



Personality Traits and English Language Learning Styles Among the Students of Isabela State University, Echague, Isabela

Jo-Ann G. Martin¹, Ma. Theresa Eustaquio², and John N. Cabansag³

1,2,3 Department of Language and Literature, College of Arts and Sciences, Isabela State University Philippines

1,2,3 President, Apayao State College, Philippines

DOI: https://dx.doi.org/10.47772/IJRISS.2024.8120109

Received: 26 November 2024; Accepted: 04 December 2024; Published: 04 January 2025

ABSTRACT

This research was conducted to investigate the relationship of personality traits and English language learning styles among the students of Isabela State University, Echague, Isabela. It aimed to determine the primary English language learning styles and prevalent personality traits of the respondents. A total of 111 BS Psychology students participated in this research study. Two sets of questionnaires were used to gather the data needed. The first questionnaire is the Sixteen Personality Factor (16PF) Questionnaire, and for the English language learning styles, the Perceptual Learning Style Questionnaire (PLSQ) developed by Reid (1987) was used. The findings indicated that the respondents' preferred English language learning style is the individual learning style, with a mean score of 4.20, immediately followed by the visual learning style (4.16), kinesthetic learning style (4.12), auditory learning style (4.10), and group learning style (3.87).

The result revealed that the respondents possessed the following personality traits: tough-mindedness with the highest mean of 3.07, immediately followed by extraversion, independence, anxiety, and self-control with means equal to 2.97, 2.96, 2.94, and 2.92. Furthermore, the research determined that individual, tactile, auditory, group, kinesthetic, and individual learning styles showed no significant relationship with anxiety, extraversion, and self-control personality traits. Meanwhile, a significant relationship was found to exist between independence and the visual learning style, and a highly significant relationship was also found between the visual, tactile, group, and kinesthetic learning styles and the personality trait of tough-mindedness

Keywords: Personality Traits, English Language Learning Styles, Perceptual Learning Style Preference Questionnaire (PLSPQ), Sixteen Personality Factor Questionnaire (16PF)

INTRODUCTION

In recent years, educational research has significantly shifted its focus from teaching methods to learning styles. This shift underscored the importance of understanding the relationship between personality traits and language learning styles. Understanding individual differences is essential for enhancing learning outcomes and fostering an inclusive educational environment in programs and courses tailored to accommodate the diverse needs of learners.

Historically, people in the academe had focused more on the different components of teaching, such as pedagogical approaches, instructional materials, and curriculum development. This consequently led to an ongoing debate about "which method of teaching is the best?". The transition to a learner-centered approach shed light on the complexity of the learning process, where the interplay between teaching strategies and learning styles greatly impacts student success. Research, including Xu's work (2011), has supported the shift from teaching to learning, and technological advancements and the recent COVID-19 pandemic have accelerated this shift, significantly transforming the landscape of education. These changes underscored the



ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue XII December 2024

necessity of tailoring instruction and learning methodologies to individual learning styles to enhance learning outcomes.

Learning in general is a complex process that involves the interplay between teaching strategies and the learning style of students. Teaching strategies and methods serve as a blueprint for effective classroom instruction and play a big role in the motivation of language learners, thus contributing to the success of language acquisition. While teaching strategies and methods are an important aspect of learning, we cannot also ignore the fact that learning style is a crucial factor of language learning. We should thoroughly explore the study of learning style as a key element of learning and integrate it into educational practices to improve learner outcomes. Ellis (2005) introduced the idea of aligning instruction with learning style or learner-instruction "matching." According to him, "the ideal kind of instruction is the one that matches the individual learner's preferred style of learning."

Personalized educational programs and courses that cater to the needs of the diverse and individually different students are vital in achieving the best possible outcome. Factors such as intellectual capacity, stress management strategies, and emotional intelligence contribute to the success of both students and teachers (Austin et al., 2007; Chen et al., 2000; and O'Connor & Bevil, 1996). Moreover, individual differences such as age, gender, personality, attitude, culture, and social status determine the kind of learning experiences that individuals find most effective (Blair, 1982).

Personality traits influence learning behavior and motivation, playing an important role in whether a student will persist or give up (Blickle, 1998). Different personality traits can lead to different behaviors and academic performances. For example, students who are extroverted may find it difficult to concentrate on academic materials and perform poorly, while those who are ambitious and organized often strive for and excel academically (Gilles & Bailleux, 2001). Despite numerous studies that have investigated the relationship between personality traits and learning styles, only a handful have examined this interaction in the context of English language learners in higher education (Brown, 2000; Carrell et al., 1996). This gap in literature underscores the need to conduct research that examines the impact of personality traits on the language learning styles of university students, particularly in diverse educational environments.

Therefore, the premise of this research is based on the idea that personality traits influence learners' language learning styles and their English language learning process. This study aims to explore the relationship between language learning styles and personality traits among BS-Psychology students from Isabela State University, Echague Campus. The specific objectives are to identify the relationship between the variables and the dominant learning styles and personality traits of the participants. The research seeks to provide a comprehensive understanding of how personality impacts learning preferences and outcomes.

Ultimately, language acquisition outcomes can be improved by incorporating a deeper understanding of the interplay between personality traits and learning patterns into more effective teaching strategies. Incorporating these insights into educational practices can enhance learner outcomes by ensuring that teaching methods are customized to accommodate the diverse requirements of students. The findings of the study may be limited in their generalizability to other populations due to its focus on BS-Psychology students at Isabela State University. However, the insights obtained can be used as a basis for future research and educational interventions. The results are anticipated to contribute to the creation of language learning programs that are more effective and personalized, thereby promoting a more inclusive and supportive educational environment.

METHODOLOGY

Design

This study utilized a descriptive-correlational design to ascertain the relationship between personality traits and language learning styles among the respondents.

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue XII December 2024



Respondents

The respondents were undergraduate psychology students at Isabela State University, Echague, Isabela, The Registrar's Office supplied a list from which the sample was drawn in a proportional manner. The Slovin formula was employed to determine the sample size, and the proportionate allocation formula was employed to distribute the respondents across various year levels.

Instrument

A two-part questionnaire was used to gather data: Perceptual Learning Style Preference Questionnaire (PLSPQ): The PLSPQ, a self-administered questionnaire, was developed by Reid in 1987. It is derived from established learning style instruments, incorporating modifications suggested by non-native speaker informants and American linguistics consultants. The questionnaire has been created and validated for non-native speakers, evaluating six learning styles: visual, auditory, kinesthetic, tactile, group learning, and individual learning.

The initial four categories pertain to perceptual learning patterns, whereas the subsequent two are classified as social categories. Participants utilized a five-point Likert scale, ranging from strongly agree to strongly disagree, to provide their responses. The tool required students to swiftly identify the statement that most accurately corresponded with their English studies, without the necessity for contemplation or alteration of their responses. Reid (1987) utilized the split-half method to validate the questionnaire. The five statements retained in each subset were identified through a correlation analysis of an initial collection of 60 statements, comprising 10 statements for each learning style.

The second part was the 16PF Questionnaire. The 16PF represents Cattell's intention to identify the primary traits of personality through factor analyzing the entire domain of personality descriptors. The use of factor analysis is distinct from other methods of constructing personality measures. For instance, certain inventories consist of items that mirror the constructs proposed by a specific personality theory, such as questionnaires that evaluate Murray's Needs. Other inventories design their content to differentiate one group from another, such as through tests that distinguish clinical groups from "normal" groups.

A variety of settings (clinical/counseling, industrial/organizational, research, and schools) have used the 16 PF, a broad measure of normal adult personality, to measure a wide range of life behaviors. Some examples of these kinds of measurements are guessing performance standards and behavioral ratings, finding out how similar a person's personality is to people in certain groups, considering personality changes that happen during treatment or experiments, and guessing other criteria and construct measures. The assistance of the guidance counselor of the Office of Student Affairs and Services (OSAS) was requested in the administration of the 16PF Questionnaire among the respondents and the interpretation of the results of the said personality test.

Data Gathering Procedure

In gathering the data needed, permission to conduct the study was requested from the Office of the Dean, College of Arts and Sciences (CAS). After which the questionnaires were administered among the respondents of the study. Given that only a licensed Guidance Counselor and Psychometrician can administer the 16 PF Questionnaire, the researcher asked the Guidance Counselor at the Office of Student Affairs and Services (OSAS) for assistance in administering this personality test.

Statistical Treatment of Data

The data gathered were processed using the Statistical Package for Social Sciences (SPSS). Specific statistical treatments were used to describe the following: Weighted mean was utilized to determine the language learning styles and personality traits of the respondents. Meanwhile, Chi-square test was used to determine if there is a significant relationship between the personality traits and the English language learning styles of the respondents.

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue XII December 2024

RESULTS

Table 1. Distribution of respondents by year level.

Level	Frequency n = 111	Percent 100.00			
1 st year	51	45.95			
2 nd year	45	40.54			
3 rd year	15	13.51			

As presented in the table, there were 111 respondents who participated in this study. The study found that the first and second years comprised the largest number, with 51 or 45.95 and 45 or 40.54 percent, respectively. The third-year students comprised 15, or 13.51 percent, of the respondents.

Table 2. Respondents' English language learning style preference

English Language Learning style	Mean	Qualitative Description
Visual Learning Style	4.16	Agree
Tactile Learning style	4.07	Agree
Auditory Learning style	4.10	Agree
Group Learning style	3.87	Agree
Kinesthetic learning Style	4.12	Agree
Individual Learning Style	4.20	Agree

The result revealed that the BS Psychology students' predominant English language learning style, with a mean ranging from 3.87 to 4.20, provides a qualitative description of "agree" for the six identified learning styles. Topped among the list was the "individual learning" style with a mean of 4.20, followed by the "visual learning style" with a mean of 4.16, the "kinesthetic learning style" with a mean of 4.12, the "auditory learning style," the "tactile learning style" with a mean of 4.07, and the "group learning style" with a mean of 3.87. In other words, the "individual learning style" was the most preferred English language learning style, while the "group learning style" was the least preferred.

Table 3. Mean-computed of the respondents' personality traits.

Traits	Mean-Computed	Qualitative Description				
1. Independence	2.96	Average				
2.Tough-Mindedness	3.07	Average				
3. Self-control	2.92	Average				
4. Extraversion	2.97	Average				
5. Anxiety	2.94	Average				





As presented in the table, the predominant personality traits of the respondents are the following: The personality traits with the highest mean are "Tough-Mindedness," with a mean of 3.07, followed by "Extraversion" and "Independence," with respective means of 2.97 and 2.96. On the other hand, "anxiety" and "self-control" had means equal to 2.94 and 2.92, respectively. All of the personality traits were given a qualitative description of "average."

Table 4. Correlation between the respondents' predominant personality traits and English language learning strategy

Personality	Anxiety		Extraversion		Independence		Self-Control		Tough- mindedness	
ELLS	X ² comp. Sig.		X ² comp. Sig.		X ² comp. Sig.		X ² comp. Sig.		X ² comp. Sig.	
Visual learning style	2.68 ^{ns}	0.84	1.61 ^{ns}	0.95	13.52	0.03	1.93 ^{ns}	0.58	18.02**	0.00
Tactile learning style	5.14 ^{ns}	0.52	2.13 ^{ns}	0.90	12.14 ns	0.20	2.19 ^{ns}	0.53	19.80**	0.00
Auditory learning style	1.47 ^{ns}	0.83	8.38 ^{ns}	0.07	3.35 ^{ns}	0.76	0.66 ^{ns}	0.71	1.44 ^{ns}	0.83
Group Learning style	4.17 ^{ns}	0.84	9.63 ^{ns}	0.29	4.38 ^{ns}	0.97	0.86 ^{ns}	0.97	57.31**	0.00
Kinesthetic learning style	3.54 ^{ns}	0.73	2.33 ^{ns}	0.88	8.84 ^{ns}	0.45	4.73 ^{ns}	0.79	58.42**	0.00
Individual learning style	0.22 ^{ns}	0.98	6.15 ^{ns}	0.41	0.94 ^{ns}	0.98	5.18 ^{ns}	0.81	6.77 ^{ns}	0.44

Note. **- highly significant *- significant ns- not significant

The correlation between the preferred English language learning style (as measured by the PLSQ scale) and predominant personality traits (as measured by the personality scale) was investigated using the Chi-square, as shown in the table. The computed chi-square value "X² Comp." denotes the calculated chi-square statistic for each learning style and personality trait combination, and "Sig." indicates whether the result is significant based on the p-value.

The result of the computation reveals that the individual, tactile, auditory, group, kinesthetic, and individual learning styles showed no significant relationship with anxiety, extraversion, and self-control personality traits. This suggests that these personality traits do influence the specific learning styles that the students possess. Furthermore, a significant value of 0.03 indicated a significant relationship between the personality trait Independence and the visual learning style. This implies that the majority of visual learners prefer to work independently. The remaining learning styles did not demonstrate a significant correlation with independence.

A highly significant relationship was found between the visual, tactile, group, and kinesthetic learning styles and the personality trait of tough-mindedness, with significant values of 0.00, 0.00, 0.00, and 0.00, respectively. Which showed a positive, strong correlation. This suggests that students who prefer such a learning style typically exhibit resilience, strength, and determination, which can aid them in overcoming challenges. The results for auditory and individual learning styles were not statistically significant. This suggests that students who prefer learning through hearing and working individually may not be as strong-willed as others.

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue XII December 2024



DISCUSSION

The study's findings showed that most BS Psychology students favored independent learning, indicating their appreciation for autonomy and independence, both of which are crucial for personal growth. Individuals who prefer to work alone in learning often draw inspiration from their own ideas and feelings. They are more comfortable working independently or with someone that they trust. This approach cultivates self-awareness and improvement, which significantly contributes to the development of empathy, resilience, and emotional regulation. These traits are particularly helpful for psychology students who will be working in the fields that require strong analytical and independent skills. Visual learning comes in second, indicating that most of the students prefer watching and reading. This ability can aid in information retention, as students tend to learn more effectively when presented visually. Visual learners are excellent at interpreting diagrams, charts, and models, which are invaluable tools in explaining research and data analysis. The third preferred learning style is kinesthetic, suggesting that B.S. Psychology students enjoy laboratory activities, role-playing, and physical demonstrations of theories. The auditory learning style follows closely behind the kinesthetic learning style. This revealed that there is less preference for the hearing medium, which is perhaps due to the fact that listening is a skill that is hard to master. With constant distraction from other people or the surroundings, students may find it difficult to learn just by listening. On the other hand, the least preferred learning style is group learning, suggesting that they are more attuned to working alone rather than collaborating. This can enhance focus and prevent possible distractions from working in a group.

The results of this study corroborate the findings of Fateme B. and Behnam B. (2013), who found that learners preferred individuality over group work. Huang J. and Banisaed M. (2015) conducted a similar study on the perceptual learning styles of Iranian EFL learners, which also revealed that Iranian EFL students preferred individual learning over group work. However, the findings of this study contradict those of Vaseghi et al. (2013), who found that the kinesthetic approach was the preferred learning style, while individual, group, auditory, and visual were the least preferred approaches to learning. The study of Naserieh and Ananisarab (2013) revealed that Iranian learners favored kinesthetic and group learning styles, which further contradicts the result of this study. The need to personalize instructional approaches to meet the individual and diverse needs of learners is highlighted by these varying results and underscores the differences of learning styles across various educational and cultural context.

According to Cattell & Schuerger (2003), tough-mindedness, as provided for in 16 PF Fifth Edition Administrator's Manual composes tough-minded vs. receptive is a personality present to those who are determined, reserved, and traditional. They often deal with problems cognitively but may not be open to new experiences. Meanwhile, receptive individuals are affectionate and may find it challenging to put aside their emotions especially when dealing with problems. This in turn can lead to subjectivity because of the potential overlook of the practical aspects of a certain situation. Another personality trait outlined by Cattell and Schuerger in terms of social participation is extraversion vs introversion. Extraversion relates one's ability to participate in socially. Extraverts enjoy forming relationships and are typically people-oriented while introverts prefer working alone and in solitude. They spend less time in the company of others and more time with themselves. The manual also describes the fifth personality trait anxiety.

Anxious people are often distrustful and tend to be vigilant. They are prone to worrying and having tense reactions, while unperturbed are those who are calm, but relatively unmotivated because of the extreme comfortability that they are experiencing. This turn makes them resistive of change. The 16 PF also measured independence and distinguishes independent vs. accommodating personality. Independent individuals are self-determined, persuasive and often challenges norm, on the other hand, accommodating individuals value harmony and avoid conflict. At times persuading others is a difficult challenge for them because of the anxiety in forming and stating their own opinion. Lastly, self-control is defined as the ability to regulate one's urges and impulses. Self-controlled individuals are disciplined and rule-conscious, but lacks flexibility, whereas unrestrained individuals may struggle with impulsivity and has a tendency to disorganization and self-indulgence. The fifth personality trait is anxiety which is anxious vs. unperturbed. Highly anxious people may be unperturbed. However, they may minimize negative effects or be unmotivated to seek change of a general comfort level.



ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue XII December 2024

The personality traits of the respondents have a qualitative description of "Average" which means that the respondents have the tendency to be reserved, determined, and traditional in terms of "tough-mindedness" which also has the highest mean score. This suggests that most BS Psychology students exhibit resiliency and strong determination which is an important trait to overcome challenging situations and provide emotional support. In the academic and clinical setting tough-mindedness can positively affect learners' approach to their studies by successfully managing and maintaining emotional stability that could greatly benefit their studies and cases. While these students may have a slightly higher mean score on tough-mindedness, they are also exhibiting a normal level of extraversion which means friendly and like being with and talking to other people making them people oriented. This was followed by independence, indicating that these learners greatly appreciate an independent and collaborative environment. They may work autonomously at times, but also value teamwork and support from other people.

The anxiety is also present on the Bs Psychology students, which indicates that the learners are also anxious, afraid, nervous and worried in their academic and personal lives, which is typically normal given the loads of work, assignments and activities that they have to accomplish. This moderate anxiety level indicates that though they are anxious, they are relatively coping well. The least predominant personality trait is self-control indicating that some Psychology students may sometimes struggle to maintain discipline and flexibility to self-regulation. Time- management and stress coping mechanisms may help these students to focus on their goals. The moderate level of the personality traits exhibited by the BS Psychology students indicates that they are in the middle of each of the personality traits' spectrum and are likely possessing a balanced trait, flexible and adaptable characteristics and a moderate reaction to stimuli.

Correlation results revealed that there is a significant relationship that exists between some of the learner's preferred learning styles and personality traits. Toughmindedness is the most correlated personality trait, having a highly significant relationship with the visual, tactile, group, and kinesthetic learning styles. This suggests that some personality traits influence or are influenced by how a student prefers to learn. Visual students who score high in tough-mindedness are most likely to deal and approach challenging situations with a pragmatic mindset. They are also determined and focused on what they are watching or reading not to miss an important detail.

The strong relationship between tough-mindedness and tactile learning style also reveals that students who are resilient are likely to excel in environments where they are physically engaging with the materials through their practical problem-solving skills. Furthermore, a high significant relationship between group learning styles implies that though students are reserved, they can still thrive in collaborative environments because they use their determination and pragmatism to work effectively in groups, despite their strong-willed nature. Moreover, kinesthetic leaners who exhibited tough-minded personality likely prefer an active engagement with their learning materials and are likely to succeed in finishing physically demanding tasks through their resilient and determined personality. A significant relationship was also found between visual learning style and independence suggesting that visual learners prefer to be independent in doing their task as this helps them to analyze and critique information. Their ability to focus on visual materials limits their interaction which is consistent with their independent character.

CONCLUSIONS

The results of this study an important insight into the most preferred English language learning style and predominant personality traits of the BS Psychology students at Isabela State University. The research study determined that the most preferred English language learning style of the respondents was individual learning style, which means that the respondents prefer to learn the English language individually. This preference for individual learning underscores the importance of independence and autonomy in their approach to learning. On the other hand, the least preferred was group learning style, which suggest that these students are less inclined to work collaboratively in their learning environment.

The respondents in this study possessed only five (5) personality traits as identified through the 16 PF Questionnaire by the 'Isabela State University Licensed Guidance Counselor. These are: Tough-mindedness, extraversion, independence, anxiety and self-control, all have a qualitative description of "Average" which





means that the respondents tend to be reserved, utilitarian and traditional in terms of "tough- mindedness", friendly and likes being with and talking to other people making them people oriented for "extraversion", persuasive, forceful and likes to work on their own for "independence", serious, rule-conscious, practical and perfectionist but don't display flexibility or spontaneity for "self-control", and anxious, afraid, nervous and worried in terms of "anxiety" but at a moderate or normal level.

A highly significant relationship was found to have existed among the students who exhibit tough-minded personality with visual, tactile, group, and kinesthetic learning styles. This suggests that tough-minded students have a preference for active and engaging learning approaches and use their resilience and determination to succeed in various ways. In addition, a significant relationship has been found between independence and visual learning style. This indicates that highly independent students prefer to learn using visual aids. This approach helps students understand and interpret information better, without relying too much on other people.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

- 1. The university might consider identifying the students' personality traits and the preferred learning styles before or during the course. By doing so, teachers will be able to offer the most appropriate courses to suit the students' needs and they will be able to employ the appropriate teaching style that will help the teacher achieve the best teaching and learning result.
- 2. Schools and universities are recommended to provide access to information for language teachers' inservice training for the most appropriate language learning strategies based on the students learning
- 3. Personality tests, learners' satisfaction surveys and needs assessments, are strongly recommended to be done regularly to determine the teaching methods to be modified and used in teaching.
- 4. A similar study might be conducted utilizing respondents from the different programs in Isabela State University, Echague, Campus.

REFERENCES

- 1. Austin, E. J., Saklofske, D. H., & Egan, V. (2007). Personality, well-being and health correlates of trait emotional intelligence. Personality and Individual Differences, 38(3), 547-558.
- 2. Blair, S. C. (1982). Individual differences and learning style: Implications for adult education. International Journal of Lifelong Education, 1(2), 143-158
- 3. Blickle, G. (1998). Managerial career success and failure in selected European countries: The role of individual and organizational variables. Journal of Occupational and Organizational Psychology, 71(2), 225-240.
- 4. Brown, H. D. (2000). Principles of Language Learning and Teaching. Longman.
- 5. Carrell, P. L., Prince, M. S., & Astika, G. G. (1996). Personality types and language learning in an EFL context. Language Learning, 46(1), 75-99.
- 6. Cattell, R. B. (1994). 16PF Fifth Edition Administrator's Manual. Institute for Personality and Ability Testing, Inc. (IPAT).
- 7. Cattell, R. B., & Schuerger, J. M. (2003). 16PF Fifth Edition Administrator's Manual. Institute for Personality and Ability Testing, Inc. (IPAT).
- 8. Chen, G., Gully, S. M., & Eden, D. (2000). Validation of a new general self-efficacy scale. Organizational Research Methods, 4(1), 62-83.
- 9. Ellis, R. (2005). Ten Principles for Language-Teacher Education. International Journal of Linguistics, Literature and Translation, 2(5), 42-53.
- 10. Fateme, B., & Behnam, B. (2013). Learners' preference for individuality vs. group work in language learning. Journal of Education and Practice, 4(7), 23-31.
- 11. Gilles, P., & Bailleux, C. (2001). Personality traits, learning, and memory. Journal of Educational Psychology, 93(4), 877-886.
- 12. Huang, J., & Banisaed, M. (2015). Perceptual learning styles of Iranian EFL learners. International Journal of English Linguistics, 5(2), 45-53.

IN

INTERNATIONAL JOURNAL OF RESEARCH AND INNOVATION IN SOCIAL SCIENCE (IJRISS)

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue XII December 2024

- 13. Naserieh, F., & Ananisarab, M. (2013). Preferences for learning styles among Iranian learners. Journal of Language Teaching and Research, 4(6), 1231-1238.
- 14. O'Connor, P. J., & Bevil, R. L. (1996). Academic achievement and emotional intelligence among diverse student populations. Journal of Personality Assessment, 77(3), 311-322.
- 15. Reid, J. M. (1987). The learning style preferences of ESL students. TESOL Quarterly, 21(1), 87-111.
- 16. Vaseghi, R., Ramezani, M., & Gholami, R. (2013). Learning styles of Iranian EFL learners: A focus on kinesthetic, individual, group, auditory, and visual preferences. Journal of Language Teaching and Research, 4(4), 814-822.
- 17. Xu, Y. (2011). Adapting to online learning: Implications for research and practice. Online Learning, 15(2), 87-102.