

EFL Learners' Knowledge and Use of Gender Stereotypes: Evidence from Arabic Native Speakers

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Received: September 30, 2017

Accepted: October 9, 2017

Online Published: October 21, 2017

doi:10.22158/selt.v5n4p632

URL: <http://dx.doi.org/10.22158/selt.v5n4p632>

Abstract

The research explored EFL learners' knowledge and use of gender stereotypes of common English nouns (e.g., doctor and nurse). In the study, we compared how EFL learners living in Saudi Arabia and native English speakers rated 24 nouns that can be used to refer to either males or females and how they interpreted sentences containing the gender-specific pronouns his and her preceded by one of the three types of these nouns (i.e., male stereotyped, female stereotyped, or gender neutral). The results showed that performance for EFL learners differed from native speakers' in both tasks. EFL learners rated nouns as generally referring to males more often than did native English speakers. EFL learners were also significantly less likely to interpret her and his as referring to the preceding noun than were native English speakers. The results suggest that in EFL courses, learners are likely to benefit from explicit coverage of gender ambiguous English nouns and the topic of gender stereotyping as an important aspect of vocabulary knowledge.

Keywords

EFL, vocabulary knowledge, gender stereotypes, Arabic, sentence comprehension

1. Introduction

For those learning English as a Foreign Language (EFL), mastering the use of some English nouns is complicated by the fact that they can be used to refer to males or females (i.e., are gender ambiguous), and some of these nouns are associated with gender stereotypes. For example, some nouns referring to occupations or social roles are used to refer to one gender more often than the other (e.g., doctor, nurse, sheriff, and florist) (Banaji & Hardin, 1996; Carreiras, Garnham, Oakhill, & Cain, 1996; Kennison & Trofe, 2003; Lenton, Sedikides, & Bruder, 2009). While there have been some attempts to highlight the existence of gender stereotyping in the content of EFL textbook content (Barton & Sakwa, 2012; Ghorbani, 2009) and classroom activities (Lee, 2015), relatively few studies have examined how EFL

learners acquire and use knowledge about the gender stereotypes for specific English nouns. In this brief report, we aimed to explore the extent to which the knowledge and use of gender stereotypes of ambiguous English nouns differ for EFL learners whose first language was Arabic from native English speakers living in the United States.

Across all types of languages, nouns can be associated with gender stereotypes that are distinct from their grammatical gender. Consider the examples in 1. In Spanish, a noun referring to male would be marked with the masculine affix *-o* and also be modified by the masculine *el*, as in 1a and 1d. When used to refer to a female, the noun would end with *-a* and be modified by *la*, as in 1b and 1c. Carreiras et al. (1996) showed that native speakers of Spanish took longer to read the noun phrase when the gender stereotype of the noun differed from the gender marking of the noun (i.e., 1a and 1b vs. 1c and 1d). Over the last 20 years, there have been numerous studies demonstrating that gender stereotypes associated with specific nouns can influence language processing across a variety of languages (Cacciari et al., 1997; Garnham, Gabriel, Sarrasin, Gygax, & Oakhill, 2012; Garnham & Yakovlev, 2015; Gygax, Gabriel, Sarrasin, Oakhill, & Garnham, 2008; Irmén & Kurovskaja, 2010; Kreiner, Sturt, & Garrod, 2008; Osterhout, Bersick, & McLaughlin, 1997; Siyanova-Chanturia, Warren, Pesciarelli, & Cacciari, 2015).

- | | | |
|---|------------------|-------------------------|
| A | a. el carpintero | carpenter who is male |
| | b. la enferma | nurse who is female |
| | c. la carpintera | carpenter who is female |
| | d. el enfermo | nurse who is male |

In the present research, we tested the hypothesis that EFL learners whose native language is Arabic are likely to be particularly challenged when mastering gender stereotypes associated with English nouns and using the information during language processing. There are multiple reasons why native speakers of Arabic may find the gender stereotypes of English nouns to be confusing. Foremost, Arabic, unlike English, has a grammatical system in which there is gender agreement (i.e., masculine and feminine) among verbs, nouns, adjectives, determiners, and quantifiers, eliminating ambiguity about whether a person referred to by a noun is male or female (Ibn Al-Anbari, 1978). Second, due to the rigid gender roles in some Arabic-speaking communities, there are words and expressions referring to occupations or social roles held so rarely by women that the word always carries masculine gender marking (e.g., engineer and judge). Third, some have suggested that Arabic is a language that has sociological gender in that the language is particularly focused on male-associated contexts than on female-associated contexts (See also Badran et al., 2002; Sadiqi, 2006). Fourth, for many English nouns, there may not be one word translations that are equivalent in Arabic or there may be multiple translation-equivalents (Abudalbh, 2012). For example, the word hairstylist has two translations in colloquial Arabic depending on the sex of the person being described. There is a word for a male hairstylist or barber and a different word for female hairstylist. The default gender in Arabic language is masculine; thus, when the sex of the individual is unknown or when referring to a group of men and women, masculine

gender is used. For nouns referring to inanimate concepts, the gender appears arbitrary and must be learned. Lastly, EFL instruction in Arabic speaking environments, such as Saudi Arabia, frequently involves lecturing (Bawazeer, 2015) and reliance on textbooks and other printed materials that may provide more examples of male-associated than female-associated topics and settings.

In the present research, we reasoned that EFL learners whose first language is Arabic may experience confusion when using gender ambiguous nouns in English. We report a study in which we compared performance in two tasks for EFL learners living in Saudi Arabia whose first language was Arabic and for native English speakers living in the United States. In the first task, participants rated nouns in terms of how often they were perceived as referring to males or females, following methods used in previous research with monolinguals (e.g., Kennison & Trofe, 2003). In the second task, participants interpreted sentences containing one gender-specific pronoun (i.e., his and her) preceded by one of three types of nouns (i.e., male stereotyped, female stereotyped, and gender neutral). Consider the example in 1. The interpretation of the pronoun is ambiguous, as it may refer to the person also referred to by the noun in subject position or may refer to someone not yet introduced into the discourse. Table 1 displays sample sentences and comprehension questions. We hypothesized that: a) EFL learners' perceptions of gender ambiguous nouns and interpretation of pronouns in sentences containing gender ambiguous nouns would differ from those of native English speakers.

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|---|------------------------------------|-------------------------|
| B | a. The doctor saw his/her friend. | Male Stereotyped Noun |
| | b. The nurse saw his/her friend. | Female Stereotyped Noun |
| | c. The patient saw his/her friend. | Gender Neutral Noun |

2. Method

2.1 Participants

Twenty four female ESL learners living in Saudi Arabia and enrolled in an integrated skills English language course participated for no compensation or course credit. Participants were first year medical students who had been admitted to a year-long preparatory program, which requires students to take an intensive English course that focuses on general English in the first semester and specialized medical English in the second academic semester. Participants were in the second semester when they participated in this study. They were placed in the advanced language proficiency class based on Oxford online placement test. Their mean age was 18.6 years ($SD = .5$). Twenty-four native English speakers who were enrolled in psychology courses in the United States participated in exchange for course credit. All were female with a mean age of 19.25 years ($SD = 1.19$).

Table 1. Sample Sentences and Comprehension Questions from the Study

Type of Noun	Pronoun	Example Sentence	Example Comprehension Question
Male Stereotype	His	The doctor saw his friend.	Do the words <i>doctor</i> and <i>his</i> refer to the same person?
Female Stereotype	His	The nurse saw his friend.	Do the words <i>nurse</i> and <i>his</i> refer to the same person?
Gender Neutral	His	The patient saw his friend.	Do the words <i>patient</i> and <i>his</i> refer to the same person?
Male Stereotype	Her	The doctor saw her friend.	Do the words <i>doctor</i> and <i>her</i> refer to the same person?
Female Stereotype	Her	The nurse saw her friend.	Do the words <i>nurse</i> and <i>her</i> refer to the same person?
Gender Neutral	Her	The patient saw her friend.	Do the words <i>patient</i> and <i>her</i> refer to the same person?

2.2 Materials

We selected 24 common English nouns from the gender-stereotype norms for English reported by Kennison and Trofe (2013). Eight were strongly stereotyped to refer to men (i.e., *doctor*, *architect*, *butcher*, *criminal*, *judge*, *police officer*, *auto mechanic*, and *carpenter*); 8 were strongly stereotyped to refer to women (i.e., *nurse*, *hairstylist*, *florist*; *housecleaner*, *dental hygienist*, *social worker*, *babysitter*, and *dancer*) and 8 were gender-neutral (i.e., *patient*, *customer*, *new employee*, *artist*, *assistant*, *exchange student*, *neighbor*, and *witness*). We then created 24 simple sentences that served as experimental targets (c.f., Clifton, Kennison, & Albrecht, 1997; Kennison, 2003). In these sentences, one of the nouns was followed either by the gender-specific noun *his* or *her*. For each sentence, there were six conditions, created by varying the type of noun (i.e., male-stereotype, female-stereotype, or gender-neutral) and by varying the following pronoun (i.e., *his* or *her*). Each sentence was followed by a yes/no comprehension question designed to determine whether the participant interpreted the pronoun as co-referent with the noun. Twenty four filler sentences were also constructed to be intermixed with the target sentences. All filler sentences contained a noun and a pronoun and were followed by the same type of comprehension question. Half of the filler sentences had comprehension questions whose answers were unambiguously no, and the other half, unambiguously yes.

2.3 Procedure

After we obtained approval for the research from the Oklahoma State University IRB, we recruited participants with help from their instructor who agreed to disseminate the research invitation to her students. The survey was created using a professional license of SurveyMonkey.com. Participants completed the sentence comprehension portion of the survey first with the experimental targets and the filler sentences presented in a randomized order. Secondly, participants rated a randomized list of the 24 nouns, and lastly, they provided demographic information. The data were collected anonymously without IP addresses.

3. Results

Participants' responses were used to calculate the percentage of co-referent interpretations (i.e., "yes" responses) for each target sentence. We analyzed the data using analyses of variances (ANOVAs) with participants (F_1) and items (F_2) as random effects following Clark (1973). In all analyses reported in this paper, type of participant was the between subjects variable, having two levels (i.e., EFL vs. native English speaker), noun type was the within subjects variable, having three levels (i.e., male stereotype, female stereotype, and gender neutral). Participants' ratings of gender ambiguous nouns were also analyzed. Figure 1 displays the mean noun rating for Arabic-English bilinguals and native speakers of American English. The results confirmed the hypothesis that EFL learners' ratings differed from those of native English speakers. The pattern of ratings for EFL learners and native English speakers was similar across noun types with differences for EFL learners smaller than native English speakers. The noun type x participant type interaction was significant by participants only, $F_1(2,92) = 8.71$, $p < .001$, $\eta^2 = 0.16$, $F_2 < 1$. EFL learners rated female stereotyped nouns as referring to males to a higher degree than native English participants: (EFL: 4.52 vs. native English: 3.14), $F_1(1,47) = 13.23$, $p = .001$, $\eta^2 = 0.22$, $F_2(1,15) = 22.18$, $p < .001$, $\eta^2 = 0.61$. Ratings for EFL and native English participants did not differ for neutral nouns: (EFL: 4.97 vs. native English: 4.80), $F_1(1,47) = 3.06$, $p = .09$, $F_2 < 1$. For male stereotype nouns, EFL participants rated them as referring to males to a lower degree than native English participants, although the difference failed to reach significance: (EFL: 5.57 and native English: 6.38), $F_1(1,47) = 3.95$, $p = .052$, $F_2 < 1$. Overall, EFL participants rated nouns as more likely to refer to males than native English speakers, resulting in a significant main effect of participant type: (EFL: 5.02 vs native English: 4.77), $F_1(1,46) = 6823.53$, $p < .001$, $\eta^2 = 0.99$, $F_2(1,14) = 5230.54$, $p < .001$, $\eta^2 = 0.99$. The main effect of noun type was also significant, $F_1(2,92) = 33.51$, $p < .001$, $\eta^2 = 0.42$, $F_2(2,28) = 165.33$, $p < .001$, $\eta^2 = 0.92$.

In the analysis of pronoun interpretation, pronoun type was a within-subjects variable, having two levels (i.e., *his* and *her*). Figure 2 displays the mean percentage of co-referent interpretations by condition and type of participant. The results confirmed the hypothesis that EFL learner' interpretations of the pronouns *his* and *her* would differ from those of native English speakers. Native English participants generally interpreted the pronoun as referring to the noun in subject position most of the time regardless of the pronoun (i.e., *his* vs. *her*) and regardless of the type of noun in subject position (i.e., male stereotype, female stereotyped, or neutral) (i.e., ranging between 76% and 85%). In contrast, EFL learners' were far less likely to interpret pronouns as referring to the gender ambiguous noun (i.e., ranging between 46% and 69%). The main effect of participant type was significant, (EFL: 51% vs. native English: 80%), $F_1(1,46) = 157.13$, $p < .001$, $\eta^2 = 0.77$, $F_2(1,46) = 583.41$, $p < .001$, $\eta^2 = 0.93$. No other main effects or interactions were significant.

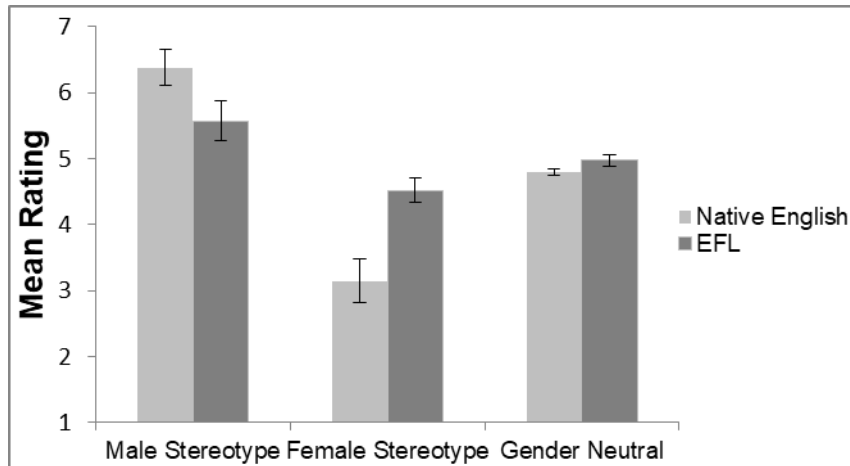


Figure 1. Mean Rating (1 = Mostly Female, 7 = Mostly Male) for English Stereotyped and Neutral Nouns for EFL Learners and the Native English Speakers with Standard Errors

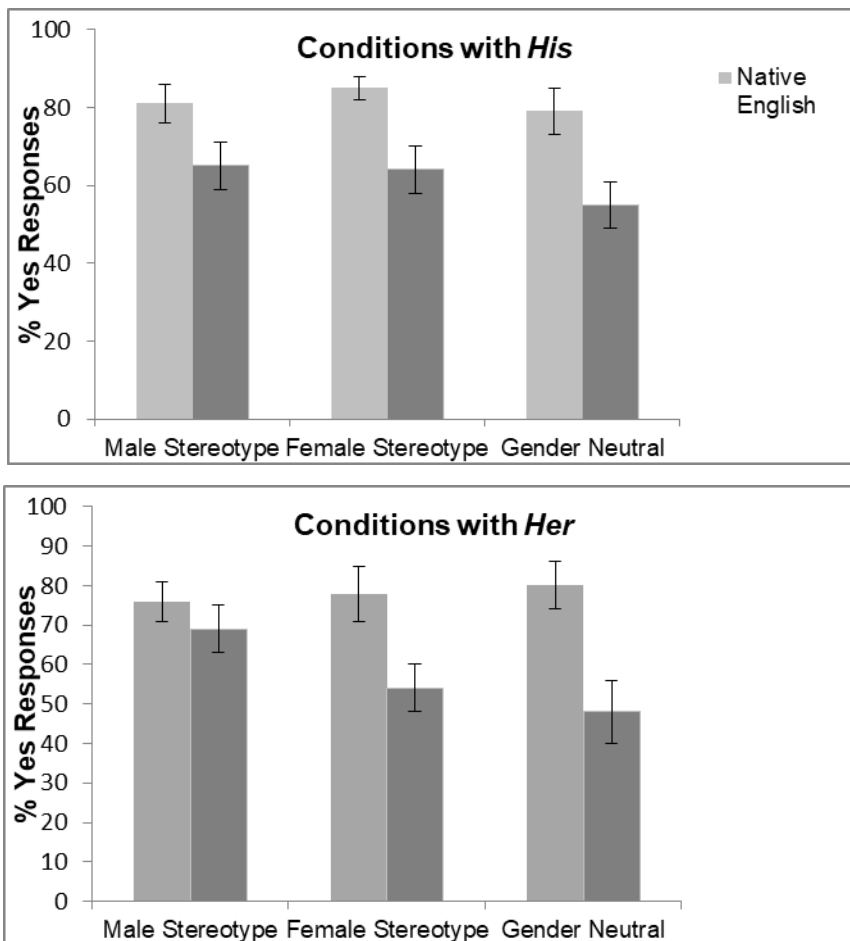


Figure 2. Mean Percentage of Co-Referent Pronoun Judgments by Condition EFL (n = 24) and Native English (n = 18) Participants. Top Panel Displays Results for Sentences Containing the Pronoun His. Bottom Panel Displays Results for Sentences Containing the Pronoun Her

4. Discussion

The present research compared EFL and native English participants' knowledge and use of gender stereotypes for English nouns that can refer to males and to females. The results showed that EFL learners perceived nouns as generally referring to males (versus females) more often than did native English speakers. They also interpreted the gender-specific pronouns *his* and *her* as referring to a prior gender ambiguous noun significantly less often than native English speakers. These results demonstrate that there may be value of incorporating coverage of gender stereotypes of English nouns into EFL pedagogical practices, such as presenting English nouns in groups labeled as strongly stereotyped or gender neutral. Instructors may find it useful to provide students with occupational statistics for some of the most commonly used nouns with the caveat that perceptions may correlate somewhat, but not perfectly, with national statistics (See Gyga et al., 2008; Misersky et al., 2014). Lastly, EFL learners may also benefit from experiencing examples of sentences in which gender-specific pronouns (e.g., *his* and *her*) may be interpreted as referring to an antecedent that has a strong gender stereotype or is gender neutral.

The present results are limited in that the sample involved only relatively well-educated females. We would expect that future research with EFL learners less skilled in English would observe even larger differences between native English speakers and EFL learners than those observed in the present research. Additional limitations of the research relate to the relatively small number of nouns tested in the study. In English, most nouns can be used to refer to men and women; thus, future research is needed to determine whether the present results can be replicated in studies using a wider variety of nouns. Lastly, the research is limited in its reliance on self-report measures of sentence comprehension. Self-report measures of comprehension may not reflect participants' initial interpretation. Future research employing other methodologies (e.g., eye tracking during reading) to assess sentence comprehension may be valuable to explore how EFL learners interpret pronouns in the context of gender stereotyped antecedents.

There are several avenues for future research. For example, future longitudinal studies of EFL learners may be able to document the relationship between a learner's experiences and their knowledge of the gender associations with specific nouns. Future research may also find comparisons of male and female EFL learners, as the daily experiences of men and women are likely to differ and be related to differences in their language experiences.

In sum, although the topic of gender stereotypes has been well-researched in research involving participants using their first language, there has been little to no research examining how information about gender stereotypes are acquired and used by second language learners. We offer the results in this brief report to demonstrate that gender stereotypes can present challenges for some EFL learners. The challenges should be easily overcome through pedagogical activities that raise awareness about gender stereotyping for English nouns.

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