

## Gender Variation in Voice Quality in Learning English as A foreign Language: An Investigation into Libyan Learners' Perceptions

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### ملخص الدراسة

أُجريت هذه الورقة البحثية لدراسة مدى مساهمة الجنس في التحدث باللغة الإنجليزية كلغة أجنبية وذلك وفقاً لآراء طلاب الفصل الأول والثاني بقسم اللغة الإنجليزية، كلية الآداب في جامعة مصراتة. تركزت مشكلة هذه الدراسة على عدد من جوانب جودة الصوت مثل: الدرجة، الحدة، الهمس والسرعة وغيرها. تم توزيع أوراق الاستبانة والتي تحتوي على عشرة بيانات متعلقة بموضوع الدراسة على 82 طالباً لمعرفة آراءهم في أثر التباين بين الجنسين على جودة الصوت في تعلم اللغة المستهدفة (اللغة الإنجليزية كلغة أجنبية). تم تحليل البيانات التي تم جمعها بأسلوب كمي بالإضافة إلى تصنيف آراء المشاركين في الدراسة حسب الجنس (ذكر أو أنثى). وخلصت الدراسة إلى أن تصورات الطلاب كانت بشكل عام إيجابية في الغالب بخصوص موضوع الدراسة تحت البحث. وفقاً لنتائج الدراسة، يمكن ملاحظة أن كلا من المشاركين من الذكور والإناث اتفقوا بشكل كبير على معظم النقاط في استبيان الدراسة، مما يثبت أن الطلاب يميلون عموماً إلى الاعتقاد أن المتحدثين باللغة الإنجليزية كلغة أجنبية يختلفون في جودة الصوت عند التحدث بها.

### Abstract

This study was carried out to investigate the contribution of gender in voice quality in the production of English as a foreign language according to the opinions of first and second semester students, at the Department of English, Faculty of Arts in Misurata University. The problem of this study was centralized in a number of voice quality aspects including: loudness, pitch, sharpness, nasality, harshness, creakiness, whisper, and speed. A questionnaire with ten statements was floated to 82 students to find out the effect of gender variation on voice quality in learning the target language i.e. English. The collected data was analyzed quantitatively. Moreover, the participants' perceptions were categorized based on their gender. The study concluded that students' perceptions were mostly positive regarding that matter. According to the study results, it can be observed that how both male and female participants showed a high tendency of agreeing to most of the points assigned to the questionnaire, which proves that students generally believe that male and female speakers of English as a foreign language differ in voice quality when producing the language in an EFL context.

**Keywords :** gender variation, voice qualities, loudness, pitch, sharpness, nasality, harshness, creakiness, whisper, speed

## 1. Introduction

Many experts are convinced that there are differences between females and males in voice quality; For instance, Laver (1980) explains that 'voice quality is the ensemble of properties in a person's speech that allows a listener to recognize the voice as belonging to a unique individual'. He adds that those characteristics, which are present more or less all the time that a person is talking, are a permanent quality running through all the sounds which are spoken (cited in Biemans, 2000, p.3).

Ning (2010) says that gender difference has entered into English language studies as a linguistic variable for a long time. As one of the popular fields in sociolinguistics, explorations on gender difference in English language and other languages have experienced a period of gradual development. The relation between language and gender has become one of the major issues in sociolinguistics since early 1970s.

Nemati and Bayer (2007) discover that gender differences in language usage reflect different and unequal roles and status. They propose that because of the low status of women and the social pressure on them to talk like a lady, women as compared to men tend to use more hedges, intensifiers, super polite forms, and question intonations. However, there are many other factors influence language usage. Therefore, the speech of different individuals varies according to age, gender, social class and ethnic groups.

Several studies have showed the differences between men and women in using language. However, this study mainly seeks to discover students' views about the following issues:

1. How do the phonatory characteristics differ between genders in spoken English?
  - i. Breathy and whispery voice
  - ii. Creaky voice
  - iii. Harsh voice
2. How do the Articulatory characteristics differ between genders in spoken English?
  - i. Nasality
  - ii. Articulatory range
3. How do Prosodic characteristics differ between genders in spoken English?
  - i. Pitch
  - ii. Loudness
  - iii. Tempo

The study researchers worked with first and second semester students enrolled in the Department of English at the Faculty of Arts in Misurata University, during the academic year 2016 – 2017. The study did not intend to measure any accurate differences in voice quality. Instead, it sought to observe different opinions of the study subjects about the differences in voice quality that could probably be caused by gender considerations by using quantitative methods in analyzing the collected data.

### 1.1. The concept of gender

Ginet (2003) explains that "gender is not something we are born with, and not something we have, but something we do something we perform" (p. 8). According to Ning (2010), gender refers to a set of classes and manners expected from a female or male by society. Gender roles are learned and can be affected by factors such as education or economics. Moreover, Holmes and Meyerhoff (2003) indicate that "gender is not viewed as a stable, pre discursive construct residing in individuals; rather it emerges in discourse and in other semiotic practices. In other words, individuals do not simply act out a pre-existing gender; they are always actively involved in the 'doing' of gender" (p. 161).

### 1.2. Categories of gender

Gender categories are an obvious product of relations and mappings based on a look into cultural communication and different practices by individuals (Shitemi, 2009). Hellinger and Bubmann (1990) conclude that having established the difference between the more general concept of 'noun class language' and the concept of 'gender language', it is necessary to introduce a number of idiomatic distinctions of women and men in language: grammatical gender, lexical gender, and social gender.

First, grammatical gender includes noun classes that dictate and are relevant for various kinds of agreement patterns (Shitemi, 2009). Bazzanella, C, Leonard, S, & Thune, E. (2006) show that "grammatical gender is not necessarily linked to the opposition female-male but also the one between animate and inanimate" (p. 5).

However, lexical gender is the inventory of lexical morphemes and words in language. There is often a link between gender and the lexicon. The lexicon is the most changeable part of language. Its content varies in different scopes. There are varying access strategies to lexicons by language users including competence, performance, registers, terminology and other specialized usages that facilitate acquisition and application (Shiemi, 2009).

Finally, social gender is based on hypothesis cultural and social assumptions about the respective function of women and men in society. It is manifested, for example, in widely held anticipations about an architect being a man, or a secretary being woman (Bazzanella, C, Leonard, S, & Thune, E. 2006).

### 1.3. Voice quality

Voice quality is a difficult term to define because it is used by different specialists and for different concepts. As Biemans (2000; 19) explained that voice quality "refers to laryngeal qualities or a specific phonation type, e.g. breathy voice, and sometimes it is used in a broad sense as the total vocal image of a speaker, including for instance pitch, loudness, and phonation types".

Voice quality is a group of characteristics in persons' voice that enables receivers to recognize the voice as belonging to a unique individual (Biemans, 2000). Laver (1980) defined voice quality as the characteristic auditory identifying an individual speaker's voice It causes "those characteristics which are present more or less all the time that a person is talking: it is a quasi-permanent quality running through all the sound that issues from the mouth" (Abercrombie 1967:91, cited in Biemans, 2000)

According to Laver and Trudgill, 1979, cited in Biemans, 2000: 19-20), voice characteristics can be short-term, medium-term, or long-term. Short-term features convey meaning through “the sequential ordering of phonological and grammatical units in larger structures, i.e. consonants, vowels, words, and longer utterances...”. However, characteristics with a medium-term time frame have a paralinguistic function. “They convey the emotional state of the speaker... For instance, anger can be communicated by using a harsh, loud, and high voice...” finally, “long-term speech features are an indication of extralinguistic speech behaviour, and consist of elements which are more or less permanently present in a speaker's voice. An example is the mean pitch level a speaker tends to use. All long-term voice features characterising a speaker's voice combined are called her/his voice quality...”

## 2. Methodology

### 2.1. Participants and setting

The participants in this study were students enrolled in first and second semesters in the English Department in the Faculty of Arts at Misurata University. The study was carried out during the academic year 2016 – 2017. 82 students were asked to take part in the study; including 15 male students and 67 female students.

### 2.2. Research instrument

The questionnaire consisted of 10 statements which focused on the concepts of voice quality and how students perceive them based on their gender. The answers were given in three different levels of perceptions, ranging from absolute agreement to absolute disagreement. The statements were set from the most to the least general. Therefore, when they were analyzed together, they would verify coherence, logical progression and better manifestation of ideas.

The first two statements were general and determined the existence of a relationship of gender with learning English as a foreign language and its production. The statements from the 3<sup>rd</sup> to the 10<sup>th</sup> dealt with different aspects of voice quality: loudness, pitch, sharpness, nasality, harshness, creakiness, whisper, and speed. These eight aspects were distributed in the statements to discover participants' opinions as EFL learners.

### 2.3. Data collection and analysis

First of all, the necessary permissions from authorities in the conduct of the study were taken. Moreover, the students were informed that their participation in the study would not influence their study or grades and any information and opinion collected from them would be used for the purposes of study only.

In addition, sample questionnaire scripts were distributed to 5 target respondents to check face-validation, and to 5 experts to determine content-validation.

The questionnaire was distributed to the identified respondents. After gathering all the required data, analysis followed

The collected data was presented in terms of numbers according to the gender of participants. The statements were listed together in one table for a specific purpose. The collective display would help the researchers see the results in a comparative manner, and it would help them to give a full account of data being discussed together, rather than following a method of splitting questions which might have led to a kind of confusion because the statements were not related.

### 3. Findings

The findings of the study were discussed and analyzed. The nature of data collected was subjective as the students gave their opinions about the given statements. Thus, the data was presented and analyzed numerically. The table below displays students' responses to gender variation in voice quality.

Question		Agree	Neutral	Disagree
1	M	8	4	3
	F	34	27	6
2	M	6	6	3
	F	32	25	10
3	M	5	6	4
	F	32	18	17
4	M	8	5	2
	F	27	20	20
5	M	8	3	4
	F	23	25	19
6	M	9	2	4
	F	32	21	14
7	M	5	3	7
	F	35	16	16
8	M	8	3	4
	F	22	25	20
9	M	12	2	1
	F	27	31	9
10	M	11	2	2
	F	39	18	10

**Table (1): Gender Variation in Voice Quality**

The statements were constructed from the most to the least general in order to investigate the perceptions of students on gender variation in voice quality.

The first question dealt with the possible effect of the first language and its interference with the foreign language in terms of pronunciation. Concerning this issue, Sinha (2009) affirmed that:

*...foreign accent is the inability of non-native language users to produce the target language with the phonetic accuracy required by native listeners for acceptance as native speech. Although, there is, in all languages, a fairly large variation in phonetic realization depending on a number of regional, social and stylistic factors. Native speakers, presumably because of extensive experience with the language, seem to have little trouble recognizing the deviant phonetic realization of the language usually known as foreign accent (p. 119).*

This clarifies the existing different phonetic production among many foreign language learners. The table shows that more than half of the male participants (8) believed that the English as foreign language affects and is affected by the first language (Arabic). However,

other students either remained unsettled about the matter (4) or just disagreed (3). As to the female participants, (34) of them believed in the two-way affecting part of language on the phonetic system, and with no a small number, (27) participants were not sure about the issue, while (6) of them denied this effect.

The second statement focused on the problem of whether gender differences were apparent and contributing in learning English as a foreign language. Not many male participants seemed to agree as less than half of them (6) agreed with yes, and other (6) participants stated that they did not find a connection and ticked the choice they were neutral, and a small number of (3) disagreed on the existence of that relationship. The case is not different with female participants, (32) participants saw a bound relation of gender to learning the target language (English) and the voice production, (25) students had suspicions whether to agree or not, while only (10) students failed to see the relation. Finally it could be concluded that more than half of the participants, both genders; see, to some extent, a kind of relation between gender and language learning and production.

The third statement went on more specification on the problem, as it determined whether female speakers have a sharper voice while speaking English or not. The male participants' perceptions varied as (5) of them agreed to that, while (6) of them remained neutral, either not sure about the connection or they need more investigation on the matter, and (4) participants disagreed not spotting a relevant difference in voice sharpness. Female participants sought the question differently, as (32) participants saw that female speakers had a lower and sharper pitch while speaking English as a foreign language, however, (18) students were undecided, and the remaining (17) drew a dissimilar conclusion.

Another point formulated to observe the perceptions of students on the loudness of voice and its effect on foreign language learning, and this point is illustrated in question 4. There was number of (8) male participants who agreed to the point, (5) of them probably were not sure or did not ponder the relationship before, and only (2) disagreed. As to the female students, the perceptions were almost distributed equally, (27) of them agreed that loudness of voice supports English learning, while (20) participants were neutral about that, and the other (20) students were at variance with that.

The fifth statement dealt with understanding the nasal nature of the first language, and whether it is represented or affects the production of the foreign language in a way makes the speech rather vague. More than half of the male participants, specifically (8) showed their agreement to the point, (3) were neutral, and (4) of them did not see that nasal production could vary in production or between both genders. The case with female participants was not identical, (23) of them approved the connection between the nasal behavior of the first language and its effect on foreign language production in terms of clarity between both genders. However, slightly more than that number (25) saw that it is not certain and accurate to determine the relationship, while only (19) had a clear idea that the relationship is not valid.

Other important focus of the study was the harshness of the voice and whether it is affected by gender differences. Male students responded to question 6 inconsistently: more than half of them (9) agreed that there is an apparent difference in harshness of voice between the genders, only (2) students were uncertain about the point, and only (4) declined any valid difference in terms of harshness of voice. However, (32) female students agreed to the existence of such relation. A considerable number of female students (21) did not seem to have a clear-cut answer, while the remaining (14) opposed the idea.

Another statement that attempted to tangle upon the gender differences in voice quality, chiefly on the creaky and whispery voice and whether it is the production of gender differences in foreign language use. Regards male students answers, (5) of them were in harmony with that point, (3) were neutral, and the remaining (7) did not show their agreement to any relation of gender differences in producing whispery or creaky voice. Female participants had different perceptions as (35) of them showed a strong agreement to that point, while the remaining students were equally distributed to either remain neutral or disagree.

The eighth statement was set to reinforce the fifth question on the nasality of the sound system of the two languages and their relationship with language production and the possible differences may occur because of gender differences. Coming to data, (8) male participants agreed to the point that nasality of sound is a main contribution to language production difference as being affected by gender; only (3) participants had their doubts about the implications of this point, while (4) of them were in dispute with that validity of such claim. In another respect, female participants' perception did not vary much from male ones': (22) of them concurred with the point, (25) participants were neutral, and the other (20) simply disagreed with idea.

The ninth statement focused on the notion that male speakers of English as a foreign language have a higher pitch than female ones. Male students showed different outcomes in comparison with their previous responses. (12) male students agreed that male speakers of English as a foreign language have a higher pitch, (2) of them were unsettled about the issue, and only (1) sought different. Similarly, (27) female participants said that they agree to the statement, (31) of the total number were not sure whether to agree or disagree, but only (9) determined their indifference to the question under investigation.

The last question was set to measure students' perceptions about whether female speakers of English as a foreign language tend to speak faster than male ones. Male participants again showed a high tendency to agree to the point, as (11) of them showed their agreement, and the remaining participants were distributed equally to either being neutral or just disagree. Similarly, more than of the female participants (39) showed their agreement to the notion, (18) students were neutral, while the others (10) did not agree to validity of the idea.

#### **4. Conclusion recommendations and limitations**

The data gathered in this study was the main contributor to the validity of the findings, as there would be no findings without testable evidence. However, the nature of the information gathered was numerical. Therefore, no hypotheses were formulated at the onset of this endeavor, as a result, the perceptions of the participants in the study were collected and verified numerically to determine their preferences to certain points about gender and voice quality in a foreign language context.

The previous results discussed above shed the light on the data determined by the number of the students and explained the existent data. In conclusion, the study showed the results as percentage as will be shown below:

Question	Agree	Neutral	Disagree
<b>1</b>	M 53%	26%	21%
	F 51%	40%	9%
<b>2</b>	M 40%	40%	20%
	F 48%	37%	15%
<b>3</b>	M 33%	41%	16%
	F 48%	27%	25%
<b>4</b>	M 53%	33%	14%
	F 40%	30%	30%
<b>5</b>	M 53%	20%	27%
	F 34%	37%	29%
<b>6</b>	M 60%	14%	26%
	F 48%	31%	21%
<b>7</b>	M 33%	20%	47%
	F 52%	24%	24%
<b>8</b>	M 53%	21%	26%
	F 33%	37%	30%
<b>9</b>	M 80%	14%	6%
	F 40%	46%	14%
<b>10</b>	M 72%	14%	14%
	F 58%	27%	15%

**Table (2): Gender Variation in Voice Quality (percentages)**

Based on the results presented in table (2) it can be observed how participants, both male and female, revealed a high tendency of agreeing to most of the points assigned to this study, which proves that students generally believe that male and female speakers of English as a foreign language differ in voice quality when producing the language as a foreign language.

Based on the findings and conclusions extracted from this study, the following are recommended:

1. A Study which determines the differences between both genders in voice quality is often should be carried out based on experiments and practical experience to reach to empirical results.
2. other researchers might consider carrying on with the gaps this study has not filled; using a different methodology and reserach design to observe if there would be any varied results.



3. EFL teachers might consider revising their textbooks, basically of language skills, in a way that considers gender variations. Therefore they can meet individual students' needs and preferences.

At the beginning of conducting the present study, its main purpose was to investigate the students' views of voice quality variations among male and female students. Therefore, a questionnaire, as a research tool, was used. The present study has the limitation of not using another research instrument such as carrying out classroom observation or conducting interviews with the participants to obtain more valid and solid results. Therefore, further studies are required to overcome the limitations of the present study and to produce more convincing evidence of the existing gender variations in voice quality.

Moreover the present study made a partial contribution to understand students' opinions about the potential differences in voice quality among Libyan male and female speakers of English as a foreign language. However, overgeneralizing the findings should be avoided and other studies need to be conducted to carefully investigate some other issues highlighted by the study findings and related to gender variations in voice quality.

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**6. Appendices****Appendix A**

Questionnaire

Name (optional) \_\_\_\_\_

Gender: male ( ) female ( )

1	Learning a foreign language affects and is affected by the phonetic system of the first language.	Agree	Neutral	Disagree
2	Gender is a contributing factor in the process of learning English, especially in determining the voice of the speaker.	Agree	Neutral	Disagree
3	Females have a lower and sharper pitch in voice when speaking English.	Agree	Neutral	Disagree
4	Loudness of voice affects learning English positively.	Agree	Neutral	Disagree
5	The nasal behavior of the first language phonology system affects the phonological system of the foreign language in a way that makes the speaking of both genders unclear.	Agree	Neutral	Disagree
6	Harshness of the voice in the foreign language context is affected by gender.	Agree	Neutral	Disagree
7	Women are expected to have less creaky, harsh, and loud voice than men.	Agree	Neutral	Disagree
8	The Nasality of the sounds while learning a foreign language is mainly affected by gender.	Agree	Neutral	Disagree
9	In the prosodic speech, the high pitch in male English foreign language speakers is usually higher.	Agree	Neutral	Disagree
10	Female English foreign language speakers tend to speak faster than male speakers. In other words, the rate of tempo is higher.	Agree	Neutral	Disagree