
<tbody>
<tr>
<td>language a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>language b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>language c</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Actuellement quelle est la fréquence d'utilisation de cette/ces langue(s)? (veuillez cocher la case appropriée pour chaque langue)

<table>
<thead>
<tr>
<th></th>
<th>rarement</th>
<th>parfois</th>
<th>fréquemment</th>
<th>très fréquemment</th>
</tr>
</thead>
<tbody>
<tr>
<td>language a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>language b</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>language c</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. Où utilisez-vous cette/ces langue(s)?

<table>
<thead>
<tr>
<th>À la maison</th>
<th>À l’école</th>
<th>Au travail</th>
<th>En voyage</th>
</tr>
</thead>
<tbody>
<tr>
<td>language a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>language b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>language c</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C. Les questions suivantes se penchent sur la langue ARABE: les raisons qui vous ont amené à l'apprendre et votre expérience d'apprentissage.

1. Parlez-vous un dialecte arabe?

   Oui □ si vous répondez OUI préciser lequel ________

   Non □

2. Pour quelle(s) raison(s) avez-vous décidé d'apprendre l'arabe classique? (veuillez cocher la/les réponse(s) appropriée(s))

   a. intérêt personnel
   b. cours pour obtenir un crédit
   c. sujet obligatoire pour mon programme d'études supérieures
   d. origine arabophone
   e. voyage
   f. autre (veuillez spécifier) ____________
3. L'arabe classique est-il utilisé par vous à la maison?

   Oui  ☐

   Non  ☐  Si vous répondez NON veuillez passer à la question 5

4. Quelle est la fréquence d'utilisation à la maison? (veuillez cocher la case appropriée)

   rarement  ☐  parfois  ☐  fréquemment  ☐  très fréquemment  ☐

5. Dans quel(s) but(s) utilisez-vous l'arabe? (veuillez cocher la/les réponse(s) appropriée(s))

   a. pour parler à d'autres arabophones
   b. pour l'utiliser dans mon domaine d'étude et de recherche
   c. pour regarder la télévision
   d. pour lire les journaux et des magazines
   e. pour lire des œuvres littéraires
   f. pour écouter la radio
   g. autre, veuillez préciser ____________

6. Comparée à d'autre(s) langue(s) que vous avez apprise(s), comment trouvez-vous l'apprentissage de l'arabe? (veuillez cocher la réponse appropriée)

   a. très difficile
   b. difficile
   c. plus ou moins difficile
   d. facile
   e. très facile
7. Selon vous, qu'est-ce qui rend l'arabe une langue difficile à apprendre? (veuillez cocher la ou les réponses appropriée(s))

   a. grammaire
   b. vocabulaire
   c. prononciation
   d. le système d'écriture
   e. autre(s), veuillez préciser __________

8. En vous comparant à d'autres apprenants dans votre classe, où vous situez-vous dans vos résultats?

<table>
<thead>
<tr>
<th>au-dessous de la moyenne</th>
<th>à la moyenne de la classe</th>
<th>au-dessus de la moyenne</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Par rapport aux autres étudiants de la classe quelle est, selon vous, votre performance dans les domaines suivants?

<table>
<thead>
<tr>
<th></th>
<th>pareille</th>
<th>meilleure</th>
<th>pire</th>
<th>incapable de juger</th>
</tr>
</thead>
<tbody>
<tr>
<td>parler</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>écoute</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>écrire</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lecture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. Pouvez-vous accomplir ces tâches en ARABE et comment?

<table>
<thead>
<tr>
<th></th>
<th>avec beaucoup de difficulté</th>
<th>un peu de difficulté</th>
<th>sans difficulté</th>
<th>incapable de faire</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. parler à un arabophone</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. regarder et comprendre un programme de TV</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. lire les journaux et les magazines</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d. écrire une lettre</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e. comprendre une émission radiophonique</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
إسبانيان خلفية

1- هل أنت .......؟

أ- ذكر 

ب- أنثى 

2- لأي مجموعة ينتمي عمرك؟ (من فضلك ضع علامة واحدة)

أ- 18 - 20 

ب- 21 - 24 

ث- 25 - 30 

ج- 31 - 35 

د- 36 + فأكثر

3- ما هو برنامجك الدراسي؟

4- أيا من هذه اللغات تكلمت أولا في طفولتك؟

اللهجة المغربية 

اللغة البربرية

ب- نستفسر الأسئلة الثالية بالتعين عن اللغة العربية الفصيحي.

1- على أي نحو (نحوي) تستخدم اللغة العربية الفصيحي؟ (من فضلك ضع علامة بعد ما يناسب)

أ- في مجال دراسي 

ب- في القراءة 

ت- في الكتابة 

ث- في مجالات أخرى
2- إذا أجبت بنعم، ما هي هذه اللغة أو اللغات؟

1- 
2- 
3- 

3- أين تعلمت هذه اللغة أو اللغات؟ (من فضلك ضع علامة واحدة).

في المنزل

في المدرسة

لغة 1
لغة 2
لغة 3

4- هل تستطيع فهم هذه اللغة أو اللغات مكتوبة أو متكاملة أو كلامًا؟ (من فضلك ضع علامة واحدة).

كلامًا

قراءة

كتابة

لغة 1
لغة 2
لغة 3
2- هل تعتمد اللغة العربية الفصحي في منزلك؟
نعم ☐
لا ☐ (إذا أجبت لا، توجه إلى السؤال الرابع)

3- إلى أي قدر تتكلم العربية الفصحي في منزلك؟ (من فضلك ضع علامة واحدة).
نادرًا في بعض الأحيان ☐
حوالي نصف الوقت دائمًا ☐

4- بالمقارنة مع الطلاب الآخرين في فصلك ما هي درجة إجادتك اللغة العربية الفصحي؟
فوق المعدل ☐
متوسط ☐
تحت المعدل ☐

5- بالمقارنة مع الطلاب الآخرين في فصلك كيف تقيم أدائك في المجالات التالية؟
أحسن وأسوأ لا أستطيع الجواب ☐
التحدث ☐
الكتابة ☐
القراءة ☐

6- مَتَضَفِّع الأسئلة التالية تحديدا عن اللغات الأخرى التي تعرفها.

1- هل تعرف أي لغة أخرى غير اللغة العربية الفصحي؟
نعم ☐
لا ☐