

# ***The Relationships Between Learning Styles and L2 English Learning***

**Jinyan Chen<sup>1,†</sup>, Wenyuan Yang<sup>2,a,\*</sup>**

<sup>1</sup>*Cambridge International Exam Center in Shanghai Experimental School, Shanghai, 201210, China*

<sup>2</sup>*School of Foreign Languages, Shanghai Ocean University, Shanghai, 201306, China*  
*a. yannyang0725@outlook.com*

*\*corresponding author*

*†These authors contributed equally.*

**Abstract:** The paper discusses the relationship between learning styles and L2 English learners. The authors mainly focus on how personality and autonomous learning abilities influence learning styles and learning performance. The authors read through pervious study and find that there are gaps in studies of personality and autonomous learning abilities. Then, two pieces of questionnaires are conducted through online platform. According to the questionnaires, for personality, students of judgement and perceiving personalities prefer different learning styles, achieving different English performance. Their choices are always related to their characteristics of personalities. For autonomous learning abilities, the author investigates students' abilities to learn independently by comparing their English grades, attempting to infer the relationship between English learning and autonomous learning. Authors' findings have new insight in the field of learning styles of L2 English learners. But the questionnaires only collect small number of students and the results lack qualitative support.

**Keywords:** English learning styles, learning performance, personality, autonomous learning, questionnaire

## **1. Introduction**

### **1.1. Learning Styles**

Learning style is the consistent learning style of the learner with personality characteristics, and is the sum of learning strategies and learning tendencies [1]. Learning styles are influenced by the environment and experience in the process of formation. What is more, learning styles are unique because learners have distinctive personalities and they are formed through long-term learning activities influenced by specific learning environments.

### **1.2. Second Language (L2)**

Second-language acquisition (L2) usually refers to any other language learning after the first language acquisition [2]. People study it from social, psychological, linguistic and other perspectives. As an

independent discipline, Second-language acquisition research was probably formed in the late 1960s and early 1970s. It describes the second language characteristics and their developmental changes of learners, as well as the common characteristics and individual differences that learners have when learning a second language, and analyzes the internal and external factors that affect second language acquisition.

## 2. Literature review

### 2.1. Personality

Personalities are characteristics that set an individual apart from others [3]. Therefore, personality learning styles refer that, in response to specific qualities of students, including their thoughts, feelings, values, perceptions, actions, and attitudes, as well as their speaking, acting, and feeling styles, they create and implement their own learning styles [4]. Personalized learning, as a method of instruction that emphasizes the growth of learners and draws upon potential in order to meet present obstacles and succeed in the future, becomes as a key component of learning styles [5].

Personality includes individual differences such as introversion, judgement, perceiving and so on, which are the elements of prevailing personality test, Myers - Briggs Type Indicator, MBTI [6]. These differences influence their choice or formulation of learning styles when they learn a new foreign language, English.

İsmail conducted the study with 102 freshmen at Bilkent University, where English was the medium of instruction. It showed that introvert students preferred visual learning styles, next auditory styles. 41% of extrovert students chose visual styles while 28% of them was auditory and 19% was tactile. 80% of ambiverts used both visual and auditory styles[7]. Hence, the ways people choose to express their inner feelings, whether inner emotional experience or showing interests to external things, have a great impact on their learning styles. For example, introvert learners using visual styles are more likely to be inspired by pictures, graphs, recordings and videos. They learn more from observation than communication, listening and practice. When they learn English, they tend to watch English movies and observe English dialogues to develop their knowledge. However, some extroverts and ambiverts use auditory styles, which enables them to have strong oral expressing abilities in English learning. They tend to have better daily performances of the foreign language and are willing to be engaged in English speaking practice. And learners who use tactile styles prefer discussion on the knowledge or writing down new ideas on sticky notes. They may like to discuss English grammar or something confused with peers and record the results on the notes. According to discussion of İsmail, the visual styles students (46%) were more successful in the learning process, next the auditory students (43%) came. Additionally, it emphasized that students who combined visual and tactile styles were more likely to achieve success [7]. The rates of success are not high both in visual and auditory styles. But the implementation of tactile styles greatly helps learners to get high levels of English quality. Besides, according to Derakhshan, there are some considerable relationships between more proficient learners and their learning style preferences, namely, Tactile, while the low-proficient ones favoured Visual [8]. From this finding, visual styles chosen by most introverts and ambiverts are less proficient than tactile styles used by minority of extroverts. Therefore, the personality of extrovert has positive effect on learning styles, efficiency and success.

Then, the authors conducted questionnaires on how learning styles of university students are influenced by their personality, judgement (J) and perceiving (P) in MBTI during the English learning process.

## 2.2. Autonomous Learning Abilities

The cultivation of autonomous learning ability is a gradual process that requires the joint efforts of students and teachers [9]. In the process of learning English, some students lack autonomy in learning English. At present, how to carry out English autonomous learning is a hot topic in the education sector [10]. Lots of people believe that self-directed learning is a learning behavior that students actively engage in and experience the joy of learning. Autonomous learning is a relatively new form of learning compared to traditional learning methods. Taking students as the main body of learning, students make their own decisions, are not controlled by others, and are not affected by external interference [11]. Through reading, listening, research, observation, practice, and other means, individuals can achieve continuous change. This chapter will summarize the advantages and disadvantages of autonomous learning by comparing it with non autonomous learning (traditional methods).

## 3. Method

For personality, there are five measurable variables in this study using a questionnaire: personalities of students, general learning styles, word memorizing styles, English learning performance, the relationship between performance and learning style.

For autonomous Learning Abilities, the authors delivered a survey questionnaire on social media targeting high school students' learning and extracted 35 useful answers for analysis.

### 3.1. Participants

For personality, participants were 20 third year college students in one university of a developed city in China who were L2 English learners, which ages are around 20-23 years old.

For autonomous Learning Abilities, the authors delivered a questionnaire on social media to investigate Sinology's college entrance examination students learning English. The reason for setting up this audience group is because Sun mentioned in his published journal that: Under traditional teaching models, it is difficult to fully understand students' autonomous learning [11]. Hence, Chinese high school students are more suitable for authors to do the experiment.

### 3.2. Materials

These questionnaires were self-designed. For personality, parts of 5 variables were referred to the study of İsmail on introvert and extrovert students [7]. The present study just considered the general learning styles such as visual, auditory and tactile styles, as a common English learning practice, the ways of word memorizing were also taken into account.

For autonomous learning abilities, the authors set 4 questions for autonomous learning abilities:

- 1.How is the relationship with the English teacher?
- 2.Do you know how to read English related materials or watch English movies outside of class?
- 3.Is it mainly about completing the English homework assigned by the teacher? Would you learn something else on your own? For example, memorizing words.
- 4.What is the average English score range?

The reasons why the authors set these issues are as follows. First, the education that Chinese students receive from childhood is very traditional. They rely heavily on teachers, so most students do whatever the teacher says. Few students will assign their own homework. Secondly, Sun mentioned in his journal that the teacher-student relationship directly affects students' English learning performance, and a harmonious teacher-student relationship helps students cultivate their autonomous learning ability, thereby enabling them to learn English independently [11]. Is it because

the better the relationship between students and teachers, the higher the grades? So the authors asked about the relationship between students and teachers. Thirdly, compared to language tests such as International English Language Testing System (IELTS), which are a large level, the college entrance examination scores are easier to compare because each score is displayed. Moreover, not everyone can perform normally in every exam, and everyone may not remember their exam scores. So I asked about the score range of my usual exams. Finally, Li Lu mentioned in her paper that learning interest is a proactive, positive, and persistent cognitive and emotional state of students towards learning, which is an important factor in improving learning outcomes [12]. In the authors opinion, it also affects self-directed learning, so the authors have set up a question to ask everyone whether they will watch books or movies outside of class due to their hobbies.

### **3.3. Procedure**

For personality, the questionnaire included 10 questions for 5 variables was completed on the online platform Questionnaire Star during June 22, 2023 to June 30, 2023.

For autonomous learning abilities, the authors have received a total of 50 materials and selected invalid answers from them. For example, some middle school students can answer questions, but for the accuracy of experimental comparison, The authors will remove middle school students from the answers.

### **3.4. Data Analysis**

This paper will utilize frequency analysis to calculate the frequency of each item in order to illustrate the ratios of learning styles: personality and learning autonomous abilities through bar charts and tables. Based on this frequency analysis, the general profile of their learning styles will be clearer for the readers.

## **4. Results and Discussion**

### **4.1. Personality**

The questionnaire finally obtained data from 20 valid questionnaires. The analysis and display primarily focus on the descriptive statistics of the 5 variables used in this study.

#### **4.1.1. Personalities of Students**

70% of students are judgement in MBTI while 30% of students are perceiving. Therefore, there are more students with J personality in the questionnaires, who tends to be organized, prepared, like to make and stick to a plan, and be able to follow most rules freely. People of P personalities prefer their choices to be open, liking to go with the flow, and be flexible in making plans.

#### **4.1.2. General Learning Styles**

For students of J personality, 50% of them choose watching original English books, movies and other visual materials, which belongs to visual learning styles. 42% of them choose taking down notes in textbooks reading and prefer tactile styles. Only one student chooses making conversations with native English speakers, which is auditory style. For students of P personality, half of students use tactile styles and others prefer visual styles. Hence both J and P students prefer visual and tactile styles. As J characteristic is organized and prepared, it is more comfortable for students to arrange the schedules of learning by using books and movies. Making conversations with others is full of randomness for them. Since P characteristic is flexible in making plans, students would like to freely

decide their learning progress, which can hardly be realized by talking with native speakers. According to Zhang Hao, when reading a book, perceiving individuals tend to absorb and understand the content, while judging individuals are clear about whether they agree with the ideas in the book [6]. Hence the ways J and P student use visual styles are still different.

#### **4.1.3. Word Memorizing Styles**

For students of J personality, 42% of them choose continuously watching the words to deepen memory, which belongs to visual learning styles. 58% of students pick playing word recordings with the help of apps, which is auditory styles. Hence the word memorizing styles J students prefer are different from their general learning styles. None of them use tactile styles because their personalities lead them to stick to original versions of word lists and be unwilling to change or create other ways. For students of P personality, 16% of students choose visual styles, 34% of them choose auditory styles. 50% of them prefer tactile styles, writing difficult words on sticky notes and sticking them on desk. According to P students, they are more likely to have open mind, which helps them find new suitable methods such as writing down words in their suitable and effective orders. As an important practice in English learning, styles of word memorization should also be attached great attention.

#### **4.1.4. English Learning Performance**

For students of J personality, 15% of them fail in College English Test Band 6 (CET6), which means they have poor English learning quality. 50% of students achieve 425-550 score in CET6 and have medium quality. 25% of students get more than 550 scores in test and are qualified as success in CET6. For students of P personality, being equivalent to J student, 15% of them fail too. 85% of students are in medium quality. Hence more J students have greater learning performance and their implementation of visual and tactile styles is useful and suitable. The results contrast to conclusion of Zhang Hao: J/P dimensions are largely unrelated to English scores [6].

#### **4.1.5. Relationship between Performance and Learning Styles**

For students of J personality, 56% of them think their English performance is unrelated to learning styles. While for P students, 33% hold the same view. I infer the reason why more J students hold the view is that they are more organized and totally prepared for the exams.

### **4.2. Autonomous Learning Abilities**

#### **4.2.1. Data Analysis**

The authors classified their English grades based on their total scores. According to the standard set by the National Education Bureau: pass 90 points. 120 points are considered good, and 135 points are considered excellent.

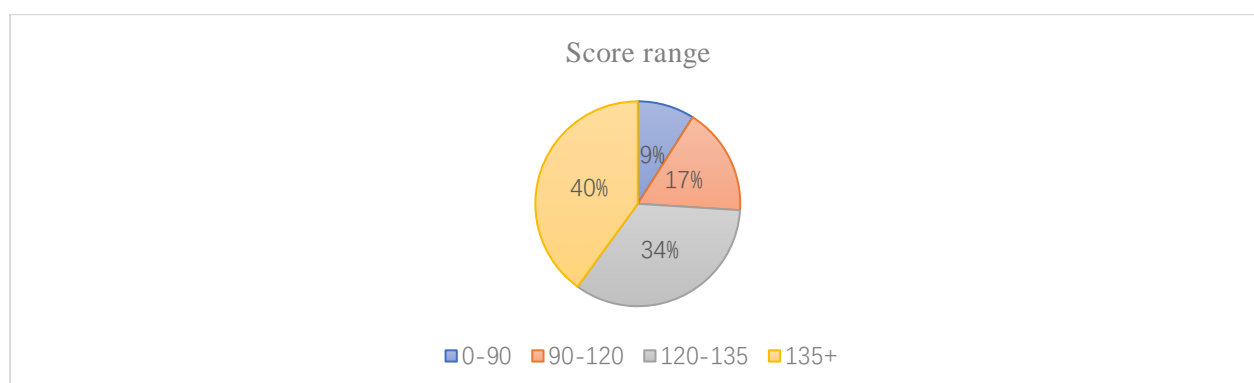


Figure 1: Score range.

From figure 1, it can be seen that among most high school students, their grades can stabilize at a level of 135+, which is a very surprising point. The English proficiency of Chinese high school students is much better than I imagined. However, based on a survey of test paper types, the authors also found that these are often the parts that Chinese people are good at: the exam includes single choice, cloze filling, reading comprehension, sentence selection filling, word spelling, error correction, and composition. Based on a survey of everyone, the authors found that most students are more likely to score on reading and listening questions, but some students are more likely to lose points on the grammar part. The most difficult question to score on is composition, and most students who fail are very distressed about it.

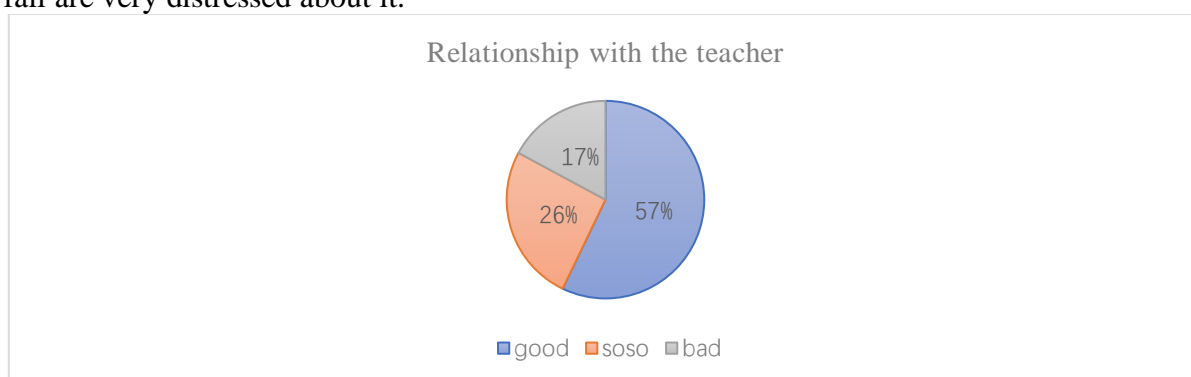


Figure 2: Relationship with the teacher.

Figure 2 that makes the authors feel the most interesting is the second one. According to figure 2, authors found that most students have poor relationships with their teachers. Surprisingly, some students even try to rebel against their teachers (because traditional teachers advocate militarized education, which can stimulate some students' rebellious mentality). Harmonious teacher-student relationships prevent students from harboring resentment towards their teachers, so that they are willing to communicate with the teacher, express their true thoughts, and enable the teacher to design teaching methods based on the comprehensive quality of primary school students and their actual situation in the teaching process, in order to achieve the ideal teaching goals. However, high school students are not as rebellious as elementary school students, and they are relatively more rebellious.

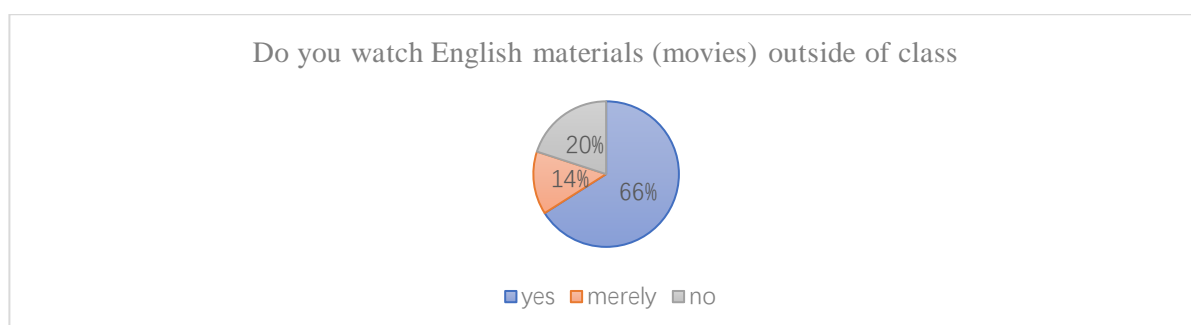


Figure 3: Do you watch English materials (movies) outside of class?

Therefore, some students may prove that their teacher's teaching level is low by not writing homework assigned by them (as shown in figure 3), but by assigning homework outside of class to themselves. However, cleverly, during the process of 'rebellion', students reach the stage of autonomous learning. By assigning their own homework and supervising their own memorization of words, such students' grades are not too bad and usually remain stable at 125+. Through the analysis of Figure 3, combined with Li Lu's statement, learning interest is a proactive, positive, and persistent cognitive and emotional state of students towards learning, which is an important factor in improving learning outcomes [12]. Authors can intuitively feel that most people do not reject English, and even like it. Many people watch movies, read books, and so on outside of class. Some even look for beautiful English speaker to fall in love and chat with, in order to further improve their English proficiency. Although his behavior was not advisable, the authors were truly shocked by his actions.

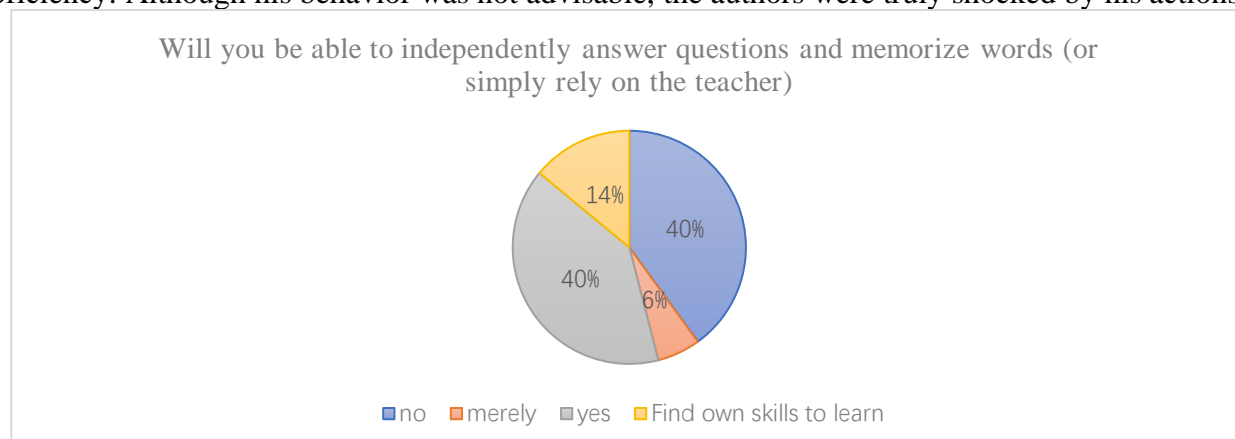


Figure 4: Will you be able to independently answer questions and memorize words?

Because Chinese education has been instilled from a young age that only listening to the teacher is enough, and few students have the concept of self-directed learning. However, since the concept of self-directed learning has also been instilled in students in the past two years, it can be seen from Figure 4 that 40% of students will also look at other assignments after completing them, while 40% of students cannot and will not do homework, 14% of students unintentionally complete autonomous learning in defiance of the teacher, while the remaining 4% occasionally do extracurricular homework but only have three minutes of enthusiasm.

#### 4.2.2. Comparison between Autonomous Learning and Non-Autonomous Learning

Authors found a magical phenomenon in the questionnaire regarding autonomous and non-autonomous learning.



Table 1: Patterns of completing the questionnaire

Relationship with the teacher	Do you watch English materials (movies) outside of class	Will you be able to independently answer questions and memorize words (or simply rely on the teacher)	Score range
Good	No	No(even homework)	60-90
Soso	Merely	No	115-125
bad	Yes	Find own skills to learn	120-130

Table 1 shows three lines are typical answers from the questionnaire I collected, and many people answer in this way. Neglecting the relationship with the teacher, from the other two aspects, the students in the first row are in a state of complete abandonment of English learning, so they cannot be summarized as either autonomous or non-autonomous learning. But in the second and third lines, authors can find that students who do not rely on teachers will perform better than students who rely on teachers. What is the reason for this? Students who rely on teachers generally do not have the process of self-directed learning, but their academic performance will be better than I expected. The authors asked several students in depth about the reasons for such scores, and summarized that they have encountered a good teacher. Their English teacher can effectively guide them in learning, assign high-intensity homework, and improve students' grades, which may not be very outstanding, but it must be excellent. For students who are completely autonomous in learning, they can more easily identify their own loopholes and take measures to make up and improve. For example, if there are problems with their compositions, they can learn more about them, and if there are problems with their reading, they can brush the reading questions. By memorizing more vocabulary and reading more English books outside of class, their grades unconsciously improved.

#### 4.2.3. How to Have the Ability of Autonomous Learning

Firstly, in order to cultivate self-learning ability, it is necessary for students to master reasonable learning methods in order to improve their effectiveness and truly enhance their self-learning ability. In learning English every day, people should change traditional learning methods and actively explore scientific and effective learning methods. In the authentic learning process, incorrect problem sets can be created. Distinguish incorrect issues and summarize them to avoid similar types of errors in the future. In addition, during the learning process, mind maps can also be manually used to link relevant knowledge to create a knowledge framework. In order to master knowledge more systematically and proficiently, and to further improve learning efficiency, mastering reasonable learning methods not only enables people to learn independently, but also allows people to experience the joy of success, and students are more willing to learn independently [13]. Secondly, it is very important to enhance students' interest. In fact, many high school students lack interest in learning English, lack motivation to learn, are unwilling to learn, and even some students feel bored with learning. Learning interest plays an irreplaceable role in the process of high school English language learning, and students can only actively learn English if they are interested. In the actual learning process, in addition to seeking the help of teachers, students should constantly explore effective methods to enhance learning interest. They can choose some English movies that are more interesting and experience the charm of English. They can also listen to more English songs and feel the joy brought by English from the songs. After that, they can gradually feel the emotion of learning English, encourage oneself to study English seriously, established the foundation for cultivating independent learning ability. In terms of the relationships between autonomous learning and English learning, overall, the initial conclusion predicted by the authors was that L2 scores in autonomous learning



were better, as they generally believed that autonomous learning methods were better. However, the fact is that although L2 students with autonomous learning perform better, they are not much better. There is a long way to go in learning L2 English in China.

## 5. Conclusion

The paper mainly discusses about the relationship between learning styles and L2 English learners. Authors found that personality and autonomous learning abilities have great effect on learning styles. For personality, J and P students choose different learning styles and gain different learning performance. The ways they use same learning styles are also different due to their characteristics of personalities. Since previous studies just focused on one dimension of personalities, authors' findings have further insight on J and P. For autonomous learning, students with autonomous learning ability perform better, they are able to answer questions with very familiar functional knowledge, and can identify their own shortcomings and make up for them. Having the skill of self-directed learning is not only a matter of students' own efforts, but also requires the supervision and guidance of teachers. With the skill of self-directed learning, students need to learn how to use the resources around them and cultivate their ability to use them. English learners and educators may be inspired by authors' findings and choose more suitable and effective learning styles to achieve better performance.

## Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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