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Motivation and Grit Affects Undergraduate Students' English Language Performance

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Abstract: This study aims to explore non-English speaking major student's perceptions of Motivation and Grit and the relationship between these two factors and students' English language performance at a public university in China. The research was conducted by quantitative research design to collect 624 non-English speaking Major students' answers to multiple questionnaires at a public university in China. Data analysis is used by SPSS and AMOS. The study shows that Motivation and Grit all have a positive correlation with English language performance. One major conclusion of this study is Grit has the most significant effect on the English language performance of non-English speaking major students in multiple regression analysis and is also the best predictor of the relationship between these two factors and English language performance in the path analysis in Structure Equation Modeling (SEM) analysis. The finding also revealed that male students' perception of motivation and grit is slightly stronger than that of female students. These findings highlight the need for English as a foreign language (EFL) teacher to understand students' affective factors in learning English, and hence help them utilize different teaching methods to enhance students' English learning and promote sustainable development of English learning in a public Chinese university.

Keywords: *English language performance, English learning, motivation, grit, psychology.*

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Introduction

English is perceived as the most important language across especially a globalization in the modern society and various fields ranging from politics to business, technology and education (Amoah & Yeboah, 2021; Schneider, 2020). The rapid development of China's reform and policy has led English language to be widely employed in various fields, such as education, international political meetings, entertainment, business, and even personal social interaction. English is not only becoming a language tool, but also English language performance is regarded as an important standard for students in learning English in China (Low & Pakir, 2021; Lu et al., 2019; Minghui & Dongming, 2021). Due to the challenge and difficulties of learning English, students have to spend most time and energy in improving English proficiency in China. However, many studies have indicated that many students in China do not have deep interesting in English learning so that they are unsatisfied with their English language proficiency (Han et al., 2020; He, 2020; Luo, 2018). Thus, the pervasiveness of confusion students undergoing also raises concerns about the sustainability of English learning development; this also challenges traditional perceptive of learning and teaching method in pedagogy.

Undoubtedly, English language learning is essential and necessary for people who study English as a foreign language (EFL) in China. According to the Ministry of Education in China, English is one of three major courses from primary school, even in some big cities, like Beijing, Shanghai and Guangzhou, English is taught from kindergarten (Chen, 2015; Wei, 2016). Because of the importance English has accrued in relation to the nation's development, these EFL learners' language performance in schools and colleges has drawn a lot of attention in China. At universities level, students' language performance is often used as a yardstick to make inferences about EFL learners' proficiency and to justify selection decisions such as admission to colleges and universities, promotion, graduation and requirement of go abroad learning in China (Jianfeng et al., 2018; Wright & Zheng, 2016). In order to achieve the satisfied language performance, students' psychological processes are worth to exploring in language learning (Fu, 2020; Jianfeng et al., 2018; Shih, 2019). In the field of second language learning and psychology, there are many studies that claim the ultimate importance of psychological factors influencing English language performance, for example, motivation (Dörnyei &

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Ushioda, 2011), language aptitude (Skehan, 1989), personality (Ehrman et al., 2003), attitude (Youssef, 2012) and language anxiety (Horwitz & Young, 1991). Few studies have systematically investigated the combination of psychological factors and aggression of these factors influence English language performance in a single research framework by having in mind the relationship between these psychological factors individually and English language performance. Among these psychological factors, Asmari and Javid (2011) claimed that Motivation has a positively effect on English language performance when ESL/EFL learners taken an interest in learning English. Gyamfi and Lai (2020) found that grit has also played a significant function in predicting the students' learning achievement. These studies have confirmed the correlation between motivation, grit and English language performance. However, there are scarce studies on what and how the interrelationship of these psychological factors influence English language performance of undergraduate students in universities in China. As such it addresses a gap given a collection of motivation and grit as students' psychological factors mainly focus on exploring the relationship between undergraduate students' perception on motivation, grit and their English language performance in Chinese university.

Furthermore, some studies also have examined the individuals' different factors when the researchers in second language acquisition (SLA) and psychology carried out to investigate the relationship between these psychological factors and English language performance (Fu, 2020; He, 2020; Shih, 2019). Among individual difference factors, gender is considered to be one of most important variables, which may affect the learners' language performance (Qian, 2015; Yuzulia, 2021). In addition, many studies have investigated the role of gender in the field of second language acquisition (SLA) and psychology in Western countries, fewer studies have examined the effect of gender on students' language performance in China. Thus, this current study aimed to investigate the relationship between motivation, grit and undergraduate students' English language performance with the variable of gender,

Literature Review

Motivation

Motivation is a kind of power that inspires, maintains and makes the behavior point to a specific purpose. Motivation can be defined as the process whereby goal-directed activity is instigated and sustained (Schunk et al., 2012). Motivation is an explanatory concept and defined to explain why an individual has this or that behavior when pursuing the goal. This definition presupposes the following: (a) motivation is a process instead of a product; (b) motivation involves goals that provide impetus for action; (c) motivation requires activity that includes effort, persistence, and volition; and (d) motivated activity is triggered and maintained by such motivational processes as expectations, attributions, and affects. It is perceived that in traditional psychology, motivation reflects on the internal driving forces, including mental, willingness, and instincts force, and can be caused by reinforcement and stimulus.

In the field of second language acquisition (SLA), the main motivation involves what might be considered passion, which relates to an individual's intrinsic desires and goals (Dörnyei & Ushioda, 2011; Gardner, 2001). Notably, successful language learners know their strengths, weaknesses, and preferences. In this regard, they effectively apply strengths and compensate for weaknesses in learning a foreign language. Motivation is vital, as are aptitude, attitudes, and intelligence, all of which can have a significant impact on a learner's ability to attain a second language acquisition (Yuzulia, 2021). In the field of psychology, motivation is a major factor that determines success in foreign language learning (Daif-Allah, & Aljumah, 2020).

There exist various motivation theories in psychology and education. Over the years, most of these motivation theories have been established to evaluate the connection between language and motivation performance. Eccles and Wigfield (2002) research indicate that there exist theories that focus on reasons for engaging in tasks, including goals theory, self-determination theory, intrinsic motivation theory, and flow theory. The two authors also note that other theories emphasize the integration of value and expectancy constructs, including self-worth theory, attribution theory, and expectancy-value theory. Other theories such as volition and motivation theory as well as self-regulation theory tend to integrate cognition and motivation (Eccles & Wigfield, 2002). Self-determination theory (SDT) (Deci & Ryan, 1985) is one of these motivating theories that have gained popularity in the language teaching field.

There are many factors affecting learners' motivation when learning. Some researches reveal that intrinsic motivation and extrinsic motivation is most critical sub-components that influencing students' motivation (Aldosari, 2014; Loganathan et al., 2016; McEown et al., 2014; Wang, 2008). According to Al-Mahrooqi and Denman (2014), external motivation correlated negatively with English achievement and intrinsic motivation, while intrinsic motivation connected meaningfully with English achievement. Further, these experts in psychology also found that motivation has impact on the language learning and it is associated with achievement in learning language (Alamer & Almulhim, 2021; Noels et al., 2019; Oga-Baldwin et al., 2017). To some extent, learning motivation is a key factor which may dominate the success or failure in second language acquisition (SLA). Liu (2012) revealed that students' motivation and their English language performance are reciprocally connected. Ghanea et al. (2011) did a study that examines the English language learners' motivation in English learning in universities, they found that students' motivation positively influenced their English language achievement. Their findings also showed that the relationship between students' motivation and English learning is causal relation. Yahaya et al. (2011) also found that motivation is a factor that clarifies rightly English learning in SLA.

Grit

Grit has been examined alongside motivational qualities, which, like personality traits, have a long-term consistency (Duckworth, 2016; Von Culin et al., 2014). This consistency derives from grit's underlying drive, which is focused on values, objectives, desires, and preferences rather than immediate gratification. The term "grit" comes from the area of psychology and refers to a non-cognitive personality attribute that is generally characterized as a desire to achieve long-term goals (Duckworth, 2017; Duckworth & Quinn, 2009).

Gritty people are focused on achieving their objectives and aspirations in major life areas and milestones such as work-related performance, school achievement, graduation, and exceptional exam performance (Duckworth et al., 2007, 2011; Duckworth & Quinn, 2009). Gritty people embrace achievement as the result of marathon-like work, and their best qualities include the ability to persist, be patient, and tolerate the heat. While many people adjust or forsake their ambitions in the face of failures and challenges, gritty people maintain their course and go to great efforts to achieve their objectives despite hurdles on their paths (Duckworth et al., 2007)

Much of the grit research has been focused on observable characteristics that can predict performance and retention (Duckworth, 2016; Duckworth & Quinn, 2009). In both professional and academic settings, grit has been utilized to predict retention and success (Aparicio et al., 2017; Credé et al., 2017; Duckworth, 2016; Duckworth et al., 2007). From a pedagogical standpoint, Keegan (2017) investigated the link between grit and learning a foreign language. Although she claims that "the grittier the language learner, the better," the extent to which grit can play a major role in learning a new language has yet to be empirically investigated (Keegan, 2017).

According to Reraki et al. (2015), grit has positively predicted English academic achievement. Furthermore, several researchers have discovered that grit is linked to their linguistic performance (Duckworth & Gross, 2014; Eskreis-Winkler et al., 2014; Robertson-Kraft & Duckworth, 2014; Singh & Jha, 2008). In SLA, Liu and Wang (2021) found that grit and foreign-language performance are positively correlated in exploring students' psychological factors in Chinese university. Similarly, Robins (2019) discovered weak positive relationships ($r = .16$, $p.001$) between language achievement, that is grade point averages of 966 ESL learners in an online context, grit, and its sub-components. According to Wei et al. (2019), grit has a strong link as a mediator factor in learning a second language. They also discovered that in a positive English classroom atmosphere, highly gritty students have a higher probability of completely engaging in studying to attain better academic achievement in a second language.

Theoretical framework

In this study, the Affective Filter Hypothesis, which has impact on foreign language learning, has been raised in the 1870s by Dulay and Burt (1977). The hypothesis got further developed by Krashen (1982) and became perfect. It is considered as psychological obstacle by Krashen, which make learners difficult to absorb the input completely. It is just like a filter, reducing the input and is tightly related to input and intake from learners. In other words, affective factors can play a role in the ratio between input and intake. The affective factors cover certain emotions in learning a second language, for example, motivation, self-confidence, anxiety. The learning input efficiency will be prevented by these negative emotions, while positive ones will promote this progress. Learners with higher motivation, self-confidence and lower anxiety will reduce the effect of filters, and gain more input. Otherwise, learners with negative emotions will filter a lots input, and have a low efficiency in learning. According to the Affective Filter Hypothesis, the input and the conversion efficiency will be affected by affective factors. This theory is quite vital for foreign language teaching. And affective filters are predicted to be affected by the feedback from the teachers, therefore, so as to raise the teaching efficiency, it is required to lower the efficiency of filter, make learners less stressed and more confident by forming a comfortable learning atmosphere.

There are two variables that form the foundation of framework, that is, motivation, and grit. According to Krashen's (1982) opinion, affective factors or attitudes as a filter are adjustable. It can improve and prevent the input to some degree. Such a theory is formed on the basis of second language acquisition, and now it has identified three affective or attitudinal variables. In this study, motivation is relied on Deci and Ryan's (1985) Self- Determination theory. Grit theory is utilized to examine by comparing the success of language learning and affective factor (Duckworth et al., 2007). According to previous literature, the Theoretical framework is listed in Figure 1

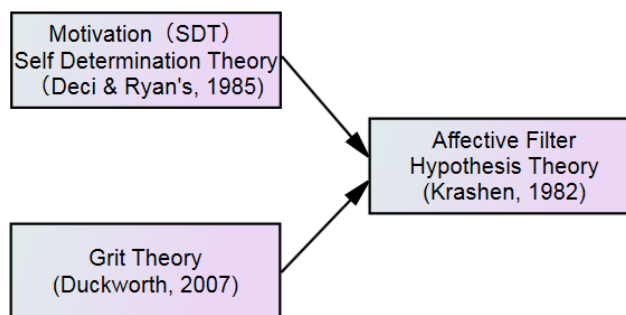


Figure 1. Theoretical Framework

Methodology

This study adapted a quantitative approach with self-Administered questionnaires survey. It was conducted at a public university in Henan province in China to measure the relationship among Motivation, Grit and English language performance.

Participants

A total of 624 non English major students were cluster randomly chosen from the second year students from four majors namely: Education, Public Management, Mechanical Engineering and Automation. There are 54.5% (n=340) Male students and 45.5% (n=284) Female students by simple randomly chosen to take part in this research at this public university

Instruments

A 5-point Likert scale of self-Administered questionnaires was used to measure the students' perceive of motivation, grit and English language performance. This self-Administered questionnaire was implemented by 18 items of Language Learning Orientations Scale—Intrinsic Motivation and Extrinsic Motivation (LLOS-IE) (Noels, 2003) and 12 items of Grit scale (Weld, 2016). The English language performance was represented by students' College English Test brand 4 (CET-4) results (Miao, 2006). This self-Administered questionnaire was adapted back-translation method by two language experts and the help of peers, which resulted in 34 items in final questionnaire using collecting the data.

Table 1 displays the value of Cronbach's alpha reliability coefficients of all the constructs in this study. According to Hair et al. (2013), the internal consistency is accepted, if Cronbach's alpha coefficient was 0.7. The results indicate that the instruments of all items have been acceptable to maintain the internal consistency.

Table 1. Reliability of the Instrument of Motivation and Grit

Statement	No. of items	Cronbach's Alpha
Motivation	18	0.94
Grit	12	0.91
Total	30	0.85

Data analysis

The SPSS and AMOS software were implemented to analysis the data. Specifically, descriptive statistics analysis (percentage, Mean, Standard deviation) was conducted to measure students' perceive of motivation, grit and English language performance. The independent t-test was conducted to compare the difference of gender with regards of motivation and grit. The correlation and multiple regression method were implemented not only to determine the relationship among motivation, grit and English language performance, but also to determine the best predictor between motivation and grit. The Exploratory Factor analysis (EFA) was also used to measure the validity of motivation and grit by SPSS. In order to examine the sub-dimension and association or relationship among these variables, the AMOS software was applied to conduct Confirmatory Factor analysis (CFA) and Structural Equation Modeling (SEM). In the end, a structure model tested using Structural Equation Modeling (SEM) to under the directional relationship among Motivation, Grit and English language performance.

Findings/ Results

Table 2. Distribution of Results of Descriptive Statistics

Profile	Frequency (N=624)	Percent%	Cumulative%
Gender			
Female	284	45.5	45.5
Male	340	54.5	100.0
CET-4			
High (>525 marks)	15	2.4	2.4
Medium (425-524 marks)	266	42.6	55.0
Low (<424 marks)	343	55.0	100
	High	Medium	Low
CET-4/Gender			
Female	7	130	147
Male	8	136	196

Note. CET-4= College English Test brand 4

Entries in Table 2 show that there were 284 (45.5%) female and 340 (54.5%) male students who participated in this study. Since the CET-4 score was ranged from zero to 710 marks. The students were classified into three groups: High English language performance, Medium English language performance, Low English language performance. Students classified as high English language performance group scored above 525 marks, Medium English language performance group scored between 425 to 524 marks and Low English language performance group scored below 424 marks. The 425 marks is the minimum acceptance mark to further CET-6 which is higher English test for non-English speaking major students. Moreover, in order to gain a better understanding of distribution of Gender, the Table 4.1 shows the distribution of respondents by gender with the result of English Test (CET-4). There are 7 female and 8 male students belong to the high group with CET-4 score. Further, 130 female and 136 male students belong to the medium group with CET-4 score. There are 147 female students and 196 male students in the low group with CET-4 score.

Table 3. KMO and Bartlett's Test of Five Factors

	Kaiser-Meyer-Olkin (Measure of Sampling Adequacy)	Bartlett's Test of Sphericity (Sig.)
Motivation	.955	.000
Grit	.916	.000

In Table 3, the results of KMO test showed sampling adequacy, which measures inter-item correlations. The KMO of all factor ranged from 0.916 to 0.965, which is superb for factor analysis. Bartlett's test of sphericity demonstrated that all items are reached the suggested level of statistical significance ($p < .000$). These results indicated that all factors are suited to factor analysis.

Table 4. Factor loading for Rotated Factor Analysis of Motivation

Questionnaire Items	f1	f2
1. When I study English, I have the impression that it is expected of me.	.953	
10. I study English for the pleasure that I experience in knowing more about the literature of the second language group	.897	
2. I study English in order to get a more prestigious job later on	.830	
3. I study English in order to have a better salary later on.	.812	
5. I study English, because I would feel ashamed if I couldn't speak to my friends from the second language community in their native tongue	.812	
9. I study English, because I choose to be the kind of person who can speak a second language	.801	
8. I study English, because I think it is good for my personal development	.800	
4. I study English to show myself that I am a good citizen because I can speak a second language	.791	
7. I study English, because I choose to be the kind of person who can speak more than one language	.788	
6. When I study English, I would feel guilty if I didn't know a second language	.788	

Table 4. Continued

Questionnaire Items	f1	f2
18. I study English for the pleasure I get from hearing the second language spoken by native second language speakers		.829
13. I study English for the pleasure I experience when surpassing myself in my second language studies		.809
17. I study English for the "high" feeling that I experience while speaking in the second language.		.809
16. I study English for the "high" I feel when hearing foreign languages spoken		.805
15. I study English for the satisfaction I feel when I am in the process of accomplishing difficult exercises in the second language		.795
14. I study English for the enjoyment I experience when I grasp a difficult construct in the second language		.795
11. I study English for the satisfied feeling I get in finding out new things		.790
12. I study English, because I enjoy the feeling of acquiring knowledge about the second language community and their way of life		.783

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

The rotated correlation matrix results of motivation showed that all 18 items divided into two factor components in Table 4. Each item of factor loading of motivation construct exceeds 0.6. The Varimax with Kaiser Normalization, a type of rotation method was applied because the hypothesized factors were expected to correlate. According to this factor loading criteria in Table 3.14, the items (1, 2, 3, 4, 5, 6, 7, 8, 9, 10) were loaded on Factor 1 and items (11, 12, 13, 14, 15, 16, 17, 18) were also loaded to Factor 2.

After examining these items, it was found that these items (1, 2, 3, 4, 5, 6, 7, 8, 9, 10) all shared extrinsic pressure from peers or grades in and future purpose of learning English; therefore, this factor was named Extrinsic Motivation (EM) for Learning English. An example item is "I study English in order to get a more prestigious job later on."

It was found that these items (11, 12, 13, 14, 15, 16, 17, 18) all shared intrinsic interest in and fondness and enjoyment of learning English; therefore, this factor was named Intrinsic Motivation (IM) for learning English. An example item is "I study English for the satisfied feeling I get in finding out new things".

Table 5. Factor loading for Rotated Factor Analysis of Grit

Questionnaire Items	f1	f2
1. I have overcome setbacks to conquer an important challenge.	.950	
7. I am diligent	.893	
5. I have been not obsessed with a certain idea or project for a short time but later lost interest	.815	
3. I have achieved a goal that took years of work	.810	
2. I finish whatever I begin	.805	
4. Setbacks don't discourage me	.804	
6. I am a hard worker	.790	
8. I have difficulty maintaining my focus on projects that take more than a few months to complete		.824
12. I often set a goal but later choose to pursue a different one		.820
11. I become interested in new pursuits every few months		.818
9. New ideas and projects sometimes distract me from previous ones		.811
10. My interests change from year to year		.796

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

The rotated correlation matrix results of grit showed that all 12 items divided into two factor components in Table 5. Each item of factor loading of grit construct was over 0.6. The Varimax with Kaiser Normalization, a type of rotation method was applied because the hypothesized factors were expected to correlate. According to this factor loading criteria in Table 3.20, the items (1, 2, 3, 4, 5, 6, 7) were loaded on Factor 1 and items (8, 9, 10, 11, 12) were also loaded to Factor 2.

After examining these items, it was found that these items (1, 2, 3, 4, 5, 6, 7) all concerned with passion to achieve long-term goals and perseverance of effort in learning English, which is high level of grit; therefore, this factor was named Perseverance of Effort (PE) for Learning English. An example item is "I have been not obsessed with a certain idea or project for a short time but later lost interest."

It was found that these items (10, 11, 12, 13, 14, 15, 16, 17, 18) related to lack of consistency of interest and less perseverance of effort in learning English, which is low level of grit; therefore, this factor was named Consistency of Interest (CI) for learning English. An example item is "I often set a goal but later choose to pursue a different one."

According to factor loading of all factors, each dimension of these two factors was identified by exploratory factor analysis (EFA). As a result, the Motivation (Mo) scale includes Extrinsic Motivation (EM) and Intrinsic Motivation (IM). The Grit (Gr) scale loads Perseverance of Effort (PE) and Consistency of Interest (CI).

Based on the results obtained from the exploratory factor analysis (EFA) above, the relationship among independent (latent) variables was test by confirmatory factor analysis (CFA). In addition, the dimensionality of all independent variables was further investigated using confirmatory factor analysis for each dimension of these two factors.

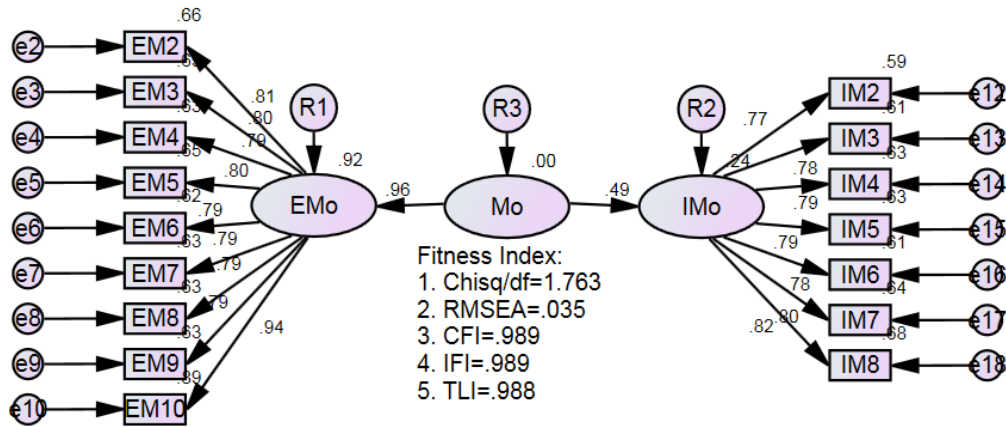


Figure 2. CFA Result of Motivation (Mo)

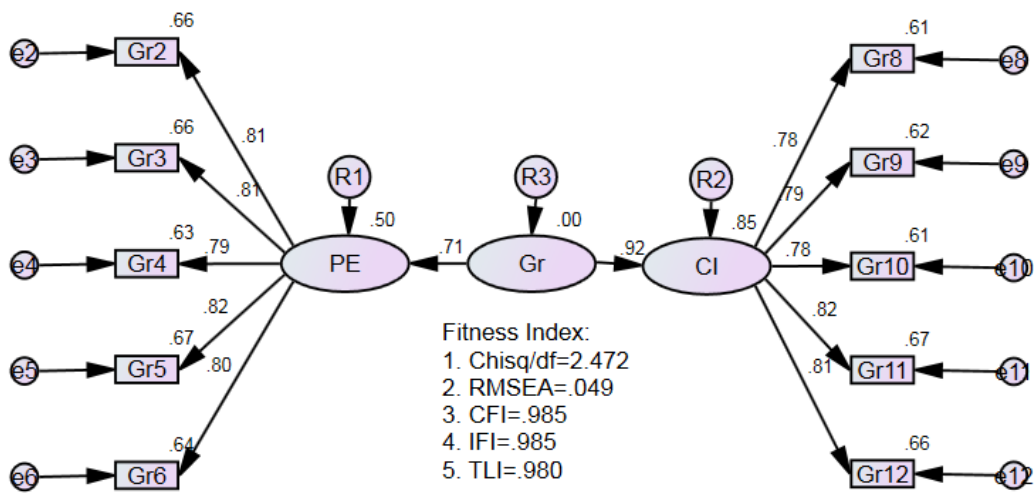


Figure 3 CFA Result of Grit (Gr)

The revised measurement model for Motivation construct is shown in Figure 2, which indicates that the factor loadings for the remaining 16 items in each sub-construct are greater than the value of 0.6. Besides, the results for the model fitness indexes were satisfied in the final measurement model of Motivation (Chisq/df =1.763<3.0, RMSEA=.035<0.5, CFI=0.989>0.97, TLI=0.988>0.97 and IFI=0.989>0.97). Moreover, the final revised measurement model for Grit construct is shown in Figure 3, which indicates that the factor loadings for the remaining 10 items in each sub-construct are greater than the value of 0.6. Besides, the results for the model fitness indexes were satisfied in the final measurement model of Grit (Chisq/df =2.472<3.0, RMSEA=.049<0.5, CFI=0.985>0.97, TLI=0.980>0.97 and IFI=0.985>0.97).

Table 6. One-Sample Statistics of Each Variable

	N	Mean	Std. Deviation	Std. Error Mean
Motivation	624	3.10	.76	.03
Intrinsic Motivation	624	3.08	.87	.03
Extrinsic Motivation	624	3.12	.94	.04
Grit	624	3.12	.77	.03
Perseverance of Effort	624	3.12	.95	.04
Consistency of Interest	624	3.12	.87	.03

As regards Table 6, non-English speaking major's perception of these factors show the mean of the Grit scale ($M=3.12$, $SD=0.77$) was the higher than Motivation scale ($M=3.10$, $SD=0.76$). Within the sub-dimension scale, the mean of Extrinsic motivation scale ($M=3.12$, $SD=0.94$) similar with the mean of Perseverance of Effort scale ($M=3.12$, $SD=0.95$) and Consistency of Interest scale ($M=3.12$, $SD=0.87$). The lowest mean was obtained for Intrinsic Motivation scale ($M=3.08$, $SD=0.77$).

Table 7. Group Statistics of Gender with respect to Motivation and Grit

	Gender	N	Mean	Std. Deviation	p
Motivation	Female	284	3.10	.74	.203
	Male	340	3.11	.78	
Grit	Female	284	3.09	.76	.263
	Male	340	3.14	.78	

Table 7 presents that the mean score of male students ($M=3.11$, $SD=.78$) is sight higher than that of female students ($M=3.10$, $SD=.74$; $p=0.203$) in perceptive of Motivation. In Grit scale, male students ($M=3.14$, $SD=.78$) is higher than that of female students ($M=3.10$, $SD=.74$; $p=0.263$). The results imply that the male students' perceptive in Motivation and Grit were slightly higher than that of the female student. However, the differences in the mean score between male and female students' were not statistically significant as all the probability values were above 0.05 ($p > 0.05$).

Table 8. Correlations analysis among Motivation, Grit and CET-4

		CET-4	Motivation	Grit
CET-4	Pearson Correlation	1	.503**	.516**
	Sig. (2-tailed)		.000	.000
	N	624	624	624
Motivation	Pearson Correlation	.503**	1	.548**
	Sig. (2-tailed)	.000		.000
	N	624	624	624
Grit	Pearson Correlation	.516**	.548**	1
	Sig. (2-tailed)	.000	.000	
	N	624	624	624

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

As regards correlation analysis in Table 8, non-English speaking major's perception of two factors were significantly associated with English language performance (all $r > 0.5$, $p < 0.01$). The results from the analyses indicated that the relationship between the Motivation scale and the Grit scale was the strongest ($r=.548$, $N=624$, $p < 0.01$). The correlation between the Grit scale ($r=.516$, $N=624$, $p < 0.01$) and CET-4 is stronger than Motivation scale ($r=.503$, $N=624$, $p < 0.01$).

Table 9. Multiple Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.069	.084		12.689	.000		
	Motivation	.225	.028	.315	8.045	.000	.700	1.428
	Grit	.243	.028	.344	8.791	.000	.700	1.428

a. Dependent Variable: CET-4

Multiple regression analysis results in Table 9 indicated that the highest beta weights of Grit were 0.344 ($t=6.034$, $p < 0.05$), indicating that students with higher score of Grit were expected to higher score on CET-4 results (English language performance). The beta weights for Motivation scale were 0.315 ($t=5.279$, $p < 0.05$). This result suggests that the relationship between Grit scale and English language performance (as measured by CET-4 score) was the strongest compared with Motivation.

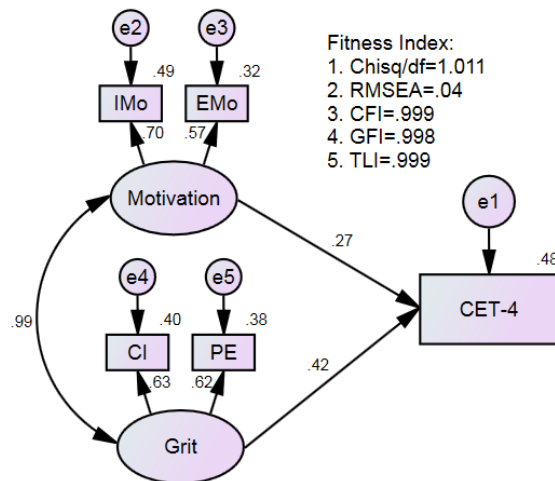


Figure 4. Standardised Path Coefficients between Constructs in SEM

Figure 4 informed the complete revised hypothesized model presented above revealed several important matrices. In this SEM, the sub-dimension of Motivation was explained by the Intrinsic Motivation (IMo) and Extrinsic Motivation (EMo). The Grit can be explained by Perseverance of Effort (PE) and Consistency of Interest (CI). As an initial model that is developed in relationship between these two factors and English Language Performance (ELP), the model has 0.48 or 48% of total variance explained by Motivation and Grit. In other words, there is 34% of the total variance that can be explained by other constructs that are not investigated, which might fit with this study. The proposed structural model achieved the required goodness of fitness (Chisq/df = 1.011 < 3.0, RMSEA = 0.04 < 0.08, CFI = 0.99 > 0.97, TLI = 0.99 > 0.95, and GFI = 0.98 > 0.97).

Table 10. Testing the Causal Effect of the Constructs

			Estimate	S.E.	C.R.	p	Result
ELP(CET-4)	<---	Motivation	.274	1.532	.873	***	Significant
ELP(CET-4)	<---	Grit	.422	1.700	.806	***	Significant
Motivation	<---	Grit	.986	.031	10.527	***	Significant

In Table 10, it shows the regression weight for each independent variables of path analysis that has been proposed in the research hypotheses of the study. It is obvious that all independent variables have a significant contribution towards CET-4 separately. Grit (Bate=0.42) has the highest positive contribution towards ELP. The regression weight of Motivation is 0.27. The results reveal that increased English language performance was directly predicted by great Grit. This final SEM model support that Grit has the strongest correlation with English language performance.

Discussion

The results obtained in this study are similar to the results of research conducted on psychological factors in second language acquisition in the literature. In this study, it is determined that grit has a positive significantly effect on undergraduate students' English language performance and has the strongest relationship between these two psychological factors and English language performance. Many studies in the literature support the results of this study. In the field of second language acquisition, some studies have found that grit is strongly associated with academic performance (Aydin Sunbul, 2019; Duckworth, 2016; Ekinici et al., 2021; Tang et al., 2021). According to Duckworth (2016), grit has been used to explain the variance of academic performance. Tang et al. (2021) claimed that grit, as an affective psychological factor, has a positive correlation with the persistent effort in second language acquisition, aligned with MacIntyre (2016), who confirmed that grit was positively affecting students' foreign-language performance. Learners with low grit easily give up when they are learning a foreign language. Anyhow Wei et al. (2019) mentioned that there is a positive influence of high grit on academic achievement among college students.

In addition, motivation is also a major part that determines success in foreign language learning (Aldosari, 2014; Daif-Allah & Aljumah, 2020; Loganathan et al., 2016). In this study, motivation was found to be strong positive associated with grit and influence students' language performance. This finding is in line with Al-Mahrooqi and Denman's (2014) study on students' language achievement. They claimed that students' motivation has a major impact on their language learning process as well as their language performance is both intrinsically and extrinsically motivated.

In the field of psychology, the psychological factors include certain emotions, such as motivation, attitude, grit, and others. When students with positive emotions, such as high grit, positive attitude and high motivation, their affective filter is low to receive the input. On the contrary, when students have negative emotions, such as low motivation, low

grit, negative attitude, they have high filter to obtain the input (Kurniawati, 2021; Pabro-Maquidato, 2021). Hence, in this study, the importance of psychological factors can lead to more effective learning of English language.

By developing the relationship between motivation, grit and English Language performance, problems that arise in examining undergraduate students' psychological factors in teaching English Language can be identified. Moreover, the results may help educators in universities in China to build appropriate teaching frameworks guiding the non-English speaking major students to learn English Language effectively. The results may also help students to face the affective psychological issue in learning a foreign language.

Another finding of this study is that there is gender difference the level of students' perceptive of Motivation and Grit. But the difference is not statistically significant (The value of $p > 0.05$). In other words, male students' perceptive of level of Motivation and Grit is slightly higher than that of female students in this study. According to Montero-SaizAja (2021), gender difference does affect English Language learning, in which the female students were found to use language learning strategies more extensively than male students. This finding is agreed with Kwon (2018) and Wallace (2015), which states that no statistically significant difference was found in examining the level of affective factors like grit, motivation and aptitude with regards to gender. In another study, Azwar and Harahap (2021) identified that gender difference has influence English Language learners' desire to use English Language.

Conclusion

The findings of the study revealed that Motivation and Grit all has significant effect on English language performance of the non-English speaking Major students at a public Chinese university respectively. Grit is examined to be the best predictor in the relationship among motivation, grit and English language performance. This research has developed a model to examine comprehensively relationship between motivation, grit and English language performance. In this model, motivation is categorized by intrinsic motivation and extrinsic motivation. Grit is contributed by perseverance of effort and consistency of interest. There is slight empirical finding on what factors contributes to students' English language performance at this point. The evidence of this study confirms and identifies the affective hypothesis filter theory by Krashen (1982). Moreover, this finding also proves affective hypothesis filter theory recognizes motivation and grit as the significant factors influencing English language performance. The researcher suggests policy makers and EFL teachers to substantially focus on the current phenomenon of non-English speaking major students and make better efforts in dealing with the issue. Based on implications for pedagogy, this study could help EFL teachers to recognize these variables as important affective factors in the field of psychology and second language acquisition. Otherwise, this study also helps students to recognize the perceptive of the relationship between these affective factors and their English language performance as well as find out the solution. In a word, it is also suggested for English Language educators need to familiarize students with learning strategies and enhance students' motivation and grit in learning English Language so that they can improve students' sense of achievement in English academic.

Recommendations

Although the number of the participants of non-English speaking major students (N=624) is sufficient for data analysis to be conducted in this study, the respondents might not be representative of all non-English speaking major students in China. The questionnaires used in this study have previously been used in previous research, it might have limited measurement precision and the items of the questionnaire might not be comprehensive enough to reflect the variables among all Chinese non-English speaking major students. The inclusion of some background about respondents (like cities and rural) should have made the research interesting and persuasive. In addition, the quantitative data by the survey is statistically objective and comprehensive, the respondents do not describe their own opinions and view of learning English in depth. Interview and observations were not conducted in this study. The use of qualitative methods such as interview and observation might provide deeper insights into EFL learning.

Limitation

This research is limited to identify the data sample of non-English speaking major students only at a public university in China. Although the number of the participants of non-English speaking major students is sufficient for data analysis to be conducted in this study, the respondents might not be representative of all non-English speaking major students in China. The non-English speaking major students participated in this study were cluster randomly selected from four different majors at a public university. Therefore, it was limited to cover non-English speaking major students from other faculties. Although the quantitative data by the survey is statistically objective and comprehensive, the respondents do not describe their own opinions and view of learning English in depth. There are very limited attempts to conduct interview and observations. The use of qualitative methods such as interview and observation might provide deeper insights into the sustainable development in English language learning.

Authorship Contribution Statement:

YunTao: Contributed to research method and design. Foong-Yoke-Yean: Theoretical framework, expand a research design. Alias: Critical discussion of manuscript, Data analysis, interpretation.

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