The Acquisition of Definiteness Feature by Persian L2 Learners of English

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Abstract

The definiteness feature in English is both LF and PF interpretable while Persian is a language in which this feature is LF-interpretable but PF-uninterpretable. Hence, there is no overt article or morphological inflection in Persian denoting a definite context. Furthermore, Persian partially encodes specificity not definiteness. In definiteness both the speaker and hearer are involved while in specificity just the speaker may be taken into consideration. The associated indefinite article identifies an individual from a set but lacks the uniqueness feature. Specificity, on the other hand, may be defined in relation to the speaker. It signals the speaker's intention to refer to some individual with a noteworthy property. Based on the predictions made by the interpretability hypothesis, it is predicted that Persian learners of English should be able to acquire the English definiteness feature lacking in their L1. To test the hypothesis, fifty L2 learners at intermediate and advanced levels were selected. To test their comprehension as well as production, they were given forced-choice elicitation and translation tasks.

The results of the study showed that the L2 learners acquired the definiteness feature giving credence to the interpretability hypothesis in which the acquisition of LF-interpretable but PF-uninterpretable features does not pose a persistent problem. In the oral production task, the results show that the L2 learners use some compensating mechanisms

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such as demonstrative and possessive adjectives to encode definiteness. The results further indicate that the Persian learners of English experience some fluctuations in teasing apart the definiteness and specificity in indefinite referential singular contexts.

Keywords: 1. Definiteness   2. Specificity   3. Acquisition 3. Interpretability Hypothesis 4. Persian Learners.

1. Introduction

The acquisition of functional morphology has always preoccupied the researchers in the field of second language acquisition. L2 learners often exhibit certain problems in the acquisition of inflectional morphology. They often fail to produce appropriate functional morphology in the obligatory contexts. One of the most challenging functional morphemes in English language acquisition is the article *the* and *a/an*. The use of articles is subject to fluctuation until the L2 learners can set the correct parameters instantiated.

An issue that is of considerable interest in both L1 and L2 acquisition research is whether the lack of article production or suppliance is because of the absence of the underlying functional structure (i.e. the DP projection) or certain other factors such as prosodic structure and/or semantics which may lead to articles being omitted (null form Ø) or substituted (indefinite *a* for definite *the* or vice versa). Radford (1991) maintains the view that in early child language the DP projection is absent. By contrast, Borer & Rohrbacher (2002) maintain that a fully specified functional structure is present from the earliest stages of acquisition, even if learners do not produce articles on every occasion where an adult native would require them.

English articles can be used to serve two main functions. The first function is the definiteness notion related to the semantic/pragmatic function of the articles. In English, the article *the* marks any NP out as definite whereas a/an marks count NPs as indefinite. However, *the* is not an exclusive marker of definiteness, because different elements including demonstratives and possessives, etc., also make the NP definite.The absence of articles in count plural/mass/abstract is an indicator of indefiniteness in English. In English, an NP which is accompanied by the

article *a* is indefinite. Again, however, indefiniteness is not always marked by *a*; there are other elements such as *some*, *each*, zero, etc. which mark indefiniteness [cf. Foley and Van Valin (1985:283). The second function of English articles is to license count singular NPs as syntactic arguments. Certain languages such as Chinese, Japanese, Russian and Persian allow count singular NPs to appear directly as arguments in syntactic expressions while this is not the case in English.

Cross-linguistically, articles are used to mark either definiteness or specificity. Definiteness can be informally defined as the speaker and hearer presupposing the existence of a unique individual in a set denoted by the NP. The associated indefinite article identifies an individual from a set but lacks the uniqueness feature. Specificity, on the other hand, is defined in relation to the speaker. It signals the speaker's intention to refer to some individual with a noteworthy property. The associated non-specific article identifies an individual from a set, but without the speaker's intention to refer. To illustrate, consider example (1) taken from Lyons (1999: 167). *Merchant Banker* has a specific interpretation in (1a) but a non-specific one in (1b). In (1a), the speaker's intention is to refer to a specific merchant banker whose noteworthy property is that Peter does not get on with her. In (1b), an individual is picked out, but without referring to a specific individual.

(1a) Peter intends to marry a merchant banker--even though he doesn't get on at all with her.

(1b) Peter intends to marry a merchant banker--though he hasn't met one yet.

Standard English encodes definiteness not specificity. This cuts across specificity in the sense that (in) definites can be freely specific or non-specific. In languages that have encoded specificity for articles, like Samoan (Lyon, 1999), this cuts across definiteness. Also, the semantic contrast encoded in the feature make-up of *the* and *a/an* is one of definiteness not specificity.

The following two hypotheses have been entertained in this study: the impairment hypothesis (Meisel, 1991, 1997; Clahsen, 1988) and Interpretability Hypothesis (Tsimpli and Dimitrakopoulou, 2007). According to the impairment hypothesis, L2 learners cannot acquire the L2 functional morphology. Meisel (1991) argues that L2 grammars lack

agreement (on the grounds that infinitives and bare stems are common in place of forms appropriately inflected for agreement) and that finiteness and verb-placement are unrelated (see also Clahsen, 1988).

According to the interpretability hypothesis, interpretable grammatical features do not create any learning problems at the conceptual level (LF) although such a feature may not have a phonetic representation (PF) in L1. This hypothesis claims that interpretable features are accessible to the L2 learner while uninterpretable features are difficult to identify and analyze in the L2 input due to persistent L1 effects on adult L2 grammars. The definiteness feature is interpretable at the conceptual level in English and Persian. However, the two languages are different at the phonetic level in that Persian lacks the phonological form for indicating definiteness. The definite article *the* in (2) modifies the nouns *car* and *garage* and mark the NPs as definite whereas its Persian equivalent in (3) does not encode any definiteness marker.

(2) The car is in the garage. *â*
(3) m*â*šin dar   tamirg*â* ast.
   Car   in   garage   is.
   The car is in the garage.

The present study intends to investigate whether Persian L2 learners of English can acquire the definiteness feature which is not realized in Persian. The use of definite article is investigated in different contexts such as singular, plural, definite, indefinite, specific as well as non-specific contexts. The current research will investigate which of the above mentioned contexts will create more problems for the L2 learners.

2. Semantic Properties of English and Persian Noun Markers

Articles are semantically interpreted and syntactically instantiated. They are encoded differently cross-linguistically. In this section, the semantic features of *definiteness* and *specificity* are elaborated. The binary features of definiteness and specificity are contextually bound (Heim, 1991) and both play a role in article specifications cross-linguistically. They are related to the unconscious linguistic knowledge of the speaker and/or hearer of a determiner phrase denoted by the NP in the discourse.

Fodor and Sag (1982) define definiteness and specificity as follows: If a Determiner Phrase (DP) of the form [D NP] is [+definite], then the speaker assumes that the hearer shares the speaker's presupposition of the existence of a unique individual in the set denoted by the NP. If the given DP is [+specific], then the speaker intends to refer to a unique individual in the set denoted by the NP, and considers this individual to possess some noteworthy property. In the same vein, Huddleston and Pullum (2002) make a distinction between the semantic properties of reference and denotation. They point out that a linguistic expression has reference if, by using it on a given occasion, a speaker intends it to pick up some 'independently distinguishable entity in the real world (p.399). Although Fodor and Sag (1982) align definiteness and specificity with "uniqueness", Huddleston and Pullum accompany these semantic features of noun with "reference". Then, not all noun phrases are referential expressions. An indefinite noun phrase is regarded as non-referential since it does not refer to particular entity. A further distinction is between specific and non-specific. The speaker typically has a particular referent(s) in mind, i.e., [+specific], while generic/non-specific reference refers to a more general way or species (Lyons 1977: 178). This study follows Huddleston and Pullum's semantic features of noun referent because both English and Persian definiteness and specificity can be accounted via referent.

In this section, we discuss how these features are instantiated in English and Persian. To illustrate, a context that is [+definite] or [+specific] is a context that has satisfied the conditions on definiteness or the conditions on specificity respectively. When we assert that a context is [-definite] or [-specific], it means that these conditions have not been satisfied. Below, it is explained what it means for lexical items (as opposed to contexts) to be [+definite] or [+specific]. The fact is that every language has either a definite or a specific marker, but not both. Some languages such as Persian, Turkish and Albanian have a specific marker, whereas some other languages including English, German and French have a definite marker. Given these points, it is argued that English has not encoded the specificity marker in its linguistic system.

2.1 Definiteness in English

Non-generic nouns can be discussed in terms of their identification by the interlocutor. If the interlocutor knows the reference, it is considered as definite, otherwise it should be regarded as indefinite.

Standard English has two articles, *the* and *a* instantiating the semantic feature of definiteness as in [+definite] and [-definite] contexts, respectively. English definiteness markers are determined by the semantic feature of countability. While *the* is used in both singular and plural [+definite] contexts (5a,b), *a* is used only in singular [-definite] contexts (4a). For the purposes of this research, we will take bare plurals to be the plural counterpart of singular *a* indefinites[1].

(4) a. I saw a monster.

    b. I saw monsters.

(5) a. I saw the monster.

    b. I saw the monsters.

In English, however, mass nouns lack an overt article which is the counterpart of the indefinite article *a* (6).

(6) I have salt in my diet.

Nevertheless, it is not the case that singular countable bare nouns cannot occur by themselves. If they appear, they will be interpreted as mass nouns (7). These facts indicate that English nouns are lexically distinctive based on count vs. mass criterion. Furthermore, the above facts reveal that English nouns are instantiated by definiteness articles.

(7) Monster is a huge animal.

In English, numerals are projected at the level of cardinal projection (CARDP) above NumP because they precede it.

(8) I saw two monsters.

The projection of the noun phrase *two monsters* has the following configuration.

(9) [CARDP two[NumP[NP monster]s]]

Diagram 10*a* below indicates that the specifier of NumP is plural. Therefore, the head noun is interpreted as plural. The specifier of NumP in diagram *b* is countable singular and the N^0 is interpreted as singular; while that of diagram *c* refers to a mass noun such as *salt*.

10 a. NumP_{PL} b. NumP_{sg} c. NumP_{Mass}

       / \   / \   / \

    Num NP   Num NP   Num NP

      | | | | | |

     [PL] N^0 a N^0 [mass] N^0

(Adopted from Ghomeshi 2003:54)

Diagram 10b shows that the indefinite article *a* is represented on the NumP node. The question which may arise is how the definite article *the* is projected. This article needs to be projected at a level higher than CARDP because it always precedes numerals:
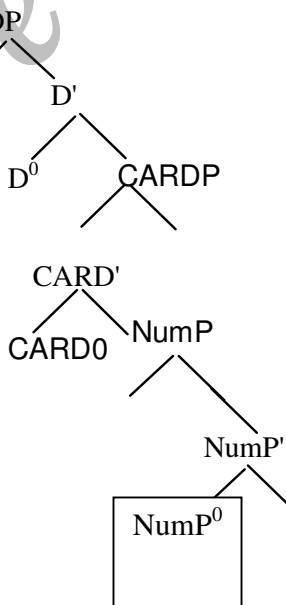
     (11) I saw the two monsters.

The noun phrase *the two monsters* has the following structure:

     (12) [DP the [CARDP two[NumP[NP monster]s]]]

Hence, as Ghomeshi (2003) argues, it can be concluded that the English noun phrases have three levels of projections (13):

(13)

```
                    DP
                     \
                      D'
                     /  \
                   D⁰    CARDP
                          \
                          CARD'
                         /    \
                     CARD0    NumP
                              /  \
                                 NumP'
                                /  \
                           ┌────────┐
                           │ NumP⁰  │
                           └────────┘
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The head of NumP, i.e., $NumP^0$ instantiates singular indefinite, mass nouns, and plural nouns whereas that of Cardinal projection represents numerals. Finally, the head of DP, i.e., D^0 determines [+definite] feature.

Hawkins (1978) offers a semantic-pragmatic account of the English articles in terms of inclusive vs. exclusive reference. All definite DPs have an inclusive reference while indefinite DPs show an exclusive one. The DP *the books* in the sentence *"Put the books on the shelf"* normally refers to all the books in question whereas the DP *a leg* in "*John lost a leg in the war"* shows that John originally had two legs one of which was excluded from the reference. Hawkins further offers a taxonomy of definite DPs to show the distinction between their form and meanings. Three main types of definite DPs in his taxonomy include anaphoric, associative and encyclopaedic references which will be investigated in the current study.

2.2 Definiteness in Persian

Rahimian and Hajiani (2009) claim that specificity in Persian is basically context dependent and is not formally marked (P. 12):

14) *bax*š   *yek ostâd*   *estexdâm*   *mi-kon-e*

    Department one professor employing IMPF-do.NPS-3SG

    The department is going to employ a professor

The above example (14) would be used at least in two different situations. First, if the referent of the NP *ostâd*, 'professor' would be used in a context is known to the speaker, then it would be interpreted as specific, say, a specific professor. But if the department has not yet decided on a specific professor, then it would be interpreted as nonspecific.

Karimi (1999) claims that the specific NP, definite or indefinite, is always followed by *râ* in object position. Its nonspecific counterpart lacks this element. However, Rahimian and Hajiani (2009: 10) provide some examples rejecting her claim (see 15):

15)   a.   *bâbâ* **yek ketâb-e jadid** *be man dâd-* ʃspecific object NP without *râ*]

     father one book-LINK new to I give.PS-3SG
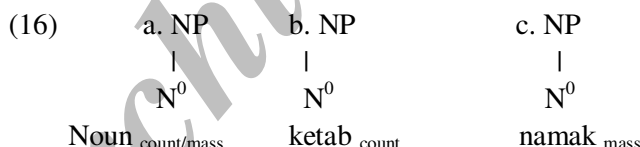
     My father gave me a new book

   b. *bâbâ* **yek ketâb-e jadid-o** *be man dâd-* ʃspecific object NP with *râ*]

    father one book-LINK new-COMP to I give.PS-3SG

    My father gave me a new book

Both '*yek ketâb-e jadid'* and '*yek ketâb-e jadid-o'* are specific NPs because both would be used in a context where the speaker is talking of a certain book that his father gave him. Therefore, we also argue that specific direct objects in Persian are not necessarily followed by 'ra'. The colloquial marker "-o" in 15 (b) and the zero marker in 15 (a) both indicate that the NP object is referential and specific.

All noun properties that were mentioned before are applicable to Persian language except the countability distinction. In Persian semantic forms, there is not such a distinction for countable and uncountable nouns. In this language, all nouns are countable, i.e., all nouns can be pluralized (Lazard, 1992). In other words, the references of all nouns in Persian are distinct and countable, though some references like "soil" and "water" are mass nouns in reality. Persian structure allows us to use the plural form, saying "waters", "soils", like "books", and "pens". Therefore, it can be concluded that countability is due to Persian deep semantic form and is acceptable for its native speakers as part of their competence, and not necessarily as a reflection of lexicon reality. To provide some evidence that Persian nouns are not grammaticalized based on countability, it suffices to say that in Persian numerals must appear with singular nouns. Therefore, the NP nodes are represented as follows:

(16)   a. NP   b. NP   c. NP
              | | |
             N^0 N^0 N^0
      Noun $_{count/mass}$ ketab $_{count}$ namak $_{mass}$
(Adopted from Ghomeshi 2003: 54)

The diagrams in (16) show that Persian lexical nouns are not marked based on countability criterion. Then, the difference between nouns in English and Persian is concerned with the absence of a NumP projection in Persian. That is, the bare singular noun can syntactically appear as an argument of a predicate without mass interpretation while its English counterpart is projected as NumP projection.

2.3 Definite marker in Persian

The noun marker which could be compatible with Persian nouns regardless of their syntactic positions is the [-specific] semantic feature of –*i*. This lexical marker can occur in subject, object, and object of

preposition. In other words, this marker is referential but non-generic[2].

(17)   a.   *mard -i âma-d*
              man-[-specific] came -3rdsg
              A man came.

 b. *(man)   livân-i   šeka'st-am*
     I   glass-[-specific]   broke-1sg
     I broke a glass

 c. *(man) bâ   mard-i sohbat=kard-am*
     I   with man-[-specific] talk=did-1sg
     I talked to a man

What is the syntactic structure of Persian nouns with the specificity marker *–i*? To answer this question, one needs to emphasize that this marker is not a marker of cardinality like the numeral 'one' but a quantitative indefinite like 'some', 'any', and 'no' (Ghomeshi 2003).

(18) *ǎnha be in mǎdrese xesǎrǎt-i vǎred=kard-and*
     They to this school damage.-[-specific] bring=did-3PL
     They brought some damages to this school.
(19) *ǎnha be in mǎdrese xesǎrǎt-i vǎred=nǎkard-and*
     They to this school damage-[-specific] bring=not did-3PL
     They brought no damages to this school.

The above sentences show that the *–i* marker cannot be interpreted like the English indefinite article *a*. Then, the syntactic configuration of the Persian *–i* marker is not at the level of Number projection. As Ghomeshi (2003) puts it truly, this marker is the head of quantifier project:

20. [QP [NP N]-i]

The specificity feature *–i* is not the counterpart of the singular indefinite *a* because it is compatible with plurality (see 21). Then, the syntactic configuration of noun phrase *xesǎrǎt-hǎ-i* is as follows: The configuration in 21 indicates that the head of Quantifier Projection (QP) is the *–i* specificity marker.

(21) [QP [NP N-PL]-i]
    [QP [NP xesăr-ăt]-i]

In non-generic referential context, Perisan nouns without *–i* marker could be interpreted as [+specific]. In the sentences (22a) and (22b) the noun phrase *nameh* is interpreted as [+specific, +definite]. If the noun occurs in object position, it will be aligned with object marker *–ra*[3].

(22) a. *nâme rasid*
    letter arrived
    The letter was delivered
    b. *(man) nâme-râ emzâ=kard-am*
    I letter-OM sign=did-1sg
    I signed the letter

(23) a. *(man) livân-i šeka'st-am*
    I glass-def broke-1sg
    'I broke the glass'
    b. *(man) ketâb-ha-ra   neve'št-am*
    I book-PL-def   wrote-1sg
    'I wrote the books'

The syntactic structure of definite nouns lacking the *–i marker* is represented as follows (Ghomeshi 2003):

(24) [DP [NP N]ØDEF]
    [DP [NP Livan] ØDEF]

2.3.1 Plural marking and definiteness in Persian

It was mentioned that plural marking in English is instantiated at the level of NumP, while that of Persian triggers definite meaning so it is licensed by definite projection.

To prove this idea, first, one requires discussing the location of definiteness in Persian. There is no overt definite marker in Persian. The subject position with no noun marker is construed as definite:

25- dâneš ju xandid
    student   laugh.PAST.3SG
    'The student laughed.'

The direct object non-referential bare nouns are distinguished from

definite bare noun by the presence of case marker –ra:

26- a. *livân-i   šeka'st-am*   b. *livân-râ   šeka'st-am*
glass   break.PAST-1SG   glass-OM break.PAST-1SG
'I broke glasses.'   'I broke the glasses'.

We follow Ghomeshi's view that –ra heads a KP[4] and takes a DP as its complement, and that definite direct object marker must appear with –ra (27).

27- [$_{KP}$ [$_{DP}$ [$_{NP}$ N-PL]0 $_{DEF}$]-ra]

Bare plurals in Persian must be considered as definite. When they appear as direct objects, this means that bare plurals appear with –ra (28b).

28- a. *dâneš juâ xandid-and*
b. *livân -hâ**(-ro) *šeka'st-am*
student-PL laugh.PAST.3SG
glass-PL*(OM) break.PAST-1SG
'The students laughed.'
'I broke the glasses.'

In subject position, a noun phrase containing a numeral with classifier is construed as definite and does not license plural marking (29a-b).

29- a. *se-tâ livân ru-ye miz bud-and.*
three-CL glass on-EZ table be.PAST.3SG
'Three glasses were on the table.'
b. *se-tâ livân *(hâ) ru-ye miz bud-and.*
three-CL glass on-EZ table be.PAST.3SG
'The three glasses were on the table.'

The question arising here is whether we can claim that plural marking marks for definite. The following discussion indicates that this is a strong claim.

2.4 Plural marking and indefiniteness
The Persian indefinite marker –i can occur with nouns in subject (30a), object (30b), and object of preposition (30c) positions:

30- a. dâneš ju-i raft.   b. dâneš ju-i did-am
student-IND go.PAST.3SG   student-IND see.PAST.3SG
'A student went.'
'I saw a student.'
c. livân-râ be dâneš ju-i dâd-am
glass-OM to student-IND give.PAST-1SG
'I gave the glass to a student.'

In English, the indefinite article functions as the singular counterpart to the plural marker, while in Persian the indefinite marker –i cannot appear on bare predicate nominals (31). So, it functions as the English quantitative indefinites 'some' and non-affirmative 'any'.

31- a. *hamid dâneš ju-i -e   b. hamid dâneš ju-e*
Hamid student-IND-be.3SG
Hamid   student-be.3SG
'Hamid is a student.'
'Hamid is a student.'

The claim made by Ghomeshi (2003) is that the presence of –i on a noun entails that the noun must be referential and therefore accounts for the fact that the resulting noun phrase is construed as 'specific'[5] (32).

32-   be xâter hame ânha bâyad kâr-i bekonam
for the sake of them must something-IND do.pres-1SG
For their sake I have to do certain things.

For these reasons, Ghomeshi suggests that –i is a quantitative indefinite determiner which heads QP. She also keeps numerals distinct from number (singular vs. plural marking). Numerals head a Cardinality Phrase (see example 33).

33- a. *[$_{NP}$N-PL]   b. *[$_{CARDP}$[$_{NP}$N-PL]
c. [$_{DP}$[$_{NP}$N-PL]0$_{DEF}$]   d. [$_{QP}$[$_{NP}$N-PL]-i]

In sum, the syntactic structure of Persian noun contains just two levels: cardinal projection and quantifier/determiner projection while that of English requires an extra number projection.

3. Methodology

3.1 Hypotheses and predictions

The following research hypotheses were entertained in the present study:

1. Given the interpretability hypothesis, Persian L2 learners of English can acquire the definiteness feature of English articles.

2. Given the Impairment Hypothesis, Persian L2 learners of English cannot acquire the definiteness feature of English articles even at advanced levels.

3. There is no difference in article use at the comprehension and production levels.

It was predicted that definiteness feature can be acquired by Persian L2ers of English because English encodes definiteness. Also, there will be no difference in the subjects' performance as to whether the type of definite context, i.e. anaphoric, encyclopaedic and association affects the suppliance of the definite article.

3.2 Participants

50 subjects took part in the present study all of whom were students of English literature and TEFL at undergraduate and graduate level at the University of Yazd, Iran. None of the subjects had any residence in an English speaking country. The subjects' bio data is presented in Table 1.

Table 1: Participants' information

	N.	Age range	Age mean	OQPT range
Intermediate	25	18-25	21	36-47
Advanced	25	18-27	22	48-59

All the subjects were tested on campus. In order to tap the subjects' proficiency level, they were asked to complete the Oxford Quick Placement Test (OQPT) (2001) which is a timed test and should be completed in 30 minutes. The test consists of 60 items of vocabulary, grammar and cloze test. The subjects who scored between 35 up to 47 were placed at the intermediate proficiency level. Those who scored between 48 up to 60 were placed at the advanced proficiency level. For the sake of clarity of presentation, we will merely offer the results of the

advanced group in the next section.

3.3 Tasks
3.3.1 Forced choice elicitation task

The forced choice elicitation task included 92 conversational exchanges out of which 48 items were considered for the present study. Each short dialogue either had a count or mass noun following the article. Based on previous studies it was believed that the L2 learners would have difficulty selecting the correct article due to the type of definite and/or the type of noun. There were 12 contexts half of which are definite contexts and the rest indefinite ones. The test instrument was designed to incorporate definite and indefinite specific contexts, indefinite non-specific contexts and three definite contexts. The distribution of tokens in the test, together with the expected article choice in standard English, is shown in Table (2) here. 44 distracters were included in the task as fillers.

Table 2: Distribution of types and tokens (= k) in the forced choice elicitation task

Definite	Count singular		Count plural	
	Expected article	K	Expected article	K
Anaphoric	the	4	the	4
General knowledge	the	4	the	4
Associative	the	4	the	4
Indefinite				
+specific (-scope)	a	4	Ø	4
-specific (-scope)	a	4	Ø	4
-specific (narrow scope)	a	4	Ø	4

An example relating to definite anaphoric count singular context is provided in (34) below. The rest of the contexts tested are enumerated and exemplified in Appendix A.

(34) A: Come on! We've been in this shop for hours.

B: I can't make up my mind. Which shirt do you like best?

C: I prefer _____ shirt with stripes.

the a an Ø

3.3.2 Oral production task

In order to see if L2 learners can use the articles productively, an oral production task was designed. There were some sentences to be translated from Persian into English in which the investigators tried to find out if the subjects have acquired the definiteness and specificity setting of English articles. There were 12 contexts altogether similar to the forced-choice elicitation task bar the number of tokens which were 2 per context totalling 24. The subjects' production was recorded by the Samsung digital recorder and was then transcribed for the data analysis by the researchers.

3.3.3 Procedures

The forced choice elicitation task was not timed but all participants were encouraged to read each short dialogue and choose from four possible items that could fill the gap provided. They were asked to choose the item that they felt was most appropriate to fill the gap and put a circle around it. They were asked not to take too long in deciding which article should be inserted. Rather, they were encouraged to choose the article that they thought was the most appropriate article to fill the gap. The average amount of time to complete the task was forty five minutes. Written instructions for the completion of the task were given and once each participant had read the instructions the researcher then asked each of them if they had clearly understood what they were being asked to do.

4. Data Analysis and Results

The data analysis in the present study is divided into two parts. The first section covers the results obtained from the forced choice elicitation task. Each subject's choice was given a score of 1 and the two non-selected choices a score of zero. It was then possible to quantify how often a subject selected the expected article and how often an unexpected choice was made in each context. The results of both definite and indefinite contexts are analysed here. The second part analyses the results obtained by the oral production task in both definite and indefinite contexts and in terms of singularity and plurality of the target nouns.

4.1 Results of forced choice elicitation task
4.1.1 Results of definite contexts

The subjects' performance on definiteness patterns are presented here. As pointed out earlier, there are three contexts of definiteness namely anaphoric, encyclopaedic and association. The overall results in all three contexts are tabulated in Table (3). As can be seen from Table (5), there was some variability between the definite and zero article use in the plural context. The subjects, however, opted for the English definite article in 91% and 85% of the time.

Table 3: Choice of *the* in [+ definite, + specific] count singular and plural contexts vs. *a and * Ø

Count singular (k=12)		Count plural (K=12)	
The	a/an*	the	Ø*
91%	5.66%	85%	14.66%

Table (4) displays the results of the anaphoric context in singular and plural contexts. The majority of the subjects opted for the correct option in both contexts implying that they fully recognized the fact that there was a need for a functional word in such contexts. There was no statistically significant difference between the singular and plural contexts ($p > 0.05$).

Table 4: Definite anaphoric count singular and plural

The		a/an*		Ø*	
Sg.	Pl.	Sg.	Pl.	Sg.	Pl.
94%	99%	5%	0%	0%	1%

Table (5) displays the results of the subjects' performance in encyclopaedic contexts in singular and plural contexts. Unlike the anaphoric contexts, the L2ers were less accurate in the plural contexts. The advanced learners selected zero article 25% of the time. There was a statistically significant difference between the singular and plural contexts as a whole ($p = 0.001$). It seems that the encyclopaedic knowledge is considered as too general for some L2ers in plural contexts.

Table 5: Definite encyclopaedic /count singular and plural

The		a/an*		Ø*	
Sg.	Pl.	Sg.	Pl.	Sg.	Pl.
91%	74%	2%	1%	7%	25%

Table (6) presents the results of the definite association context in both singular and plural contexts. Regarding the plural context, there was some variability between the definite and zero article. Such a similarity was not observed in the singular context where the advanced learners did not opt for the zero article in the association context. No statistically significant difference was observed neither for the number variable (p>0.05).

Table 6: Definite association/count singular and plural

The		a/an*		Ø*	
Sg.	Pl.	Sg.	Pl.	Sg.	Pl.
88%	82%	10%	0%	2%	18%

In sum, the analysis of the results obtained from definite contexts lends support to the interpretability hypothesis claiming that those functional features which play a semantic role in the LF component can be acquired by L2 learners even if the required feature is lacking in their L1 inventory of features.

4.1.2 Results of indefinite contexts

Indefinite contexts were discussed in the light of specificity so as to enlighten the interaction between definiteness and specificity as a semantic feature. There were three main indefinite contexts which were further subdivided in terms of the number variable, i.e. singularity and plurality. Table (7) depicts the distribution of tokens in the test along with expected article choice. The examples for different contexts are presented in appendix A. The results of each individual indefinite context are presented in turn below.

Table 7: Distribution of types and tokens in indefinite contexts

Type of context	Expected article	Count singular	Expected article	Count plural
Indefinite, + specific (- Scope)	a	4	Ø	4
Indefinite, - specific (- Scope)	a	4	Ø	4
Indefinite, - specific (Narrow scope)	a	4	Ø	4

The article suppliance of the L2 learners in indefinite, + specific contexts for singular and plural contexts is displayed in Table (8). The subjects fluctuated in the use of articles in the singular context. Nearly 40% and 50% of the subjects opted for the definite article in the singular and plural contexts respectively. It seems that they have not yet established the fact that specificity in English may or may not be encoded by the definite article.

Table 8: Indefinite referential de re/count

	the*	a/an	Ø*
Singular	39%	59%	1%
Plural	50%	0%	50%

In the plural context (Table 8) where our target article should be zero, the subjects showed an overuse of the definite article *the* in nearly half of the cases. It seems that the subjects are assuming definiteness for specificity.

Table (9) displays the results of the subjects' performance in indefinite, non-specific (- scope) for singular and plural contexts where the target article should be a/an and Ø respectively. As can be easily noticed from Table (9), L2ers correctly supplied the relevant article in singular contexts which are both – definite and – specific.

Table 9: Indefinite non-referential de re/count

	the*	a/an	Ø*
Singular	2%	98%	0%
Plural	3%	2%	95%

In the plural context (Table 9), a similar tendency can be observed. The majority of L2 learners correctly supplied the zero article in such instances. It seems that the – specificity feature is having a positive contribution in the L2 learners' judgements.

The last context considered for the indefinite pattern is indefinite, - specific (Narrow scope). Table (10) shows the results of the singular and plural contexts which require a/an and Ø respectively. In the singular context, the L2 learners correctly supplied the indefinite article in 95% of the time. In the plural context (Table 10), the majority of the subjects (84%) opted for the zero article ; nonetheless, such a selection is less categorical than the no scope context displayed in Table (9).

Table 10: Indefinite de dicto/count

	the*	a/an	Ø*
Singular	4%	95%	1%
Plural	16%	0%	84%

The use of the definite article *the* in indefinite contexts including +/- specific situations is tabulated in Table (11). The results show that the learners have not yet acquired the specificity feature in English. Nearly half of the subjects supplied the definite article in indefinite, + specific contexts. This was not the case when the NP is [-specific]. They were fluctuating between a definite and a specific reading of *the*, as predicted by the Fluctuation Hypothesis (Ionin, Ko and Wexler, 2004).

Table 11: Choice of **the* in [-definite] count singular and plural contexts

+specific		-specific	
Singular (k = 4)	Plural (k = 4)	Singular (k = 8)	Plural (k = 8)
39/100 (39%)	50/100 (50%)	6/200 (3%)	19/200 (9.5%)

Overall, the results of the subjects' performance in indefinite contexts indicate that the Persian L2 learners of English exhibit some fluctuations in the indefinite, + specific contexts whereas this fluctuation greatly disappears in indefinite, - specific contexts both in no scope and narrow scope domains.

4.1.3 Results of oral production task

The oral production task consisted of 24 conversational exchanges to be translated from Persian into English. There were two main contexts of definite and indefinite articles with three subdivisions for each. Like the forced choice elicitation task, the definite contexts were divided into anaphoric, encyclopaedic and association contexts all of which were + specific and + definite. Each context type had two tokens totalling 12.

The indefinite context was also subdivided into three parts similar to the previous elicitation task. It consisted of (a) indefinite, + specific context, (b) indefinite, - specific (no scope) and (c) indefinite, -specific (narrow scope).

The subjects were required to read the conversational exchange in Persian and translate the sentences into English. Their production was recorded by Samsung Digital recorder and was then transcribed for the data analysis by the researchers. The results of the subjects' performance in each individual context are elaborated below.

The subjects' suppliance of articles in definite anaphoric singular context is displayed in Table (12) below. Although the context was designed to elicit the definite article *the*, some learners opted for some other functional words such as possessive adjectives and object pronouns. As can be seen from Table (12), 34% of the advanced subjects selected the possessive adjective *my* instead of *the*. This does not make the sentence ungrammatical. The context (item 35 below) may have led the subjects to use possessive adjectives rather than the definite article. Many L2 learners have preferred to use 'my bag' instead of 'the bag' in the following item (35).

(35) A: I left my bag at home this morning.
     B: What a pity! What did you do then?
     A: I returned home to pick up **the** bag.

The use of object pronouns is also observed by the advanced group (16%). The subjects have recognized the fact the object DP is definite and specific requiring a modifier; however, they have opted for different DP modifiers.

Table 12: Subjects' performance in definite anaphoric singular context

the	my	it
25/50 (50%)	17/50 (34%)	8/50 (16%)

Table (13) depicts the results from the definite anaphoric plural context where the target response should be *the*. The L2ers selected the definite article *the* in 52% of the time. They also opted for some other determiners such as *some* which attracted 30% of the responses. The majority of the learners correctly identified the fact that there was a need for the definite article but they chose different functional words to this end.

Table 13: Subjects' performance in definite anaphoric plural contexts

the	some	Them/these	Ø
26/50 (52%)	15/50 (30%)	1/50 (2%)	6/50 (12%)

The results of the learners' performance in definite encyclopaedic singular context showed that nearly all subjects (96%) used *the* in this context. The subjects' performance in the definite, encyclopaedic plural context, as displayed in Table (14), was subject to fluctuation. The subjects were exhibiting some optionality in the use of definite article *the* and zero article. Such a linguistic performance is rather similar to the same context in the forced choice elicitation task where the subjects allowed some use of zero article.

Table 14: Subjects' performance in definite encyclopaedic plural context

the	Ø	others
30/50 (60%)	19/50 (38%)	1/50 (2%)

The subjects' performance in the definite association singular context showed that the L2 learners had easily identified the fact that there was a need for a definite article in such contexts as they produced the correct article in 98% of the time. Furthermore, the use of definite articles in the definite association plural context revealed that 94% of the subjects had correctly allowed the definite article *the* in such instances.

All in all, the Persian L2 learners have correctly acquired the fact that

the definiteness feature should be encoded by the article *the* in English in singular contexts. However, they exhibit some linguistic fluctuations between *the* and *zero* in the definite encyclopaedic plural contexts. This implies that the L2 learners have more problems in the encyclopaedic context than the anaphoric and association contexts. Furthermore, the use of other determiners such as *some* is prevalent in the plural contexts especially in the anaphoric case.

The subjects' performance in the indefinite contexts is discussed here. Given the fact that the indefinite article *yek* or the enclitic pronoun *–i* exists in the subjects' L1, we predict that the L2 learners will find no learning problem in the acquisition of indefinite article in singular contexts.

Table (15) shows the results of the subjects' performance in indefinite, + specific singular contexts. As can be seen from the table, the majority of the learners allowed for the indefinite article correctly (76%). Several subjects used *some* with a singular noun which was grammatically acceptable (12%)

Table 15: Subjects' performance in indefinite, + Specific, -scope, singular context

a/an	Ø	some	the	others
38/50 (76%)	3/50 (6%)	6/50 (12%)	3/50 (6%)	0/50 (0%)

The subjects' performance in the indefinite, + specific plural context, as displayed in Table (16) indicates that the advanced learners used the zero article in 18% of the time. They used the indefinite determiners such as *some, a lot of, a number of* in about 80% of the time. The indefinite pronoun *some* was very commonly used in such plural contexts.

Table 16: Subjects' performance in indefinite, + Specific, -scope, plural context

Ø	some	A lot of/ a number of	Others
9/50 (18%)	38/50 (76%)	2/50 (4%)	1/50 (2%)

The analysis of the data in the indefinite, - specific, -scope, singular context reveals that the L2 learners have easily produced the correct

linguistic form. The L2ers supplied the correct article in 49 out of 50 instances (98%). In the indefinite, non-specific plural context (Table 17) where the expected response is the zero article, we can observe more variability of the responses. The L2ers used the zero article in 20% of the time. Nonetheless, the majority of the subjects (68%) used the indefinite pronoun *some* in these instances which cannot be rejected as inappropriate or ungrammatical.

Table 17: Subjects' performance in indefinite, - Specific, -scope, plural context

Ø	Some	the	a/an
10/50 (20%)	34/50 (68%)	2/50 (4%)	4/50 (8%)

The final context investigated in the oral production task was the indefinite, non-specific singular context with narrow scope. The advanced learners correctly supplied the proper indefinite article in all instances (100%). However, the results of the indefinite, non-specific plural context, as displayed in Table (18), revealed that the advanced subjects used the zero article in only 14% of the cases. However, the indefinite pronoun was mostly supplied by the learners in such plural contexts (84%).

Table (18): Subjects' performance in indefinite, -Specific, narrow scope, plural context

Ø	some	others
7/50 (14%)	42/50 (84%)	1/50 (2%)

The L2 learners' performance in the indefinite contexts reveals that the learners have no problem in the acquisition of indefinite articles in singular contexts. However, the subjects have dispreferred the use of zero article in plural contexts. They have tended to use the indefinite pronouns in these cases which will be accounted for in the next section.

The results of the oral production task reveals that the L2 learners are producing fewer ungrammatical zero articles in the production task than in the forced-choice elicitation task.

5. Discussion

We will now examine the hypotheses made earlier and examine whether they are supported by the results of the forced choice elicitation and oral production tasks. The results presented in tables 3-6 indicate that the Persian speaking learners of English fluctuate between interpreting *the* as a marker of definiteness and specificity.

The use of definite article *the* in the oral production task, however, was more fluctuated than the forced choice elicitation task (see tables 10-12). Since the second task was a production task, the participants used other functional words such as *my, it, some* and zero article as well as *the*. The use of *my* and *it*, however, refers to a singular noun. Then, they could be compatible with the definite article while *some* is more compatible with the indefinite plural article. The results can be accounted by the semantic interference of Persian indefinite article into English. English definiteness markers are determined by the semantic feature of countability. While *the* is used in singular and plural [+definite] contexts, *a* is used only in singular [-definite] contexts. In Persian semantic forms, there is not such a distinction for countable and uncountable nouns. That is, in Persian nouns are not projected to a number projection while all English nouns are projected to the number projection. The results show that the function word *some* was not generally produced in the definite context except in definite anaphoric plural (table 11) while that of indefinite contexts is almost existent. It is a clear proof that indefinite nouns mark specificity rather than definiteness. As a matter of fact, in English indefinite count nouns are not aligned with *a/an* while those of Persian are compatible with [-definite, -specific]. Example (18) is repeated here in (36) :

(36) ănha be in mădresă xesărăt-i văred=kard-ănd
    They to this school damage.-[-specific] bring=did-3PL
    They brought some damages to this school.

Thus, the specificity feature –*i* is not the counterpart of the singular indefinite *a* because it is compatible with plurality. The syntactic configuration of the Persian –*i* marker is not at the level of Number projection rather it is the head of quantifier project (37).

37- [QP [NP N]-i]

In English the indefinite marker *a/an* is instantiated in NumP while that of Persian is projected in DP. It indicates that the Persian learners of English who apply *some* have already acquired NumP in English because Nump is at lower level projection than DP. Moreover the use of *my* and *it* in definite contexts is also an indication of definite syntactic configuration.

The question which arises is why the learners produced fewer pronouns such as *some* in singular indefinite contexts than the plural contexts. One may claim that the function word *some* indicates [-specific] and [+plural]. It also indicates that the syntactic configuration of *some* is quantitative. But why do some learners produce *some* in singular contexts (see Table 13)? As it was discussed earlier, the indefinite article in English functions as the singular counterpart of the plural marker, while in Persian the indefinite marker –i cannot appear on bare predicate nominals. Therefore, it can function as the English quantitative indefinites *'some'* and non-affirmative *'any'*. The examples are repeated in (38) and (39) below:

(38) * hamid dâneš ju-i-e
(39) hamid dâneš ju-e
     Hamid student-IND-be.3SG
     Hamid student-be.3SG
     'Hamid is a student.'
     'Hamid is a student.'

The data lacked the functional word *some* in singular definite contexts. It also supports the fact that Persian –i is functioning as an indefinite marker similar to English quantitative *some.*

As mentioned earlier, the only Persian noun marker –i marks specificity, i.e., [-specific] and the lack of the noun marker indicates [+specific] rather than definiteness. The data show that in definite contexts, the participants predominantly selected *the* over 84% in forced choice elicitation task. They also opted for the incorrect *the* in [+indefinite, +specific] contexts in forced choice elicitation task (see Table 6) with a high percentage while the selection of *the* in [+indefinite, -specific] was very low (see Table 7). However, the production of definite marker *the* in the oral production task was varied. The

percentage of definite marker *the* in definite anaphoric singular and plural contexts was less than other contexts. The only criterion which causes the high percentage of incorrect *the* and the low percentage of *the* is the feature [+specific] and [-specific] respectively.

As it was mentioned earlier, the definite marker is absent in Persian but the Persian speakers know the semantic feature of specificity. The application of definite marker *the* in all types of definite contexts in both tasks is high in intermediate and advanced proficiency groups. It indicates that the participants have successfully reset the value of specificity to that of definiteness.

In contrast to the definite article which is non-existent in Persian, the indefinite article is present; however, it marks specificity rather than definiteness. The results obtained suggest that the L2 learners have access to the parameter, but their developing interlanguage grammar fluctuates between *a/an* and *some*.

Three different research hypotheses were stated in this empirical study the results of which will be briefly presented in this section.

The first hypothesis which is related to the interpretability hypothesis claims that Persian L2 learners of English can acquire the definiteness feature of English articles. The theoretical rationale behind this claim is that the notion of definiteness, although it was argued to be lacking in Persian, is semantically interpretable. The findings of the present study show that the L2 learners have satisfactorily acquired the definiteness feature which lacks an overt morphological manifestation in Persian. Hence, the results corroborate the interpretability hypothesis.

The second hypothesis which is related to the impairment hypothesis (Meisel, 1991, 1997) states that Persian L2 learners of English cannot acquire the definiteness feature of English articles even at advanced levels. However, the results obtained prove the reverse. The L2 learners have acquired the definiteness feature as part of the functional category of English articles.

The third hypothesis posits that is no difference in article use at the comprehension and production levels. The results of the study show that in the comprehension tasks the results can be interpreted more uniformly as the subjects are required to select rather than supply the article. Nonetheless, in the second task, oral production, the L2 learners have

opted for other compensatory strategies for definite or indefinite contexts. To illustrate, they have used the demonstrative adjectives or possessive adjectives to indicate definiteness. These alternatives can be syntactically acceptable but it does not imply that the native speakers of English use the same alternatives in such constructions. Given the above points, it can be stated that the L2 learners are less accurate and precise in the oral production task.

Considering the L2 learners' performance in different contexts of definiteness and specificity, it was found out that the L2ers showed fluctuations in the use of the indefinite article (a/an) in singular indefinite, specific referential contexts The subjects fluctuated in the use of articles in the singular context. Nearly 60% of the subjects opted for the definite article and the others indefinite article. Therefore, it can be argued that they have not yet established the fact that specificity in English may or may not be encoded by the definite article. Indeed, it cannot be generalized that whatever is specific should be considered as definite.

6. Concluding Remarks

SLA theories should account for the variability observed in the process of language acquisition. Functional morphology is considered as one of the most crucial aspects of SLA which is subject to different interpretations. In the present study, the acquisition of English article system has been investigated in terms of the generative framework advocated by Chomsky (1981) and other generative researchers. It was argued that Persian partially encodes specificity for non-specific singular nouns whereas English encodes definiteness not specificity.

The findings of the study substantiate the view that L2 learners can fully acquire the functional categories which are argued to be lacking in their L1. However, it does not imply that they face no particular problem in this regard. The notion of specificity is more challenging than that of definiteness.

By implication, syllabus designers and curriculum developers should highlight the distinction between definiteness and specificity by providing suitable samples of the target language structures. From the practical viewpoint, the findings of the study can have great pedagogical

values. It will diagnose and reveal the problems faced by the Persian learners of English in learning the English article system. The findings of the study can give the curriculum developers some clues as how to present the articles in the teaching materials to be developed. The curriculum developers will be able to design some drillings and exercises for those contexts in which the L2 learners have faced the most difficulty.

Notes

1. Bare plurals are in fact known to behave differently from *a*-indefinites – e.g., by obligatorily taking narrow scope under an operator on the conditions under which bare plurals *can* take wide scope). For the purposes of this paper, we will ignore the differences in the behavior of *a*-indefinites and bare plurals in English, since these differences are irrelevant for our discussion: what is relevant is under what conditions L2-English learners overuse *the* with singular as well as plural indefinites.

2. As one of the anonymous reviewers has kindly noted, it can be argued that existentiality entails specificity. In other words, if an NP denotes specificity, it implies existentiality and vice versa.

3. All objects that are inherently definite, such as proper names (e.g. 'John-ra'), personal and demonstrative pronouns appear with this marker; however, this marker does not appear on subjects or objects of prepositions.

4. We will assume –ra as a Case marker that appears on definite direct objects and attaches syntactically to DPs.

5. Givon (1984) connects the presence of an indefinite marker to a referential reading for the noun. He states that "the use of the contrast between one and zero to code the referential-indefinite versus nonreferential contrast is also found in Hebrew, Turkish, Persian and other languages.

6. The options are the same for the rest of the contexts in this appendix.

Appendix A

1. Definite anaphoric count singular

    A: Come on! We've been in this shop for hours.

    B: I can't make up my mind. Which shirt do you like best?

    C: I prefer ____ shirt with stripes.

the   a   an   Ø[6]

2. Definite anaphoric count plural

    A: Hurry up or we'll miss our train. What are you doing?

    B: I'm looking for my keys.

    A: You're so absent-minded. You just put _____ keys in your rucksack.

3. Definite encyclopaedic/count singular

    A: We had science in school today with Mr Smith.

    B: What did you learn?

    B: We learned that Mr Smith wants to visit _____ moon!

4. Definite encyclopaedic/count plural

    A: I went sightseeing in London last Saturday.

    B: Did you see any famous monuments?

    A: Yes, I saw _____ Houses of Parliament.

5. Definite association/count singular

    A. Are you interested in our internship programme?

    B. Yes, I would like to work in your Colchester bank.

    A. OK, then, I will contact _____ branch manager for you.

6. Definite association/count plural

    A. We will go to Paris at Christmas!

    B. How I envy you! I thought that all flights were full.

    A. We booked _____ tickets three months in advance.

7. Indefinite referential de re/count singular

    A: Philippa has been shopping.

    B: What did she get?

    A: She bought _____ book which is one of my favourites.

8. Indefinite referential de re/count plural

    A: That comedian I saw yesterday wasn't very funny.

    B: Wasn't he?

    A: Not really. He told _____ jokes that everybody knows.

9. Indefinite non-referential de re/count singular

    A: Rose is happy.

    B: Why?

    A: She got _____ car for her birthday. I wonder what it looks like?

10. Indefinite non-referential de re/count plural

    A: Julian has been buying things again.

B: What did he get this time?

A: Apparently he bought _____ skis for his skiing holiday, but I haven't seen them yet.

11. Indefinite de dicto/count singular

A: I was sorry to wake up this morning.

B: Why was that?

A: I dreamt I owned _____ fabulous car.

12. Indefinite de dicto/count plural

A: Eric is preparing flowerbeds in his garden.

B: Why?

A: He wants to grow _____ roses.

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