
| RESEARCH ARTICLE

Difficulties in Learning English Plural Formation by EFL College Students

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| ABSTRACT

Freshman students at the College of Languages and Translation received direct instruction in plural formation. Instruction covered regular plural nouns, irregular plural nouns, plural formation of words ending in -f, and -o, nouns that have the same plural and singular form, and words with Latin and foreign plurals. The students did all the exercises in the textbook, then took an immediate test a week after instruction and a delayed test at the end of the semester (3 months later). Responses were scored and a corpus of 3099 errors was collected from both tests. No significant differences were found in the amount and types of errors made by the students in the immediate and delayed tests. Results revealed that freshman students tended to regularize English plural formation and overgeneralize regular English plural morphemes (63.28%), i.e., they deleted the regular plural suffix from nouns ending in an -s or -es (35.37%) or tended to add the regular plural suffix to words that do not have it (27.91%). They also confused singular and plural endings of Latin words (15.07%). They either confused the singular and plural forms of the same Latin word or added a faulty Latin suffix to a Latin word or even a non-Latin word such as *criterium*, **curriculum*, **natia*, **salma*, **petrolea*. In other cases, they thought the singular and plural forms of a word were the same (7%). In addition, findings showed that the most difficult plurals to master were those of words that end with an -s or -es but have no singular form such as *measles*, *news*, *pajamas*, *means*, *linguistics* (28.85%); words with Latin plurals (21.85%); non-count nouns such as *information*, *electricity*, *petroleum*, *salmon* with no plural form (21.4%), and words that have a plural, but they thought they have no plural form such as *nation*, *illness*, *infection*, *African* (8.55%). Interference among the English plural morphemes themselves and confusing plural formation rules caused most errors. No interference from Arabic pluralization was found. Recommendations for improving students' English plural formation competence are given.

| KEYWORDS

EFL freshman students, plural formation, EFL plural acquisitions, faulty plurals, faulty pluralization strategies, interference.

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1. Introduction

The acquisition of inflectional morphology has been a topic of interest to researchers in the first language acquisition literature for decades. A variety of studies have investigated the acquisition of inflectional morphemes in different languages, such as first grade children producing more correct responses and fewer nonplural responses than kindergarten children (Knafle & Others (1979); children's regularizations of plural forms (Berman, (1981; Marcus, 1995; Maslen, Theakson, Lieven & Tomasello, 2004); using growth curves and dynamic-systems modeling to examine early lexical and grammatical development of children (Robinson & Mervis, 1998); differences between English plural noun inflections and third singular verb inflections in the language input due to frequency, sentence position, and duration (Hsieh, Leonard, Swanson, 1999); error patterns in the acquisition of German plural morphology with grammatical gender as a cue (Spreng, 2004); the production of nominal prefixes in the Otopamean language Northern Pame (Pye & Pfeiler (2021) and others.

Another line of research focused on the acquisition of plural morphemes by children with language learning disabilities or specific language impairments such as grammatical morphology in children learning English as a Second Language (ESL) and native children with specific language impairment (Paradis, 2005); the use of verb and noun morphology in the spoken and written

language of school-age children with language learning disabilities (Windsor, Scott & Street (2000); rule invention in the acquisition of morphology by a language-impaired child (Camarata & Gandour, 1985); using suprasegmental features to distinguish singular and plural forms in spontaneous speech and phonological, morphological, and psycholinguistic factors contributing to rule invention in the acquisition of morphology by a language impaired three-year-old child (Camarata & Erwin, 1988); plural acquisition in 5-and-6-year-old children with specific language impairment (Oetting & Rice, 1993).

In addition, numerous studies in the literature investigated the acquisition of inflectional morphology in the second/foreign language (L2). Jia (2003) examined the acquisition of the English plural morpheme by children who are native speakers of Mandarin Chinese. She followed up ten native Chinese-speaking children who immigrated to the United States between the age of 5 and 16 for five years. She used a picture description task and their spontaneous speech to measure the children's proficiency in producing English plural morphemes. Only 70% of these children mastered English plural morphemes after five years of exposure to the English language. There were individual differences among the ten children due to the age of initial exposure to English and the English language learning environment. The children' spontaneous speech showed all error types made by L1 children. However, the children marked the same noun inconsistently in the same test session, and they very frequently overgeneralized the plural morpheme in singular and mass noun contexts.

In Poland, Dabrowska (2001) compared the English past tense inflectional morphemes with the Polish genitive which has three different markers in both the singular and the plural, each restricted to a different subset of nouns. Analysis of the spontaneous speech of three children between age 1 and 5 revealed that the children generalized and overgeneralized all three inflectional Polish endings.

The use of regular the plural [-s] inflectional ending in compounds by adolescent francophone ESL students compared to adult native-speaker of English was explored by Murphy (2000). Results revealed that regular plurals in compounds were frequently found. In another longitudinal study of the development of English past tense and plural inflections in children enrolled in either a French immersion or a traditional English curriculum, Gray and Cameron (1980) found that the type of program did not influence the acquisition rate.

A review of the literature was conducted by Kopcke (1998) to find out whether the acquisition of inflectional morphology by German and ESL children is rule-based or whether there is a pattern association, i.e., due to schemata. The findings supported the linguistic schema theory of acquisition.

In another study, Natalicio and Natalicio (1973) administered a test consisting of nonsense syllable trigrams and visual stimuli to 120 six-year-old children in the El Paso area to assess the effects of initial consonants, especially /s/, on the pluralization of English nouns by English-native and Spanish-native first grade children. Results showed no significant effect of initial /s/ on the correct noun pluralization, although /s/ was more frequently associated with misarticulations in both singular and plural responses. Results also emphasized the importance of pluralization rules, differences between native English and native Spanish speakers' pluralization strategies, and the sources of /s/ misarticulations.

Regarding the acquisition of the English plural morphemes by EFL Arabic-speaking students, Altarawneh and Hajjo (2018) analyzed the extent to which Arabic-speaking EFL students are aware of English plural morphemes, whether they can recognize them in context, and whether their English proficiency level plays a role in recognizing plural morphemes. The authors administered a Grammaticality Judgment Task consisting of sentences adapted and modified from the Corpus of Contemporary American English to sixty EFL students from Al Ain University of Science and Technology in the United Arab Emirates (UAE). Results showed that the students had little awareness of English plural morphemes in context. In addition, the students' English proficiency level had a little effect on their recognition of English plural morphemes.

Although the acquisition of the English plural morpheme by monolingual English-speaking children has been studied extensively, there are fewer studies about the processes through which L2 learners acquire English plural morphemes especially Arabic-speaking learners. In Saudi Arabia, there is lack of studies that investigate EFL college students' ability to produce English plurals and the difficulties that they have in English plural formation. Therefore, this study aims to investigate the acquisition of plural morphology by Saudi EFL freshman students. Specifically, the study aims to identify the following: (i) Saudi EFL freshman students' plural formation skill; (ii) the types of plural errors made by the students; (iii) the plural acquisition hierarchy of difficulty, i.e., order of acquisition of English plural forms; (iv) the strategies that Saudi EFL students use in producing English plural forms; (v) the possible causes of Saudi EFL students' difficulties in plural acquisition; and (vi) the effect of the students' first language (Arabic) plural morphology on their faulty production of English singular and plural forms.

Awareness of Saudi EFL students' difficulties in learning English plural forms is significant for EFL instructors at Saudi language and translation departments to pay more attention to English grammatical morphemes and different plural marking systems of English and Arabic as this knowledge is vital for the use of English in translation and interpreting. In foreign language education, it is important for EFL instructors to know their students' acquisition order of major linguistic items in the target language as this will enable them to teach the English morphological system more effectively in EFL classrooms.

The inadequate acquisition of English plurals poses numerous problems in translation and interpreting courses in the upper levels of the translation program at the College of Languages and Translation (COLT), King Saud University. A study by Al-Jarf (2020a) found that undergraduate students at COLT have numerous difficulties in translating English plurals to Arabic such as translating plural compound (*image processors*); English nouns ending in *-ies* that have the same singular and plural form (*series, species*); singular and plural forms of the same base when the base could assume two parts of speech, (*rich* and *riches*; *wood* and *woods*); foreign/Latin singular and plural forms (*indices, larvae, tempi, oases*); and names of tools and articles of dress consisting of two parts ending (*scissors, scales*) and others. Another study by Al-Jarf (2000) showed that translation students at COLT make agreement errors in number and gender between the subject and verb, modified noun and adjective, antecedent and referent pronoun in number and gender when they translate texts from English to Arabic.

2. Methodology

2.1 Subjects

Subjects of the current study consisted of 285 EFL freshman students at the College of Languages and Translation, King Saud University, Riyadh, Saudi Arabia. The students were in their first semester of the translation program and were enrolled in a Grammar 1 course (2 hours per week). They were concurrently taking Listening I (3 hours), Speaking I (4 hours), Reading I (4 hours), Writing I (4 hours) and Vocabulary Building 1 (3 hours) courses. The students were all Saudi and were all native speakers of Arabic. Their median age was 18 years, and the range was 17-19 years old. They all had 7 years of EFL instruction in grades 6 to 12 prior to their admission to the translation program in college.

2.2 Materials and Tasks

The subjects were enrolled in a Grammar 1 course that the author taught and they studied *Understanding and using English Grammar* by Betty Azar and Stacy A. Hagen's (2016). They covered the following grammatical structures: *Parts of speech, prepositions, prepositional phrases, Transitive and Intransitive verbs, linking verbs, regular and irregular verbs, adverb placement, information, tag, negative and yes-no questions, negatives, singular and plural forms, use of definite and indefinite articles, pronouns, subject-verb agreement, 9 tenses, modals, pronunciation of -ed, -s at the end of words, spelling of -ing, -ed, -es.*

The subjects received direct instruction in plural formation. All plural formation rules were taught in one class session. The following English pluralization categories were taught:

- regular plural nouns ending in *-s* or *-es*: *songs, cats, boxes, brushes, bridges, churches, quizzes.*
- plural of words ending in *-y*: *babies, stories, boys, days.*
- nouns ending in *-s* but are singular: *news.*
- nouns having a plural invariable form ending in */-s/* but have no singular form: *scissors, trousers.*
- plural nouns that take no plural suffix: *cattle.*
- irregular plural forms that involve mutation: *man/men; woman/women; foot/feet, mouse/mice; goose/geese.*
- nouns that take the suffix *-en*: *child/children, ox/oxen.*
- nouns that have the same plural and singular forms: *deer, fish, means, sheep, shrimp.*
- nouns ending in *-ies* but are not plural: *series; species.*
- nouns ending in *-s* but are singular: *means, headquarters.*
- subject names ending in *-ics* are singular: *linguistics, mathematics, pediatrics.*
- nouns describing the people of a country ending in *-ese* or *-ss* are plural: *Chinese, Swiss.*
- plural of nouns ending in *f*: *calf/calves, half/halves, knife/knives, leaf/leaves, life/lives, loaf/loaves, self/selves, shelf/shelves, thief/thieves, wolf/wolves; belief/Beliefs, chief/chiefs, cliff/cliffs, roof/roofs; scarves or scarfs.*
- plural of nouns ending in *-o*: *autos, ghettos, kangaroos, kilos, memos, photos, pianos, radios, solos, studios, tatoos, videos, zoos, echoes, heroes, potatoes, tomatoes, mementos/mementoes; tornados/tornadoes; mosquitos/mosquitoes, volcanoes/volcanoos; zeros/zeroes.*
- non-count nouns that have no plural forms: *furniture, energy, milk, chemistry.*
- loan words from foreign languages especially Latin and their plural forms end in foreign and Latin suffixes: *stimulus, stimuli; larva, larvae; stratum, strata; matrix, matrices; phenomenon, phenomena; curriculum, curricula; thesis, theses; analysis, analyses; tempo, tempi; cello, celli; samurai, samurai.*

- foreign nouns that have a foreign plural and a regular English plural: *appendix, appendices, appendixes; bureau, bureaux, bureaus; dogma, dogmata, dogmas; formula, formulae, formulas.*

The students did all the exercise in the textbook in class orally and in writing in two class sessions. The instructor monitored the students and provided individual help and feedback.

2.3 Instruments

The students took an immediate test a week after plural instruction and a delayed test at the end of the semester (3 months later). On the immediate test, the students were given a random sample of words in isolation, i.e., no context was provided. The students were required to write the singular or plural form of the given nouns. The nouns were directly selected from the chapter taught in class. Similarly, the delayed test required the students to write the singular or plural form of a sample of nouns which were selected from different lessons covered throughout the semester. The immediate plural test consisted of the following tasks:

- (1) Write the plural form of the noun where necessary on the line underneath:
 - *salmon – nation – cacti – theses – lice – army – index*
 - *fungus – criteria – volcano – loaf – pajamas – Asian – gravity*
- (2) Write the plural form of the noun in Row (1) and singular form in Row (2) on the line underneath.
 - *information – self – ox – chemistry – aluminum – petroleum – currency*
 - *vertebra – data – means – trousers – stimuli – enemies – wolves*
- (3) Write the singular form of the noun in Row (1) and plural form in Row (2) on the line underneath.
 - *species – trousers – nuclei – oases – scarves – news – worries*
 - *appendix – African – strata – electricity – calf – goose – roof*
- (4) Write the plural form of the noun where necessary:
 - *Saudi – vocabulary – curriculum – software – nucleus*
- (5) Write the singular form of the noun where necessary:
 - *criteria – pajamas – indices – species – lice*

The delayed test was similar in the number of items and types of English pluralization cases covered.

2.4 Data analysis

Students' written responses were scored by the author. In scoring the students' responses, any response that did not match the target plural/singular form was counted as an error even if one letter was wrong or missing. An answer sheet was used. A corpus of 3099 errors was collected from the immediate and delayed tests.

The frequencies of faulty plural/singular forms for each stimulus noun on both tests was computed. Frequency counts were also calculated for all faulty nouns in a pluralization category (see Section 2.2 above). Frequencies were converted to percentages. The plural error mean, median, standard deviation, standard error, and range were computed for both tests (See table 1). To find out whether there are significant differences in the plural errors on the immediate and delayed tests, a paired-sample T-test was run. To find out if the frequency of plural errors related to the students' general grammatical knowledge and achievement, each student's plural error score on the immediate and delayed test was correlated with her grammar course grade at the end of the semester.

To identify the strategies that the subjects utilized in plural formation, plural/singular errors were subjected to further analysis. Error strategies were classified into deleting the final -s or -es; regularizing plural forms by adding -s and -es; adding a faulty Latin suffix, i.e., confusing Latin singular and plural inflectional endings; confusing the singular and plural forms for the same Latin noun; overgeneralizing the same form; deleting a suffix or a pseudo-suffix; inventing plural and singular forms; and spelling plural or singular forms the way they pronounce them, i.e. misspelling singular and plural forms.

The possible causes of faulty plural forms were classified into failure to learn conditions under which rules apply; incompetent application of rules (ignorance of rule restriction); attempting to build up hypotheses about English plurals from their limited experience of it in the classroom or textbook; and the novelty factor. In addition, the effect of the students' first language (Arabic) plural morphology on their faulty production of English singular and plural forms was examined as well.

2.5 Reliability and Validity

The immediate and delayed plural tests are believed to have content validity as they aimed at assessing EFL freshman students' ability to produce English plural and singular forms. The tasks required were comparable to those covered in the grammar textbook and practiced in the grammar class. Concurrent validity was determined by establishing the correlation between the students' scores on the immediate and delayed tests and their scores on the grammar mid-term test. The validity coefficient for the immediate test was .65 and for the delayed test was .68.

Since the author was the instructor and scorer of both tests, estimates of inter-rater reliability were necessary. A 30% random sample of the immediate and delayed test answer sheets was selected and double-scored. A colleague who holds a Ph.D. degree in linguistics scored the samples. She followed the same scoring procedures and used the same answer key that the author utilized. The scores given by both raters were correlated. There was a .98% agreement between the two raters. Disagreements were solved by discussion.

Furthermore, examinee reliability was calculated using the Kuder-Richardson formula 21'. The examinee reliability coefficient was .71 for the immediate test and .74 for the delayed test.

3. Results and Discussion

3.1 The Plural Error Distribution

The typical EFL freshman student in the current study could not produce 48% of the immediate test items and 52% of the delayed test items. The English plural error mean score on the delayed test was higher than that of the immediate test (See Table 1). In addition, no significant differences were found between the plural error mean scores of the immediate and delayed tests ($T = 4.34$, $DF = 284$). This is probably because the delayed plural test items covered more lessons than the immediate plural test and it shows that freshman students in the current study had not mastered plural formation in English even after three months of grammar, vocabulary, listening, speaking, reading and writing instruction.

Table 1: The Mean, median, mode, Standard deviation, standard error, and range of errors on the immediate and delayed plural tests

	N	Mean	Median	SD	SE	Range
Immediate test	285	47.88	48	22.4	.38	2-45
Delayed test	285	53.69	52	21.8	.34	1-46

This finding is consistent with findings of other studies in the literature. In Altarawneh and Hajjo's (2018) study, results of the Grammaticality Judgment Task showed little awareness of the English plural morphemes in context among EFL Arabic-speaking students at Al Ain University of Science and Technology in the UAE. This means that students' ability to identify plural forms correctly, whether they are presented in context, as in Altarawneh and Hajjo's study, or presented in isolation, as in the current study, is inadequate.

3.2 Comparisons of the Immediate and Delayed Test Results

No significant differences were found in the amount and types of errors made by the students in the immediate and delayed tests. The same errors were made although the experiment was repeated with different groups of freshman students over 4 semesters. A positive correlation was found between a student's grammatical knowledge and her English plural formation mastery level. The correlation between the plural immediate test scores and the students' grammar course grade was 0.62 ($P < .01$), and between the plural delayed test scores and the grammar course grade was 0.71 ($P < .01$). This means that the student's overall knowledge of English grammar as revealed by her grammar course grade correlates with her plural error score. A high grammar course grade correlates with a low plural error score and a low grammar course grade correlates with a high plural error score. This finding is inconsistent with findings of prior studies such as Altarawneh and Hajjo (2018) who found that students' English proficiency level had a little effect on their use of English plural morphemes.

3.3 Hierarchy of Plural Formation Difficulties

Table 2 shows that the most difficult types of English plurals for EFL freshman students in the current study are:

- 1) **Nouns ending in -s** (1278 or 38.6% of the plural errors) as in: *Wolves, phonetics, trousers, measles, news, oases, scarves, species, linguistics, enemies, theses, pajamas, worries, species, scarves.*
- 2) **Words that end with an -s or -es but have no singular forms** (28.85%) such as: *measles, news, trousers, pajamas, means, linguistics, phonetics, species.*

- 3) **Words with Latin plurals** (21.85%): *appendixs, cactis, cacties, cactes, criterions, criteriones, funguses, funges, fungases, indexs, indexies.*
- 4) **Non-count nouns with no plural form** (21.4%) such as: *information, electricity, petroleum, salmon, energy, gravity, chemistry, aluminum.*
- 5) **Words that have a plural, but freshman students thought they have no plural form** such as: *nation, illness, infection, African, Asian, army* (8.55%).

These findings are inconsistent with prior research. Brown (1973) studied fourteen morphemes in L1 in children and found that the order of their acquisition is almost identical across children and is predicted by their relative semantic and grammatical complexity. Brown added that infants go through a series of stages during their learning of the plural marker. In particular, infants show comprehension of the plural marker at an earlier age for familiar objects than for unfamiliar objects. Thus, infants seem to initially understand the plural marker only in known contexts, and then later on, they are able to generalize this knowledge.

In another study, the 12 studies reviewed by Goldschneider and Dekeyser (2001) pointed out that the acquisition orders in L2 English are determined by 5 factors: (i) perceptual salience (number of phones); syllabicity (presence/absence of a vowel in the surface form); (ii) morphophonological regularity; (iii) semantic complexity; (iv) syntactic category; and (v) frequency. Children's performance was affected by input frequency (Oetting & Rice, 1993).

It seems that students in the current study had difficulty comprehending the meaning of some nouns on the tests. They do not seem to have frequently encountered or noted some of the nouns on the test in their grammar course nor in their English language courses.

Table 2: Frequency of Plural Errors Per Noun

Words tested	Error Freq.	Words tested	Error Freq.	Words tested	Error Freq.
Trousers	311	Illness	56	Theses	28
Curricula	226	News	50	Information	31
Worries	167	Asian	48	Criterion	27
Nuclei	138	Salmon	47	Nation	24
Species	115	Infection	46	Roof	21
Oases	111	Vertebra	44	Fungus	19
Electricity	96	Means	44	Loaf	18
African	93	Chemistry	43	Pajamas	18
measles	88	Energy	42	Army	17
Petroleum	88	Goose	40	Wolves	17
Scarves	86	Lice	41	Index	16
currency	84	Gravity	41	Appendix	15
Phonetics	77	Data	38	Ox	14
Linguistics	73	Cacti	34	self	5
Calf	68	Stimuli	37	Volcano	5

3.4 Students' Faulty Plural Formation Strategies

Analysis of the immediate and delayed tests in the present study has shown that the EFL freshman students have not mastered English plural morphology. In 35.37% of the plural errors, the subjects deleted the regular plural suffix from nouns ending in -s or -es as in *Scarve, scarv, oase, oas, trouser, worry, enemi, mean, linguistic, new, specy, measle, measl, phonetic, wolve, wolfe, pajama, these.*

A second major finding was that in 27.91% of the plural errors, the students tended to regularize the plural form by adding and -s or -es, and overgeneralizing the regular English plural form by adding the regular plural suffix -s or -es to words that do not have it such as Latin words, non-count nouns and irregular nouns as in the following faulty examples: *Calfs, calfes, electricities, electricity, roofes, geoses, goosies, cactis, cacties, cactes, criterions, criteriones, informations, selfes, funguses, funges, fungases, indexs, indexies, gravitys, gravities, gravityes, pajamases, loafes, loafes, salmons, salmones, theseses, stimulies, volcans, volcanes, aluminumes, alumines, chemistrys, chemistries, currencys, currences, petroleums, petrolums, oxes, oxices, appendixs, energys, energies.*

In 15.07% of the errors, the subjects confused singular and plural endings of Latin words. They either confused the singular and plural forms of the same word as in *curricula (curricula), data (data), stimuli (stimuli)*, added a faulty Latin suffix to a Latin word, or even a non-Latin suffix such as: *curriculae, curriculi, curriculaus, curriculon, daton, dati, datae, criterium, stimula, stimulia, stimulon,*

stimulum, vertebri, vertebrium, vertibrion, vertebtron, vertebrium, nuclea, nucla, nucleum, nuceon, nuclum, infectia, infectium, infecta, phonetum, phonetis, natia, informatia, salma, salmona, petrolea,

In 7% of the errors, they gave the same form, i.e., they thought the singular and plural forms of a word were the same as in *infection, illness, Saudi*.

Less common strategies used in plural formation were:

- Deleting a suffix or a pseudo-suffix: *append, curricul, criterio, grav, volcan, alumin, curren, currenc, dat, inform, stimul, vertebr, verteb, petrole, petrol, appendi, linguis, illn, nucle, scar, stim, stimule.*
- Inventing plural and singular forms: *spece, specius, specix, criteris, leus, indes, fungia, currences, datumia, datea, informs, curricula, curricula, calvies, infectium, linguistix, linguistex, linguisty, linguisti, currencum, datinum, dati, datis, dugt, phonetis, phnet, phonety, petrolei,*
- Misspelling plural or singular forms: *Curriculum, appendeces, illness's, gees, nuclus, nucleus, oaseis.*

The plural errors that EFL freshman students in the present study have made are similar to children and adults' errors in other studies. The EFL freshman students' accuracy rates and error patterns with plural morphemes are similar to those of monolingual children (Paradis, 2005). Adults have similar problems forming plurals from new nouns (Spreng, 2004). Phonological factors affect the spelling of morphemes by English-speaking children in French immersion, and good phonological awareness is associated with the correct spelling of plural morphemes (Cormier & Kelson, 2000).

3.5 Possible Causes of Plural Formation Errors

In 63.28% of the plural errors, freshman students in the sample tended to regularize and overgeneralize English plural formation by adding an -s or -es or deleting the -s or -es inflectional ending to produce the singular form. Novelty seems to be a major cause of producing faulty plural/singular noun forms especially when the noun and its plural are both new such as the singular and plural Latin nouns used in English. Since there are numerous pluralization rules in English, the students attempted to build up hypotheses about English plural formation from their limited experience of, limited practice and limited exposure to it in the classroom or textbook. The multiplicity of examples probably led to interference among the plural morphemes themselves. The plural error data shows students' failure to learn the conditions under which English plural formation rules apply and cases that are exceptions to the rule. The students seem to be incompetent in applying English pluralization rules and ignore pluralization rule restrictions.

The regularization and overgeneralization of the plural forms ending in -s and -es in the current study are similar to those in prior studies of L1 and L2. For example, in Jia's (2003) study, 5-to-15-year-old native Mandarin Chinese children overgeneralized the plural morpheme in singular or mass nouns. Polish children ages 1 to 5 regularized and overgeneralized genitive case endings in the singular and plural in spontaneous speech (Dabrowska, 2001). Adolescent francophone EFL students as well as L1 adults frequently used regular plurals (Murphy, 2000). six-year-old children regularized plural forms (Berman, 1981)

Regularization and overgeneralization constitute a developmental stage that L1 children and L2 learners go through, i.e., it is a temporary stage. In this respect, Berman's results revealed the complex interaction between formal linguistic knowledge and incidental knowledge due to familiarity with specific forms in language usage and in formulaic contexts. Both linguistic and incidental knowledge are developmentally determined. What is considered an error may need to be evaluated differentially with respect to the language of young children compared with that of older learners. Plural growth begins after reaching a threshold in vocabulary size (Robinson & Mervis, 1998).

Cox (1989) added that children's overregularization of noun and verb morphemes can be corrected at a later stage. Cox's investigation of four- to-six-year-old children's ability to correct overregularized plural nouns and verbs in the past tense showed that, in general, older children performed better than the younger children, and plural nouns were corrected significantly more often than past-tense verb forms. Younger children were better at correcting the nouns than the verbs, whereas older children corrected verbs and nouns equally well. Similarly, in Knafle and Others' (1979) study, first grade children made more correct responses and fewer non-plural responses than kindergarten children.

A naturalistic study by Maslen, Theakson, Lieven and Tomasello (2004) indicated that past tense and plural overregularization in English by children shows evidence of a relationship between relative regular/irregular type frequencies; substantial overregularization periods for some verbs and nouns despite the correct tokens in child speech and input; and a strong negative correlation between input token frequencies and overregularization rates for verbs and nouns.

Moreover, phonological, morphological, and psycholinguistic factors contribute to rule invention (Camarata & Erwin, 1988). Vanttila and Ackerman (2000) emphasized that differences in the acquisition profiles of Finnish, English, and German derive from the type of morphosyntactic information associated with inflectional elements, and the relative complexity of the inflectional system of L1 and L2.

On the other hand, the type of program did not influence the rate of acquisition of past tense and plural inflections (Gray & Cameron, 1980).

3.6 Effect of Arabic (L1) on English (L2) Plural Morphology

The plural error data analysis in the present study has demonstrated that the students' first language (Arabic) does not seem to interfere in their faulty production of English plurals. Arabic does not seem to facilitate the acquisition of English plural formation either, as Arabic and English do not share any inflectional endings (equivalent plural forms) that show common origin and meaning. Arabic and English have different plural morphologies. Arabic has 3 sound (regular) plurals and a broken (irregular) plural. Sound plurals and duals are formed by adding a single morpheme to the singular form to form the masculine sound plural, feminine sound plural, or dual (plural of two). The broken plural is formed by mutation (changing the internal structure of the singular form) following certain derivational patterns (Al-Jarf, 2020a; Al-Jarf, 2015a; Al-Jarf, 2011b; Al-Jarf, 2005b; Al-Jarf, 1994).

The only transfer from the Arabic language that occurred in the plural error data was in spelling nouns the way they pronounce them since words in Arabic are generally phonetically spelled.

Unlike the present study, Khor (2012) found a strong influence of L1 on the acquisition of articles, the preposition in and plural forms by 6th and 7th grade students in Sweden. L1 (Swedish) seemed to shape the order in which L2 grammatical morphemes are acquired by the students. The students in one language group seemed to learn the morphemes in a specific order, rather than a fixed universal order. Current findings are also inconsistent with Bongartz' (1999) study that showed that the interlanguage of all learners allows for the optional incorporation of regular plural nouns.

4. Recommendations

Findings of the current study showed that EFL freshman students at COLT have numerous difficulties in producing English plural and singular forms. When learning English plural morphology, an EFL Arab student must learn the different cases of plural formation for English and Latin nouns used in English, which have no counterparts in Arabic plural formation. This is probably due to the novelty of the English plural forms, lack of frequent exposure to the examples given for each plural category, complexity of their spelling especially Latin singular and plural forms, unfamiliarity with their meaning, inability to connect examples of each plural category with each other and lack of understanding the conditions under which each plural rule used and those under which it is not used as in nouns ending in -s and -es.

To help the students learn English plurals more efficiently, the present study recommends the following:

- Teaching plural formation rules in small groups with extensive examples.
- Raising students' awareness of English singular and plural forms in all the language courses that the students take at COLT, not only in the Grammar 1 course.
- Intensive practice and revision of English plural rules in recurrent intervals.
- Reading to children made significant changes in their overall production of plural and past tense inflections (Long & Scott, 1976). Therefore, intensive reading should be encouraged. The students at COLT can read collaboratively in and out of class, can use mobile reading apps, audiobooks, and mobile fiction apps where they can locate examples of singular and plural nouns in the written text and convert singular to plural and plural to singular where applicable (Al-Jarf, 2022b; Al-Jarf, 2021a; Al-Jarf, 2021b; Al-Jarf, 2021c; Al-Jarf, 2020b; Al-Jarf, 2012).
- Enriching the students' vocabulary by using mobile vocabulary apps (Al-Jarf, 2022a; Al-Jarf, 2013).
- When teaching vocabulary, the instructor should connect the printed form of the words with their pronunciation (the hidden sounds, double and silent letters, and homophones), singular/plural form, synonyms and antonyms, English and Arabic meanings, usage, component parts and other derived forms (Al-Jarf, 2006).
- A variety of online grammar tasks can be integrated to help the students practice the different grammatical structures they study including the production of English plural forms (Al-Jarf, 2017).
- Using Online Learning Management systems such as Blackboard to post grammar and vocabulary extension activities for the students to practice English plural formation. The instructor should provide communicative feedback on the location of errors in plural formation and have the students correct their own mistakes by checking dictionaries and other resources (Al-Jarf, 2021a; Al-Jarf, 2011a; Al-Jarf, 2007; Al-Jarf, 2005a).

- Training the students to check the plural form of a noun in online and mobile dictionary apps (Al-Jarf, 2022c).
- Encouraging the students to create their own singular and plural flashcards using mobile apps for studying and reviewing the plural forms and getting ready for tests (Al-Jarf, 2021d).
- Using mind maps to categorize, relate, and visualize a group of nouns that share the same plural rule, same inflectional ending, same spelling, pronunciation, meaning or derivatives to serve as a mnemonic device (Al-Jarf, 2015b; Al-Jarf, 2011c; Al-Jarf, 2011d; Al-Jarf, 2010).
- Raising students' awareness of phoneme-grapheme correspondences in English singular and plural nouns as in "species, radii, appendices, calf/calves, half/halves, knife/knives, ghettos, mosquitos/mosquitoes, stimuli, larvae, matrices, theses, cello, formulae, tempi" (Al-Jarf, 2019; Al-Jarf, 2008).
- Raising students' awareness of the differences between English and Arabic inflectional morphology, word formation processes, particularly plural formation rules and the varieties of plural forms available in English and Arabic to enhance their ability to translate English plurals to Arabic and vice versa (Al-Jarf, 2020a; Al-Jarf, 2015a; Al-Jarf, 2011b; Al-Jarf, 2005b; Al-Jarf, 1994).

Finally, since the students take more advanced Grammar, Listening, Speaking, Reading, Writing and Vocabulary building courses in semesters 2, 3, and 4 of the translation program at COLT, assessment of the mastery level of English plurals by students in the upper levels (semesters) is still open for further investigation by future researchers to find out the kinds of errors the students make and the faulty strategies they use in the production of English plurals and whether the different English language courses they take contribute to their plural production competence.

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