

Gender Differences in Second Language Learning:

Why They Exist and What We Can Do About It

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Chapter 1: Introduction

It is commonly assumed that females are able to learn languages at a quicker pace than males. There is a great deal of empirical evidence that suggests the female brain is more situated for language learning even from birth (Dionne, Dale, Boivin, & Plomin, 2003). This evidence made me think about my personal experiences with language acquisition. I, being a female, have not had a great deal of trouble learning Spanish, Portuguese, Italian, and Arabic in addition to my native tongue of English. However, I have taken many language classes in my life and I have noticed that many people struggle with learning a foreign language. Furthermore, I have noticed that in my beginning language classes, there is generally a near equal split of females to males. As my classes get more advanced, the number of males drastically declines.

Take a moment to reflect on your own personal experiences. If you have taken a language class, especially in a university, take a moment to think about your fellow classmates. Were there mostly men, women, or an equal balance of genders in your class? Throughout my 6 language classes in high school and 16 here at the University of Tennessee, I have seen that there are consistently more females than males. Because of this, I chose to investigate if women tend to learn languages more frequently than men. I decided to do this in the context of majoring in a language in a university setting utilizing a database that is derived from The National Center for Education Statistics (NCES).

This research is significant because it provides numerical evidence about the gender gap in second language learning. This study examines previous research to obtain information on the differences in male and female brains during language learning and provides information as to why females are more successful at language learning than males. The field of language education is also detailed and used to explain why females are at an advantage. This study also

adds information as to why different genders choose to learn different languages. The goals of this study are to provide accurate information on the gender differences in second language learning and to provide suggestions as to how this gender gap can be narrowed.

Chapter 2: Literature Review

Within the field of second language acquisition (SLA), there are varying factors that affect the willingness of a learner. One of the major factors is gender, which can determine everything from how you learn a language to what languages you will learn and how long you will learn them for (Ortega, 2009). This chapter reviews factors such as brain activity during language acquisition, gendered language acquisition methods, the methods that the language education system relies on, and how the genders differ during the adult period of language acquisition. Reviewing all of these factors allows for a solid background to approach the gendered language acquisition differences in learners aged 20-30.

To begin, it is important to note the distinctions in language learning styles of men and women. The ways that men and women think overall, but especially in language processing, are quite distinct from one another. In a 2008 study performed by researchers at Northwestern University, it was found that boys' and girls' brains were active in different areas during English language acquisition and that girls' brains worked harder overall during this process. This means that the girls' brains did more processing and connecting than the boys' brains did (Burman, Bitan, & Booth, 2008). The researchers tested 31 boys and 31 girls between the ages of 9 to 15 using functional magnetic resonance imaging (fMRI) during various spelling and writing tasks. The students were asked to read words without hearing them as well as hear and identify words without seeing them. The researchers found that girls showed significantly greater activation in language areas of the brain such as areas associated with abstract thinking and speech production. Boys' brains, however, were activated in purely auditory and visual areas. This study concludes that males rely heavily on their senses while females have a more holistic approach to language learning (Burman, Bitan, & Booth, 2008).

Since males rely on the auditory and visual components of their brains and females employ abstract thinking with a holistic approach, it can be concluded that males and females differ in skill level with various language acquisition methods (Burman, Bitan, & Booth, 2008). Giving a more in-depth description of how males and females learn, Arabski and Wojtaszek (2011) state that generally, males excel in methods that use senses, such as videos, reading and writing exercises, and auditory exercises. They perform better on oral exams and exams with visual aids than females do. However, females' brains are more suited for speech production, grammar exercises, and exercises that involve abstract thinking such as fill-in-the-blank or verb conjugations. They naturally perform better on a holistic exam or an exam with a speaking component. Since language exams commonly test writing, speaking, and grammar, this explains why women tend to perform better on these exams and thus tend to continue foreign language education more often than men do.

Other relevant evidence that confirmed females have more language acquisition skills was found by van der Silk, van Hout, and Schepens (2015). In their study, there were 27,119 adult learners from 88 countries with 49 varying mother tongues learning Dutch as a second language. The researchers found that, overall, females outperform males in writing and speaking tasks. However, unlike the study by Northwestern University (Burman, Bitan, & Booth, 2008), there was no gap in both reading and listening. The boys in van der Silk, van Hout, and Schepens's study were predicted to be better at these types of activities since minimal connecting of multiple brain areas was required, therefore it could be possible that males lose these superior abilities in reading and listening as they age. The study does verify that most women do not lose their superior abilities in the speaking and writing categories and simply carry them on from childhood.

To many scholars, language acquisition is seen as being dominated by females, especially in secondary education. Rebecca Rogers, a leading expert in the field of secondary language education, said “language is the most feminized field in secondary education” (Rogers, 2006, p. 135). At the surface, this seems like an overly broad statement with little to no quantitative support. However, in 2016, one of the leading language-learning software, Babble, surveyed its users which range in age from 13 to 75+. However, the majority of their learners are aged 25 to 65. The results of this survey were surprising: “Globally, we found that more women are learning in comparison to men” (Noack, 2016, para. 1). Regardless of this, they are just one of the hundreds of language-learning software, so it would be ineffective to prove such a large statement by using one set of data. What this survey was able to bring light to is the specific gender differences in the languages that men and women were learning. The data showed that “men have a bias towards learning German, Portuguese and Russian, whereas women seem to choose Dutch, French, Italian and Spanish” (Noack, 2016, para. 1). The Babble researchers have hypothesized that the 3 languages men chose to learn have more to do with their jobs than the languages that the women chose.

This phenomenon can be explained by examining what these languages are used for. Some languages such as Russian, German, Portuguese, and French, along with Arabic, ASL, Mandarin, and Spanish are all considered languages of business. Being able to speak these languages can lead to pay increases, career advancements, and being an overall more attractive candidate for many jobs (Fowler, 2019). Although there is not sufficient data as to why the genders specifically chose those languages, a professor from the University of Duisburg in Germany commented as follows: “German has always been associated more closely with technology, industry and business while especially French but also Italian have been associated

with fashion and culinary excellence” (Noack, 2016, para. 5). Drawing on this study, it is possible that both genders choose what language to learn based upon the careers that they desire. For example, many of the users from the Babble survey reported that they were learning a language for their careers, so language acquisition is strongly motivated by improving your career.

Learning a language is not solely motivated by career reasons. Within this same Babble survey, researchers polled users on their motivations for learning a language in the categories of “career,” “cultural interest,” “travel,” “roots/heritage reconnection,” and “self-improvement.” An interesting trend that emerged was that “27% of career-motivated learners in English speaking countries learn German, making it their most popular career-boosting language by a significant margin” (Babble, 2016, p. 6). In another question of the survey, women were 3% more likely to learn a language for travel and 5% more likely to learn for mental fitness as opposed to men. This information suggests that gender differences in preferred languages generally stem back to the learners’ original motivation and are not solely based on career reasons.

In a final analysis of these current studies, it seems that the brain’s language acquisition system and also the language education system itself is designed for females to outperform males. From an early age, men are destined to underperform in language acquisition settings as compared to women. With this factor and the previously mentioned motivational differences between men and women, it becomes more obvious why more Babble users are women and why Rebecca Rogers was not heavily ridiculed for her broad statement on language acquisition. A large gap in this research disregards learners in their 20’s. The studies reviewed focus on language acquisition from birth through secondary education and then, with the Babbel survey, through the age of 25 until retirement. This line of research leaves a clear gap in the college

years that are some of the most transformative years for many people. To generate a better understanding about the gap in gender and foreign language learning, this study closely reviews foreign language majors of college students. The goal is to provide information for people who want to learn a foreign language and also to foreign language educators. Specifically, this study addresses the following research questions:

1. Do women get foreign language degrees more often than men and if so, why do men choose other fields such as business and engineering?
2. How is the choice of a foreign language major affected by women's success in language learning?
3. Since females continue longer with language acquisition, what different instruction methods can be used to bridge the gap and make up for the disconnect of foreign language teaching styles and male language acquisition methods?

Chapter 3: Methods

In order to investigate the differences in college foreign language choices of men and women, some sort of database was needed. Initially, the idea was to collect data using declared major databases from universities across the United States. However, multiple problems emerged with this idea. Within the few universities that did have an updated database, there were many inaccuracies such as defining a Spanish major and a Spanish Literature major in two different departments and not both under the foreign languages department. Another inconsistency is that the universities generally have different requirements as to what constitutes a major. For example, the same requirements for a minor in Russian at Yale University is considered to be a Russian major at the University of New Hampshire. Additionally, some databases would double-count students for different categories meaning that a German major would also fall under a Germanic Languages major.

Due to this wide array of issues, it was more reasonable to rely on a comprehensive database than separate databases from different universities. The National Center for Education Statistics website (https://nces.ed.gov/programs/digest/d18/tables/dt18_318.30.asp) provided this comprehensive database. From this website which analyzes educational data of all schools in the United States, I was able to locate a database of conferred degrees which was put together by the Institute of Education Sciences. This database is formed from accredited universities and their reported conferred degrees upon graduation. The database relied on is from the 2016-2017 school year and includes gender, field of the degree conferred, subfield in which the degree was awarded, and count of the degrees.

One drawback to this database is that the gender categories only include males and females and thus do not account for the LGBTQ community. For this reason, this study will only

include female and male genders, but language acquisition in the LGBTQ community is an area that should be taken into consideration for future studies. In terms of degrees, this database includes bachelor's, master's, and doctorate degrees, but I will only be focusing on bachelor's degrees in this study since there is sufficient data and adding master's and doctorate degrees would not drastically alter the data either way.

Within the fields of degrees, there are multiple areas in which a foreign language may be found such as cultural studies or language teaching degrees. To narrow down the options, I chose to focus on the field of foreign languages, literatures, and linguistics. Although there were options of other fields that included languages, this field is broken down into many languages while the other fields tend to group languages together. In order to simplify the data, I picked the top 11 languages that had the highest counts of degrees. These languages are as follows in no particular order: Chinese, Japanese, Korean, Russian, German, French, Italian, Portuguese, Spanish, Arabic, and American Sign Language. I did not pick these languages for any other reason besides the fact that they were the most numerous in the database and therefore would produce the most accurate results.

Using this information, I formed my own database of these 11 languages, the genders of the graduates, and the count of degrees conferred. I examined the gender and count categories to see if males or females were more numerous per language and then as an overall total of the top 11 most numerous language degrees. In total, this method of selecting the most numerous degrees produced 10,664 foreign language degrees. The more specific results and the results per language are explained in chapter 4.

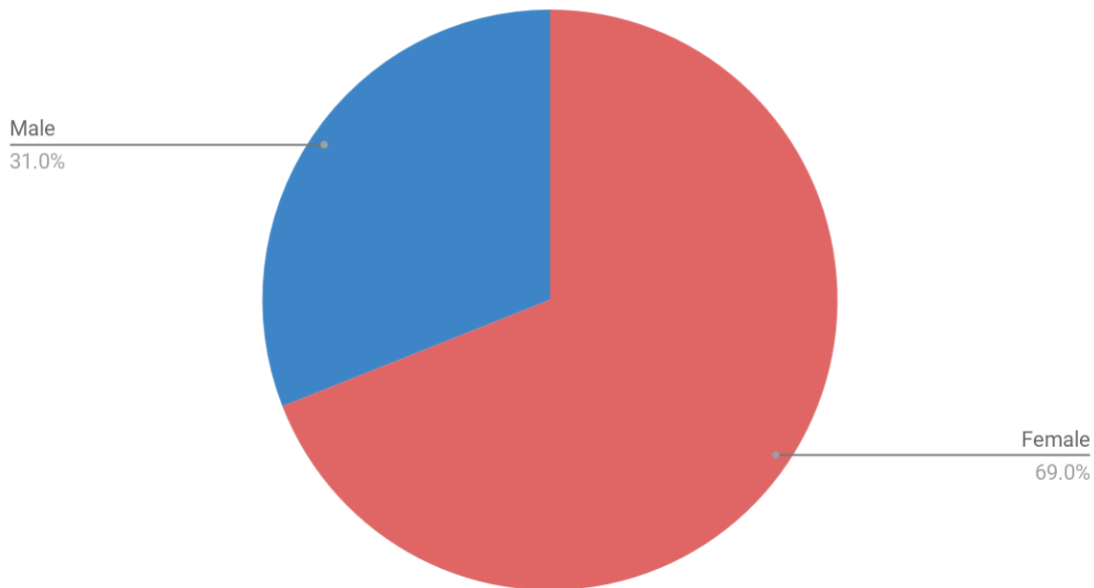
Chapter 4: Results

This chapter provides the results of my research and explains the significance of the database that was created. The database from NCES was much larger and this is just a portion of the database that was taken for this paper's needs. My database is represented as follows:

Table 1: Counts of Languages per Gender

Language	Female	Male
Chinese	253	197
Japanese	307	233
Korean	38	29
Russian*	144	152
German	384	369
French	1195	430
Italian	130	53
Portuguese*	19	22
Spanish	4716	1704
Arabic*	73	87
ASL	102	27
	7361	3303

The titles of this database represent the various languages that I surveyed and the count of males and females. The languages are listed in the first column with the counts in the next two. The Romance languages are highlighted because they tend to be the most commonly learned languages and they have a large portion of the representation in this database. The asterisks are to indicate which languages have exceptions in which the men have a higher count than the women. These languages will be separated individually and represented visually below.

Chart 1:**Male vs Female Language Degrees in NCES Database**

This is a visual representation of the entire database. All languages are combined in this representation. The higher percentage of female language degrees (69%) is quite striking compared to the percentage for males (31%). This provides evidence that females do, in fact, major in foreign languages more often than males. The margin is not as close as one would expect since there are more than double the number of females majoring in a foreign language than there are males.

Chart 2:

Spanish Degrees in NCES Database

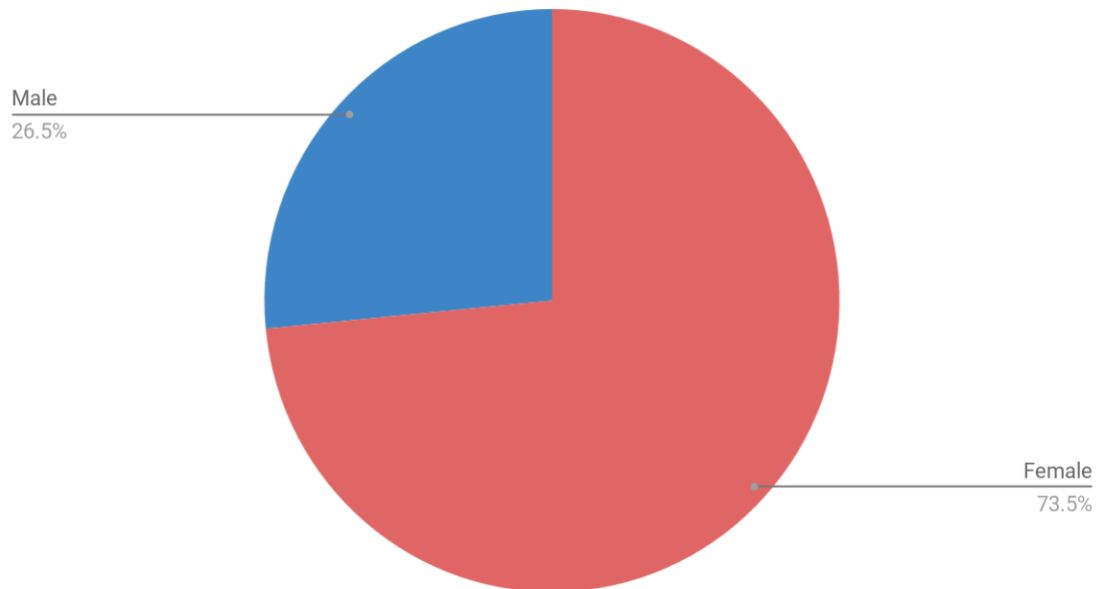
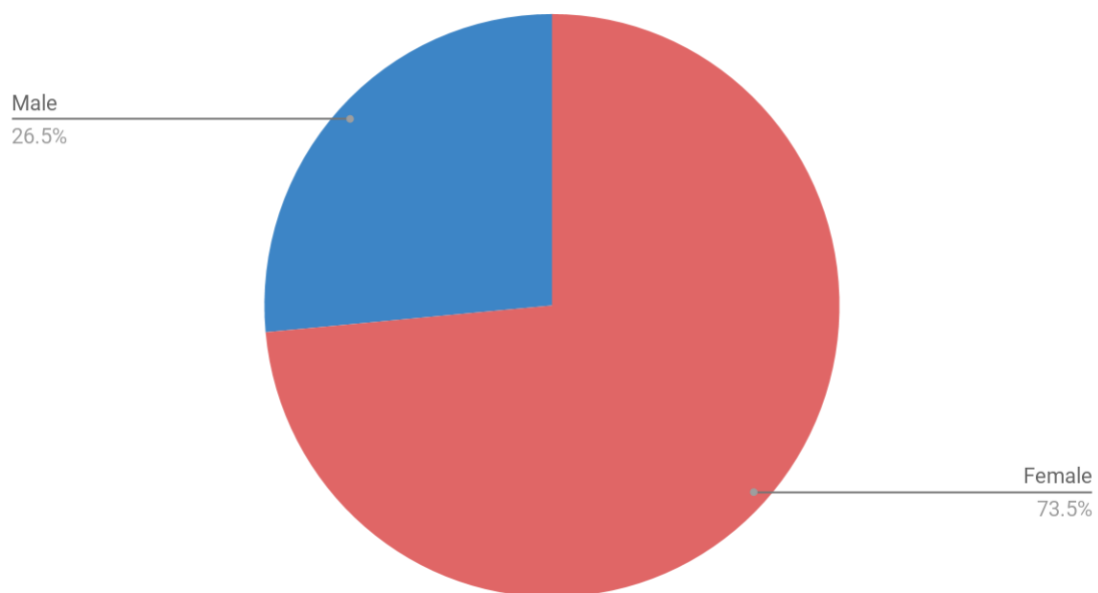


Chart 3:

French Degrees in NCES Database



Graphs 2 and 3 show the percentages for French and Spanish. Females learn both of those languages even more often than males than the average percentage from all of the languages combined. An interesting note is that both of these languages have the same percentage of males compared to females. They have different counts in the database, but the proportions are the same. This could imply that females will continually learn these languages more frequently than they choose other languages as well as more often than males.

It is interesting to note which languages are exceptions in which there are more men than women and which languages are dominated by women. This is an intriguing phenomenon, but it is likely explained by the previously mentioned article by Noack (2016) which ties certain professions to language and gender. Professions become related to certain languages based on geographical regions being associated with that industry, but the idea of the gendered professions is more traditional and stems from historical events. Given the distinction between these two immersions, it is interesting to see how gender and languages intersect.

This study has provided answers to all of the previously stated research questions. The results show that women obtain foreign language degrees more than twice as frequently as men do. The reason that men choose other fields such as business and engineering likely has to do with them not having as much success in language learning due to the design of their brains but also the education methods most frequently employed. Women tend to stick with these majors more often because they have more success which is also due to their brains and the language education methods. There are different methods such as oral exams and other activities which use the senses that language teachers can use in order to increase the likelihood that males will perform as well as females. This increased performance would likely motivate males to continue their language education.

Chapter 5: Conclusion

From an investigation of the results, it is clear that women do major in foreign languages more often than men. Given the evidence presented in chapter 2, it seems that men and women are designed to learn languages differently. As presented by several researchers, females tend to be more effective language learners from a very young age. As if this advantage was not enough, the female learning style tends to match with the instructional methods used, which leaves males at an even greater disadvantage.

It is also important to note that males and females have different goals in mind when learning a language. The few exceptions in certain languages can likely be explained by the field of work that the learners choose to enter. Because of this, it is evident that languages are somewhat gendered.

Given this information, should males just stop trying to learn languages altogether? Of course not, but language teachers should consider the different learning styles of males. From previous research (Burman, Bitan, & Booth, 2008; Arabski & Wojtaszek, 2011), we know that males need to use their senses when acquiring a language. Teachers should implement more activities involving visual aids or auditory exercises so that males are given a fair chance (Coskun, 2014). As for exams, oral exams are more suited to the male style of learning since they rely on senses and are not just written on paper. If these teaching methods are employed, males would have much greater success in the classroom.

Now that we know what resources males need in order to learn effectively, how can teachers find a balance of the male and female learning styles? It is actually simpler than it seems to be. Females do not necessarily have a contrasting learning style compared to males, they simply incorporate multiple methods at once while males rely on one at a time. This means that

if methods for the males are implemented, it will not hinder the females' learning abilities. In fact, since they would have all of their focus on one aspect of acquisition, they might be more successful learners overall.

Given the drastic differences in the numbers of female and male language learners, it is clear that the language education system is in need of a change. It is quite unfortunate that language has become so feminized in societies across the world, but this does not mean that males cannot be as effective learners as females. Teachers should take the initiative to change their instruction methods so that males have a fair chance of closing this language acquisition gap.

References

- Arabski, P. J., & Wojtaszek, A. (Eds.). (2011). *Individual learner differences in SLA*. Retrieved from <https://ebookcentral-proquest-com.proxy.lib.utk.edu>
- Babbel. (2016). User survey 2016. Retrieved from https://press.babbel.com/en_GB/releases/downloads/Babbel_Global_User_Survey_2016.pdf
- Burman, D. D., Bitan, T., & Booth, J. R. (2008). Sex differences in neural processing of language among children. *Neuropsychologia*, 46(5), 1349-1362. doi:10.1016/j.neuropsychologia.2007.12.021
- Coskun, L. (2014). The girls are better at language learning: a comparative approach. *Journal of Educational and Social Research*, 4(2). doi:10.5901/jesr.2014.v4n2p17
- Digest of Education Statistics, 2018. (n.d.). Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_318.30.asp
- Dionne, G., Dale, P. S., Boivin, M., & Plomin, R. (2003). Genetic evidence for bidirectional effects of early lexical and grammatical development. *Child Development*, 74, 394–412.
- Employment and Earnings by Occupation. (n.d.). Retrieved from https://www.dol.gov/wb/occupations_interactive.htm
- Frans W. P. van der Slik, Roeland W. N. M. van Hout, & Schepens, J. J. (2015). The gender gap in second language acquisition: gender differences in the acquisition of Dutch among immigrants from 88 countries with 49 mother tongues. *Plos One*, 10(11). doi:10.1371/journal.pone.0142056
- Noack, R. (2016, March 5). Why men and women might choose to learn different languages. *The Washington Post*, Retrieved from www.washingtonpost.com/news/worldviews/wp/2016/03/05/the-worlds-most-male-and-female-languages-according-to-learners/?noredirect=on&utm_term=.86dcd4329f95

Ortega, L. (2009). *Understanding second language acquisition*. London: Hodder Education.

Rogers, R. (2006). Women in modern language teaching: elements for a story to be built.

ELA Applied Linguistics Studies, 142(5), 135-149.