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Research article

Grammatical Number in English and Arabic: A Contrastive Morphological Analysis with Potential Implications for Arabic-Speaking EFL Learners

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ABSTRACT

This paper presents a systematic contrastive analysis of grammatical number in English and Arabic, focusing on morphological differences and their potential implications for L2 learning. Drawing on contrastive analysis and cross-linguistic influence research, the study uses authoritative grammatical descriptions and, where appropriate, corpus-derived quantitative evidence from previous studies. It examines how singularity, duality, and plurality are encoded and how they interact with gender and case. The analysis shows substantial typological differences: English has a binary singular-plural system, whereas Arabic has a ternary singular-dual-plural system, with number marking interacting more extensively with gender and case. These contrasts may constitute potential sources of cross-linguistic influence. The study contributes to applied linguistics by integrating traditional contrastive analysis with contemporary SLA perspectives and available corpus-derived quantitative evidence to help identify potential areas of learner difficulty and inform future learner-language research.

العدد النحوي في الإنجليزية والعربية: تحليل صرفي تقابلي مع الاثار المحتملة على متعلمي الإنجليزية كلغة اجنبية من الناطقين بالعربية

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المُستخلص

تقدم هذه الدراسة تحليلا تقابليا منهجيا لنظامي العدد النحوي في اللغتين الإنجليزية والعربية مع التركيز على الاختلافات في البنى الصرفية وما يترتب عليها من اثار محتملة في تعلم اللغة الثانية. تستند الدراسة الى ابحاث التحليل التقابلي والتاثير عبر اللغات وتعتمد على البيانات الوصفية النحوية الموثوقة والأدلة الكمية المستمدة من المدونات اللغوية في الدراسات السابقة. تتناول الدراسة التمييز بين الإفراد والتثنية والجمع وتفاعلاتها مع الجنس النحوي والإعراب. تعرض الدراسة فروق نمطية جوهرية بين اللغتين. ففي حين تعتمد اللغة الإنجليزية تمييزا ثنائيا بين المفرد والجمع، تعمل اللغة العربية وفق نظام ثلاثي يشمل المفرد والمثنى والجمع وتتفاعل فيه علامات العدد بدرجة أوسع مع الجنس النحوي والإعراب. وتذهب الدراسة إلى أن هذه الاختلافات قد تشكل مصادر محتملة للتأثير عبر اللغات. تسهم الدراسة في اللسانيات التطبيقية من خلال دمج التحليل التقابلي التقليدي مع المنظورات المعاصرة في اكتساب اللغة الثانية ومع الأدلة الكمية المتاحة المستمدة من المدونات اللغوية للمساعدة في تحديد مواطن الصعوبة المحتملة لدى المتعلمين وتوجيه البحوث المستقبلية المعنية بلغة المتعلم.

الكلمات المفتاحية: العدد النحوي، التحليل التقابلي، اكتساب اللغة الثانية، التأثير عبر اللغات، متعلمو الإنجليزية الناطقون بالعربية

1. Introduction

The grammatical category of number is a universal feature of human language, yet the structural means by which individual languages encode it vary considerably. Contrastive Analysis (CA), first systematised by Lado (1957) and subsequently refined by James (1980), holds that a systematic comparison of two languages can illuminate the structural points at which learners are likely to encounter difficulty (i.e., points where the native and target languages diverge) as well as those where similarities may facilitate acquisition. Such contrasts, however, are more appropriately treated as hypotheses about possible learner difficulty unless confirmed by learner-language evidence. Despite its theoretical critics (e.g., Wardhaugh, 1970), CA continues to inform syllabus design, error analysis, and pedagogical grammar, particularly in contexts involving closely related or typologically distinct language pairs (Erzin, 2026; Mitchell et al., 2019).

English and Arabic constitute a typologically instructive pair. Both are well-described languages with extensive grammars, yet their number systems differ in significant ways: the number of grammatical terms, the morphological strategies employed, the role of grammatical case in number marking, the interaction of number with agreement, and the availability of sub-distinctions within the plural. Understanding these differences has direct practical value for Arabic-speaking learners of English,

English-speaking learners of Arabic, translation professionals and undergraduates working between the two languages, and syllabus designers. Many studies suggest that cross-linguistic influence may affect EFL learners' production of target-language forms even at higher L2 proficiency levels (see, e.g., Erzin, 2026; Mkhelif, 2014). To help determine the extent to which cross-linguistic influence contributes to learning an L2 area, it is important to conduct contrastive studies that help identify potential areas of difficulty, generate empirically testable predictions, and, consequently, suggest appropriate remedies.

Although Aziz's (1989, 2021) and Al-Jurf's (2002) works have attempted to present contrastive descriptions of the two languages, they focus on major points and thus do not include all the typically relevant details and their pedagogical/translational implications. For example, in Azizi's (1989) contrastive analysis, no reference is made to important topics such as the plural of compounds in English and non-human plural nouns in Arabic commonly taking feminine singular adjective forms, although these topics may constitute potential sources of L2 learning difficulty. Aziz (2021, p.i) has made it clear that the focus of his contrastive analysis is on the syntactic component rather than the morphological one: "The syntactic component is the central part of this description. However, the other components, the phonological, the morphological and the semantic components are from time to time referred to in order to explain syntactic points." Al-Jurf's (2002) contrastive analysis is generally comprehensive. However, when it comes to broken (irregular) plurals in Arabic, it focuses mainly on paucal plural templates, listing four templates without explicitly specifying the criteria governing their selection or ordering or indicating whether their sequence reflects relative frequency. Thus, it gives little attention to broken plural templates (e.g., abundant plural templates), which recent corpus-based studies suggest are highly frequent and productive (e.g. Boudelaa & Gaskell, 2002). Approximately 41% of the plurals in Boudelaa and Gaskell's (2002) study belong to broken plural templates (see Section 5.1.3), which require careful attention; their pedagogical and translational implications are among the main concerns of the present study. This study aims to address these coverage limitations and provide a more complete picture. Accordingly, the study presents an integrated morphological comparison of the grammatical number systems of English and Arabic, combining authoritative grammatical descriptions with available corpus-derived quantitative evidence to help identify potential areas of learner difficulty and generate empirically testable hypotheses about cross-linguistic influence. In doing so, it contributes to applied linguistics by integrating traditional contrastive analysis with contemporary perspectives on SLA and pedagogical grammar.

The present study has the following objectives:

1. To describe the morphological realisation of grammatical number in English.
2. To describe the morphological realisation of grammatical number in Arabic.
3. To identify the points of similarity and difference between the two systems.
4. To identify and discuss potential pedagogical and translational implications.

The study addresses the following research questions:

1. How is grammatical number morphologically realised in English and Arabic?

2. What major similarities and differences exist between the two systems?

3. Which structural differences may constitute potential sources of cross-linguistic influence in L2 learning?

4. What potential implications do these differences have for EFL instruction and translation practice?

2. Theoretical Framework

Contrastive Analysis (CA) emerged as a formal methodology in structural linguistics in the mid-twentieth century. Lado (1957, p. 2) argued that "those elements that are similar to [the learner's native language] will be simple for him, and those elements that are different will be difficult." This prediction that structural divergence between two languages generates learner difficulty gave CA both its theoretical rationale and its pedagogical application.

James (1980) later developed a more refined taxonomy of cross-linguistic relationships, distinguishing between zero correspondence (where a category or form present in one language is completely absent in the other), divergence (where both languages have the category but do not realise it in the same way), and over-differentiation (where one language makes a distinction the other does not). All three relationships are exemplified in the English-Arabic number comparison: zero correspondence in the absence of dual number in English; divergence in the plural morphology of both languages; and Arabic over-differentiation in the paucal-abundant distinction absent from English (Section 5.1.3).

More recently, CA has been integrated with cross-linguistic influence studies in Second Language Acquisition (SLA). Odlin (1989) and Ellis (1994) both argue that morphological cross-linguistic influence from L1 to L2 is most pronounced in domains where the L1 possesses a grammatical category that the L2 lacks, or vice versa. The number system provides a test case of precisely this type: Arabic-speaking learners of English need to adjust to a target system in which the three-term L1 distinction is not morphologically maintained, while English-speaking learners of Arabic need to acquire the dual and the broken plural, which have no L1 counterparts and may therefore face additional learning demands. Cross-linguistic influence research since the 1970s does not assume a simple one-to-one relationship between structural difference and learning difficulty (see, e.g., Kellerman, 1995; Jarvis & Pavlenko, 2008). Structural difference remains *one* predictor among several (e.g., perceived similarity, L2 proficiency), and recent literature does not deny its relevance (see, e.g., Erzin, 2026; Mitchell et al., 2019; Mkhelif, 2021). More recent work has also emphasised the need to identify cross-linguistic influence through converging evidence rather than structural contrast alone and has highlighted the value of learner-corpus data for testing transfer-related hypotheses systematically (Jarvis & Pavlenko, 2008; McEnery et al., 2019). Such approaches are particularly relevant to L2 morphology, where structural differences can generate testable predictions about learner behaviour but cannot by themselves establish transfer.

In the present study, a distinction is made between structural contrast, predicted learner difficulty, possible cross-linguistic influence, and empirically observed learner behaviour. A structural difference between English and Arabic may identify a potential area of difficulty, but it does not by itself demonstrate that cross-linguistic influence actually occurs. For example, English information is an uncountable noun, whereas its Arabic counterpart, معلومة (*maʿlūmah*), is countable and has the plural form معلومات (*maʿlūmāt*). This structural mismatch may therefore be expected to constitute an area of difficulty for Arabic-speaking learners of English and to be a potential source of cross-linguistic influence. However, contrastive analysis alone cannot establish the actual production of forms such as *informations and requires evidence from learner-language data. Accordingly, the present study directly establishes the structural contrast and identifies the associated predicted area of difficulty. In contrast, possible cross-linguistic influence and empirically observed learner behaviour remain hypotheses to be verified empirically.

3. Methodology

This study employs a qualitative contrastive morphological analysis design, supplemented where appropriate by corpus-derived quantitative evidence reported in previous corpus-based studies. The study did not compile or directly query a corpus; it draws on quantitative evidence from previous corpus-based investigations. Here, the qualitative contrastive morphological analysis adopted is understood as the systematic description, classification, and comparison of number-related morphological categories and forms in English and Arabic. The Arabic component of the present study focuses primarily on Modern Standard Arabic (MSA). Accordingly, contemporary MSA reference grammars and modern written Arabic provide the principal descriptive basis for the analysis. The study also consults Classical Arabic grammatical sources where relevant, particularly for morphological categories and classifications that continue to inform MSA descriptions. Their inclusion should not, however, be taken to mean that Classical Arabic and MSA are treated as separate or equivalent objects of analysis. Rather, the relationship between the two is a dynamic continuum, a linguistic spectrum that allows choosing the most appropriate form for each context (Abid, 2026). This distinction is especially relevant to the traditional classification of broken plurals into paucal and abundant patterns, whose conventional numerical associations the present study describes without assuming that they function as rigid or fully productive semantic distinctions in contemporary MSA.

The analysis draws on linguistic data from authoritative grammatical descriptions of English and Arabic. At the descriptive level, it draws mainly on the frameworks offered by Quirk and Greenbaum (1973), Quirk et al. (1985), and Huddleston and Pullum (2002, 2005) for English. For Arabic, the analysis draws primarily on descriptions of Modern Standard and modern written Arabic, particularly Aziz (1989), Ryding (2005), and Badawi et al. (2016), supplemented, where relevant, by classical grammatical sources such as Ibn Aqeel (1985), Ibn Hisham (1979), and Al-Zamakhshari (1993). Nahr (1989). The grammatical sources were selected on the basis of their descriptive comprehensiveness, scholarly

authority, relevance to grammatical number morphology, and coverage of contemporary English and MSA. In addition, the analysis is supplemented, where appropriate, by corpus-derived quantitative evidence, such as frequency counts, percentages, and type-based distributions reported in previous corpus-based studies. It mainly uses Biber et al. (1999) for English and Boudelaa and Gaskell (2002) for Arabic, as they are, to the best of the researcher's knowledge, among the most relevant available sources providing quantitative evidence pertinent to the present morphological comparison. Their selection was further guided by the availability and applicability of quantitative morphological evidence directly relevant to the dimensions examined in the present study, rather than by corpus size alone. Although Boudelaa and Gaskell's (2002) database is relatively limited (see Section 5.1.3), a limitation worth acknowledging, the figures it offers on nominal forms taking a sound (regular) or a broken (irregular) plural have been reported as sufficiently reliable. Data from these corpus-based sources helped determine which plural types are more numerous than others and arrange the most frequent broken-plural templates in descending order.

The analysis proceeds through several stages:

First, the relevant number categories and morphological forms in each language are identified from established grammatical descriptions.

Second, these forms are classified according to the major dimensions examined in the study, namely:

(1) number categories,

(2) plural formation,

(3) interaction with grammatical gender, and

(4) interaction with grammatical case.

Third, following James's (1980) framework for contrastive analysis, the two languages are systematically compared across the four major dimensions mentioned above. The comparison was intended to identify areas of correspondence, divergence, and over-differentiation. Particular attention was paid to differences that may constitute potential sources of cross-linguistic influence and learner difficulty in SLA.

Fourth, where available, selected corpus-derived quantitative evidence from previous studies supplements the qualitative description, particularly in relation to the relative frequency of plural types and broken-plural templates. In the present study, the figures drawn from Boudelaa and Gaskell (2002) represent lexical-type frequencies rather than token frequencies. The former counts the number of distinct lexical items that realise a given form or pattern, whereas the latter counts occurrences in running text.

Finally, the resulting structural contrasts are interpreted in terms of their potential relevance to cross-linguistic influence, L2 learning, and translation. The analysis is therefore primarily qualitative and descriptive, with quantitative evidence playing a supplementary rather than a primary analytical role.

Several limitations of the present design warrant acknowledgement. The study is primarily descriptive and contrastive and therefore does not provide direct evidence of learner behaviour or translation performance. Its quantitative component relies on corpus-derived evidence reported in previous studies rather than on corpus data collected specifically for the present investigation. Nevertheless, the Arabic lexical database used in Boudelaa and Gaskell (2002) is relatively limited in scope, and the quantitative patterns derived from it should therefore be interpreted cautiously rather than treated as fully representative of MSA as a whole. Accordingly, the identified areas of learner difficulty and cross-linguistic influence are not treated as direct evidence of learner difficulty or cross-linguistic influence. Rather, they should be regarded as theoretically motivated predictions that require verification through learner-language, experimental, or translation data.

4. Number in English

The English number system is a binary one: it distinguishes singular (one referent) from plural (more than one referent). This two-term opposition is realised primarily through noun morphology. With respect to this number system, English nouns can be classified into two main groups: variable (countable) nouns and invariable (uncountable) nouns. Variable nouns are more numerous than invariable nouns, since most nouns in English display a singular/plural contrast (Biber et al., 1999; Huddleston & Pullum, 2005; Quirk et al., 1985). The variable-invariable distinction is adopted here as a descriptive framework for the present comparison. Although it broadly parallels the countable-uncountable distinction, the two classifications should not be treated as fully equivalent or exhaustive.

4.1 Variable Nouns

Variable nouns have both a singular and a plural form (Huddleston & Pullum, 2002; Quirk & Greenbaum, 1973). In the singular, they require the indefinite article *a* or *an*; in the plural, they take a plural affix and occur without the indefinite article.

(1a) *He bought a book and an apple.*

(1b) *He bought two books and three apples.*

The plural forms of variable nouns divide into regular (predictable) and irregular (unpredictable) types.

4.1.1 Regular Plurals

Regular plurals are formed by suffixation. Plural formation in English is regular in most cases (Biber et al., 1999). The default suffix is {-s}, but its phonological and orthographic realisation is determined by the final segment(s) of the base form (Huddleston & Pullum, 2005; Quirk et al., 1985):

1. Default: add -s (e.g., pen → pens, shop → shops).

2. After sibilants (s, z, ch, sh, x): add -es (e.g., glass → glasses, church → churches, box → boxes).

3. After consonant + y: change -y to -i and add -es (e.g., spy → spies; proper nouns excepted: the Kennedys).

4. After vowel + y: add -s (e.g., boy → boys).

5. After consonant + o: typically add -es (e.g., hero → heroes); some exceptions (e.g., photos, pianos).

A notable feature of English regular plurals is their phonological conditioning: the suffix is realised as /s/ after voiceless consonants (*caps*), /z/ after voiced segments (*dogs*), and /ɪz/ after sibilants (*buses*). This allomorphic variation is phonologically transparent. It does not depend on morphosyntactic information such as grammatical case, as shown in Section 5.1.2.

4.1.2 Irregular Plurals

Irregular plurals are not predictable from the base form. They are not generated by the default productive plural rule and often require lexical knowledge, although some subclasses display limited morphological or phonological regularities (Huddleston & Pullum, 2002; Quirk & Greenbaum, 1973). There are several subclasses of them:

1. Voicing plurals: the final consonant of the base is voiced, and -s is added (e.g., path → paths /θ/ → /ð/; wife → wives /f/ → /v/; house → houses /s/ → /z/).

2. Mutation plurals: a medial vowel changes (e.g., foot → feet; goose → geese).

3. -en plurals: a suffix -en is added, sometimes with internal change (e.g., child → children; ox → oxen).

4. Zero plurals: the plural form is identical to the singular (e.g., sheep → sheep; deer → deer).

5. Classical plurals: they are borrowed words that retain the plural morphology of the source language (see Table 1).

Table 1. Classical plural formation in English

Origin	Pattern	Singular	Plural
Latin	-us → -i	radius	radii
Latin	-um → -a	datum	data
Latin	-ex/-ix → -ices	codex	codices
Greek	-is → -es	thesis	theses
Greek	-on → -a	phenomenon	phenomena
French	-eau → -eaux	bureau	bureaux
Italian	-o → -i	solo	soli
Hebrew	base + -im	kibbutz	kibbutzim

4.1.3 Compound Nouns

With compound nouns (i.e., nouns consisting of more than one base), the plural can be formed in three different ways (Quirk & Greenbaum, 1973; Quirk et al., 1985). These patterns represent different structural types of English compounds rather than fully productive pluralisation rules that apply indiscriminately to compound nouns:

(1) Normally, the last element of the compound is put in the plural form:

(e.g., assistant director → assistant directors, babysitter→ babysitters),

(2) The first element of the compound is changed to the plural:

(e.g., passer-by → passers-by, man-of-war → men of war)

(3) Both first and last elements are put in the plural form:

(e.g., gentleman farmer → gentlemen farmers, woman doctor→ women doctors)

4.2 Invariable Nouns

Unlike variable nouns, invariable (uncountable) nouns have a single form and do not alternate between singular and plural. They divide into singular invariables and plural invariables (Quirk et al., 1985).

4.2.1 Singular Invariables

Singular invariable nouns denote entities conceptualised as masses, abstractions, or collectivities rather than discrete countable units. They cannot be preceded by *a/an* and resist pluralisation (Huddleston & Pullum, 2002; Quirk & Greenbaum, 1973). Their principal subtypes are:

1. Abstract mass nouns: advice, information, help.
2. Concrete mass nouns: water, meat, gold.
3. Nouns ending in -s that are grammatically singular: economics, measles, news.
4. Proper nouns: London, Tigris, Shakespeare.
5. Adjective heads used nominally (non-personal): the beautiful, the true.

4.2.2 Plural Invariables

Plural invariable nouns take plural agreement but have no corresponding singular form. Their principal subtypes include the following (Huddleston & Pullum, 2002; Quirk et al., 1985):

1. Summation plurals- referring to objects with two joined parts: scissors, trousers, glasses.
2. Plural nouns ending in -s with no singular: thanks, proceedings, outskirts.
3. Plural proper nouns: the Himalayas, the Alps, the Netherlands.

4. Unmarked plural nouns (no -s): clergy, people, police.

5. Personal adjective heads: the sick, the rich, the elderly.

5. Number in Arabic

Unless otherwise indicated, 'Arabic' in the present study refers to Modern Standard Arabic (MSA). Classical grammatical descriptions are cited where they describe morphological categories that remain relevant to MSA morphology. The Arabic number system is a three-term system, distinguishing singular مُفْرَد (*mufrad*, 'one referent'), dual مُثَنَّى (*muthannā*, 'two referents'), and plural جَمْع (*jam'*, 'more than two referents'). This three-term system is primarily realised through noun and adjective morphology. In this system, Arabic nouns and adjectives fall into two main groups: variable (countable) and invariable (uncountable). Variables in Arabic are more numerous, especially among countable nouns, which normally participate in a singular, dual, and plural system (Badawi et al., 2016; Ryding, 2005). Irregular (broken) plurals are conventionally further subclassified into the paucal plural جمع القلة (*jam' al-qilla*) for three to ten referents and the abundant plural جمع الكثرة (*jam' al-kathra*) for more than ten, a distinction with no parallel in English. This numerical distinction, however, may not necessarily be realised consistently across all lexical items and contexts in contemporary usage. Both regular (sound) and irregular (broken) plural types exist, and number marking in Arabic interacts systematically with grammatical case, unlike in English.

5.1 Variables in Arabic

Variables in Arabic have a singular form, a regular dual, and either a sound or a broken plural (Aziz, 1989).

5.1.1 The Dual

The dual is a categorical feature of Arabic number that has no productive morphological counterpart in English (English *both, either,* and *neither* encode duality lexically rather than morphologically). In Arabic, the dual is formed by suffixation to the singular form, with the suffix conditioned by grammatical case (Ibn Hisham, 1979; Al-Zamakhshari, 1993):

1. Nominative case: suffix ـان (*-āni*)

2. Accusative and genitive cases: suffix ـيْن (*-ayni*)

(2) الذَّكِيَّانِ الطَّالِبَانِ نَجَحَ

najaḥa al-ṭālibāni al-dhakiyyāni 'The two clever students succeeded.' (nom.)

(3) تُفَّاحَتَيْنِ اشْتَرَيْتُ

shtaraytu tuffāḥatayni 'I bought two apples.' (acc.)

(4) المُعَلِّمَيْنِ مَعَ ذَهَبْتُ

dhahabtu ma'a al-mu'allimayni 'I went with the two teachers.' (gen.)

These examples show that case assignment, rather than the noun's semantics, determines the suffix form, a morphosyntactic pattern that has no counterpart in English.

5.1.2 Sound Plurals

As Aziz (1989) notes, sound plurals in Arabic are closely connected with grammatical gender. Two types exist:

Masculine Sound Plural (جمع السالم المذكر): This type of plural is used for personal masculine nouns and adjectives. The suffix is ـُونَ (*-ūna*) in the nominative case and ـِينَ (*-īna*) in the accusative and genitive:

(5) النَّشِيطُونَ الطَّيَّارُونَ نَجَحَ

najaḥa al-ṭayyārūna al-nashīṭūna 'The active pilots succeeded.' (nom.)

(6) المُهَنْدِسِينَ رَأَيْتُ

raʾaytu al-muhandisīna 'I saw the engineers.' (acc.)

(7) النَّجَّارِينَ مَعَ عَمِلْتُ

ʿamiltu maʿa al-najjārīna 'I worked with the carpenters.' (gen.)

Feminine Sound Plural (جمع السالم المؤنث): This is used for semantically or formally feminine nouns and adjectives; formed by adding ـَاتُ (*-āt*) (Aziz, 1989):

(8) نَشِيطَاتٌ المُعَلِّمَاتُ

al-mu'allimātu nashīṭātun 'The (female) teachers are active.'

(9) الطَّائِرَاتُ حَدِيثَةٌ

al-ṭāʾirātu ḥadīthatun 'The planes are modern.'

As shown in (9), the adjective is feminine singular rather than plural. In Arabic, non-human plural nouns typically trigger feminine singular agreement in relevant agreement targets, such as adjectives, a pattern known as deflected agreement (Badawi et al., 2016; Bettega & D'Anna, 2022; Ryding, 2005).

A key observation here is that the Arabic sound plural suffix encodes both number and gender, whereas the English regular plural suffix {-s} encodes number only. In addition, Arabic suffix alternations are conditioned by case, a grammatical variable that has no role in English number marking.

5.1.3 Broken Plurals

Broken plurals جمع التكسير (*jam' al-taksīr*) in Arabic are formed not only by suffixation but also by internal vocalic modification of the base, i.e., root-and-pattern morphology (also called templatic morphology) characteristic of Semitic languages (McCarthy, 1981; Holes, 2004). As noted by Aziz (1989, p. 116), they "are not fully predictable, or are only partially predictable in that they are derived

according to certain forms [templates]." This contrasts fundamentally with English, where irregular plurals involve a limited set of heterogeneous processes, including internal vowel change, nondefault suffixation, and zero marking. In contrast, Arabic broken plurals are organised more systematically through root-and-pattern morphology.

Within the traditional Arabic grammatical classification of broken plurals, a distinction is made between paucal plural patterns جمع القلة (*jamʿ al-qilla*) and abundant plural patterns جمع الكثرة (*jamʿ al-kathra*). The former are conventionally associated with quantities from three to ten, whereas the latter are associated with larger quantities. In contemporary MSA, however, this numerical distinction should not be interpreted as an exceptionless rule governing the choice of plural form.

Paucal plural جمع القلة (*jamʿ al-qilla*): Four paucal plural templates are attested (Ibn Aqeel, 1985; Halwani, 1999; McCarthy & Prince, 1990), as shown in Table 2 below, which is ordered by available frequency evidence (Boudella & Gaskell, 2002).

Table 2. Arabic paucal plural templates traditionally associated with (3-10 referents), ordered by available frequency evidence

No.	Template	Singular	Plural	Gloss	Lexical type frequency
1.	أَفْعَال (af'āl)	بَاب (bāb)	أَبْوَاب (abwāb)	door	121
2.	أَفْعِلَة (af'ila)	طَعَام (ṭa'ām)	أَطْعِمَة (aṭ'ima)	food	24
3.	أَفْعُل (af'ul)	شَهْر (shahr)	أَشْهُر (ashhur)	month	(< 10)
4.	فِعْلَة (fi'la)	فَتَى (fatā)	فِتْيَة (fitya)	youth	(< 10)

Note: Figures represent lexical types rather than token occurrences. The source study did not provide exact frequencies for classes containing fewer than ten types.

As shown in Table 2, the frequencies represent lexical types rather than occurrences in running text. Boudelaa and Gaskell (2002) report exact figures only for plural classes with ten or more members. Consequently, their published table does not provide the precise frequencies of أَفْعُل and فِعْلَة. They examined 1670 nominal forms occurring among the 3000 most frequent words in their MSA lexical database. Approximately 59% and 41% of the relevant lexical types in the database were sound and broken plurals, respectively. Using this linguistic and corpus-based evidence, they show that MSA's plural system is not a minority default, as was previously thought (e.g. McCarthy & Prince, 1990). Based on their analysis, they argue that Arabic sound plural formation should not be treated as marginal. However, broken plurals remain central to Arabic morphology.

Abundant plural جمع الكثرة (*jamʿ al-kathra*): These are conventionally associated with quantities greater than ten, particularly where a lexical item has contrasting paucal and abundant plural forms, e.g.

شَهْر (*shahr*): أَشْهُر (*ashhur*, paucal, which follows the pattern أَفْعُل (*af'ul*) in Table 2 above) and شُهُور (*shuhūr*, abundant, which follows the pattern فَعُول (*fa'ūl*) in Table 3 below).

Abundant plural forms belong to more than twenty-five templates (Nahr, 1989; Ryding, 2005), the most frequent of which are shown in Table 3 (Boudella & Gaskell, 2002).

Table 3. The most frequent Arabic abundant plural templates, traditionally associated with quantities above ten, ordered by available frequency evidence

No.	Template	Singular	Plural	Gloss	Lexical type frequency
1.	فَعُول (fa'ūl)	شَهْر (shahr)	شُهُور (shuhūr)	month	79
2.	مَفَاعِل (mafā'il)	مكتب (maktab)	مكاتب (makātib)	office/desk	56
3.	فَوَاعِل (fawā'il)	سَاحِل (sāḥil)	سَوَاحِل (sawāḥil)	coast	40
4.	فِعَال (fi'āl)	ثَمَرَة (thamara)	ثِمَار (thimār)	fruit	36
5.	فَعَائِل (fa'ā'il)	ضَمِير (ḍamīr)	ضَمَائِر (ḍamā'ir)	conscience	33
6.	فُعَلاء (fu'alā')	حَكِيم (ḥakīm)	حُكَمَاء (ḥukamā')	wise man	32
7.	فُعَل (fu'al)	أُمَّة (umma)	أُمَم (umam)	nation	25
8.	فُعُل (fu'ul)	صَحِيفَة (ṣaḥīfa)	صُحُف (ṣuḥuf)	newspaper	17
9.	فُعَّال (fuʿʿāl)	حارِس (ḥāris)	حُرَّاس (ḥurrās)	guard	15
10.	مَفَاعِيل (mafāʿīl)	مِنْدِيل (mindīl)	مَنَادِيل (manādīl)	handkerchief	15
11.	فِعَل (fi'al)	خَيْمَة (khayma)	خِيَم (khiyam)	tent	13
12.	أَفْعِلَاء ('af'ilā')	صديق (ṣadīq)	أَصْدِقاء (aṣdiqā')	friend	13

Note: Frequencies are lexical-type counts from Boudelaa and Gaskell (2002).

The templatic nature of Arabic broken plurals means they form a morphological system qualitatively distinct from English irregulars: rather than being listed individually, they are generated by applying a finite set of vowel melodies to consonantal roots. This systemic character is absent from English irregular plural morphology.

5.2 Invariable Nouns in Arabic

Arabic also has nouns that are invariably singular or invariably plural. For contrastive completeness, the present section briefly considers invariable nouns in Arabic, a class that has received less systematic treatment in Arabic grammatical descriptions than variable nouns. Aziz (1989) notes that traditional Arab grammarians did not systematise this class, and that the two subsets have received less descriptive attention than their English counterparts. Singular invariables include abstract nouns such as شَجَاعَة

(*shajā'a*, 'courage'), and plural invariables include collective nouns such as نَاس (*nās*, 'people'). A small class of expressions is invariably dual and typically idiomatic, such as الأَصْغَرَان (*al-aṣgharān*, 'the two small things'), which idiomatically refers to the heart and the tongue. This dual invariable class is unique to Arabic and has no English counterpart.

5.3 Number and Gender Interaction

A notable feature of Arabic number morphology, distinguishing it from English, is its systematic interaction with grammatical gender. English gender is largely restricted to the personal pronoun system (*he/she/it*) and does not affect plural formation. In Arabic, the choice of sound plural type depends on the noun's grammatical gender: masculine nouns take the masculine sound plural ـونَ (*-ūna*) or ـينَ (*-īna*), while feminine nouns take the feminine sound plural ـاتٌ (*-āt*). This gender-number interaction means learners need to acquire two grammatical categories simultaneously, which may pose a potential learning challenge for English-speaking learners of Arabic.

6. Contrastive Analysis: English and Arabic Morphological Numbers

This section systematically compares the two number systems across the dimensions identified above. Table 4 summarises the similarities and differences between the two systems; the following subsections elaborate on each point of divergence.

Table 4. Synoptic comparison of English and Arabic number systems

Feature	English	Arabic
Number of terms	Two (singular, plural)	Three (singular, dual, plural)
Noun variability in terms of grammatical number	Present	Present
Adjective variability by grammatical number	Absent	Present
Regular plural formation	Suffixation only; suffix conditioned by the phonology of the base	Suffixation; suffix conditioned by grammatical case and gender
Irregular plural type	Limited, heterogeneous processes, including internal vowel change, nondefault	Broken plurals organised through root-and-pattern (templatic) morphology, though not fully predictable
Frequency of suffixal (regular) pluralisation	More frequent than irregular pluralisation	More frequent than broken plurals
Paucal/abundant distinction	Absent	Traditionally recognised in the classification of broken plurals; the numerical distinction is not

		necessarily rigid in contemporary usage.
Dual	Absent (lexical expression only: both, either)	Morphologically productive; obligatory for 'exactly two'
Case conditioning of number suffix	Absent	Present (nominative vs. accusative/genitive forms)
Gender interaction with plural morphology	Plural marking not conditioned by grammatical gender	Sound plural formation conditioned by grammatical gender, with distinct masculine and feminine plural forms
Overtness of number marking	Obscured in some noun classes (e.g. zero plurals, -s singulars)	Often overtly marked morphologically, including a dedicated dual category, although plural formation, especially broken plural formation, is not always fully predictable

6.1 Number of Terms: Binary vs. Ternary Opposition

The most fundamental difference concerns the number of terms in each system. English has a binary opposition (singular vs. plural); Arabic has a ternary opposition (singular vs. dual vs. plural). In James's (1980) taxonomy, the dual represents an instance of grammatical over-differentiation relative to English: Arabic encodes a distinction between exactly two and more than two that English lacks. The additional dual category introduces an obligatory morphological distinction between exactly two referents and quantities greater than two in relevant contexts, a distinction that English does not encode inflectionally. For English-speaking learners of Arabic, this means acquiring a new grammatical category absent from their L1: this additional category may increase the number of morphological distinctions they need to acquire. In contrast, Arabic-speaking learners of English need to adapt to a target-language system that does not grammatically encode this distinction, which they have internalised in their L1, and the absence of a grammatical dual may reduce opportunities for direct form-function mapping. These asymmetries align with transfer-based accounts of L2 learning (Odlin, 1989).

The contrastive analysis suggests possible consequences for Arabic EFL learners (Section 7) and offers empirically testable predictions for SLA researchers.

6.2 Variability by Grammatical Number: Variable (Countable) vs. Invariable (Uncountable)

In both languages, nouns are divided, in terms of grammatical number, into two main types: variable nouns (those that can be made plural) and invariable nouns (those that cannot be made plural). Variable nouns are more numerous in both languages and are either regular or irregular. In both languages, available quantitative evidence shows that suffixal regular pluralisation is more frequent than

irregular pluralisation. In the database examined by Boudelaa and Gaskell (2002), sound plurals are more frequent in terms of lexical type distribution than broken plurals.

6.3 Morphological Strategies: Affixation vs. Templatic Morphology

English plural morphology is predominantly additive (concatenative; a suffix is appended to the base form), although a limited set of irregular nouns exhibits internal stem alternation, zero marking, or nondefault suffixation. Arabic, by contrast, combines concatenative sound-plural morphology with a much more systematic nonconcatenative root-and-pattern system in broken plurals. Templatic morphology, in which a vowel melody (the template) is superimposed on a consonantal root, is a typological characteristic of Semitic languages and is structurally alien to English (McCarthy, 1981). For English-speaking learners of Arabic, acquiring Arabic broken plurals may involve learning a templatic morphological mechanism that lacks a productive counterpart in English.

6.4 Case Conditioning and Grammatical Case

Contemporary English marks case only in the personal pronoun paradigm (*he/him, she/her*). Plural formation in English is therefore not conditioned by case. In Arabic, by contrast, the sound plural and dual suffixes differ between the nominative case and the accusative/genitive cases (see Sections 5.1.1 and 5.1.2). For Arabic learners of English, the absence of case-conditioned plural marking may be a structural facilitator. However, English-speaking learners of Arabic need to learn to integrate case and number simultaneously.

6.5 Overtness of Number Marking

English number marking is not always transparent: zero-plural nouns (*sheep, deer*), for example, are formally identical in the singular and plural, and nouns ending in {-s} (*news, mathematics*) appear plural but are grammatically singular. Arabic generally displays greater overt morphological differentiation of grammatical number than English, particularly through its dedicated dual morphology and its range of plural markers. In terms of morphological transparency (defined as the degree to which morphological form corresponds to grammatical meaning, Bybee, 1985), Arabic generally shows more explicit morphological differentiation of number than English, which may make certain number distinctions relatively salient to learners. Overt marking, however, does not necessarily entail predictability, particularly because broken plural formation may be only partially predictable. Morphological overtness should therefore be distinguished from morphological predictability: a category may be overtly marked while the form used to realise it remains only partially predictable.

7. Potential Pedagogical and Translational Implications

7.1 Potential Implications for EFL Teaching

The contrastive findings suggest several potential areas of difficulty that can be formulated as empirically testable predictions for Arabic-speaking learners of English:

1. The absence of dual morphology in English is unlikely to cause production errors involving the use of a dual suffix that does not exist in the L2. However, it may involve a potential over-extension of explicit quantity marking. In other words, Arabic-speaking EFL learners may show a greater tendency to use explicit lexical quantity marking, such as *two* or *both*, when referring to exactly two entities. They may consider that simply pluralising an English noun is informationally insufficient when they intend exactly two referents and may resort to lexical strategies (*two books* rather than simply *books*) more frequently than native speakers. It may also cause comprehension difficulties: sentences such as 'I saw the teachers' (referring to exactly two teachers) may be interpreted as relatively underspecified with respect to exact duality. These are empirically testable predictions for SLA researchers.

2. Count/mass noun distinctions in English are a well-documented source of difficulty for Arabic learners (Master, 1997). The present analysis suggests one possible source of this difficulty: Arabic and English countability distinctions do not always map directly onto one another. What counts as countable in one language is not necessarily countable in the other language and vice versa. For example, 'information' is uncountable in English. Still, its counterpart in Arabic, معلومة (*maʿlūmah*), is countable and has a plural form معلومات (*maʿlūmāt*), which may contribute to errors such as *informations, although such errors may also involve intralingual overgeneralisation of English plural morphology and other factors. Besides, plural regularity is language-specific; consequently, what counts as a sound plural in Arabic is not necessarily regular in English and vice versa. For example, 'alumnus' has the irregular plural 'alumni' in English. Still, its counterpart in Arabic خريج (*khirrīj*) has a sound plural خريجون (*khirrījūn*). This mismatch may constitute a potential locus of cross-linguistic influence, although an error such as **alumnuses* may also result from intralingual overregularisation of the English plural system. These predicted difficulty areas may help inform focused pedagogical attention and the design of diagnostic or remedial tasks.

3. The complexity of English irregular plurals, particularly the classical (learned) plurals (Table 1), may impose additional lexical-learning demands because many forms cannot be generated by the default plural rule. The contrastive analysis therefore suggests that explicit attention to these forms and repeated contextualised exposure may be pedagogically useful.

7.2 Implications for Translation

The following points related to translation practice may be highlighted:

1. The three-way number distinction in Arabic poses translation challenges in both directions. When translating from Arabic into English, the translator needs to decide how to render the dual: English has no morphological equivalent, so lexical strategies such as 'the two students' or 'both students' need to be used, which may require lexical specification not morphologically encoded in English. When translating

from English into Arabic, the translator needs to resolve number ambiguity in certain English constructions (e.g., 'I need teachers', two or more?) and determine which form is appropriate for a given noun, requiring knowledge of the lexicon that goes beyond grammatical rules.

2. The translator also needs to decide how to render English compounds, such as 'women doctors', where English permits gender-specifying noun compounds, whereas Arabic more commonly expresses the meaning through gender inflection, modification, or paraphrase. These have no direct morphological counterparts in Arabic. They can have semantic counterparts, as Arabic commonly expresses these meanings through feminine professional nouns, adjective phrases or descriptive paraphrases rather than through the same compound structure. So the translator can choose طبيبات (*ṭabībāt*), which is more natural than نساء طبيبات (*nisāʾ ṭabībāt*), which is likely to introduce redundancy, since the feminine plural suffix ـات (*-āt*) already indicates gender.

3. The traditional paucal-abundant distinction in Arabic may also matter for translation. However, the choice between plural forms should not be treated as mechanically determined by numerical reference, since paucal and abundant forms do not operate as an entirely rigid numerical opposition in all contexts, and the interpretation of a plural form may depend partly on contextual usage (Yaqut, 1999; Al-Badairat & Al-Batayneh, 2014). This poses an additional challenge: an English text using the plural 'months' may not indicate whether fewer or more than ten are intended. A sensitive Arabic translation may need to use contextual information to select the appropriate plural form from the options أَشْهُر (*ashhur*, paucal, which follows the pattern أَفْعُل (*af'ul*) in Table 2 above) and شُهُور (*shuhūr*, abundant, which follows the pattern فَعُول (*fa'ūl*) in Table 3 above). Accordingly, where alternative plural forms are available, translators should not assume that numerical reference alone determines the appropriate plural form.

7.3 Directions for Further Research

Future research should investigate whether learner corpora, classroom performance, and translation practice reflect the predicted areas of difficulty. Corpus-based, experimental, and error-analysis studies would provide valuable empirical evidence on the acquisition and processing of grammatical number in both languages. Several empirically tractable research questions arise from this analysis:

1. Error analysis studies: Do Arabic-speaking EFL learners make more errors with certain types of irregular English plurals, and are these errors systematic (e.g., over-regularisation)?

Studies of error analysis in this domain would benefit from a learner-corpus design (Granger, 2014) and from coding errors using a taxonomy based on the contrast points identified in Section 6.

2. Corpus-based studies: Do Arabic EFL learners' written corpora show significantly higher rates of lexical dual marking (e.g., 'both …', 'two …') than comparable native-speaker corpora, a pattern that would be consistent with possible L1 influence?

3. Translation studies: Do professional translators and translation undergraduates systematically use different strategies to render Arabic dual constructions into English, and do these strategies vary by text type? To what extent are they aware of the distinctions between paucal and abundant plurals? Is the paucal/abundant semantic distinction consistently realised across all lexical items and contemporary contexts?

4. Further morphological research: Future studies could compare the realisation of grammatical number in MSA with that in Arabic colloquial varieties, investigate the pluralisation of English loanwords in MSA, examine plural-of-plural formations (jamʿ al-jamʿ), and explore whether the selection among alternative plural forms is related to lexical meaning or usage context.

8. Conclusions

This study examined the grammatical number systems of English and Arabic at the morphological level through a systematic contrastive analysis informed by contemporary perspectives on contrastive linguistics and cross-linguistic influence and supplemented by corpus-based data where appropriate. Drawing on the contrastive analysis presented above, the following conclusions may be drawn:

1. The two languages differ not only in the number of grammatical categories they encode, but also in the morphological mechanisms used to realise number distinctions. English relies primarily on a binary singular-plural distinction and on concatenative plural morphology. In contrast, Arabic employs a ternary system that includes singular, dual, and plural forms. It also preserves a conventional morphological distinction between paucal and abundant broken-plural patterns, for which available frequency evidence indicates their relative importance. However, the numerical interpretation of the paucal and abundant plural types is not necessarily rigid in contemporary MSA.

2. Available quantitative evidence indicates that suffixal regular plural forms are more frequent than irregular plural forms in both languages, although their relative frequencies differ. The contrastive analysis presented answers the study's first and second research questions about how the two languages morphologically realise grammatical number, as well as their major similarities and differences.

3. The findings also reveal important differences in how numbers interact with gender and case, and in each language's degree of morphological transparency. These contrasts suggest several potential areas of learner difficulty and cross-linguistic influence, particularly for Arabic-speaking learners of English, English-speaking learners of Arabic, and translators working between the two languages. They also address the third and fourth research questions on structural differences that may constitute potential sources of cross-linguistic influence and their pedagogical and translational implications.

Two main contributions of the present study may be highlighted:

1. The study contributes to the applied-linguistics literature by integrating traditional contrastive analysis with contemporary concerns in SLA and pedagogical grammar.

2. The study draws on authoritative grammatical descriptions and available corpus-derived quantitative evidence to support the morphological comparison, help identify potential areas of learner difficulty, and generate empirically testable hypotheses concerning cross-linguistic influence. However, the analysis remains descriptive and does not draw on learner-language data.

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Appendix A: Transliteration Conventions for Arabic

Arabic	Transliteration	Arabic	Transliteration
ء	ʾ	ع	ʿ
ث	th	غ	gh
ح	ḥ	خ	kh
ذ	dh	ش	sh
ص	ṣ	ض	ḍ
ط	ṭ	ظ	ẓ
ا	ā	ي	ī / y
و	ū / w	ة	-ah / -at