





Probing the Gender Aperture: Exploring Gender Differences in Language Learning

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Abstract

There have been numerous studies which exploring gender differences yet their role in second language acquisition remains unsettled. This research article aims to shed light on gender differences in language, specifically in second language learning. The ultimate aim of the research is to find and affirm whether male students are better in learning a secondary language or female students. The findings would help the teachers to focus on the areas requiring more support and equip the students with additional guidance, thereby facilitating faster and more effectively. Additionally, teachers would know about the brighter side of learners. Since learning a second language is complex and significant, research on gender differences is considerable for identifying effective teaching techniques. Gender differences yield different results in acquisition and have been studied across various fields, acquisition psychology, social studies, and scientific researches. Here, the motivation for analysing the gender differences is primarily identify the factors that determine the stronger performer in language learning. Identifying these factors may lead to further outcome- based inputs in second language teaching and learning. This paper reviews previous scholarship and researches on gender differences in language learning and supplements it with the researcher's own findings, supported with appropriate evidence.

Keywords: Gender difference, gender-based outcome, language acquisition.

Submitted: 17.04.2026

Revised: 07.05.2026

Accepted: 22.06.2026

Published: 31.06.2026

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Introduction

This article seeks to move beyond simplistic discrimination based on gender; rather, it attempts to understand and identify the reasons behind the successful language outcomes observed across genders. This research focuses on gender and the learners' knowledge, proficiency and use of language; additionally, this paper explores why a particular gender surpasses the other in language learning. While numerous studies have discussed the gender differences through the lens of anthropology, when considering language, phonology, and lexicon, students are taken into account to determine the better performer by gender. Drawing on the previous studies and research papers, the researcher highlights that the female learners are generally more proficient in learning second language, and they carry out pronunciation, accent and vocabulary that are one step ahead of, and more accurate than those of male learners. This research article presents supporting evidence to substantiate this position on the gender gap in second language learning. Further, this paper undertakes to perceive the facts which makes female to learn well- accelerated with perfection, and with a greater accuracy than male.

Literature Review

Lihong Gu says that, the research into gender differences in the field of linguistics began with Robin Lakoff, who introduced the term 'female language' in her book *Language and Women's Place* published in 1973 which aroused the linguists' interests in this research topic. Lakoff, identifies several features of the female language, arguing that women are socially trained to speak in ways that appear less confident, less attractive and more polite than men this social connectedness, she suggests, makes women more receptive to adopting a language than men (53). Cameron (2003) also supported the view that women are superior in understanding a secondary language and expressing themselves with greater ease than men, a position consistent with Lakoff's arguments (173-192). In terms of Gender Language Theory, it is widely believed that gender affects language acquisition, with the reference to how younger generation boys and girls, male and female attaining the (secondary language) language. "The field of women and gender studies has matured over the last decade with many colleges and universities now offering undergraduate majors, and several others offering master's and doctoral degrees" (Ingold 103). The theory examines how language usage differs between genders, reflecting or creating social roles, power dynamics, and communication styles. In support of this, several notable scholars have coined their own terms for female language, including, "women's language" (Lakoff 1973), "the female register" (Grosby and Nyquist 1977), "genderlect" (Kramer 1974) and "gender-related-language" (Mulac et al 1986). Ying L.F states that Generally, both males and females may be involved in their language studies for various reasons. The reasons which critics mentioned in their discussion are that they feel motivated to learn by external and internal motives, such as the desire to obey rules or please teachers, the interests and benefits of language itself where it is applicable for both

the genders.

In 2002, Gu conducted a large-scale study among Chinese university students learning English and found that female learners performed better in vocabulary acquisition and overall English proficiency. The study also found that female students used vocabulary learning strategies more frequently and effectively than male learners. In 2004, Andreou, Andreou, and Vlachos conducted research among Greek undergraduate students learning English as a second language, their findings explain that female learners achieved higher scores in speaking performance than male learners. Researchers attributed this difference to greater communicative engagement and willingness to participate in classroom interaction. "Employing language learning strategies will lead to greater language communication ability and academic achievement" (Ho and Ng 454). Hong Nam and Leavell (2006) investigated on language learning strategies among ESL learners and reported that female students used affective and social learning strategies more actively than male students. Female learners were more willing to seek clarification, communicate with peers, and manage emotional difficulties during language learning relatively this shows their motivation with themselves. Accordingly, this research seeks to identify the factors underlying the differential performance of female and motivating factors for both genders to learn a secondary language.

Research Gap

Another gap concerns the overreliance on binary gender categories. Most earlier studies classify learners strictly as male or female and treat gender as a fixed biological variable. Although gender has often been understood solely in biological terms, in second language learning it encompasses the behavioural dimensions of a particular gender identity which may facilitate language acquisition. Contemporary theories in language and identity argue that gender is socially constructed and fluid, yet limited research applies these perspectives to second language acquisition. As a result, many studies fail to capture the complex interaction between identity, power relations, and language learning experiences. This study therefore seeks to clarify why a particular exact gender is more motivated in learning a second language, and how it relates to identifying the patterns of development in language acquisition.

Attitude and Scientific behaviour towards Language Learning

Behavioural studies indicate that the majority of female students tend to behave more attentively, in the classroom compared with male students, factors such as autonomy, attitude and learning strategy further enable female learners to grasp the nuances of language learning more effectively. Adolescence, the transitional from childhood to young age, is a stage during which students acquire a great deal academically, in particular, adolescence plays an important role in shaping personality in numerous ways. During this period, young people learn new kinds of manners and practices not formally taught in schools. They develop self-esteem, courage and self-confidence. These behavioural changes differ between genders and play pivotal role in shaping one's learning attitude. Girls use more non-

lexical verbs than boys when expressing their feelings; analysed from a psychological perspective, this reflects girls' more active participation in household and family activities.

Dr. Michael Phillips, a Neuro-audiologist at the Indiana University School of Medicine, found gender differences in the brain activity of men and women. According to that brain imaging scans showed that the left-brain hemisphere of men in the study was activated while listening but both hemispheres were activated in women. This data suggests that there is a physical difference in listening between men and women. Dr. Michael Phillips in "Temporal Lobe Activation Demonstrates Sex-Based Differences During Passive Listening" suggests that while the anatomical composition of the male and female ear is identical, men and women listen differently (202). Specifically, women appear to use both sides of the brain while listening, whereas men rely more heavily on onside. As Mark Phillips stated: "Our research suggests language processing is different between men and women, but it doesn't necessarily mean performance is going to be different" (202). Researchers noted that the majority of women showed neural activity in the temporal lobe on both the sides of the brain, while male participants displayed activity primarily confined to the left side. Scientists believe the left side of the temporal lobe is responsible for listening and speech. This serves as supporting evidence that women demonstrate greater bilateral engagement in listening than men.

Behaviourism Theory, derived from the work of Skinner (1981), posits that knowledge exists independently and outside of the scope of people, according to this theory, a learner's relationship with society and cultural context determines their capacity for learning. The research further investigates the ideas of various theorists and scholars to access their claims regarding the predominance of one gender over the other in language acquisition Skinner (501-504).

Perspectives of Gender Differences in Language Learning

Lakoff (1975) introduced the concept of 'Dominance' arguing that women demonstrate a clear dominance in second language learning and are better at grammar, punctuation and spelling (53-56). She further argued that linguistic features of women's speech such as hedges, hypercorrect grammar, super polite forms, question intonation in declarative contexts, and question tags, exemplify the tentative and relatively powerless nature of women's language, thereby reflecting broader social hierarchies (Lakoff 53-56).

Another theorist named Tannen (1990) also gave his regards and coined a term 'difference'; this identifies that basic difference between men and women linguistic approaches towards language learning (14-18). Boyle (1987) in his study of Chinese students in Hong Kong, addresses females earned significantly higher mean scores on general proficiency tests in English as a foreign language than scored by males (273-284). "Despite decades of literature investigating the cybersecurity industry's skills and gender gap, women remain underrepresented in this field. Additionally, skill frameworks often emphasize technical skills while overlooking soft skills"

(Benson et al. 1). So, from these studies one can understand the factors behind the female understanding and deliverance of a secondary language. Girly behaviours are infused to girl students when they are in kinder garden itself; so, education comes as one among their responsibility to achieve it. Whereas in the case of boys' education comes as part of their commitment to get a good job and attain an affluent lifestyle; so, the efforts are limited. Based on this statement the different genders how they see secondary language learning and how they learn with different strategies also come as discussion among researchers.

The Social Interaction Theory, developed by child development psychologist Vygotsky, defines that social interaction between children and significant other fosters cognitive development in language learning (79). "Recognizing others' social interactions is a crucial human ability" (Masson and Isik 1). This theory holds that positive social interaction among children produces remarkable result in learning; in language learning specifically, meaningful interaction enables communication and facilitates the acquisition of knowledge with greater ease (Vygotsky 79-91).

The Social Learning Theory, proposed by Bandura (1977), states that humans often learn by modelling one another or through imitation (22). He adds that this process requires attentiveness, retention, the ability to reproduce observed behaviours, and motivation (22-28). Self- motivation among students is therefore pivotal in language learning.

Kolb's Learning Style, which developed by David Kolb in 1984, states that an individual's learning styles depends and develops due to life experiences, genetic mutation, and the demands of the immediate environment. As per this theory genders are equally given probability for learning a secondary language, but what makes the differences is that their circumstances and state of affairs they belong to (95-98).

Kolb's Learning Cycle

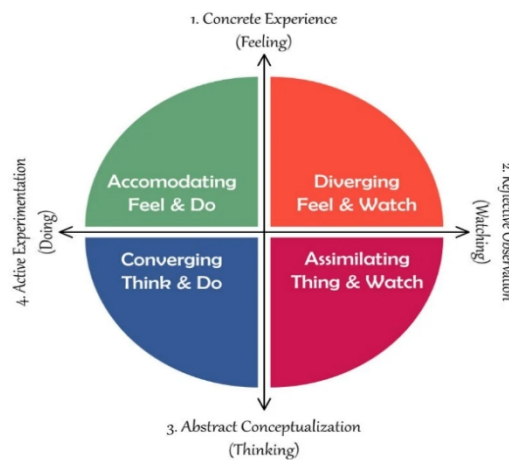


Figure1: Kolb's Learning Cycle

Converger, Diverger, Assimilator, and Accommodator:

Kolb's learning theory covers all these four elements:

(i) Converger, this concerns highly skilled individuals who have practical ideas for specific applications in the areas of active experimentation and abstract conceptualisation.

(ii) Diverger, this involves individuals whose learning styles favour seeing the "bigger picture". This group of people enjoys brainstorming and always comes up with refreshing ideas. Musicians, artists, those with excellent skills in the arts, and counsellors all tend to be in this learning style.

(iii) Assimilator, is a set of individuals who are more concerned with theoretical considerations and models than with people, working in areas such as reflective observation and abstract conceptualisation. Individuals with these learning styles are mostly mathematicians and researchers in the basic sciences. Lastly, the

(iv) Accommodator this set of individuals develops learning styles through active experiments and concrete experience. Therefore, self-motivation plays a pivotal role in learning a secondary language with ease, additionally the techniques and gadgets also occupy a prominent place in second language learning. These, then are some of the learning styles identified by famous theorists, through them, students learn according to their capacity, social background, self-interest and so on.

The ease of learning through the use of technology could be one of the immediate causes leading to gender differences. However, the gender differences in language learning emerge earlier in female than in males, because females actively engage in language practice through relationships. In contrast, males mostly use language to explain events and objects, treating it as a largely academic matter. Female and male language outcomes can only be measured on the basis of how they react to situations, practice, sometimes proficiency is assessed using native speaker accent and pronunciation parameters. Taken together, these theories suggest that no single factor explains the gap; motivation, social interaction and learning style work together, and gender appears to influence each of them.

Research Method, Tool and Design

To determine and differentiate the communicative performance, a Quasi-experiment was used to verify that the genders differ in their understanding of a second language. Based on their gender category, their understanding and acquisition were expected to vary. This research establishes cause and effect through the tests. Participants in the experiment were 100 students from the Agricultural Engineering department.

Data Analysis

Pre-test Analysis

The table presents a comparative analysis of pre-test grammar scores between

male and female students, with a sample size of 100 students equally divided by gender (50 males and 50 females). The data indicate that female students outperformed their male peers across all key performance indicators in the pre-test. On average, females scored 75.2%, which is 7.1 percentage points higher than the male average of 68.1%. The median scores follow a similar trend, with females scoring 76% and males 69%. While both groups demonstrated a reasonable spread of scores, male students showed slightly higher variability, as reflected in their larger standard deviation (10.2 vs. 8.6). In terms of achievement, 74% of female students passed the test (defined as scoring $\geq 70\%$), compared to 60% of male students, indicating a 14% higher pass rate for females. The top-performing 10% of students also scored slightly higher among females ($\geq 86\%$) than males ($\geq 82\%$).

These pre-test results provide a baseline for evaluating progress and reveal a consistent, though modest, gender gap in grammar proficiency prior to instructional intervention.

Metric	Male (n = 50)	Female (n = 50)	Difference (Female - Male)
Average Score (%)	68.1	75.2	+7.1
Median Score (%)	69	76	+7
Standard Deviation	10.2	8.6	-1.6
Highest Score (%)	87	91	+4

Table1: Pre-test Outcome

Post-test Analysis

Post-Test Grammar Score Comparison by Gender (n = 100)

Metric	Male (n = 50)	Female (n = 50)	Difference (Female - Male)
Average Score (%)	76.2	83.5	+7.3
Median Score (%)	77	85	+8
Standard Deviation	9.4	7.8	-1.6
Highest Score (%)	95	98	+3
Lowest Score (%)	60	65	+5
Pass Rate ($\geq 70\%$)	84% (42/50)	94% (47/50)	+10%
Top 10% Threshold	≥ 90	≥ 92	+2
Improved from Pre-Test (%)	88%	96%	+8%

Table - 2 Post-Test outcome

The post-test results reflect the outcomes of a grammar-based language assessment conducted after an instructional intervention, with data collected from 100 students (50 male and 50 female). The analysis reveals a clear overall improvement in both groups when compared to pre-test performance. However, female students not only maintained their lead but also demonstrated greater gains, suggesting a more effective learning response.

The average post-test score for female students rose to 83.5%, compared to 76.2% for males, marking a 7.3-point performance gap in favour of females. The median score for females (85%) is also notably higher than that of males (77%), indicating that the overall distribution of female scores shifted higher after the learning period. Moreover, the pass rate for female students increased to 94%, while the male pass rate improved to 84%, preserving a 10% lead for females. The lowest female score (65%) remained higher than the lowest male score (60%), suggesting more consistent performance across the group. Female students also had a slightly higher threshold for the top 10% of scores ($\geq 92\%$ vs. $\geq 90\%$). Most notably, 96% of female students showed improvement from their pre-test scores, compared to 88% of males, highlighting that female students are not only outperformed males but also demonstrated stronger learning progress.

These results suggest that female students responded particularly well to the instructional intervention, both in terms of performance and improvement, showcasing greater gains in grammar proficiency post-test.

The data from this analysis clearly shows that female students performed better than male students in both the pre-test and post-test. This difference in performance can be linked to several reasons that have been discussed in earlier sections. Female students tend to be more attentive in classroom, using various learning strategies, and are more willing to interact with their peers and teachers. These habits help them learn a second language and more effectively. As scholars state that, female learners make greater use of affective and social strategies which support better language outcomes. The idea about this brain mentioned here, expresses that women use both sides of the brain when listening, which may help them process language more fully, completely. On the other hand, male students also showed improvement after all instructional phase which suggests that teaching methods can positively affect all learners. Evenly, male students may need more encouragement to participate actively in class and to use different learning strategies. Teachers can help by creating classroom environment where all the students feel comfortable to speak, ask questions and practice the language. Motivation also plays an important role when students are genuinely interested in learning a language, they tend to put in more effort and achieve better outcome and results. Understanding the reasons begin the gender gap in language learning can help teachers plan better lessons and provide the right kind of support to both male and female students.

Conclusion

The findings from both the pre-test and post-test grammar assessments provide compelling insights into the gender-based dynamics of language learning. As suggested by the title *Probing the Gender Aperture in Language Learning*, this study set out to explore whether a significant gender gap exists in language acquisition, and the results affirm that such an aperture not only exists; but widens positively in favour of female students over time. From the outset, female students demonstrated stronger baseline grammar skills, outperforming their male peers in average score, pass rate, and consistency. However, what is more revealing is that this initial advantage grew even more pronounced after the instructional phase. Not only did female students score higher in the post-test, but a greater proportion also showed marked improvement from their pre-test results, indicating a more effective uptake of learning strategies or responsiveness to teaching methods.

This performance pattern suggests that gender may play a meaningful role in how students engage with and progress in language learning, particularly in grammar-based evaluations. The term “aperture” in the study’s title metaphorically reflects this widening gap; not as a deficit, but as a lens to understand differentiated learning outcomes. Rather than viewing the gap as problematic, it provides an opportunity to probe deeper into instructional approaches, cognitive styles, motivation, and classroom dynamics that may contribute to these gendered learning trajectories. Yet a widening aperture also invites a caution, if teaching quietly favours the strategies that girls are socialised into, then the gap may reflect not innate but the very shape of the classroom itself.

In sum, the study underscores the importance of gender-aware pedagogy in language learning (ESL), where understanding such apertures can guide more equitable and effective teaching strategies for all learners.

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