



Personality Traits and Language Learning Strategies among EFL Students

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ABSTRACT

This research delves into the effect of the Big-Five-personality-traits-Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness on acquiring second/foreign languages among individuals from the Iraqi Kurdistan region, spanning linguistics, cognitive science, psychology, and sociology. The interdisciplinary study explores how personality traits intertwine with language learning. Analyzing 495 EFL learners in Kurdistan universities, the research deploys statistical methods to uncover correlations between personality traits and language-learning strategies. The results unveil nuanced associations; for instance, Conscientiousness and Neuroticism influence memory strategies, while Conscientiousness and Agreeableness relate to cognitive strategies. Compensation strategies connect with Conscientiousness and Openness, and metacognition strategies demonstrate ties to Extroversion and Openness. Affective strategies align with Conscientiousness and Neuroticism, and social strategies are linked to Extroversion and Openness. These results emphasize the intricate dynamics of how personality traits influence language learning strategies, emphasizing the need for further investigation into the underlying mechanisms governing this interplay.

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1. Introduction

The classification of personality variations, commonly called the "Big Five," is contingent upon five key characteristics. Each trait illuminates significant aspects of an individual's cognition, emotions, and behaviors. However, the current study delves into the impact of these "Big Five" traits on language learning, discerned through variations in acquiring second/foreign languages.

While extensive research in linguistics, cognitive science, psychology, and sociology has contributed significantly to our understanding of second/foreign language acquisition, there remains a notable gap in the literature regarding the nuanced relationship between learners' personality traits and the specific strategies they employ during the language learning process^[1]. The existing literature has explored various dimensions, such as learner age, motivation, and cognitive traits. However, a comprehensive investigation is needed into how personality traits, particularly within the framework of the 'Big Five,' impact language learning strategies is yet to be fully addressed. The Current research objectives are to fill this gap by investigating the effect of 'Big Five' personality traits on acquiring second/foreign

languages, thereby contributing to a further holistic understanding of the factors shaping language learning outcomes.

To a certain extent, the modalities and content of individuals' learning experiences are contingent upon their personalities. This aspect, alongside linguistic, motivational, and demographic factors, constitutes a pivotal component in language learning. Similar to other structural phenomena, a bidirectional interaction exists between language learning and personality. Consequently, personality may influence second language acquisition, and reciprocally, second language acquisition may impact personality development^[2]. The adjective studies of Galton in 1884, positing that all human languages encode specific personality characteristics through the use of adjectives, have given rise to the notion that language usage may circumscribe fundamental human personality attributes to a finite set of elements. Galton contended that a more concise set of adjectives, with meanings overlapping or possessing sufficient similarities, could be identified among 1,000 adjectives with slightly varied meanings^[3]. This study aims to elucidate how distinct personality dimensions, particularly within the 'Big Five' framework, impact language learning strategies to address the gap.

According to certain psychologists, the most efficacious method of categorizing personality is identifying characteristic traits, rendering personality the organizational framework for these traits. The structure of personality can be outlined through a

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relatively restricted set of criteria that provide evidence of the existence of a trait^[4]. In line with this theoretical foundation, the current study explores the organizational principles behind individual differences in language acquisition to contribute to a deeper understanding of how personality traits influence language learning strategies.

2. Literature Review

The relationship between language and personality has been thoroughly examined, delving into both language production and interpretation of personality via language. Research on personality perception has identified various factors affecting the accuracy of judgments, such as the perceiver's familiarity with the target and the visibility of the personality trait being judged. The current research employs self-report scales for personality measurement, focusing on personality communication through language production. Following trait theory, personality encompasses internal characteristics that influence behaviors, including language use. While language use is considered stable, longer discourse samples may exhibit dynamic qualities due to contextual variability.

Content and style are crucial elements, with content reflecting focus and meaning and style encompassing syntactic and grammatical structures. Extraversion is extensively studied concerning language production, with extroverts displaying distinct linguistic behaviors such as increased speech and specific pronoun usage. Neuroticism is associated with directness in written texts, manifesting through a higher incidence of first-person singular words and fewer articles. Linguistic markers of traits like Agreeableness and Conscientiousness have also gained attention, emphasizing the multifaceted relationship between language and personality^[5], as cited in American Psychological Association Trait Theory, 2022.

A personality trait is an identifiable thought, emotion, or behavior pattern that exhibits stability across time and relevant situations. The Big Five, also recognized as the widely accepted model of personality structure, are a group of five broad personality traits: extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to experience^[6]. From this point of view, each of these can be explained as shown below;

1- Extraversion: The characteristics associated with extraversion encompass warmth, gregariousness, assertiveness, activity, excitement-seeking, and positive emotions. These traits span from "Extravert" to "Introvert" attributes. Characteristics associated with extraversion prove advantageous in fields such as sales, politics, and the arts. On the other hand, introverted traits find merit in production management and the physical and natural sciences. Extraverts are gregarious, warm, and optimistic, while introverts tend to be reserved, quiet, and shy^[7]. However, Extraverts are progressing and want to gain energy in social situations. Working makes them feel energized and excited. Those who are less isolated or isolated in this character are more protected and have less energy to struggle in social situations, and social gatherings can be tiresome and often require reclusion and calm, so that "filling"^[7].

- 2- Individuals with low scores exhibit coldness, cynicism, rudeness, unpleasantness, criticality, antagonism, suspicion, vengefulness, irritability, and uncooperativeness. Conversely, high scores demonstrate friendliness, good-naturedness, likability, kindness, forgiveness, trust, cooperativeness, modesty, and generosity^[2]. On the other hand, being agreeable distinguishes between being good-natured and being cynical. Agreeable people have a prosaic attitude toward others and are not antagonistic in their thoughts, feelings, or actions. They are compassionate, forgiving, kind, trustworthy, and not self-centered. Being agreeable is associated with cooperation and giving behavior^[8].
- 3- Conscientiousness: a personality trait characterized by thoughtfulness, impulse control, and goal-directed behavior, is commonly observed in individuals engaged in scientific endeavors and high-stakes financial sectors. The requisite skill set in these domains often involves a meticulous and organized approach, emphasizing detail orientation and organizational capabilities. Individuals with high levels of Conscientiousness routinely engage in proactive planning and behavior analysis to discern its impact on others. This trait is frequently evident in the composition of project management teams and human resources departments, contributing to establishing a well-balanced structure within the overall team development^[9].
- 4- Neuroticism: It manifests as traits such as sadness, moodiness, and emotional instability, representing both a physical and emotional reaction to stress and perceived threats in daily life. It is commonly misconstrued as anti-social behavior or a more profound psychological condition. Individuals exhibiting elevated Neuroticism experience mood swings, anxiety, and irritability. Those undergoing sudden daily personality changes may be indicative of high neurotic tendencies, with heightened reactivity to elevated stress levels in both professional and personal lives^[10].

Openness is a characteristic encompassing both imagination and insight, with an inclination towards an elevated interest in the world of other individuals and a keen desire to explore and learn novel experiences. This trait fosters diverse interests and a propensity for more adventurous decision-making. Creativity is integral to the openness trait, facilitating a greater affinity for abstract and lateral thinking. An individual with a high openness trait can be envisioned as consistently opting for the most exotic item on the menu, exploring new destinations, and cultivating interests beyond conventional expectations^[11].

2.1. Big Five Trait Personality and Second/Foreign Language Learning

The prevalence of communicative teaching approaches in acquiring second languages highlights the importance of nurturing communicative competence among learners. Moreover, researchers such as^[4, 12, 13] assert that language learning is effectively promoted through interactive and meaningful communication in pragmatic settings.

Studies show that personality traits affect second language learning; some results mentioned that the Big Five personality traits significantly influence speaking anxiety in the foreign language classroom, with the remaining three having little to no direct influence^[3]. Positive psychology about second language learning is one of the most effective perspectives that link second language learning to the effects of personality structure. This psychological viewpoint indicates that the Big Five personality trait affects second language learning; based on these differences, the five traits have been portrayed in human personality^[8].

According to the study of^[14], learning a second language appears to be influenced by personality traits. The characteristics of personalities with higher readiness to learn are compared to other extraversion, and Agreeableness features in this study. At the same time, it demonstrates that Neuroticism makes people less prepared to learn a second language. According to the findings of^[1] study, students who derive satisfaction from social prominence and exhibit self-discipline tend to display increased motivation in pursuing second language acquisition. The findings further indicate a positive correlation between Agreeableness and motivation, while, as anticipated, Neuroticism exhibits a direct negative relationship with the motivation to learn a foreign language.

2.2. Objective

The primary goal of this research is to explore the relationship between personality traits and Second/Foreign Language learning among EFL students.

3. Material and Method

The current study used quantitative methods of research to achieve its aim. The study utilized two standard questionnaires to collect data; the first one is "The John and Srivastava Big Five Trait Personality Questionnaire," which is a 44-item questionnaire covering various personality traits, and the second one is "The Bessai language learning strategies Questionnaire," which is a 50-item questionnaire covering a wide range of strategies; cognitive, compensatory, metacognitive, affective, and social.

3.1. Sample

The sample comprised EFL learners from all over Kurdistan universities in the English Department. There were 495 participants; males, 322(65.05%) and females, 173(34.95%); all participants volunteered their time to this study.

3.2. Ethical Consideration

Initially, it is crucial to address ethical considerations. A heightened focus on ethical aspects is essential as it aids researchers in maintaining scientific integrity and transparency and fostering confidence and trust in the study's findings and conclusions^[15].

The Psychology Department approved ethics approval and consent to participate. The researchers ensure ethical compliance by protecting participants' confidentiality, anonymizing data, and providing comprehensive information about the study's nature and participants' right to withdraw. The study sample ensures that all information is preserved and utilized for scientific purposes only. The process involves presenting a clear consent form^[16] and addressing any questions from participants before they decide to participate.

3.3. Measures

The samples completed the two scales listed below:

1. Personality Trait Questionnaire

The John and Srivastava Big Five Trait Personality Questionnaire is a 44-item questionnaire covering various traits: Extroversion, Agreeableness, Conscientiousness, Neuroticism, and Openness^[17]. This scale has been used with the Kurdish sample^[18].

Each item was scored on a scale of (1) for disagree Strongly, (2) for Disagree a little, (3) for Neither agree nor disagree, (4) for agree a little, and (5) for agree strongly. The internal reliability for Personality traits was (0.85) for extraversion, (0.80) for Agreeableness, (0.83) for Conscientiousness, (0.85) for Neuroticism, and (0.81) for Openness with a total mean (0.83).

2. Language Learning Strategies Questionnaire;

The Bessai Language Learning Strategies Questionnaire is a 50-item questionnaire covering various strategies: cognitive, compensatory, metacognitive, affective, and social^[19]. Each item was graded on a scale of (1) for frequently, (2) for occasionally, and (3) never. The internal consistency for language learning is Memory strategies (0.77), Cognitive strategies (0.83), Compensation strategies (0.81), Metacognitive strategies (0.84), Affective strategies (0.82), and Social strategies (0.84).

3.4. Data analysis

Following the removal of missing data, many statistical measures were carried out. The data was analyzed with the SPSS program. The Pearson correlation coefficient was utilized to define the association between the Big Five personality traits and Language Learning Strategies. Multiple regression analysis was utilized to determine which personality factors best predict Language Learning. Since the data was normally distributed, an independent-sample t-test was performed to explore the differences in gender preferences toward language learning.

4. Results

The following tables present the results of the collected quantitative data to show the relationship between personality traits and language learning strategies among EFL students.

Table 1: Descriptive and mean differences between research variables for Big Five traits personality and Language Learning Strategies.

	Personality Traits			Language Learning Strategies		
	M(SD)	t / f	P-Value	M(SD)	t / f	P-Value
Gender		-0.87	0.38		-0.42	0.67
Male	153.53 (9.58)			185.71 (28.85)		
Female	154.33 (9.90)			186.77 (25.20)		

The results in Table 3 demonstrate the gender differences for both personality traits and language learning strategies; the results show that there are no statistically significant differences regarding gender in both dependent and independent variables because both p-values are more remarkable than (0.05).

Table 2: Correlation between personality traits and Language Learning Strategies.

	1	2	3	4	5	6	7	8	9	10	11
Extraversion	1										
Agreeableness	-.164**	1									
Conscientiousness	0.036	.317**	1								
Neuroticism	-0.061	-.348**	-.466**	1							
Openness	.253**	-0.017	0.010	0.042	1						
Memory Strategies	0.003	.106*	.116**	.246**	.323**	1					
Cognitive Strategies	0.077	0.051	-0.015	.234**	.328**	.756**	1				
Compensation Strategies	.094*	0.036	-0.024	.208**	.246**	.542**	.656**	1			
Metacognition Strategies	0.085	.149**	.170**	-0.013	.328**	.620**	.690**	.476**	1		
Affective Strategies	0.084	-.091*	0.077	.115*	.225**	.623**	.489**	.516**	.518**	1	
Social Strategies	-.123**	-0.080	-.114*	.161**	.255**	.448**	.409**	.205**	.490**	.599**	1
*P<0.05											
**P<0.01											

Table 3: Statistical Analysis between Personality Traits and Language Learning Strategies.

	Memory Strategies				Cognitive Strategies				Compensation Strategies						
	R2	b	β	t	p	R2	b	β	t	p	R2	b	β	t	p
extraversion	0.24	-0.053	-0.034	-0.818	0.414	0.155	0.037	0.027	0.624	0.533	0.89	0.023	0.021	0.456	0.648
Agreeableness		0.257	0.167	3.835	0.000		0.190	0.141	3.053	0.002		-0.093	-0.085	-1.767	0.078
Conscientiousness		0.289	0.250	5.543	0.000		0.172	0.170	3.551	0.000		0.145	0.176	3.533	0.000
Neuroticism		0.471	0.405	8.808	0.000		0.106	0.104	2.136	0.033		0.132	0.160	3.151	0.002
openness		0.390	0.315	7.740	0.000		0.344	0.317	7.363	0.000		0.186	0.210	4.692	0.000
	Metacognition Strategies				Affective Strategies				Social Strategies						
	R2	b	β	t	p	R ²	b	β	t	p	R ²	b	β	t	p
Big Five	0.127					0.089					0.118				
extraversion		-0.278	-0.202	-4.521	0.000		0.023	0.021	0.456	0.648		-0.278	-0.202	-4.521	0.000
Agreeableness		-0.083	-0.061	-1.295	0.196		-0.093	-0.085	-1.767	0.078		-0.083	-0.061	-1.295	0.196
Conscientiousness		-0.048	-0.047	-0.960	0.338		0.145	0.176	3.533	0.000		-0.048	-0.047	-0.960	0.338
Neuroticism		0.096	0.093	1.877	0.061		0.132	0.160	3.151	0.002		0.096	0.093	1.877	0.061
openness		0.332	0.302	6.898	0.000		0.186	0.210	4.692	0.000		0.332	0.302	6.898	0.000

Table 3 presents a statistical analysis that explores the relationship between various strategies and five personality traits: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness.

When examining the results related to memory strategies, a weak negative correlation with extraversion (B = -0.053) is observed.

However, this correlation does not achieve statistical significance (p = 0.414), indicating a lack of substantial evidence supporting a meaningful connection between memory strategies and extraversion. Similarly, no other personality traits show statistically significant relationships with memory strategies.

Regarding the Cognitive Strategies, there is a weak positive correlation with extraversion ($B = 0.037$). However, like memory strategies, this relationship lacks statistical significance ($p = 0.533$), suggesting that cognitive strategies do not strongly influence extraversion or other personality traits.

In the case of compensation strategies, weak positive correlations are observed for extraversion and other personality traits. However, like the preceding strategies, these correlations fail to reach statistical significance ($p > 0.05$). This implies that compensation strategies are unlikely to impact these personality traits substantially.

In contrast to the prior strategies, metacognition strategies reveal a more notable association with extraversion. A moderate negative correlation is identified ($B = -0.278$), and this relationship is statistically significant ($p < 0.001$), suggesting that individuals employing metacognition strategies may tend to be less extroverted. A similar pattern is observed for the other personality traits, with metacognition strategies displaying statistically significant associations.

Like memory and compensation strategies, affective strategies display weak positive correlations with extraversion and other traits. Nevertheless, these correlations do not reach statistical significance ($p > 0.05$), indicating that affective strategies may not strongly influence these personality traits.

Shifting to social strategies, a moderate negative correlation with extraversion ($B = -0.278$) is evident, and this relationship is statistically significant ($p < 0.001$). The process implies that individuals utilizing social strategies may exhibit lower levels of extraversion. The same holds for the other personality traits, as social strategies demonstrate statistically significant relationships.

The key result in the table is that metacognition and social strategies have statistically significant relationships with the five personality traits under consideration. These strategies influence the levels of extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness in individuals. On the other hand, memory, cognitive, and compensation strategies do not significantly impact these personality traits, at least based on the analysis presented in the table.

5. Discussion

^[18]This study explored the fascinating intersection of personality traits and language learning strategies, revealing compelling connections that can be attributed to several reasons. Firstly, examining memory strategies unveiled their ability to account for 24% of the Big Five personality traits variance. Conscientiousness and Neuroticism emerged as crucial influencers of memory strategies, suggesting that individuals with higher conscientiousness levels are inclined to adopt structured approaches in language learning. In contrast, those with elevated neuroticism levels may resort to memory strategies to alleviate anxiety or stress. The results of this study are consistent with those of several other studies; that is, the results

obtained in this study are the same as those shown in other studies such as research^[20, 21].

Moving to cognitive strategies, which contribute 15% to the variability in personality traits, Conscientiousness emerged as the dominant personality trait linked to these strategies. This result highlights that individuals with higher Conscientiousness tend to consistently use cognitive strategies, possibly due to their propensity for careful planning and critical thinking, which benefit language learning. Furthermore, however less pronounced, a positive association with Agreeableness suggests that this trait may also shape cognitive strategies. In^[22] study, the current study's results confirm that this personality dimension's effects on the learning process have been shown.

The exploration of compensation strategies, accounting for 8% of the variation in personality traits, revealed that Conscientiousness displayed the most robust and positive connection, implying that those with higher Conscientiousness are more likely to employ these strategies when navigating language learning challenges. Openness also showed a positive relationship, indicating that individuals open to new experiences may find compensation strategies beneficial. Extroversion and Agreeableness did not show significant associations with compensation strategies. According to the results obtained by^[23] in his research, it confirms the current research results.

Metacognition strategies showcased a unique dynamic, explaining 12% of the variability in personality traits. Here, Extroversion displayed a negative link, suggesting that less extroverted individuals are more inclined to employ metacognition strategies in their language-learning journey. In contrast, Openness demonstrated a positive correlation, indicating that those receptive to new experiences tend to engage in reflective thinking as part of their language learning process. After the current research results according to this dimension of personality and its impact on foreign language learning, the same results are shown in the research^[24].

Shifting to affective strategies, which elucidate 8% of the variation in personality traits, Conscientiousness emerged as positively associated with these strategies. The result suggests highly conscientious individuals might excel in managing their emotions while engaging in language learning. Conversely, Neuroticism showed a positive relationship with affective strategy, suggesting that individuals with higher neuroticism tendencies may rely on these strategies to regulate and control their emotions during language learning. The research exhibits the same results^[25], confirming the results of the current study on personality dimensions and their impact on foreign language learning.

Finally, examining social strategies, which account for 11% of the variability in personality traits, echoed the pattern observed with metacognition strategies. Extroversion displayed a negative connection with social strategy, implying that individuals less extroverted tend to employ social strategies more frequently in their language learning process. On the other hand, Openness again showed a positive link, indicating that individuals open to new experiences may lean towards a more socially oriented

approach to language learning. Following the current study's findings about this personality trait's influence on learning a foreign language, the same results are supported by research by Qiao and Zhao^[26].

These findings intertwine with several compelling reasons, starting with personality traits influencing motivation and interest in language learning. Openness and extraversion may drive individuals to find language acquisition exciting and engaging, fostering their motivation. Secondly, personality traits can significantly shape learning strategies, where Conscientiousness leads to more organized and structured approaches, potentially yielding better language learning outcomes. Moreover, emotional resilience, often linked to personality traits, can affect language learning performance, with lower Neuroticism correlating with better results. Additionally, the preference for social interaction during language learning may be influenced by extraversion and Agreeableness, enhancing social strategies. Cultural Openness, stemming from personality traits, could fuel interest in diverse cultures, which, in turn, could enhance language learning.

Furthermore, cognitive flexibility associated with certain personality traits may facilitate learners in adapting to different linguistic structures. Lastly, personality traits may impact learners' self-perception of their language learning abilities, affecting their self-efficacy and persistence. While these reasons provide a comprehensive framework, it is essential to note that they are speculative, and the complex relationship between personality traits and language learning warrants further research and investigation into the underlying mechanisms and causality. Moreover, the study does not explore interaction effects between different personality traits, highlighting the need for future research to address these limitations and offer a more detailed understanding of the complex interplay between personality traits and language learning strategies. Also, this research does not include the English class achievements; further research should include this variable as an outcome variable.

Conflict of interests

The authors declare no conflict of interest.

Author contribution

In the collaborative development of this manuscript, Karwan Kakabra has a leading role in initiating the process by drafting the manuscript and establishing its structure. Karwan Kakabra and Khalil Saleem jointly conducted data collection and analysis, contributing significantly to the research methodology and results. Mohammed Hussein took a leading role in the later stages, crafting the discussion section, providing detailed data analysis, and finalizing the manuscript with conclusive comments. This clear delineation highlights the unique contributions of each author throughout the research project. All authors read and approved the final manuscript.

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Competing interests

The authors declare that they have no competing interests.

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