



ARTICLE



<https://doi.org/10.1057/s41599-023-02280-y>

OPEN

The interaction between Nunation and English definiteness: the case of L1 Najdi and Hijazi speakers

Abdulrahman Alzamil¹✉

Various factors affect second language (L2) use of English. One of these is the first language (L1) influence on L2, in relation to the way L1 grammaticalises articles. Nunation is considered to be an Arabic indefinite article by a number of Arabic grammarians. Najdi and Hijazi are two major dialects spoken in Saudi Arabia. Najdi has nunation, while Hijazi does not. In English, Najdi and Hijazi articles are used when the context is definite, which means that *the* in English and *al-* in Arabic are used regardless of the specificity setting. The present study examined whether the presence of nunation would affect the target and non-target uses of articles. That is, would English articles be used in the same way by both Najdi and Hijazi speakers? The sample was composed of 56 elementary-level secondary school students, of whom 24 were native speakers of Najdi; 24 were native Hijazi speakers and 8 were native English speakers. A multiple-choice test was utilised to gather the data. The results showed that: (a) both experimental groups used *the* statistically similarly; (b) the Najdi speakers' overused *a**; (c) the Hijazi speakers overused *ø**; (d) both groups showed sensitivity to the specificity setting; (e) the presence of nunation in the L1 affects L2 learners' use of articles.

¹Department of Foreign Languages, College of Arts, Taif University, Taif, Kingdom of Saudi Arabia. ✉email: dr.aa.alzamil@gmail.com

Introduction

L2 acquisition of English articles is problematic (Feng, 2019; Bruyn, 2020; Ivanov and Tryzna, 2020; Kong, 2022; Veličković, 2022). Whether an L1 has articles or not has been shown to be a potential explanation for the accurate use or misuse of English articles (Ionin et al., 2008; Crompton, 2011; Hassan and Eng, 2018). If a language is [+article], this does not mean that it has an article system identical to that used in English. It should be noted that [+article] languages distinguish articles according to semantic features (Ionin et al., 2008). In English, there are two indefinite articles (*a* and *o*) and one definite article (*the*), whereas in Modern Standard Arabic (MSA) and other spoken Arabic dialects, there is one definite article (*-al*). However, MSA and other spoken Arabic dialects realise indefiniteness differently from English. MSA and a few spoken Arabic dialects (such as Saudi Najdi) have a phonologically overt indefinite marker called nunation or *tanwin*. Nunation is the *-n* sound suffix added to nouns (Sawaie, 2014). Nunation can be part of any of the three case markings (*-un*, *-in* and *-an*) (Bettega, 2014). Conversely, other spoken Arabic dialects (such as Saudi Hijazi) have a phonologically covert indefinite article similar to the English *o*. This study investigates how speakers of two major Saudi-Arabic dialects (Najdi and Hijazi) use English definite articles, to see whether such apparently minor differences as nunation affect this in a significant way. Najdi and Hijazi are generally similar to one another (Al-Azraqi and Alharbi, 2022), even though they are spoken in different places. The former is mainly spoken in the Najd region in the centre of Saudi Arabia, and the latter in the Hijaz region, located to the west (Alzahrani, 2019).

L2 transfer of L1 semantic features influences the use of English by L2 learners. This is a widely documented phenomenon in the literature on second language English (SLA). Positive L2 transfer is when the L1 and L2 share syntactic features that make it easier to learn the L2; negative L2 transfer makes it more difficult (Chen, 2020). The fact that of the two dialects studied here, only Najdi has a phonologically overt indefinite article may mean that different patterns of English article use are displayed by speakers of each dialect. The role of nunation in the L2 use of *the* has not to date been discussed in the literature on SLA. The novelty of this article lies in the fact that this is the first study to include both dialect and nunation as variables. Although the variation in article use between the Najdi and Hijazi dialects is subtle, it may constitute an explanation for differences in L2 English article use in the literature.

The study set out to address two research questions:

1. Will Najdi and Hijazi speakers use *the* in similar ways regardless of the presence or absence of nunation?
2. Do semantic features (definiteness and specificity) affect the use of *the*?

Semantic settings and article use

Semantics are thought to influence the use of articles (Zhao and Shirai, 2022; Ahn and Song, 2023). This study uses the semantic framework designed by Ionin et al. (2004), which governs article usage in [+article] languages. They argued that [+article] languages classify articles according to either definiteness or specificity, two semantic features that constitute the settings of the Article Choice Parameter. Articles are used when a context is definite [+D] or specific [+S]. According to the Fluctuation Hypothesis (Ionin et al., 2004; Ionin et al., 2008), L2 learners whose L1 uses articles will use their L1 settings in the L2. Lyons (1999) states that the vast majority of [+article] languages link the use of articles to definiteness—not specificity. That is, when a

context is definite, the definite article in English (*the*) and Arabic (*al-*) are used regardless of the specificity value. When a context is indefinite, the English indefinite articles (*a* or *o*) are used, depending on the number (singular or plural).

In MSA and Arabic varieties, the question of whether indefiniteness has a marker is controversial (Awad, 2011; Jarrah and Zibin, 2016). This study takes the view that nunation is a marker of indefiniteness, as argued by a number of other researchers (e.g. Holes, 1995; Kremers, 2003). Of the two dialects under study, only Najdi realises nunation (Alzahrani, 2019) as can be seen in the examples below.

1.	Abi	ashtiri	sayartin	dzididah. [-D, Najdi]
	Want-I	buy	car	new
	I want to buy a new car.			
2.	Abya	ashtari	sayarh	zadidah. [-D, Hijazi]
	Want-I	buy	car	new
	I want to buy a new car.			

It can be seen from the example above that *-in* is used in Najdi to mark indefiniteness and Hijazi does not. The way definite articles are used with both singular and plural nouns in English, Najdi and Hijazi is illustrated below.

English Singular

1. I want to talk to **the** boss. He is my brother. [+D, +S]
2. I want to talk to **the** boss. I do not know him. [+D, -S]

Plural

1. I want to talk to **the** bosses. They are my brothers. [+D, +S]
2. I want to talk to **the** bosses. I do not know them. [+D, -S]

The sentences above show that *the* is used whatever the specificity setting and number (singular vs. plural).

Singular nouns

Najdi
[+D, +S]

1.	Abi	atkalam	maʕ	almudir.	hu	axui.
	I-want	talk-I	with	the-boss	he	brother-my.
	'I want to talk to the boss. He is my brother.'					
	[+D, -S]					
2.	Abi	atkalam	maʕ	almudir.	ma	aʕrifah.
	I-want	talk-I	with	the-boss	no	know him.
	'I want to talk to the boss. I do not know him.'					

Hijazi
[+D, +S]

1.	Abya	atkalam	maʕ	almudir.	hua	axujah.
	I-want	talk-I	with	the-boss	he	brother-my.
	'I want to talk to the boss. He is my brother.'					
	[+D, -S]					
2.	Abya	atkalam	maʕ	almudir.	ma	aʕrifuh.
	I-want	talk-I	with	the-boss	no	know him.
	'I want to talk to the boss. I do not know him.'					

These examples show that so long as the context is definite, both Najdi and Hijazi will invariably use the article *al-*.

Plural nouns
Najdi
[+D, +S]

-
1. Abi atkalam maʕ *almudara*. hum axwani.
I-want talk-I with the-bosses they brothers-my.
'I want to talk to *the* bosses. They are my brothers.'
[+D, -S]
 2. Abi atkalam maʕ *almudara*. ma aʕrifhum.
I-want talk-I with the-bosses no know-them.
'I want to talk to *the* bosses. I do not know them.'
-

Hijazi

[+D, +S]

-
1. Abya atkalam maʕ *almudara*. humah axwani.
I-want talk-I with the-bosses they brothers-my.
'I want to talk to *the* bosses. They are my brothers.'
[+D, -S]
 2. Abya atkalam maʕ *almudara*. ma aʕrifhum.
I-want talk-I with the-bosses no know-them.
'I want to talk to *the* bosses. I do not know them.'
-

The above examples illustrate that Najdi and Hijazi dialects—as well as English—recognise and signal definiteness in similar ways, whether the context is singular or plural; English speakers use *the* and Najdi and Hijazi speakers use *al-*. Moreover, specificity does not affect article use.

Literature review

This section discusses studies that examined L1 Arabic speakers' use of English articles. Crompton (2011) conducted a study with Arabic-speaking learners of English who were first and second-year university-level students in the United Arab Emirates. They spoke different Arabic varieties. Their English proficiency levels varied considerably from beginner to advanced. Crompton gathered data from 95 essays. He found that participants were fairly inaccurate in their use of English articles, even though both Arabic and English have similar article systems. In particular, participants tended to overuse *the*. His findings indicated that the existence of similarities in their article systems did not invariably result in a high degree of accuracy among Arabic L2 learners of English. It should be noted that he did not indicate which Arabic varieties the participants spoke. Moreover, the results were not categorised based on their proficiency levels or semantic features.

Abudaljuh (2016) carried out a study with 30 Jordan-Arabic-speaking learners whose proficiency levels ranged from beginner to intermediate or advanced. A multiple-choice test was used. His findings showed that those who were advanced learners were native-like. However, participants at both the lower levels (beginner and intermediate) were less accurate, especially in [+D, -S] and [-D, +S] contexts, due to fluctuation between the two settings. Abudaljuh did not mention what Jordanian dialect his participants spoke or whether there were linguistic variations between the dialects.

Alhaisoni et al. (2017) examined 150 Saudi EFL students' English article use. All of them were studying English at different levels at a Saudi university. They were asked to complete a written task on different topics to investigate their L2 uses of English articles. The study found that omission errors were the most common, at 64.1%, followed by insertion errors at 27.5%. The researchers did not indicate clearly whether omission errors were greater with *the* or *a*. Nor did they provide any information regarding the participants' dialects.

Althohaly's (2020) study, investigated the L2 use of articles of a sample consisting of 104 Saudi students. The participants were studying English at two Saudi universities (Umm Al Qura University and Shaqra University). Based on an oral and a forced-

choice-elicitation task, Althohaly found that his participants' use of *the* was highly accurate. They were less accurate in their use of indefinite articles, and fluctuation was observed in [-D, +S] contexts only. It should be noted that Umm Al Qura University is located in the Hijaz region, while Shaqra University is located in the Najd region. However, Althohaly did not mention what dialect the participants spoke.

Aboras (2021) conducted a study with 32 Saudi-Arabic-speaking participants, aged between 25 and 37, who were post-graduate students in the UK. They had high levels of proficiency in English. They were given three written tasks, proved highly accurate in definite contexts, and were not sensitive to specificity. Aboras did not mention what Saudi variety they spoke.

To investigate the potential effect of nunation on the use of the English *a* and \emptyset , Alzamil (2023) carried out a study with 80 Saudi-Arabic-speaking learners of English. Half the participants spoke Hijazi and the other half Najdi; most of them had a low level of proficiency in English. Alzamil administered a multiple-choice test, finding that Najdi speakers (NjS) were more accurate in their use of *a* than Hijazi speakers (HS). The HS displayed semantic fluctuation in their use of articles, which was not the case with the NjS.

From this brief description of the existing research, it can be seen that although the L1 backgrounds of the participants in these studies were similar, to the extent that they were all Arabic speakers, the results were not identical. This indicates that differences between Arabic and English, and variations in speakers' L1 transfer may not always explain all article use and that other details may explain (either wholly or partially) these different results.

Methodology

Fifty-six participants were recruited for this study, consisting of 24 Najdi participants (mean age 18.1) who were studying in a secondary school in Riyadh and 24 Hijazi participants (mean age 18.3) who were studying in a secondary school in Jeddah. A control group comprised 8 native speakers of English (mean age 38.6) who were from the UK. As just being resident in either Riyadh (where Najdi is usually spoken) or Jeddah (where Hijazi is usually spoken) does not guarantee that one speaks a particular dialect, potential participants were asked what dialect they spoke. Because not all the participants spoke the dialect, and some reported that they had been raised in an area where people spoke a dialect different from the target dialect, there were not many participants.

Both Najdi- and Hijazi-speaking participants started learning English in elementary school in the fourth grade. English is taught once a week to elementary school students and four times a week to intermediate and secondary school students (each class is 45 min long). In Saudi government schools, English is taught by Saudi teachers who are native Arabic speakers. English article use is not covered extensively in English textbooks, which rules out the metalinguistic usage of English articles (Alzamil, 2018). The participants were asked whether they had taken any other English courses abroad or in Saudi Arabia. None of the participants had taken any courses. The rationale for this was to improve the homogeneity of the sample.

The data instruments were as follows: a) an Oxford Quick Placement test; and b) a multiple-choice test. The former is a proficiency test widely used in the SLA literature (Jiang et al., 2022). The proficiency test was timed (30 min) and contained 60 questions. The multiple-choice test, which was not timed, contained 24 short dialogues, each of which was missing an article. Participants were asked to choose the correct English article (*the*, *a*, \emptyset), to fill in a missing word and complete the dialogue. The test

was adapted from Ionin et al. (2004) and is a widely used English article test (Savelieva and Rodina, 2022). Twenty-four dialogues were definite (12 singular and 12 plural contexts). Six singular and six plural contexts [+D, +S] and six singular and six plural contexts [+D, -S] were also used. The dialogue was tested for ambiguity by the native English speakers, who were also asked to take the test and report back. Predictably, given that the test is widely used in the SLA literature, none of them reported any problems.

The tests were administered with the help of one English teacher in each school. Given that the duration of a class in Saudi schools is 45 min, the proficiency and multiple-choice tests were administered on different days. First, the participants took the proficiency test, which showed that most of them were at the elementary level. Then, on a different day, they were asked to complete the multiple-choice test. Those who were not at the elementary level were screened out, although they were allowed to complete all the tests. The UK data was collected online. Since the native speakers had been recruited to ensure that the test material was not ambiguous, the data they supplied was not compared with that of the experimental participants, whose English proficiency was in any case low. Each participant signed a consent form prior to tackling the test dialogues.

When it came to coding the multiple-choice test, both correct and incorrect uses of articles were counted, as it may not have been sufficient to take into account only the correct uses of articles. In fact, participants' incorrect use of articles could potentially provide insight into factors that led them to make certain choices.

Results

This section presents the results of the experimental groups. SPSS 25 was used to obtain the inferential results, whereas Excel 2019 was used to obtain the descriptive statistics and graphs. The inferential results were obtained by non-parametric tests since the data violated the Kolmogorov–Smirnov normality test.

This section reports all the correct and incorrect uses of definite articles. To address the first research question, multiple comparisons of the use of English articles (both between and within groups) were carried out between the NjS and the HS. Before reporting the results, Figure 1 shows the overall use of the target article *the* in all [+D, +/-S] singular and plural contexts combined, by each experimental group.

The results of a Mann–Whitney test ($r = 0.04$, $P = 0.739$) showed that the NjS and the HS used the target article *the* in similar ways. Descriptive statistics for their uses of articles in each context ([+D, +/-S] singular and plural) are presented below.

Tables 1 and 2 show that there was more variation between the groups than Fig. 1 suggests. This can be seen more clearly in their

non-target uses of articles (i.e., *a* and \emptyset). These observations were further investigated by conducting multiple Mann–Whitney tests, as shown below.

Table 3 shows that the HS used *the* more accurately than the NjS in [+D, +S] singular contexts, whereas the NjS used *a** more than the HS in [+D, +/-S] singular contexts. The HS used \emptyset * more than did the NjS in [+D, -S] singular contexts.

It can be seen from Table 4 that the NjS used *a** more than the HS in [+D, -S] plural contexts, whereas the HS, used \emptyset * more than the NjS in [+D, +/-S] plural contexts.

Table 5 shows that the NjS and the HS used *the* the greatest number of times, as well as choosing *a** more than \emptyset * in all the

Table 1 [+D, +/-S] singular contexts.

		Najdi	Hijazi
+D, +S	The	73% ^a	82.5%
	A	20.6%	5.6%
	∅	6.3%	11.9%
+D, -S	The	78.6%	71.4%
	A	19%	2.4%
	∅	2.4%	26.2%

^aMean percentage of article use.

Table 2 [+D, +/-S] plural contexts.

		Najdi	Hijazi
+D, +S	The	86.5% ^a	84.9%
	A	8.7%	6.5%
	∅	4.8%	9.5%
+D, -S	The	75.4%	76.2%
	A	12.7%	4.8%
	∅	10.3%	18.3%

^aMean percentage of article use.

Table 3 Mann–Whitney test (Najdi vs. Hijazi) in [+D, +/-S] singular contexts.

	The	A	∅
+D, +S	$r = 0.31$ $P = 0.036$	$r = 0.48$ $P = 0.001$	$r = 0.22$ $P = 0.126$
+D, -S	$r = 0.24$ $P = 0.102$	$r = 0.53$ $P < 0.001$	$r = 0.73$ $P < 0.001$

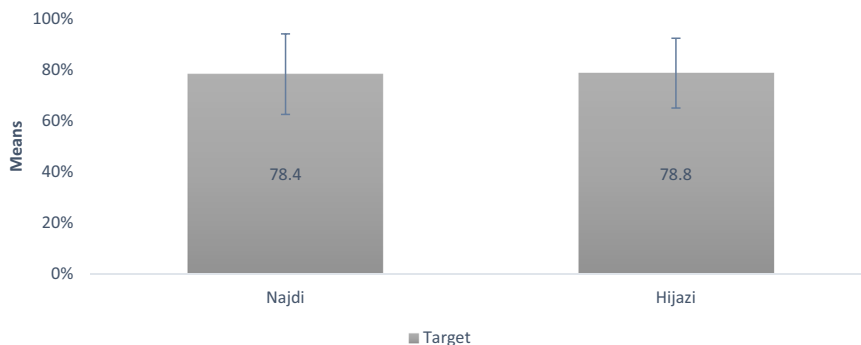


Fig. 1 Accurate uses of articles and standard errors for Najdi and Hijazi speakers. The gray bars show the accuracy means for the use of the article *the* by Najdi and Hijazi speakers. Their accurate uses of the article *the* were combined in all contexts. The error bars illustrate the standard errors to help identify the spread of the participants' accuracy levels.

Table 4 Mann-Whitney test (Najdi vs. Hijazi) in [+D, +/-S] plural contexts.

	The	A	Ø
+D, +S	$r = 0.01$ $P = 0.642$	$r = 0.09$ $P = 0.408$	$r = 0.29$ $P = 0.048$
+D, -S	$r = 0.03$ $P = 0.809$	$r = 0.034$ $P = 0.019$	$r = 0.32$ $P = 0.026$

Table 5 Within-group uses of articles in [+D, +/-S] singular contexts.

		The vs. A	The vs. Ø	A vs. Ø
Najdi	+D, +S	$r = 0.81$ $P < 0.001$	$r = 0.82$ $P < 0.001$	$r = 0.45$ $P = 0.002$
	+D, -S	$r = 0.73$ $P < 0.001$	$r = 0.84$ $P < 0.001$	$r = 0.52$ $P < 0.001$
Hijazi	+D, +S	$r = 0.82$ $P < 0.001$	$r = 0.81$ $P < 0.001$	$r = 0.26$ $P = 0.073$
	+D, -S	$r = 0.85$ $P < 0.001$	$r = 0.80$ $P < 0.001$	$r = 0.72$ $P < 0.001$

Table 6 Within-group uses of articles in [+D, +/-S] plural contexts.

		The vs. A	The vs. Ø	A vs. Ø
Najdi	+D, +S	$r = 0.82$ $P < 0.001$	$r = 0.83$ $P < 0.001$	$r = 0.19$ $P = 0.197$
	+D, -S	$r = 0.82$ $P < 0.001$	$r = 0.82$ $P < 0.001$	$r = 0.09$ $P = 0.538$
Hijazi	+D, +S	$r = 0.83$ $P < 0.001$	$r = 0.82$ $P < 0.001$	$r = 0.22$ $P = 0.126$
	+D, -S	$r = 0.83$ $P < 0.001$	$r = 0.82$ $P < 0.001$	$r = 0.53$ $P < 0.001$

Table 7 Comparisons between [+S] and [-S] singular and plural contexts.

		The	A	Ø
Najdi	Singular	$r = 0.19$ $P = 0.197$	$r = 0.07$ $P = 0.617$	$r = 0.25$ $P = 0.083$
	Plural	$r = 0.31$ $P = 0.031$	$r = 0.17$ $P = 0.239$	$r = 0.29$ $P = 0.041$
Hijazi	Singular	$r = 0.37$ $P = 0.011$	$r = 0.25$ $P = 0.084$	$r = 0.48$ $P = 0.001$
	Plural	$r = 0.33$ $P = 0.021$	$r = 0.05$ $P = 0.742$	$r = 0.36$ $P = 0.013$

singular contexts. The HS chose \emptyset^* more than a^* in [+D, -S] contexts.

Both the NjS and the HS used *the* the most in all the plural contexts, according to the results shown in Table 6. The HS used \emptyset^* more than a^* in [+D, -S] plural contexts.

Concerning the second research question, the inferential statistics for the comparisons between the uses of each article in specific vs. non-specific contexts are reported below.

Table 7 shows that the NjS were more target-like in their use of *the* in [+D, +S] plural contexts than in [+D, -S] plural contexts. The HS was more target-like in their use of *the* in [+D, +S] singular and plural contexts than in [+D, -S] singular and plural

contexts which resulted in greater use of \emptyset^* in [+D, -S] singular and plural contexts than in [+D, +S] singular and plural contexts.

Discussion

In this section, I discuss the research questions.

1. Will Najdi and Hijazi speakers use *the* in similar ways regardless of the presence or absence of nunation?
2. Do semantic features (definiteness and specificity) affect the use of *the*?

In relation to the first research question, the two groups displayed similarly high levels of accuracy across all definite contexts combined, and there were no statistical differences. This is in line with the findings of other studies (see Alhothaly, 2020; Aboras, 2021).

Whether or not they used it in their own dialect, nunation had no impact on participants' overall accuracy in their use of *the*. However, classifying their use of articles on the basis of semantic features and numbers (singular vs. plural) put a different perspective on these results. The between-group comparisons showed that the NjS used a^* more than the HS in [+D, +/-S] singular contexts and [+D, -S] plural contexts. The HS used *the* more accurately than the NjS in [+D, +S] singular contexts. The HS used \emptyset^* more than the NjS in [+D, -S] singular contexts and [+D, +/-S] plural contexts. These results show the tendency of the NjS to use a^* , and of the HS to use \emptyset^* . This tendency is further supported by the within-group comparisons, where there was no instance in which the NjS used \emptyset^* more than a^* , and there was no instance when the HS used a^* more than \emptyset^* .

These findings show that the NjS used a^* more than the HS. This could be accounted for by the fact that they have nunation in their dialect. No significant differences were observed in speakers' use of *the* overall, regardless of dialect, either when using *the* or in any context except [+D, +S] singular contexts, where the HS were more accurate than the NjS in the use of *the*. This difference could be because the NjS link the use of a^* to singular nouns, since their L1 realises the equivalent of the English *a*. On the other hand, there was clear evidence of the NjS' overuse of a^* in the between-group and within-group comparisons and of the overuse of \emptyset^* by the HS. Although this study considered the use of *the*, interesting findings emerged from a comparison of all the articles used by speakers of both dialects, which suggested that, unlike Alhaisoni et al.'s (2017) study, article-based studies should analyse the use of all articles. It can be assumed that with greater exposure to L2 input, NjS' use of a^* may cease, which is in line with the decline in the number of errors made by advanced English learners in other studies (see Crompton, 2011).

The variation in performance between Najdi and Hijazi speakers could explain why other studies have reached different conclusions. The present study calls for the inclusion of dialect as a significant variable that should be taken into consideration when recruiting participants; minor linguistic variations among participants could lead to different results. For example, Crompton (2011) recruited participants with different L1 Arabic backgrounds. He did not classify the results based on their dialect, as there could be some other Arabic dialects that realise nunation in a way similar to Najdi. The novelty of the present study's results lies in the fact that it is the first study to examine the potential effects of nunation on the use of English definite nouns, as well as the first to include dialect as a variable.

In relation to the second question, the findings are in line with those of other studies that found that L2 learners sometimes link their use of English articles to specificity (i.e., Abudaljuh, 2016; Alhothaly, 2020; Alzamil, 2023). This is different from Aboras'

(2021) findings. The NjS and the HS used *the* more accurately in specific than non-specific contexts. This was more evident in plural contexts. This shows that although both English and Arabic grammaticalise articles on the basis of definiteness, low-proficiency L1 Arabic English learners struggle to set the parameter to a suitable value. This refutes the Fluctuation Hypothesis. However, this needs to be further confirmed, since this study examined the use of articles by participants from just one L1 background. In accordance with the Fluctuation Hypothesis, however, the study anticipates that with greater L2 input, low-proficiency learners of English will eventually set the parameter to the proper value (i.e., [+D]). These findings confirm the importance of classifying contexts on the basis of semantic features, something that has not been observed in other studies (e.g., Crompton, 2011; Alhaisoni et al., 2017).

Limitations and future studies

The study suffers from the following limitations. The first is that the study did not recruit speakers from various L1 backgrounds and dialects. The second is that the study should have used fewer controlled test instruments as the participants had to choose between articles, and more spontaneous and less controlled tests could have revealed interesting findings. However, the objective was to examine the use of English articles under different semantic conditions, and the multiple-choice test used did achieve that objective. The other limitation is the relatively small number of participants. Future research could use oral tasks to examine whether there are any effects of nunation. However, it may be challenging to control semantic features and noun types in oral tasks.

Conclusion

The L2 use of English articles has been examined by many researchers, not all of whom have reached identical conclusions. Unlike previous studies, the present study examined whether the use of nunation in the L1 can affect the L2 use of the English definite article *the* by L1 Najdi (+nunation) and L1 Hijazi (-nunation) speakers. It was found that both groups used *the* similarly. However, the NjS' errors were mainly in using the non-target indefinite article *a*, whereas the HS' errors occurred mainly when using the non-target indefinite article \emptyset . Both groups were affected by semantic features, as they are sensitive to specificity and not definiteness, even though, as in English, both Najdi and Hijazi dialects link the use of articles to definiteness.

Data availability

This article contains all the data I obtained and analysed.

Received: 6 June 2023; Accepted: 12 October 2023;

Published online: 01 November 2023

References

- Aboras A (2021) The role of first language transfer in the acquisition of definiteness in specific and generic contexts by Saudi-Arabic learners of English. Dissertation, Swansea University
- Abudalbh M (2016) The acquisition of English articles by Arabic L2-English learners: a semantic approach. *Arab World English J* 7(2):104–117. <https://doi.org/10.24093/awej/vol7no2.7>
- Ahn H, Song M-J (2023) L1-Korean speakers' definiteness processing in L2 English: a visual world paradigm eye tracking study. *Bilingualism Lang Cogn* 26(3):556–569. <https://doi.org/10.1017/S1366728922000840>
- Al-Azraqi M, Alharbi A (2022) Regional variation in the syntactic use of qad reflexes: convergence or divergence in Saudi Arabic varieties? *Cogent Arts Humanit* 9(1):1–10. <https://doi.org/10.1080/23311983.2022.2139907>
- Alhaisoni E, Gaudel DR, Al-Zuoud KM (2017) Article errors in the English writing of Saudi EFL preparatory year students. *Adv Lang Liter Stud* 8(1):72–78. <https://doi.org/10.7575/aiaac.all.v.8n.1p.72>
- Alhothaly, MAMA (2020) The acquisition of English articles by Saudi EFL learners: a mixed-method research study. Dissertation, University of Aberdeen
- Alzahrani, T (2019) Floating and non-floating quantifiers in Hijazi Arabic: an HPSG analysis. Dissertation, University of Essex
- Alzamil A (2023) Nunation and the L2 acquisition of English indefinite articles by L1 Najdi and Hijazi speakers. *Heliyon* 9(5):1–10. <https://doi.org/10.1016/j.heliyon.2023.e15243>
- Alzamil J (2018) The effectiveness of explicit instruction and metalinguistic feedback: fluctuation between semantic properties. Dissertation, Newcastle University
- Awad D (2011) The acquisition of English articles by Arabic speakers. Dissertation, Lancaster University
- Bettega S (2014) The use of dialectal Tanwin in Qatari Arabic. *RiCOGNIZIONI. Rivista Di Lingue E Letterature Straniere E Culture Moderne* 1(2):15–25
- Bruyn BL (2020) Definiteness across languages and in L2 acquisition. In: Aguilar-Guevara A, Loyo JP, Maldonado VV-R (eds) *Definiteness across languages*. Language Science Press, Berlin, pp. 201–220
- Chen C (2020) A study on positive transfer of native language and second language teaching methods. *Theor Pract Lang Stud* 10(3):306–312
- Crompton P (2011) Article errors in the English writing of advanced L1 Arabic learners: the role of transfer. *Asian EFL J* 50(1):4–35
- Feng S (2019) The acquisition of English definite noun phrases by Mandarin Chinese speakers. *Stud Second Lang Acquis* 41(4):881–896. <https://doi.org/10.1017/S0272263118000323>
- Hassan MTA, Eng WB (2018) Acquisition of English definite article 'the' by Arab EFL learners. *J Appl Linguist Lang Res* 5(1):319–327
- Holes C (1995) Community, dialect and urbanization in the Arabic-speaking Middle East. *Bull School Orient Afr Stud* 58(2):270–287. <https://doi.org/10.1017/S0041977X00010764>
- Ionin T, Ko H, Wexler K (2004) Article semantics in L2 acquisition: the role of specificity. *Lang Acquis* 12(1):3–69. https://doi.org/10.1207/s15327817la1201_2
- Ionin T, Zubizarreta ML, Maldonado SB (2008) Sources of linguistic knowledge in the second language acquisition of English articles. *Lingua* 118(4):554–576. <https://doi.org/10.1016/j.lingua.2006.11.012>
- Ivanov I, Tryzna M (2020) L2 English article use by native speakers of Kuwaiti Arabic: semantic universals revisited. In: Zoghbor W, Alexiou T (eds) *Advancing english language education*. Zayed University Press, Dubai, pp. 210–220
- Jarrah M, Zibin A (2016) Syntactic investigation of nunation in Haili Arabic. *SKY J Linguist* 29:39–62
- Jiang P, Namaziandost E, Azizi Z, Razmi MH (2022) Exploring the effects of online learning on EFL learners' motivation, anxiety, and attitudes during the COVID-19 pandemic: a focus on Iran. *Curr Psychol* 42:2310–2324. <https://doi.org/10.1007/s12144-022-04013-x>
- Kong S (2022) An asymmetry in the acquisition of English definite and indefinite articles by Chinese speakers of L2 English. *Taiwan J Linguist* 20(2):51–89
- Kremers J (2003) The noun phrase in Arabic: a minimalist approach. Dissertation, University of Nijmegen
- Lyons C (1999) *Definiteness*. Cambridge University Press, Cambridge
- Savelieva T, Rodina Y (2022) Cross-linguistic influence in the acquisition of articles in L3 English by Danish-Russian bilingual children. *J Second Lang Stud* 5(2):235–265. <https://doi.org/10.1075/jsls.21025.rod>
- Sawaie M (2014) *Fundamentals of Arabic grammar*. Routledge, New York
- Veličković M (2022) L2 English article suppliance among tertiary level students: The impact of specificity. *Teme-Časopis Za Društvene Nauke* 46(3):661–676
- Zhao H, Shirai Y (2022) Frequency effects in Chinese learners' acquisition of the English article construction. In: Chan M, Benati AG (eds). *Challenges encountered by Chinese ESL learners: problems and solutions from complementary perspectives*. Springer Nature, Singapore, pp. 237–263

Acknowledgements

The researcher would like to acknowledge the Deanship of Scientific Research at Taif University for funding this research project.

Author contributions

The author of this study is the sole contributor.

Competing interests

The author declares no competing interests.

Ethical approval

Approval was obtained from the Research Ethics Committee of the Department of Foreign Languages at Taif University with which the author was affiliated. The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

Informed consent

All participants signed consent forms to participate in the study.

Additional information

Correspondence and requests for materials should be addressed to Abdulrahman Alzamil.

Reprints and permission information is available at <http://www.nature.com/reprints>

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.

© The Author(s) 2023