

# The Role of L2 Grit and Foreign Language Enjoyment in Chinese EFL Learners' Willingness to Communicate at an EMI University

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**Abstract**—The effects of intrapersonal characteristics and environmental factors on students' second language (L2) learning have been prevailing topics among researchers. Nevertheless, insufficient attention has been paid to the variable L2 grit, which is generally regarded as a positive trait predictive of academic success. Therefore, aiming to fill in the previous gap, this study illustrates a quantitative methods study that focuses on the following issues: (1) What are the correlations between L2 grit, foreign language enjoyment, and English-Medium Instruction (EMI) university students' L2 WTC in the classroom? (2) How do L2 grit and foreign language enjoyment predict EMI university students' L2 WTC in the classroom? Three adopted scales were used to collect the required data. After that, Pearson correlation analysis and multiple regression analysis were employed to further analyze the data. The results reveal that L2 grit does not serve as a predictive factor for students' L2 WTC, while foreign language enjoyment can predict students' L2 WTC positively to a significant extent. This research may contribute to second language learning and teaching by demonstrating the interrelationships among three essential academic achievement predictors.

**Keywords**—EMI university, L2 grit, foreign language enjoyment, willingness to communicate

## I. INTRODUCTION

Internal and external factors related to second language learning have gained popularity among researchers in recent years, “L2 grit” and “Foreign Language Enjoyment (FLE)” are two significant variables [1–3]. Apart from that, speaking is generally regarded as a challenging language skill for students to acquire, especially in an EFL environment where there is a lack of opportunities for continuous practice, and students usually enhance their communication proficiency by interacting with their teachers and classmates within English classes [4]. The more engaging students should have more chances to practice oral English, that is, willingness to communicate, eventually leading to their academic performance. According to previous research,

L2 grit can significantly influence students' foreign language emotions, and foreign language enjoyment has a mediating effect on the relationship between linguistic thinking mode and the willingness to communicate [1–3]. Therefore, those three variables are entangled together.

However, our understanding of how L2 grit and foreign language enjoyment are linked to L2 WTC remains sparse. Moreover, the previous research mainly focuses on non-English majors rather than English-majored students [4–6]. English majors are actually worth examining as they are generally considered enthusiastic about language learning and hence have a comparatively high degree of enjoyment in language classrooms. Given the above research gaps, we intended to figure out the influence of the organic integration of personality characteristics and emotional factors in foreign language learning. The reason for conducting this research in China is twofold. On the one hand, since the students are not provided an immersive language learning environment, subjective factors like grit and FLE then become essential as motivation resources. On the other hand, most Chinese students tend to be weak in speaking, and the result of this study provides feasible insights to tackle these issues by increasing their WTC.

This research may contribute to second language learning and teaching, once the instructors understand the relationship between L2 grit, foreign language enjoyment and Chinese EFL learners' WTC, it would be conducive to creating an enjoyable English learning atmosphere, activating students' learning motivation as well as enhancing their teaching efficiency.

## II. LITERATURE REVIEW

### A. L2 Grit

There are two elements that make up L2 grit, that is the perseverance of effort and the consistency of interests. The two terms refer to the capacity for maintaining long-term effort in the face of difficulty and keep sustaining interests when encountering setbacks, respectively [7]. Lake's study on the connection between a positive L2 self, motivation, and proficiency [8] served as the foundation for subsequent research on grit in L2 acquisition. Later,

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numerous researchers [2, 9, 10] have studied the internal structure of L2 grit and the relationship between L2 grit level and the language proficiency of learners [11, 12].

### *B. Foreign Language Enjoyment*

“Enjoyment” and “anxiety” are the main areas of research that highlight the importance of emotional elements in language learning. According to Fredrickson’s [13] broad-and-build theory, positive emotions expand an individual’s instantaneous mentality and assist them in constructing sustained personal resources. Hence, foreign language enjoyment is attached to great importance to facilitate language learning. It is seen as the degree to which L2 classroom instruction is regarded as enjoyable [14]. The three components of a fun learning environment in the classroom are instructor support, group cohesiveness, and task orientation [15].

### *C. Willingness to Communicate*

WTC in a second language is first initiated by McCroskey and Baer [16]. MacIntyre [17] further developed and defined it as “preparedness to start a conversation in an L2 at a specified moment with a specific person or people”, which is considered a final step before actual L2 use. He also proposed a pyramid model of second language WTC, which was ranked in accordance with individual emotion and social environment variables that influence second language WTC. The model demonstrated that individual factors like personality characteristics are more stable predictors, while factors susceptible to environmental influences like pleasure and anxiety are more variable predictors. Moreover, research has proved that learners more willing to communicate can achieve better results in second language learning.

### *D. Previous Studies*

Ju Seong Lee’s [4] study has investigated how grit and classroom enjoyment are related to EFL learners’ willingness to communicate in a second language within the Korean environment. The participants comprised three groups of learners with a total amount of 647, from middle school, high school, and university respectively. Questionnaires that included four sections (L2 WTC, L2 Grit, Classroom Enjoyment, and Demographic Information) were applied to collect corresponding data. One-way ANOVA, correlation analysis, and hierarchical regression analyses were conducted. The result shed light on how the perseverance of effort and classroom enjoyment can predict the WTC of all cohorts. Nevertheless, it also revealed that consistency of interest could not predict L2 WTC among all participants. Therefore, language educators can enhance learners’ L2 WTC by encouraging them to continuously take the initiatives to communicate in English. In addition, creating a positive classroom environment is an effective way to facilitate the degree of learners’ L2 WTC and communicative proficiency.

Online courses conducted by all schools for coping with challenging educational conditions alongside the broke out of COVID have drawn more and more attention

[6]. The transformation of the foreign language environment provided an essential chance for the author to investigate the correlation between learners’ Foreign Language Classroom Anxiety (FLCA) and general grit and the classroom environment (CE) of online English courses respectively. 1526 Chinese secondary students with different proficiency levels were recruited as participants. They were required to finish an online questionnaire. The relationship between general grit and CE and FLCA was shown to be negative by descriptive data, Pearson correlation, and regression analyses. Additionally, FLCA can be predicted by general grit, CE, or both independently and together.

## III. RESEARCH QUESTIONS

The research is going to analysis:

1. Are there correlations between L2 grit, foreign language enjoyment and EMI university students’ L2 WTC in the classroom?
2. Are L2 grit and foreign language enjoyment predicting EMI university students’ L2 WTC in the classroom?

According to the above research questions, the following hypotheses are put forward:

H1: Significant relationships exist among L2 grit, foreign language enjoyment and L2 WTC in the classroom among EMI university learners.

H2: L2 grit and foreign language enjoyment can predict L2 WTC among EMI university learners.

## IV. METHODS

### *A. Research Design*

The research questions determined that the research would be analyzed through statistical data. Therefore, this research would utilize quantitative methodology within the form of questionnaire. Meanwhile, the participants were collected from English language and literature studies, whose courses would be provided through English context completely and it could reduce the potential influence factors. The questionnaire, which consisted of three Likert scales, was distributed to 30 students. The data collected from the questionnaire would be evaluated by the program so that the research questions and hypotheses could be figured out.

### *B. Participant*

There are 50 participants in the research. The main participants of this research are junior students in English Language and Literature Studies (ELLS) from an EMI school in Guangdong province of China. Those ELLS students came from different concentrations, consisting of Teaching English to Speakers of Other Languages (TESOL), Literary Studies in English (LSE), and English Professional Composition (EPC). Each concentration in the major would have different class. Therefore, students from three different classes were involved in this study. 50 ELLS students were selected by convenient sampling to process anonymous questionnaire survey. These year three ELLS students intend to have future study in other

regions or countries and thus all of them have IELTS (International English Language Test System) test scores and these participants are in the upper-intermediate level. According to the result of the questionnaire, half of the participants are 21 years old. 38% of the participants are 20 years old. 22-year-old and 23-year-old participants occupy 12% of the sample. Among the 50 participants, there are 42 female participants and 8 male participants. Regarding the participants' English proficiency level, 24% of the students are at advanced level, 68% of the students are at upper-intermediate level and 8% of students are at intermediate level. All in all, most of the students are at B2 level based on Common European Framework of Reference for Languages (CEFR).

### C. Method of Data Collection

#### 1) Instrument

The research would be conducted in a quantitative method. Research would be conducted in the questionnaire. The questionnaire consists of four parts: (1) L2 grit scale, (2) Foreign language enjoyment scale, (3) Willingness to communicate scale, and (4) personal information. The scales of the questionnaire have been utilized by other studies and would be calculated as well. The reliability of questionnaire could be guaranteed. Nine items for L2 grit were rated on a five-point Likert scale [5], ranging from 'not like me at all' (code one) to 'very much like me' (code five). Items one, three, five, six, and nine belong to one aspect in L2 Grit. Questions two, four, seven, and eight belong to another aspect in L2 grit. These four questions were set as reverse coded items in the questionnaire in order to maintain Consistency of interests [7]. The foreign language enjoyment scale, which was created by Dewaele and MacIntyre [18], contains 21 items and rates on a five-point Likert scale, ranging from code one "strongly disagree" and code five "strongly agree". In this study, the L2 WTC scale was utilized, which was created by McIntyre and other researchers [19]. This scale has 28 questions rated on a five-pointed Likert scale, ranging from code one "never" to code five "almost always".

The fourth part of the questionnaire was designed to collect students' personal information such as their age, gender, and their English proficiency level.

Two students from ELLS participated in the pilot test. Each pilot test was conducted for about ten minutes. The participant concurred that some questions were ambiguous and terminological. Based on their suggestions, supplementary instructions were added in part one, which asked the participants to fill in the answers based on their current situation. We added an explanation in Chinese in question 3 of part two, which assists participants to know that "I feel different" means "becoming positive". For question one in part 3, there is no definition on open discussion. Therefore, an explanation of "open discussion" was added to the question.

#### 2) Data collection

All the question items would be set in an application called Questionnaire Star. Researchers invited the participants who met the requirement to do the

questionnaire online. Researchers would not force those students to participate in the study and they could refuse to participate in it if they do not want to spend time on it. All the participants participated in filling out the questionnaire willingly. The collected data would be presented in questionnaire application.

For considering ethical issues, the questionnaire was totally anonymized questionnaire. It would not recognize the personal information of participants. It could protect participants' privacy. Furthermore, the questionnaire provides both Chinese translation version and the original English version of the questions. Some basic information such as the purpose of research, the time for filling out the questionnaire would be included in the overall instruction of the questionnaire. All in all, this research is a voluntary and confidential participation.

#### 3) Data analysis

The collected data would be imported to a computer-assisted application called Statistical Package for the Social Sciences (SPSS). In this computer-assisted application, Cronbach's alpha would be utilized to analyze the reliability of the data. In order to acquire inferential results, Pearson correlation would be used to analyze the first research question: What are the correlations between L2 grit, foreign language enjoyment and EMI university students' L2 WTC in the classroom? Multiple regression analysis would be utilized to answer the second research question: how do L2 grit and foreign language enjoyment predict EMI university students' L2 WTC in the classroom?

## V. RESULT

The initial stage of data analysis was to conduct preliminary measurements to examine the reliability indices of three scales. Cronbach's alpha was specifically calculated to find out the reliability indices for each scale. The results, as presented in Table I, indicate that both foreign language enjoyment ( $r = 0.935$ ) and L2 WTC ( $r = 0.944$ ) exhibit strong reliability. However, the Cronbach alpha for L2 grit is only 0.466, revealing an unacceptable level of reliability. After the examination of statistics of all items in L2 grit scale, the results reveal that if item 4 is deleted, the Cronbach alpha of the scale will be increased to 0.624. According to Zhou [20], reliability indices are deemed acceptable when Cronbach's alpha falls between 0.6 and 0.7. Consequently, item 4 was eliminated to enhance reliability, yielding a final correlation coefficient of  $r = 0.624$  for L2 grit (Table I).

As shown in Figs. 1–3, the number of items is 50 and the results of the three scales conform to the normal distribution.

TABLE I. RELIABILITY STATISTICS

Scale	Cronbach's Alpha	N of Items
L2 WTC	0.944	28
Foreign language enjoyment	0.935	21
L2 grit	0.466	9
L2 grit (without item 4)	0.624	8

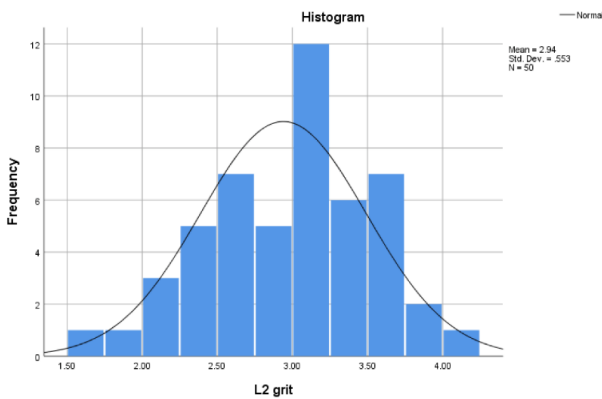


Fig. 1. Histogram of L2 grit.

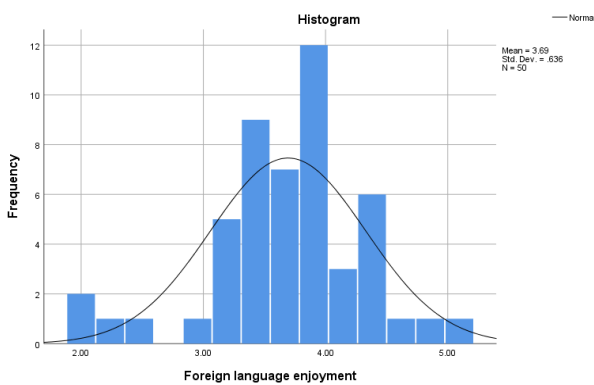


Fig. 2. Histogram of foreign language enjoyment.

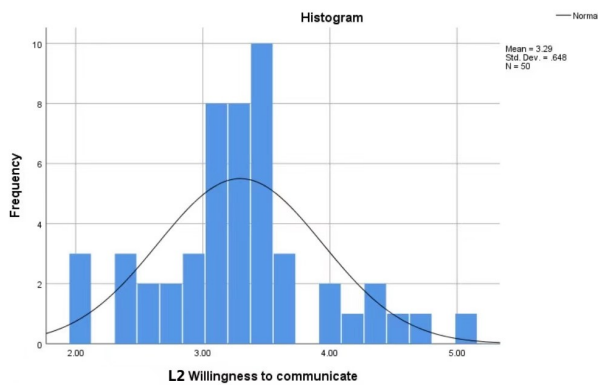


Fig. 3. Histogram of L2 willingness to communicate.

A. The First Research Question

The descriptive data in Table II would be the basis of the further analysis. The first research question concerns the correlations among L2 grit, foreign language enjoyment, and EMI university students' L2 WTC in the classroom. Therefore, Person's correlation coefficients were computed to investigate this research question. According to correlational rules, a larger absolute value of the correlation coefficient indicates a stronger relationship between the two variables [20]. As shown in Table III, a significant and moderately positive relationship ( $r = 0.499$ ,  $p = 0.000$ ) between students' L2 grit and L2 WTC can be found, while the correlation between their foreign language enjoyment and L2 WTC is strongly positive and significant ( $r = 0.819$ ,  $p = 0.000$ ).

TABLE II. DESCRIPTIVE STATISTICS

Scale	Mean	Std. Deviation	N
L2 WTC	3.2943	0.64772	50
Foreign language enjoyment	3.6933	0.63642	50
L2 grit	2.8200	0.46233	50

TABLE III. CORRELATIONS AMONG L2 GRIT, FOREIGN LANGUAGE ENJOYMENT, AND L2 WTC

Scale	Correlation	L2 WTC
L2 grit	Pearson Correlation	0.499**
	Sig. (2-tailed)	0
	N	50
Foreign language enjoyment	Pearson Correlation	0.819**
	Sig. (2-tailed)	0
	N	50

\*\*Correlation is significant at the 0.01 level (2-tailed).

B. The Second Research Question

The second research question investigates how L2 grit and foreign language enjoyment predict L2 WTC of EMI university students in class, which was analyzed by conducting multiple regression analysis, consisting of model summary, ANOVA, and coefficients.

Table IV presents the model summary for L2 grit, foreign language enjoyment, and L2 WTC. The Adjusted  $R^2$  is 0.658, which explains the proportion of variance in the dependent variable. Consequently, the model accounts for 65.8% of the variances in the students' L2 WTC scores.

Table V examined whether the model was established successfully or not and the results show that the model reaches statistical significance ( $F = 48.109$ ,  $sig = 0.000b$ , which is equivalent to  $p < 0.05$ ).

Table VI measured whether the independent variables (L2 grit and foreign language enjoyment) can predict the dependent variable (L2 WTC). The results show that only foreign language enjoyment significantly predicted ( $B = 0.863$ ,  $\beta = 0.848$ ,  $sig = 0.000$ , which means  $p < 0.05$ ) L2 WTC while L2 grit did not act as a significant predictor ( $B = -0.053$ ,  $\beta = -0.045$ ,  $sig = 0.680$ , which is equivalent to  $p > 0.05$ ).

TABLE IV. MODEL SUMMARY<sup>B</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.820 <sup>a</sup>	0.672	0.658	0.37887	1.897

<sup>a</sup> Predictors: (Constant), Foreign language enjoyment, L2 grit  
<sup>b</sup> Dependent Variable: L2 WTC

TABLE V. ANOVA<sup>A</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.811	2	6.906	48.109	0.000b
	Residual	6.746	47	0.144		
	Total	20.558	49			

<sup>a</sup> Dependent Variable: L2 WTC

<sup>b</sup> Predictors: (Constant), Foreign language enjoyment, L2 grit

TABLE VI. COEFFICIENTS<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.263	0.338		0.777	0.441		
	L2 grit	-0.053	0.128	-0.045	-0.415	0.680	0.588	1.7
	FLE	0.863	0.111	0.848	7.783	0.000	0.588	1.7

<sup>a</sup> Dependent Variable: L2 WTC

## VI. DISCUSSION

This study investigated the correlation between L2 grit and foreign language enjoyment with L2 WTC (Willingness to Communicate) in classroom settings among Chinese EMI university EFL learners. The initial finding of this investigation was that the relationship between students' L2 grit, foreign language enjoyment and WTC was positive and significant, which supported the first null hypothesis. To be specific, students' L2 grit was moderate positive correlated with WTC and foreign language enjoyment was strong positive correlated with WTC. In terms of the second research question, the study revealed that L2 grit, encompassing both perseverance of effort and consistency of interests, does not serve as a predictive factor for students' L2 WTC. Hence, the second hypothesis was rejected correspondingly. According to Lee [4], students' willingness to communicate or the improvement of spoken English, particularly for EFL learners, necessitates long-term dedication. Specifically, initiating English communication in classroom settings can be challenge for EFL learners, even among English-major students. It can be found that in EMI universities, prolonged exposure to English learning may not necessarily contribute to students' L2 WTC, which contrasts with previous research findings [4, 21].

Furthermore, the study identified that foreign language enjoyment can predict students' L2 WTC positively. This finding suggests that EFL learners in a positive classroom environment, characterized by friendly, encouraging, and supportive English teachers, are more inclined to seek opportunities to engage in English communication [13]. This finding aligns with prior studies that have demonstrated foreign language enjoyment is of positive predictive of L2 WTC in EFL contexts [15, 22]. Moreover, considering MacIntyre and Gregersen's [14] assertion that positive emotions can enhance learner resilience, it is plausible that a positive classroom context may also foster increased perseverance of effort among EFL learners. Consequently, this enhanced perseverance may contribute to their L2 WTC. Essentially, when teachers establish a positive climate within the classroom, it can alleviate psychological difficulties such as L2 anxiety, encouraging EFL learners to actively engage in speaking the target language. In light of this, investigating the potential role of both aspects of L2 grit in classroom enjoyment and L2 WTC deserves further exploration.

## VII. LIMITATIONS AND IMPROVEMENTS

The study is limited with sample size and longitudinal effects, which only addressed on English-major students. Besides, the research can only provide evidence for the association between the independent variables (L2 grit and foreign language enjoyment) and a dependent variable (L2 WTC).

More participants can be involved in the further study to enlarge the sample size. Different gender and age may also be considered influential factors; thus, more evidence can be provided to explore and support any relationship between L2 grit and foreign language enjoyment.

## VIII. CONCLUSION

This study examined whether and how L2 grit and foreign language enjoyment are related EMI university students' L2 WTC in the classroom. The findings of our study are partially different from the existing ones. That is, foreign language enjoyment is a positive and significant predictor of English major students' L2 WTC, while L2 grit (both perseverance of effort and consistency of effort) doesn't act as a predictive variable for learners' WTC. Therefore, foreign language enjoyment can strengthen students' potential intentions to initiate communication in English in EMI universities, and the students are supposed to be triggered by the external environment instead of their personal intentions. From a pedagogical perspective, it is imperative for educators to devise engaging classroom activities that not only foster a sense of accomplishment among students but also cultivate positive affect within the learning environment. Authentic activities outside the classroom can be designed, such as communicating with native speakers to increase their intrinsic speaking motivation. Engaging teaching approaches such as Task-Based Language Teaching (TBLT) and Communicative Language Teaching (CLT) can be adapted to provide enjoyable and flexible classroom environments in which the errors that occur in speech are tolerated, and students can gain various ideas from different kinds of group work. All in all, our findings enrich current research in the field of second language teaching and educational psychology. More profound and comprehensive viewpoints may be discovered in the future, with more scholars concentrating on personality traits and contextual factors that influence willingness to communicate.

### CONFLICT OF INTEREST

The authors declare no conflict of interest.

### AUTHOR CONTRIBUTIONS

All authors conducted the research. Nan Yao, Yiwen Xu, Jingjing Song analyzed the data; Nan Yao wrote the Introduction and Literature review part; Hengrui Xu wrote the Research questions and Methods section; Yiwen Xu wrote the Results part; Jingjing Song wrote the Discussions section. Yue Fu wrote the Improvements and limitations, conclusions part. All authors had approved the final version.

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