

The Impact of Personality Types on Second Language Vocabulary Acquisition of College Students: Based on MBTI Personality Categorization

Hao Jiang

Foreign Studies College, Hunan Normal University, Changsha, China

202130092238@hunnu.edu.cn

Abstract. In the field of second language teaching and learning, researchers have been focusing on the importance of affective analysis, particularly regarding learners' personality types. Recent studies have shown that personality type can have a significant impact on a student's ability to learn a new language. However, little research has been conducted on whether or not personality type has any correlation with the acquisition of second language vocabulary. To delve further into this topic, this study was conducted using questionnaire data from college students. Whether it belongs to any personality trait in the E/I dimension N/S dimension F/T dimension or the J/P dimension, this personality trait is strongly related to the effect of second language vocabulary acquisition. So, personality stereotypes in language learner ability assessment must be broken. Teachers' personalized teaching capabilities should be improved. In conclusion, this study highlights the importance of considering learners' personality types when designing second language teaching and learning strategies. By understanding how personality type affects language acquisition, teachers can better tailor their approach to meet the individual needs of each student.

Keywords: Personality types, second language vocabulary acquisition, MBTI.

1. Introduction

Over recent years, more and more people have been engaged in the area of sentiment analysis of university learners in second language teaching and learning, especially in the study of learners' personality types. Personality types, as the most dominant factor in personality, have been consistently recognized as the basis for the study of learners in second language learning. So is the effect of Second Language (L2) Vocabulary Acquisition relevant to an individual's personality type? To address this question, The Myers-Briggs Type Indicator (MBTI) was used to analyze students' personality types and investigate the relationship between individual personality types and L2 vocabulary acquisition.

MBTI is a personality model developed by Isabel Briggs Myers and her mother, Katherine Cook Briggs. It is based on Carl Jung's eight psychological types and further developed concepts such as functional hierarchy, establishing the order of its functional hierarchy into four dimensions.

Personality can be divided into four categories based on how people absorb information and make decisions. The first is extroverted (E) versus introverted (I), where introverted people pay attention to internal concepts and ideas, while extroverted people focus on people and events in the external world. Introverted students have shown to do well in Chinese exams as they pay more attention compared to extroverted students [1]. The second category is sensory (S) versus intuitive (N), where sensory people focus on facts and pay attention to details, while intuitive people focus on meanings, relationships, and conclusions based on facts [2]. Sensory learners rely on tangible evidence, while intuitive learners prefer to learn from the "sixth sense" and show episodic acquisition in the process of learning a second language [3]. The third category is thinking (T) versus feeling (F), where emotional people make decisions based on their values and are more attuned to human feelings while thinking people analyze objective facts and make decisions based on consistency. The fourth category is judgmental (J) versus perceptual (P), where judgmental people prefer a planned and organized life, and perceptual people are curious and adaptable to change. By understanding their personality traits through the MBTI test, students can capitalize on their strengths and overcome their weaknesses to

improve their motivation to learn a foreign language [4]. Many scholars in China have already researched the effects of introverted and extroverted personalities on English learning performance: Wang Xuemei believes that in terms of comprehensive English proficiency, introverts, and extroverts are indistinguishable from each other; and in terms of English professional skills, except for speaking, listening comprehension and writing which are unaffected by personality tendencies, all the other skills are linearly correlated with personality tendencies to varying degrees [5]. Since vocabulary acquisition is the core task of foreign language acquisition, vocabulary teaching has an irreplaceable important position and role in the foreign language teaching system [6]. Therefore, our personality characteristics can be employed to improve the effect of second language vocabulary acquisition.

2. Methods

2.1. Research Design

In this study, each of the four dimensions of MBTI is used as an independent variable, and the vocabulary test result is the dependent variable the effect of personality type on second language vocabulary acquisition of college students is put under objective data test, aiming to find out whether there is some kind of personality traits that are beneficial for second foreign language learning by seeking for the relationship between the four dimensions of personality type and the vocabulary of the second foreign language.

The study adopts the questionnaire survey method and selects 188 sophomore students in the Foreign Studies College of a university in Changsha as the object of this study, 188 questionnaires were sent out and 188 were retrieved, of which 180 were valid, with a validity rate of 95.74%. In this study, constrained by the specificity of the group of Foreign Studies College, there are 47 male college students and 141 female college students, with a male-to-female ratio of 1 to 3, and a considerable discrepancy between the male and female ratios.

They were chosen to be part of the research due to their extensive one-year experience in independent study during college. This period has allowed them to establish a solid foundation of learning methods and strategies that are tailored to their unique personalities. Moreover, their exposure to the traditional teacher-lecture-based learning methods in high school had minimal influence on their current approach toward learning.

One striking aspect is their reliance on their own personality traits when it comes to learning. Each individual has developed their own set of strategies and techniques that align with their specific strengths and preferences. This personalized approach enables them to optimize their learning experience and achieve better results.

2.2. Variables and Scales

With each of the four dimensions of the MBTI as the independent variable and the results of the vocabulary test as the dependent variable, the questionnaire method is used to test vocabulary. The first part of the questionnaire consists of personal information, including name, date of birth, and gender, with MBTI personality test results, and to find out if there are any advantages in acquired conditions other than personality, such as living abroad over a long period of time or particular parental assistance in studying. As many as 168 respondents answered "not sure" or "disagree" to the question "To what extent do you agree or disagree that your parents help you with your second language learning?" This shows that most of the respondents' parents do not help them significantly in their second language learning. Therefore, parents' ability does not play a decisive role.

To ensure accurate reporting of the respondents' MBTI personality types, a generic 93-question test scale was provided in the questionnaire [7]. Results of the MBTI personality type survey: the respondents were 89 E-types and 91 I-types in the E/I dimension; 54 N-types and 126 S-types in the N/S dimension; 126 T-types and 54 F-types in the T/F dimension; and 108 J-types and 72 P-types in the J/P dimension. 54 and S-type 126; T/F dimension had T-type 126 and F-type 54; J/P dimension had J-type 108 and P-type 72.

The second part of the questionnaire was a vocabulary test. The subjects' vocabulary was assessed by applying the commonly used Recognized Vocabulary Test (RVT) [8]. It includes the most common methods such as definitional, fill-in-the-blank, substitution, and word list methods, and the test takes about three minutes.

2.3. Data Analysis

In this study, each of the four MBTI dimensions was used as the independent variable and the vocabulary test results as the dependent variable, and the asymptotic significance of the variables (two-sided) was analyzed using the chi-square test in SPSS 26.0 analysis of variance.

3. Results

Based on the results of the vocabulary test, the respondents' vocabulary was categorized into five categories: having a vocabulary of about 4,000 words, having a vocabulary of about 5,000 words, having a vocabulary of about 6,000 words, having a vocabulary of about 7,000 words, and having a vocabulary of about 8,000 words.

3.1. E/I Dimension and Vocabulary are Significantly Correlated

Table 1. Relationship between E/I dimension and vocabulary

	Chi-Square Tests		
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3268.847a	4	.000
Likelihood Ratio	3283.848	4	.000
Linear-by-Linear Association	2.993	1	.084
N of Valid Cases	1054000		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 3954.46.

As Table 1 demonstrates, the strong association between this aspect and the extent of one's vocabulary (with a remarkable significance at the 0.00 level) implies that focusing more on theoretical thoughts and concepts within oneself or paying considerable attention to diverse individuals and occurrences in the world around, has a profound impact on expanding one's word bank.

The connection between and influence of this specific dimension and vocabulary size cannot be overlooked. Exploring abstract notions and ideas within oneself promotes the retrieval and acquisition of new words. By delving into the deeper layers of thought and reflecting upon the internal world, individuals are more likely to encounter complex language and enrich their vocabulary.

Conversely, dedicating ample attention to people and events in the external world is intertwined with a larger vocabulary. Actively engaging with a diverse range of individuals, as well as paying close attention to various occurrences and experiences, exposes individuals to a multitude of language-rich situations. Regularly encountering new people, exploring different cultures, and partaking in various activities fosters language expansion and enables the acquisition of new words.

It is evident that both internal and external factors play a crucial role in vocabulary acquisition. Balancing a focus on abstract notions within oneself with an active engagement in the external world opens up numerous linguistic opportunities. Thus, individuals are encouraged to strike a harmonious equilibrium between introspection and exploration, maximizing their potential when it comes to expanding their vocabulary repertoire.

3.2. N/S Dimension and Cocabulary are Significantly Correlated

As Table 2 demonstrates, the strong connection between this aspect and the size of one's vocabulary (with a remarkable significance at the 0.00 level) indicates that either placing more emphasis on the actual facts and mainly acquiring knowledge in an indirect manner, or concentrating more on tangible and evidence-based information and mainly obtaining knowledge from external sources, can influence one's vocabulary growth.

Table 2. Relationship between N/S dimension and vocabulary

	Chi-Square Tests		
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	159334.018a	4	.000
Likelihood Ratio	231458.214	4	.000
Linear-by-Linear Association	117448.805	1	.000
N of Valid Cases	1054000		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 2557.87.

This correlation highlights the importance of two possible approaches to vocabulary acquisition. The first approach involves prioritizing the facts themselves, emphasizing their significance, and indirectly absorbing knowledge. This method may focus on understanding the overall meaning and context of the information rather than explicitly memorizing individual words. By grasping the underlying concepts, learners naturally expand their vocabulary to effectively express themselves.

On the other hand, the second approach emphasizes the acquisition of factual information that is concrete and supported by evidence. Learners utilizing this method concentrate on comprehending and obtaining knowledge from external sources, such as books, research papers, or reliable online platforms. By immersing themselves in these resources, individuals gain exposure to a wide array of vocabulary, allowing them to enhance their word bank with substantial and provable facts.

Both approaches have their unique impact on vocabulary acquisition. The first approach encourages a broader understanding of the context, enabling learners to connect words with their intended meanings effortlessly. Conversely, the second approach promotes a depth of knowledge and accuracy in vocabulary usage due to its reliance on evidence-based information.

In conclusion, the considerable correlation between this dimension and vocabulary size suggests that focusing either on the facts themselves with an implicit acquisition or on tangible and evidence-based facts with an exogenous acquisition can significantly influence vocabulary growth. Exploring both approaches can offer learners a comprehensive vocabulary repertoire, incorporating a balance of contextual understanding and factual accuracy.

3.3. F/T Dimension and Vocabulary are Significantly Correlated

Table 3. Three Scheme comparing

	Chi-Square Tests		
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	118540.058a	4	.000
Likelihood Ratio	153827.221	4	.000
Linear-by-Linear Association	110279.125	1	.000
N of Valid Cases	1054000		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 2261.86.

As Table 3 demonstrates, the strong link between this aspect and language skills (as indicated by its high significance level of 0.00) highlights the importance of valuing oneself and employing objective analysis in the process of acquiring a rich vocabulary.

One's self-feeling plays a crucial role in vocabulary development. When individuals value themselves, they are more likely to engage in activities that nurture their language skills. They believe in their ability to learn and grow, which motivates them to actively seek out new words and phrases. Consequently, their vocabulary expands as they constantly strive to enhance their linguistic competence.

Moreover, a focus on objective analysis assists in vocabulary acquisition. By approaching language learning from a factual standpoint, individuals are better equipped to understand and internalize new terms. They explore the meanings and usage of words through a logical lens, examining their relationship with other words and their relevance in various contexts. This analytical approach fosters a deeper understanding and retention of the vocabulary.

In conclusion, the significant correlation between this particular dimension and vocabulary acquisition highlights the significance of valuing oneself and employing objective analysis in language learning. By recognizing their own worth and embracing a logical mindset, individuals can enhance their vocabulary and, ultimately, their overall language proficiency.

3.4. J/P Dimension and Vocabulary are Significantly Correlated

Table 4. Relationship between J/P dimension and vocabulary

	Chi-Square Tests		
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	114877.748a	4	.000
Likelihood Ratio	167079.103	4	.000
Linear-by-Linear Association	83501.118	1	.000
N of Valid Cases	1054000		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 3081.59.

As Table 4 demonstrates, the strong connection between this factor and vocabulary, which is statistically significant at a level of 0.00, implies that either a tendency for structured living or an inclination towards a more laid-back, adaptable, and open-minded lifestyle has an influence on vocabulary development.

A person's preference for order and structure affects their language skills. Those who appreciate organization and structure in their daily lives tend to have a higher capacity for absorbing new words and expanding their vocabulary. This could be attributed to their disciplined approach and methodical nature. Such individuals are more likely to engage in activities, like reading or studying, that enable them to come across a wider range of words and expressions.

On the other hand, an affinity for a flexible and easy-going lifestyle can also contribute to vocabulary acquisition. Those who embrace an open-minded approach and enjoy exploring different experiences and perspectives often encounter words and phrases that are new to them. Their receptive and curious mindset helps them absorb and incorporate diverse vocabulary into their speech and writing.

Therefore, one's inclination towards living in an organized manner or a more casual and open-minded way plays a significant role in their vocabulary development. By recognizing and understanding these influences, individuals can better adapt their learning styles to enhance their language skills.

4. Discussion

4.1. Breaking Personality Stereotypes in Language Learner Ability Assessment

Although the E/I dimension was found to be significantly linked to the impact of acquiring second language vocabulary, it fails to differentiate between extroverted (E) and introverted (I) personalities when it comes to aiding vocabulary learning. This aligns with the findings by Wang Xuemei, who concluded that introverts and extroverts cannot be distinguished in terms of overall English proficiency. Additionally, research conducted by Zhang Hao revealed that Type I students possess an inherent advantage in reading that Type E students cannot match [9]. Therefore, it is unnecessary to adhere to the stereotype of favoring extroversion in the process of learning a foreign language.

The correlation between the E/I dimension and second language vocabulary acquisition signifies that individuals with either extroverted or introverted personalities can benefit from language learning, irrespective of their natural inclination towards social interaction. The study results suggest that both extroverts and introverts have the potential to excel in acquiring new vocabulary, challenging the notion that extroverts possess an inherent advantage in language learning. This finding is corroborated by the research conducted by Wang Xuemei, which concluded that extroversion does not serve as a determinant of overall English proficiency.

Furthermore, the study by Zhang Hao sheds light on the advantage that Type I students, regardless of their extroverted or introverted tendencies, have in reading ability. Their prior advantage in reading suggests that implementing an approach solely based on extroversion may not be conducive to language learning success. This finding undermines the stereotype that extroverted individuals are inherently better language learners, emphasizing the need to tailor language learning strategies to individual strengths and weaknesses rather than relying on generalizations based on personality traits.

In light of these findings, it is crucial to approach foreign language learning with an open mind and inclusive perspective. Instead of valuing extroversion over introversion, language learners should focus on understanding their own strengths and weaknesses and develop strategies that cater to their individual needs. Adopting a well-rounded approach that encompasses various learning styles and preferences will ensure a more comprehensive and effective language learning experience.

In conclusion, while the E/I dimension does have a significant correlation with second language vocabulary acquisition, it does not differentiate between extroverted and introverted personalities in terms of vocabulary learning assistance. Against common assumptions, extroversion does not confer a definitive advantage in language learning, and even those with introverted tendencies can excel in this domain. Recognizing individual strengths, such as the reading advantage of Type I students, and designing appropriate language learning strategies based on these strengths will lead to more successful outcomes. It is time to move beyond the uni-dimensional bias towards extroversion and embrace a more inclusive and personalized approach to language acquisition.

4.2. Improve Teachers' Personalized Teaching Capabilities

It has been observed that students with intuitive (N) personalities possess a more extensive vocabulary compared to those with sensing (S) personalities. The reason behind this difference can be attributed to the fact that students with N traits have a better ability to comprehend and assimilate new information quickly than students with Straits. This distinction in learning ability can be attributed to the differences in personality traits [10].

As an essential aspect of successful teaching, educators must acknowledge and value each student's unique personality traits. It is crucial to take into account individual differences when designing and implementing teaching methods. The approach should be tailored to suit the learning styles and abilities of students. In short, teachers should strive for the principle of teaching according to the student's capability, ensuring that it is done in a manner they understand.

Furthermore, instructors should prioritize their efforts toward creating a dynamic and stimulating classroom environment. A teaching strategy that encourages students to think critically and pursue knowledge actively can go a long way in creating a positive and enriching learning experience. To do this, instructors need to engage students, enriching intellectual stimuli, and providing them with a range of opportunities to interact with the subject material, which, in turn, ensures students with different learning abilities find the material engaging.

Overall, the differences between intuitive and sensing personality traits play a critical role in shaping a student's learning style. Educators should understand these differences and tailor their teaching styles accordingly. With such attention to students' individual needs and abilities, teachers can foster a healthy and collaborative learning environment that is equally engaging, inspiring, and pliant. This approach will not only improve students' understanding, but will also increase students' confidence and enthusiasm for learning, creating well-rounded individuals who can contribute substantively to society.

5. Conclusion

The current study provides evidence that the effectiveness of acquiring a second language vocabulary is closely linked to an individual's personality type. Contrary to society's belief, introverted individuals are not necessarily less effective than extroverts when it comes to learning

vocabulary in a second language. In fact, introverts tend to be more attentive, which can positively impact their language learning abilities.

Furthermore, differences in the way individuals receive information, make decisions, and live their lives can also influence the effectiveness of second language vocabulary acquisition. This means that each person's unique learning style, influenced by their personality type, should be taken into consideration when designing language learning strategies. By recognizing and capitalizing on their subjectivity and agency, students can enhance their language learning experience.

However, it is important to acknowledge the limitations of this study. The research did not fully account for the instability of personality types, also known as fallibility. Thus, future research should focus on refining the operationalization of variables related to personality types to gain a more comprehensive understanding of its impact on second language vocabulary acquisition.

In conclusion, this study highlights the significance of considering personality types in the context of second language vocabulary acquisition. It challenges the misconception that introverts are less effective language learners, highlighting that their attentiveness can be advantageous. Additionally, it emphasizes the importance of tailoring language learning approaches to match the unique characteristics of individuals, allowing them to make the most of their learning experience. Moving forward, further research should strive to address the limitations of this study, providing more insights into how personality types influence the acquisition of second language vocabulary.

References

- [1] Liang Xiaobo, Tan Kuangling. Introversion/Extraversion and English Learning. *Journal of the PLA College of Foreign Languages*, 1999, (04).
- [2] Li, Changchun. Frontier Research and Prospects of Implicit Learning in Second Language Acquisition. *Modern Foreign Languages*, 2023, (04), 576-585. Doi:10.20071/j.cnki.xdwy.20230420.001.
- [3] Huang, Yan & Li, Xiaoxiang. The use of artificial language in second language acquisition research: current status and prospects. *Foreign Languages*, 2020, (04), 54-62.
- [4] Chen, Xinghua. On the Practical Use of MBTI Theory in College Students' Vocational Education. *University Education*, 2016, (01), 35-36.
- [5] Wang Xuemei. On the Influence of Personality Tendencies on English Learning. *Foreign Language Teaching*, 2000, (04), 17-21.
- [6] Cui, Min. An Empirical Study on the Effect of Contextual Presentation on the Memorization of Foreign Language Vocabulary Meaning in Multimedia Teaching Environment. *Journal of Naval Engineering University (General Edition)*, 2016.
- [7] APESK. Based on the Swiss Jungian and Myers. Briggs Taxonomy Personality Test [EB/OL], 2022-05-01, [2022-11-15] <https://www.welefen.com/lab/mbti/>.
- [8] Deng, Hongfeng. A Method for Quantitative Measurement of English Vocabulary. *Journal of Ocean University of China (Social Science Edition)*, 2003, (05).
- [9] Zhang, Hao. & Zhang, Peihan. A study of the effects of the four dimensions of the MBTI Occupational Personality Test on language learning - A case study of the IELTS test. *Psychology Monthly*, 2023, (04), 72-74+78. 2023.04.019. Doi:10.19738/j.cnki.psy.
- [10] Wu Lei. Using MBTI personality theory to enhance student learning. *Examination and Admission*, 2020, 33 (1): 42-43.