



The Impact of Gender Differences on Chinese English Learners

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Abstract. Gender differences caused by physiological and psychological factors has always been an important topic in the field of second language acquisition. Previous studies were mainly from Western countries, however, there has been no systematic cognition among the studies in China. Therefore, this paper mainly studies and sorts out the impact of gender differences on Chinese English learners. This paper explores the impact of gender differences on English learners in China from 2 aspects: learning strategies and learning styles. In terms of learning strategies, the findings for male and female students in terms of their choice of cognitive and metacognitive strategies seem to be more in favor of girls using these two types of strategies more than boys. In terms of learning styles, there are significant differences between visual and kinesthetic learning styles among students of different genders, with female students preferring visual learning styles and male students preferring kinesthetic learning styles. Moreover, males are more independent than females while females were more dependent than males; females tend to be more prudent while males tend to be more impulsive. Therefore, it is suggested that teachers should adopt diversified teaching methods and means according to the gender composition of students in English classes, so as to meet the needs of students of different genders, learning strategies and styles.

Keywords: Gender difference · English learning · Learning strategies · Learning styles

1 Introduction

Language learning, as social behavior, is a complex acquisition process. Many factors influence language learning, and gender is a very important factor. Gender is a fundamental part of our self-concept and is a prominent aspect of self-representation, and there are differences between the sexes. Furthermore, the gender difference is a common problem for non-native English speakers in the process of learning English, and male and female students have different factors affecting their learning effectiveness because of their gender. Since the 1920s, the relationship between gender and language learning has attracted a great deal of research by anthropologists, linguists, psychologists, and sociologists [1]. The influence of gender differences in language learning was first proposed by the Danish scholar Otto Jespersen in his work in the 1920s, and from the

1930s onwards, it was gradually recognized that gender differences could affect language learning outcomes [2]. China has the largest number of English learners in the world, yet despite the rapid growth of education in China, research on English learning and gender is still lacking. In addition, educators lack the knowledge of English teaching, many schools do not base their teaching on gender, which makes it often difficult for English teaching to take into account the actual learning needs of male and female students and to make the best effect of English teaching [3].

Researchers who have investigated and studied gender differences have reached a consensus that there are gender differences in language learning, with most believing that girls are better than boys, and that this difference tends to increase. However, due to the different research directions, perspectives, and methodologies used, the results vary. With the development of psychology, educational psychology, and cognitive psychology in the 1950s, foreign language researchers began to realize that learners are not just the receivers of information input, but that learning is a complex mental process in which learners actively cognize and process information [1]. The focus of research on foreign language teaching began to shift from teachers and teaching to learners and the learning process, that is, from how to teach to how to learn. Foreign language practitioners began to focus on how learners process and cognize new information and help learners develop learning and thinking strategies. In this context, the study of foreign language learning strategies and styles has emerged and gradually become an important research topic in the field of foreign language teaching. There are various reasons for the differences in learning strategies and styles of foreign language learners, among which gender differences have an important influence on the choice of learning strategies and the formation of learning styles of learners. However, Chinese researchers have done more research on learning strategies and less research on learning styles, and even less empirical research on gender differences in learning styles, probably because of the difficulty of studying cognitive mechanisms in the brain and the difficulty of quantifying and operationalizing them due to the abstract nature of cognitive styles.

Based on the above discussion, it can be seen that there are many discussions about gender differences in English learning, but they are mainly focused on Western countries, and there are fewer discussions in other countries, and therefore no unified systematic understanding has been formed. Therefore, this paper mainly focuses on and analyzes the situation of English learning in China, relying on the international theory of gender influence on language teaching, to explore how gender difference affects English learning. This article is divided into the following sections for discussion: 1. Learning Strategies and Learning Styles; 2. Gender Studies in Learning Strategies; 3. Gender Studies of Learning Styles.

2 Learning Strategies and Learning Styles

Learning strategies as a complete concept emerged after Bruner's 1956 introduction of cognitive strategies [4]. Different researchers have defined foreign language learning strategies from different perspectives, represented by O'Malley and Chamot, who defined learning strategies as special ideas or behaviors that individuals use to help them understand [5], learn or retain new information. According to Ellis, there are two factors

that influence learners' choice of learning strategies: one is the individual learner's differences, and the other is situational and social factors such as target language, background, task, and gender [6]. Learning style is the way learners focus their attention and try to acquire and remember new and difficult knowledge and skills. It is the natural, habitual way for individuals to assimilate, process, and acquire new knowledge and skills, which does not change due to changes in content or teaching style. Since learning style was first introduced by American scholar Herbert Thelen in 1954, it has received increasing attention from educators as an individualized element that influences students' learning [7]. From a physiological perspective, learning styles can be divided into visual, experiential, hands-on, and auditory types. From the perspective of psychological cognition, they can be divided into field-independent and field-dependent, analytical and integrative, and prudent and impulsive types. From the perspective of learners' emotions and personalities, they can be divided into introverted and extroverted, and categorization width and ambiguity tolerance types. The empirical research on learning style is mostly conducted by questionnaire surveys, among which Reid's "Perceptual Learning Style Inventory" and "Environmental Learning Style Inventory", Kolb's "Learning Style Inventory" and Eysenck's "Personality Inventory" are widely used by learning style researchers because of their high validity and reliability.

Although there are many studies on learning styles and strategies individually, few studies on the relationship between them. Some scholars have studied the effect of cognitive type on the use of language strategies. The results show that extroverts use affective strategies more frequently than introverts, and introverts use a lot of "finding ways to communicate" strategies significantly more often than extroverts. In foreign studies, Oxford and Erman found that there was a significant correlation between perceptual style and strategy preference [10], and Cohen pointed out that the relationship between learning strategies and styles was that the former could not be separated from the latter and was influenced and constrained by the latter [11]. Carson and Longhini found that learning styles determine strategies, with the former being relatively stable and the latter changing over time. Chinese scholars such as Xu Ziliang, Hao Mei, Fu Hongxia, Zheng Liping, Li Yan, and Guo Chengfeng have studied the relationship between the two. Xu found that different strategies were adopted according to different perceptions in a qualitative follow-up study [12]. Hao and Fu found a positive correlation between learning styles and strategies [13]. The order of learning style preference is independent, visual, auditory, somatic-motor, and group type. The order of strategy use is metacognitive, compensatory, cognitive, social, and affective. The two basically correspond to each other. Zheng found that field independence and dependence determined students' choice of learning strategies [14]. Li concluded that the surveyed students had not yet formed a major learning style, and that cautious organizational, intuitive, and visual styles were preferred by students, while introverted and auditory styles were not popular [15]. In addition, the mean value of metacognitive strategies was high, and the remaining five strategies (memory, cognitive, affective, compensatory, and social) were also used with moderate frequency by the college students. The use of affective, social, and compensatory strategies was higher, cognitive strategies was lower, and memory strategies was the lowest. Finally, there was a correlation between learning styles and learning strategies. Guo and Fan investigated the tendency and correlation between the two among

middle school students [16]. The results showed that students often used compensatory strategies, cognitive strategies, metacognitive strategies, and social strategies, but less often used affective strategies. There is a strong relationship between the learning strategies used by learners and their learning styles. Behind specific learning strategies lies specific learning styles. While styles refer to the overall pattern of learning behaviors, strategies involve specific learning behaviors. Learning styles reflect the learner's preferred learning strategies, however, they contain more than learning strategies including aggression, attitudes and cognitive factors. Learners tend to use learning strategies that are appropriate for their learning styles. Learners are able to extend their learning styles and change them to some extent through the practice and application of learning strategies. Furthermore, the effect of gender on foreign language learning strategies is usually not direct. It is indirectly influencing the use of learning strategies through its effect on learning styles. Thus, it can be seen that strategy and style are interrelated and influence each other, and gender has an impact on both.

3 Gender Studies in Learning Strategies

Research on gender differences in learners' English learning strategies can be divided into macro and micro perspectives according to the research perspective. The macro perspective refers to the study of English language learners' strategies in general, which is reflected in the differences in the frequency and types of strategies used. In contrast, the micro perspective focuses on strategies for learning a particular knowledge or skill, such as listening strategies, reading strategies, and vocabulary strategies.

3.1 Macro Perspective Gender Studies

Gender differences in strategies from a macro perspective can be seen in the frequency and type of strategies used. Most of the empirical results show that girls choose more learning strategies than boys in foreign language learning. Thus, Oxford argues that girls' higher language ability than boys is due to the higher frequency of strategy use by girls rather than to intrinsic gender differences [10]. However, Tran found that among Vietnamese immigrants over the age of 40 in the U.S., females used fewer language learning strategies than males [17], and Tercanliogu also found that male Turkish students used more learning strategies than female students through a survey of 184 college students [18]. In contrast, Ehrman and Oxford found no significant difference in the frequency of strategy use between male and female students. Due to the differences in the subjects and methods of the studies, different findings were found in the overall frequency of learning strategies. In a study of 107 American high school students studying Japanese, Oxford found that girls used more metacognitive strategies than boys [19]. Wang found similar results in an investigation of gender differences in metacognitive use among 520 Chinese college students enrolled in an online English course [20]. Sugeng found no significant differences in the use of cognitive and metacognitive strategies between boys and girls in general, but the difference in the use of metacognitive strategies increased significantly with the interaction of gender and grade level: boys' use of metacognitive strategies tended to increase with grade level, while girls' use tended to decrease [21].

Studies by Oxford and Nyikos [22] and Oxford [23] also found that girls used more cognitive strategies than boys. The results of studies on cognitive and metacognitive strategy choice of male and female students seem to be more inclined towards the use of these two types of strategies by female students than by male students.

3.2 Micro Perspective Gender Research

The micro-level strategy research focuses on three areas: gender differences in vocabulary, reading, and listening strategies. Some studies (e.g., Nyikos, 1990; Boyce, 1987) found gender differences between male and female learners, with girls using more vocabulary learning strategies than boys [24, 25]. Other studies found no significant differences in the overall use of vocabulary strategies between males and females, but differences in the use of specific vocabulary learning strategies: males were more likely to use translation strategies than females, while females used contextual guessing and note-taking more often than males. Zhang found that although there were differences in boys' perceptions and strategies of vocabulary learning, there was no correlation between gender differences and English vocabulary levels [25]. In terms of reading strategies, Young and Oxford suggest that gender-based differences in strategic behavior may not exist in broad categories, but rather at the level of specific strategies [26]. Most studies (e.g., Young and Oxford, 1997; Wu, 2006) found no significant gender differences in the overall use of reading strategies by male and female students, but differences in the use of specific strategies [27, 28]. Sheorey and Mokhari used a self-reported survey to find that female students used more types of strategies overall than male students, and that female students also used more of the same types of strategies than male students. Jinlin's study of 108 Chinese secondary school students' reading behaviors also found that girls outperformed boys and that girls used more cognitive and metacognitive strategies than boys [29].

Gender differences in listening strategies have not been studied much; Bacon found that boys were more likely than girls to use translation and bottom-up strategies, while girls used monitoring strategies more often. In contrast, Vandergrift used an oral report on 21 French learners and found that there was little difference between male and female students' strategy use in the given listening tasks, with girls using metacognitive strategies slightly more than boys and boys using more cognitive strategies than girls [30].

4 Gender Studies of Learning Styles

Most of the empirical studies on gender differences in foreign language learning styles are conducted in the form of questionnaires according to certain learning styles.

4.1 International Research

There is a consensus in some aspects of international research on the gender of learners' learning styles. According to Oxford, women's learning styles are integrative, tend to be field-dependent, stable, good at listening and talking, but subjective and intuitive, while men focus on field-independent, good at objective analysis and reasoning, and

good at hands-on skills, but easy to be impulsive [31]. Jones argued that the different socialization of males and females leads to differences in learning behaviors. Early language dominance in females is associated with field dependence, while visuospatial skills in males are associated with field independence [32]. Lawrence also found that male and female adults showed significant differences in learning styles [33].

Reid investigated 1338 students and found that native language learners and foreign language learners had different learning style preferences [34]. There are also differences in learning styles among foreign language learners from different cultural backgrounds. Gender influences learning styles: Males prefer visual and experiential learning styles more than females. There are few foreign studies on the relationship between gender and auditory preference, but Eisenstein's study showed that women's listening ability was better than men's, which was attributed to the fact that women used more strategies than men. Oxford also observed that the majority of auditory learners were female, and he believed that the difference in learning styles between men and women was related to the gender difference in the lateralization of brain function. Native language learners were significantly different from native language learners.

4.2 Chinese Studies

The Chinese studies mainly focus on adults and college students. Wang was one of the first scholars in China to conduct a systematic study on foreign language learning styles. The results of his survey on 490 undergraduate English majors showed that the subjects preferred the hands-on learning style the most and the group learning style the least; that there were some significant differences in learning styles among students of different grades; that male and female students were more alike than different in learning styles; and that there was a certain relationship between learning styles and foreign language learning performance. Yu also found no significant gender differences in a survey of 149 undergraduate English majors' learning styles [35]. In this regard, the researcher suggested that this may be due to the fact that the study participants were all undergraduate students majoring in English and were relatively homogeneous. Huang's study of Chinese adult students' English learning styles showed that adult students had strong perceptual and judgmental learning styles, and that learning styles were correlated with subjects' occupation, age, and gender to varying degrees. Liu et al. investigated the gender differences in college students' learning style preference and found that there were no significant differences between male and female students in other variables except for significant differences in individual learning [37]. Pei, and Dou used questionnaires and interviews to investigate the differences in language learning styles of 258 non-English major college students [38]. And the study found that the visual and kinesthetic learning styles differed significantly by gender, with female students preferring the visual learning style and male students preferring the kinesthetic learning style. Moreover, males were more field independent than females while females were more field dependent than males; females tended to be prudent while males tended to be impulsive. However, this survey showed that from a personality perspective, males were more extroverted while females were more introverted, but there were no significant differences. The researcher believes that the difference in measurement instruments may lead to inconsistent findings.

5 Conclusion

The above discussion shows that gender differences between men and women in foreign language learning are objective and cannot be ignored. In addition, gender is one of the most important factors affecting the choice and development of foreign language learners' learning strategies and styles. The gender differences in foreign language learning strategies and styles bring some insights to foreign language teaching, and the differences in learning strategies and styles of language learners of different genders should be brought to the attention of foreign language teachers. It is necessary for teachers to make students aware of the strengths and weaknesses of their own learning strategies and styles, to build on their strengths and avoid their weaknesses, and to learn and master different learning strategies and styles. In addition, teachers should pay due attention to the gender differences in students' learning strategies and styles and adopt appropriate teaching strategies that recognize and respect the existence of such differences.

However, it is not difficult to see some shortcomings in the existing related studies. The first is that there are more macro-level studies on learning strategies and unbalanced micro-level studies. There are more studies on vocabulary, reading and listening, and there is a lack of studies on other skills such as speaking and writing strategies. Secondly, the research approach is single. Studies using questionnaires are more common, but not many studies using an integrated approach (questionnaires combined with interviews, observations, diaries, and so on). Thirdly, static cross-sectional studies are predominant, and dynamic longitudinal studies are lacking. Most of the gender studies of learning strategies and styles are static studies and case studies, lacking dynamic change studies of learners and insufficient longitudinal studies, so that they cannot discover the coherent changes of foreign language learners in a deeper way, so as to better adjust teaching styles according to the changing characteristics of learners. Finally, in terms of gender studies on learning strategies and styles, most Chinese studies take college students and adults as the research objects, and the examples mentioned in this paper are mostly the same. Therefore, although the research results are generally the same, there are still slight differences. However, there is a lack of research on foreign language learning styles of middle school students or minors in China. Gender research on foreign language learning strategies and styles is one aspect of the research on gender differences in foreign language learning. The study of gender differences can, on the one hand, refine the study of learning strategies and styles and, at the same time, provide useful insights into the mechanisms of language acquisition and psychological cognition, and its research is far-reaching.

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