

# Exploring the Relationship Between Motivation and IELTS Reading Proficiency Among Chinese Learners

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Received: May 21, 2024      Accepted: July 8, 2024      Online Published: July 30, 2024

doi:10.5430/wjel.v14n6p341      URL: <https://doi.org/10.5430/wjel.v14n6p341>

## Abstract

This study investigates the impact of motivational factors on the reading test performance of Chinese learners in the IELTS examination. The objectives are to evaluate the motivation levels, analyze the relationship between motivation and IELTS reading achievement, and identify the most influential predictors among intrinsic and extrinsic motivations. Using a quantitative research design and a sample of 242 students from 12 IELTS training centers in southwest China, data were collected through the Motivation in English Reading Questionnaire (MERQ) and Cambridge Practice Tests for IELTS. Pearson correlation coefficients and multiple regression analysis were employed to analyze the data. The results show significant positive correlations between various motivational constructs and IELTS reading scores. Total motivation ( $r = .634$ ,  $p < .001$ ), efficacy and engagement ( $r = .520$ ,  $p < .001$ ), utility value ( $r = .459$ ,  $p < .001$ ), and academic value ( $r = .424$ ,  $p < .001$ ) are all positively associated with reading proficiency. Regression analysis indicates that intrinsic motivation, specifically efficacy and engagement ( $\beta = 0.504$ ), is the strongest predictor of reading scores, followed by utility value ( $\beta = 0.351$ ) and academic value ( $\beta = 0.315$ ). These findings underscore the essential role of both intrinsic and extrinsic motivations in improving reading proficiency among Chinese IELTS learners.

**Keywords:** motivation, IELTS reading, quantitative research, Chinese learners

## 1. Introduction

The relationship between motivation and language proficiency in reading is intricate and vital (Seven, 2020). Despite extensive research on this connection (Orellana et al., 2020; Zhang et al., 2020), the specific dynamics within the context of the IELTS examination remain underexplored. Motivation, which involves pushing individuals to achieve their goals, is a factor in determining language learning success (Ryan & Deci, 2000). On the other hand, the performance in IELTS reading evaluates learners' English language skills (Mehraban, 2022), with implications for both academic and career growth (Yathip & Chanyoo, 2022). This research seeks to enhance the knowledge of how motivational aspects impact IELTS reading performance.

According to the source (Wang & Guan, 2020), it is challenging for IELTS candidates in China to remain constant motivation during preparation. The reasons that lie behind this issue are complicated, resulting from teachers, students themselves, or even educational institutions. Moreover, it is also hard for them to achieve high scores in IELTS reading part, compared with students from other countries (Zhang & Hope, 2021).

Associating individuals' motivation with their IELTS reading performance is based on previous research (Rahardjo & Pertiwi, 2020), which has demonstrated the effectiveness of motivation in language acquisition. Specifically, prior studies provided solid evidence that learning motivation contributes positively to language improvement as well as achievement in career development (Noels et al., 2020; Pranawengtias, 2022).

This study aimed to attain three research objectives. The first objective is to assess the motivation level among Chinese students in doing IELTS reading test, offering details about the extent of their dedication and commitment. The second objective is to explore the correlation between motivation and IELTS reading achievement. The third objective is to find out the most significant predictor among different dimensions of motivation towards IELTS reading proficiency.

### 1.1 Research Background

Motivation plays a great role in academic achievement, affecting individuals' action taken to reach their personal goals (Bandhu et al., 2024). Motivation is commonly categorized as intrinsic and extrinsic. Intrinsic motivation involves participating in an activity for gratification and pleasure, whereas extrinsic motivation relates to completing tasks to obtain benefits or evade unfavorable outcomes (Ryan & Deci 2000).

On the other hand, motivation also has the potential to determine how well EFL learners can read (Barber & Klauda 2020; Maghsoudi et al., 2021). In detail, researchers have proved that a close relationship existed between motivation and their reading skills (Wigfield & Guthrie 1997; Baker & Wigfield 1999), and that if students are of intrinsic motivation, which means they read due to internal interest or

self satisfaction, it is more likely for them to succeed in reading tasks (Wigfield & Guthrie 1997). Meanwhile, if students are of extrinsic motivation, meaning they read for external rewards or else, there is also a larger likelihood to do better in the reading section (Baker & Wigfield 1999). In conclusion, motivation serves as an essential element in the EFL context of reading.

### 1.2 Problem Statement

Although researchers have studied the impact of motivation on reading skills, there are still gaps for further exploration. First, previous research on motivation and reading success has primarily centered around people from various countries (Habæk et al., 2020; Ellis, 2021; Kanonire et al., 2022). However, there is a scarcity of studies that specifically concentrate on the experiences of students in China. This study seeks to address this gap by shedding light on the elements that impact Chinese students as they get ready for the IELTS reading test.

Secondly, prior research has extensively explored the link between motivation and academic success, as highlighted by studies of Abdelrahman (2020), El Adl and Alkharusi (2020), and Agustina et al. (2021). Despite this, there has been limited attention given to the impact of motivation on IELTS reading section. The IELTS examination holds significance for non-native English speakers aiming to pursue education or employment opportunities in English speaking environments (Peltekov, 2021), which is worth exploring.

The third gap lies in the fact that the focus of most past studies is simply on the relationship between learning motivation and reading comprehension (Miyamoto et al., 2020; Toste et al., 2020). However, few studies employ multiple regression analysis to pinpoint the predictors across different motivational aspects towards individuals' reading abilities. Therefore, this research applied multiple regression to identify the element that contributes most to IELTS reading success.

### 1.3 Research Objectives

This study aimed to attain three research objectives. The first objective is to assess the motivation level among Chinese students in doing IELTS reading test, offering details about the extent of their dedication and commitment. The second objective is to explore the correlation between motivation and IELTS reading achievement. The third objective is to find out the most significant predictor among different dimensions of motivation towards IELTS reading proficiency. Therefore, based on the research goals, the study proposed the following hypotheses:

$H_0$ : There is no significant relationship between motivation and reading achievement in IELTS.

$H_a$ : There is a significant relationship between motivation and reading achievement in IELTS.

## 2. Literature Review

### 2.1 Reading Proficiency in IELTS

The IELTS is widely known as a language test to objectively assess individuals' English levels (Suss, 2023). As one of skills to be tested, IELTS reading is designed to evaluate people's ability to understand written passages from a variety of sources (Tadjiyeva, 2024). High scores of IELTS reading are prerequisite to academic and career progress (Yathip & Chanyoo, 2022).

For students whose aim is to study abroad, IELTS reading performance is important in two ways (Peltekov, 2021). For one thing, many institutions often set a minimum threshold of IELTS score, 6.5 or 7 for example, which requires each skill (reading, listening, speaking, and writing) to reach a relatively high level (Yadi, 2020). For another thing, excellent IELTS reading performance also makes it competent for students to read academic materials, write essays, and review past literature, all leading to the success in their further education (Khalilova, 2023).

Nevertheless, it is not easy for learners to achieve a satisfying result in IELTS reading, due to various factors ranging from poor lexical and grammar reserves, struggle in drawing from personal experiences to interpret reading contents, to the ability to finish tasks in time (Ali et al., 2020; Basnet, 2021; My et al., 2023). Chinese candidates, in particular, often feel it more difficult to improve their IELTS reading performance, considering the fact that the language differences, practice methods, and cultural, educational, and social background may impact the way they learn English (Luo et al., 2020).

#### 2.1.1 Factors of IELTS Reading

There are various factors to affect an individual's IELTS reading performance (Zhang & Hope 2021), which include:

##### I. Language Proficiency

The first factor is learners' language proficiency, which can be assessed by means of how many words they've learned, how well they can recognize and distinguish various grammars, how deeply they can interpret reading passages, and so on (Srisang & Everatt 2021). Higher language proficiency means an individual can comprehend reading materials more easily. They are fully aware of meanings of details as well as the gist of a paragraph, which results in higher IELTS reading scores (Chen, 2020).

##### II. Reading Strategies

The second key factor is reading strategies (Chinnathambi et al., 2024). There are well-known strategies to be applied in IELTS reading, including scanning and skimming (Fatmawan et al., 2023). Specifically, students scan in search for the main idea of a paragraph, whereas they skim to look for some important details (Haswani et al., 2024). It has been found that learners who know well how to use different reading strategies are better at working out reading tasks (Matyoqubovna, 2023).

### III. Motivation

Motivation is the third factor to impact reading achievement (Maharsi, 2020). Previous research has proved that learners who are intrinsically motivated are more likely to achieve their academic or career objectives, as they tend to develop effective habits to learn and work, and more importantly, stick to their goals through challenges, with perseverance and integrity (Cartwright et al., 2020). For those who are extrinsically motivated, both academic and career objectives can also be met, due to their passion for either being admitted to universities of higher ranking or being promoted at workplace, which allows them to perform well in English reading as well (Kassem & Alqahtani, 2023).

### IV. Test Preparation

Test preparation is the fourth determinant for IELTS candidates to be good at reading section (Roza, 2019). Students who devote time and energy into test preparation have larger likelihood to obtain higher scores in the test. Generally, reading test preparation involves familiarizing individuals with test structure, assigning fixed amount of time to do reading tasks, and completing simulated reading examination within the time limit (Luu & Luu, 2022). Additionally, well-planned preparation for certain question types in IELTS reading, such as looking for the gist or making inferences, also serves to improve individuals' reading comprehension (Jabri et al., 2019).

### V. Cultural and Educational Background

The fifth important factor to impact IELTS reading performance is candidates' cultural and educational background, which controls their ability to handle and interpret reading texts (Afzal, 2019; Smith et al., 2021). For example, shaped by educational experiences as well as culture norms in which they live for years, Chinese students may have developed a distinct way of comprehending written texts (Cao et al., 2021). Therefore, to design teaching materials that are suitable for Chinese learners to use and provide supporting service to meet their specific learning needs during preparation for IELTS, it is essential to know well about their education and cultural background in the first place.

#### 2.2 Motivation

Motivation can be defined as a basic psychological process to propel individuals to behave, engage, and perform in a wide range of activities, including language learning, academic and career achievement (Ushioda, 2020; Wu et al., 2020; Zhang et al., 2020). Classified as both intrinsic and extrinsic, motivation has been proved to determine what attitudes individuals are of towards language learning, how much effort they are willing to devote, and whether they will be persistent through challenges (Ryan & Deci, 2020). There are a variety of factors to affect people's level of motivation: personal traits, quality of learning experiences, social and cultural background, and so on (Dörnyei & Ushioda, 2021). Rather than working independently, such factors interact with each other, collectively influencing a learner's motivation, which demonstrates the sophisticated nature of motivation studies (Schunk & DiBenedetto, 2020).

##### 2.2.1 Enhancing Reading Comprehension Through Motivation

Motivation serves to enhance individuals' reading abilities (Weinstein, 2021), including IELTS reading. Past research indicates that students with high level of motivation have inclination to apply strategies to deal with different reading tasks, keep themselves reading complex passages, and form a deep understanding of what the text is mainly about (Barber & Klauda, 2020). There are three ways motivation has its effect on improving reading comprehension, which includes:

#### I. Encouraging Engagement and Diligence

The first contribution of motivation is that it helps stimulate students' internal drive and willingness to make more efforts in reading. It has been found that learners with motivation have larger likelihood to involve themselves in figuring out reading questions on their own, and they are also more willing to find the gist of reading passages (Filgona et al., 2020). When it comes to IELTS reading, there are two aspects in which motivation plays a significant role. The first aspect is that highly motivated candidates are often prepared to adopt different methods to understand written materials. For example, they will guess the meaning of unknown words by looking for clues within the reading context (Liu & Pei, 2023). The second aspect is that motivation does good to an individual's cognitive process, which is an essential component of reading success (Duke et al., 2021).

#### II. Encouraging Strategic Reading Habits

The second contribution of motivation is that it helps students to develop a habit of using strategies during reading (Gu & Lau, 2021). Strategies such as previewing to form a general image of reading texts, predicting what the passage is going to talk about, and monitoring their own way of dealing with difficult words and comprehension process, help individuals to better understand reading contents and more importantly, relate new knowledge with prior experiences (Schmidt et al., 2021). In the context of IELTS, highly motivated candidates tend to deal with various reading tasks by using different strategies to locate certain details, get the gist, and make inferences properly (Grabe & Stoller, 2019; Grabe & Stoller, 2022), resulting in the enhancement of IELTS reading achievement.

#### III. Fostering Persistence and Fortitude

The third contribution of motivation is that it promotes individuals to be persistent and resilient in the mindset, especially when it comes to tackling reading challenges (Kim & Kim, 2021). Reading challenges often include many unknown words, long and complicated sentences with sophisticated grammar, and time limit (Wigfield & Guthrie, 1997). However, motivated students embrace challenging texts. They refuse to give up until the reading tasks are completed (Kheang et al., 2024). The passion and desire to succeed strengthen their

mental power, which helps improve reading comprehension (Logan et al., 2011; Wigfield et al., 2016).

### 2.2.2 Previous Studies on Motivation

Previous research has provided valuable findings in the influence of motivation on students' reading abilities. For example, Hwang and Duke (2020) chose third-grade students as research subjects and investigated how motivation and content knowledge affect English reading. Using mixed methods, their findings revealed that motivation is a powerful predictor of reading scores, and concluded motivation is the key to success in English reading. Kanonire et al. (2022) selected primary school learners as participants to explore the correlation between motivation and reading proficiency. He found that both intrinsic and extrinsic motivation do good to improving learners' reading comprehension. In Chile, Orellana et al. (2020) also chose primary school students as subjects and proved there existed a significant relationship between motivation and reading achievement. Toste et al. (2020) conducted meta-analyses by generalizing findings from a range of motivation studies on academic performance. Taking students in K12 as research subjects, he confirmed that motivation is significantly associated with the enhancement of reading abilities.

In another study where Indonesian learners were studied by Firdaus (2022), it was concluded that a strong connection existed between motivation and reading achievement, and that individuals with high motivation demonstrate better reading skills. Within the context of higher education, where undergraduates were chosen as participants, Cartwright et al. (2020) revealed that intrinsic motivation exhibited a strong predictive power towards reading proficiency and emphasized multiple factors to determine academic success.

### 2.2.3 Motivation Construct

The construct of motivation in this research was based on the Motivation in English Reading Questionnaire (MERQ), which was designed by Han (2021). MERQ was derived from two instruments in previous research: the Motivated Strategies for Learning Questionnaire (MRQ) (Wigfield & Guthrie, 1997) and its revised version (MRQ-R) (Baker & Wigfield, 1999). Motivation consisted of three subscales: efficacy and engagement, utility value, and academic value. Details are as follows:

#### I. Efficacy and Engagement

Standing for intrinsic motivation, efficacy and engagement refers to an individual's internal enthusiasm to be committed to English reading activities. Students read not for external benefits, but for enjoyment and self-fulfilment (Xu & Durgunoğlu, 2020). This subscale investigates a student's level of intrinsic desire to read English contents, as well as their degree of confidence in whether they can do well in English reading tasks (Han, 2021).

#### II. Utility Value

Representing one type of extrinsic motivation, utility value involves practical rewards that English reading offers to learners when pursuing personal objectives (Sun & Gao, 2020). This subscale highlights the main purpose of English reading is to be beneficial to future development, either in terms of academic or career prospects, instead of meeting internal demands (Han, 2021).

#### III. Academic Value

As another type of extrinsic motivation, academic value particularly concentrates on academic rewards derived from English reading (Wigfield & Guthrie, 1997; Baker & Wigfield, 1999). This subscale advocates that the goal of English reading is to attain academic success, paving the way for further education (Han, 2021).

## 3. Method

### 3.1 Research Design

The design of this study was based on the correlation research to explore the relationship between learning motivation and IELTS reading proficiency among Chinese students. There was one independent variable (motivation) and one dependent variable (IELTS reading achievement). Specifically, motivation was divided into three subscales: efficacy and engagement, utility value, and academic value (Han, 2021). On the other hand, the dependent variable is IELTS reading achievement, which is assessed by means of IELTS reading test.

In terms of data collection, the Motivation in English Reading Questionnaire (MERQ) was applied to measure motivation, while Cambridge IELTS Examination Practice Materials were adopted to evaluate learners' reading proficiency. Pearson correlation was used to investigate how motivation relates to IELTS reading achievement. Multiple regression analysis was carried out to determine the best predictor of reading ability among three dimensions of motivation.

### 3.2 Population and Sampling

In this study, the target population consisted of 600 Chinese IELTS learners who were enrolled in 12 IELTS training institutions to improve their English abilities in every respect. Based on the guidelines created by Krejcie and Morgan (1970), sample size was determined to be 242, making sure the target population can be appropriately represented. The sampling technique adopted in this study is random sampling, which is characteristic of fairness and equality for students to be selected as participants (Obilor, 2023). In detail, 20 learners were selected from each of 12 training institutions, except for one institution, where 22 students were chosen, to make up the total of 242 participants.

### 3.3 Instruments

#### 3.3.1 The Motivation in English Reading Questionnaire (MERQ)

In this study, the MERQ was selected to measure how much motivation students have during IELTS reading. It was designed by Han (2021) to investigate the connection between motivation and proficiency in FL reading. MERQ has been proved to be a reliable tool to explore the influence of learning motivation on English reading.

MERQ totally contains 25 items, which can be classified as three dimensions: efficacy and engagement, utility value, and academic value. Specifically, efficacy and engagement refers to intrinsic motivation, while both utility value, and academic value represent extrinsic motivation. In this study, MERQ was further adapted to better meet research objectives, and the adapted MERQ contains 16 items, in which items ranging from No.1 to No.7 evaluate efficacy and engagement; items ranging from No. 8 to No. 12 measure utility value, while items ranging from No. 13 to No. 16 assess academic value. Details are shown in Table 1.

Table 1. Adapted MERQ

No.	Items
1	I try to get the main idea of texts when reading in English.
2	It is easy for me to understand the sentence meaning in English reading.
3	English reading is an intrinsically pleasing journey for me, rather than a task.
4	I am interested in reading English in all aspects of English studies.
5	I like reading challenging English materials when the topic appeals to me.
6	I enjoy reading English novels, newspapers, and magazines.
7	When I am absorbed in English reading, I don't notice the time passes quickly.
8	English reading is not just a hobby, it's a gateway to diverse opinions and perspectives from around the world, enriching my understanding and broadening my horizons.
9	The importance of English reading is underscored by its role in providing a deeper understanding of the lifestyles and cultures prevalent in English-speaking countries.
10	The significance of English reading is evident in its ability to facilitate my exploration of English novels, newspapers, and magazines.
11	The significance of English reading is evident in its ability to facilitate my exploration of English novels, newspapers, and magazines.
12	The importance of English reading lies in its potential to significantly enhance my prospects of securing a more promising job in the future, and to foster personal growth.
13	I engage in English reading with the goal of improving my speed as an English reader.
14	I undertake English reading to excel in English exams, including IELTS and TOEFL.
15	Engaging in English reading expands and enriches my English vocabulary.
16	I engage in English reading with a strong determination to enhance my overall proficiency in the English language, and to continuously improve myself.

### 3.3.2 Cambridge IELTS Examination Practice Materials

Participants' IELTS reading module scores were evaluated using Cambridge IELTS Examination Practice Materials from the Cambridge IELTS 18 Academic Practice Book. The reading assessment included three sections with a total of 40 questions (Ren, 2023). Each correct answer received one point, and the cumulative scores were converted to the nine-point IELTS scoring system (Gagen & Faez, 2023). The test included various question types such as completing sentences, summaries, notes, tables, and flowcharts, identifying information, matching information, and matching features.

### 3.4 Validity and Reliability

It is essential to ensure the validity and reliability of instruments so that research findings can be proved to be accurate and consistent (Sürücü & Maslakçı, 2020). In this study, MERQ was validated and adapted based on the original version, to better assess the motivation among Chinese learners who plan to take IELTS test. The process of adaptation involves an expert and an educator to censor the appropriateness of MERQ, including whether this instrument can address research objectives in this study, and make relevant adjustments.

Originally, MERQ contains 25 items. However, to better fit into the evaluation of how motivation impacts IELTS reading achievement, only 16 items remained, with 9 items left out since they are too general, or not relevant to IELTS reading.

### 3.5 Pilot Study

The pilot study was done to test if both instruments (MERQ and IELTS reading test) are appropriate to use in this study. 30 participants were invited in the pilot study. The first step is to introduce to participants what objectives this research involves, how data will be processed, and so on. The second step is to give time for participants to complete the adapted MERQ and IELTS reading test. Finally, after collecting data, reliability test was conducted on the adapted MERQ and IELTS reading test, in which Cronbach's alpha was calculated to measure the level of internal consistency (Amirrudin et al., 2021). According to details in Table 2, the coefficient of adapted MERQ is 0.88, meaning this instrument is of high reliability. On the other hand, the coefficient of IELTS reading test is 0.83, also signifying a high level of reliability.

Table 2. Cronbach’s Alpha Coefficients

Instrument	Number of Items	Cronbach's Alpha
Adapted MERQ	16	.88
IELTS Reading Test	40	.83

3.6 Data Analysis

3.6.1 Motivation Assessment

To measure the extent of reading motivation among Chinese learners, descriptive statistics, such as mean, median, and standard deviation, were collected by means of MERQ. Such data offers details of how much motivation students have, as well as how much their motivation levels vary from person to person.

3.6.2 Relationship Between Motivation and IELTS Reading Achievement

To investigate how total and different types of motivation relate to reading comprehension in IELTS, Pearson correlation was applied to demonstrate whether there was a significant correlation between the independent variable and dependent variable, as well as how much relationship they have between each other (Gogtay & Thatte, 2017).

3.6.3 Predictor Analysis

To explore the best predictor of motivation dimensions towards reading proficiency in IELTS, multiple regression was applied. Such statistical method was adopted to demonstrate which one of three motivational subscales most significantly predicted the change of IELTS reading scores.

4. Findings

4.1 Findings for Research Question 1

The first research question aimed to determine the level of motivation among Chinese learners during IELTS reading. The analysis of data presented in Table 3 can be summarized as follows:

The mean total motivation score was 11.51, with a standard deviation of 1.95, indicating that students generally reported a moderate to high level of motivation (closer to the maximum score of 14.29 than the minimum score of 3.84). The mean scores for the three dimensions of motivation were:

- (1) Efficacy and Engagement: 4.00
- (2) Utility Value: 3.88
- (3) Academic Value: 3.63

These scores suggest that students have a high level of efficacy and engagement, a moderate to high utility value, and a moderate academic value in their motivation for preparing for the IELTS reading test. The descriptive statistics indicate a generally positive level of motivation among Chinese students, particularly in efficacy, engagement, and utility value. Details were also illustrated in Figure 1.

Table 3. Descriptive Statistics of Motivation

	Descriptive Statistics				
	N	Minimum	Maximum	Mean	Std. Deviation
Total Motivation	242	3.84	14.29	11.5103	1.94679
Efficacy and Engagement	242	1.14	5.00	4.0031	.81186
Utility Value	242	1.2	5.0	3.876	.8459
Academic Value	242	1.00	5.00	3.6312	1.00160
Valid N (listwise)	242				

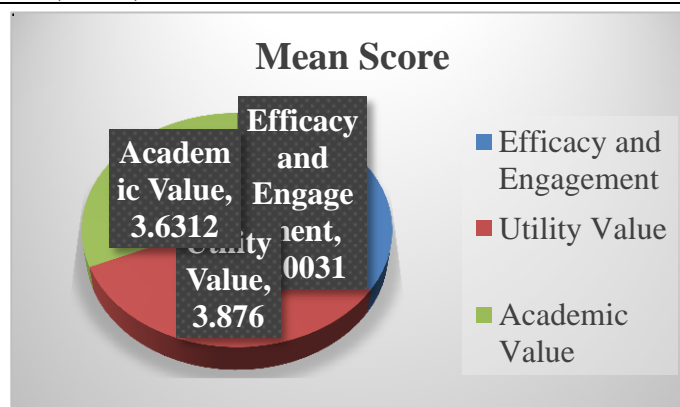


Figure 1. Pie Chart for Descriptive Statistics of Motivation

4.2 Findings for Research Question II

The second research question investigated the extent to which motivation is associated with reading comprehension in IELTS.

4.2.1 Checking for Normality

Histograms are often used to assess data distribution and check for normality (Das & Geisler, 2021). A bell-shaped curve indicates a normal distribution (Yang & Berdine, 2021). Figures 2 and 3 show that the data for IELTS reading scores and motivation are normally distributed among all participants.

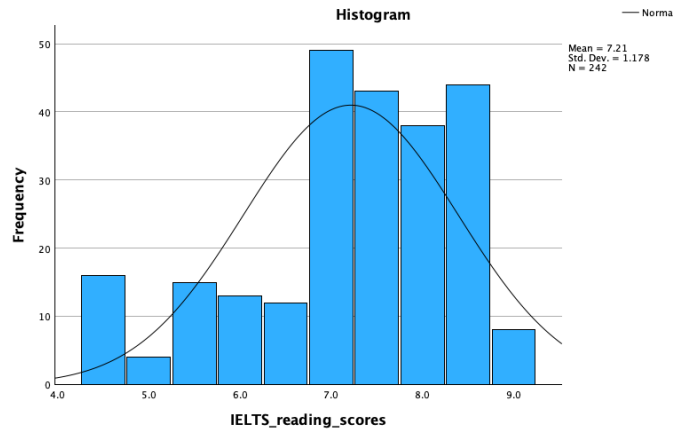


Figure 2. Histogram showing the distribution of IELTS reading scores, with scores ranging from 4.0 to 9.0 and a mean of 7.21 (SD = 1.18).

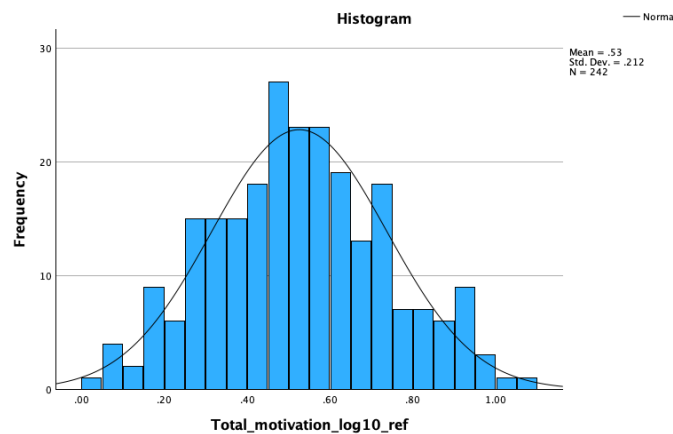


Figure 3. Histogram depicting the distribution of total motivation, appearing normally distributed with values centered around a peak and evenly spread

4.2.2 Significance Test for Motivation

As shown in Table 4, the p-value is below .05, leading to the rejection of H0 and indicating a significant correlation between total motivation and IELTS reading proficiency.

Table 4. Correlation Between Total Motivation and IELTS Reading Scores

Correlations		
	IELTS Reading Scores	Total Motivation
IELTS Reading Scores	Pearson Correlation	1
	Sig. (2-tailed)	.634**
	N	<.001
Total Motivation	Pearson Correlation	.634**
	Sig. (2-tailed)	1
	N	<.001
		242

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

The scatter plot in Figure 4 illustrates the positive relationship between total motivation and IELTS reading scores. The plot shows an upward trend, with points generally increasing from left to right, and a fitted regression line confirms this relationship. The line's slope shows that as total motivation increases, IELTS reading scores are likely to improve.

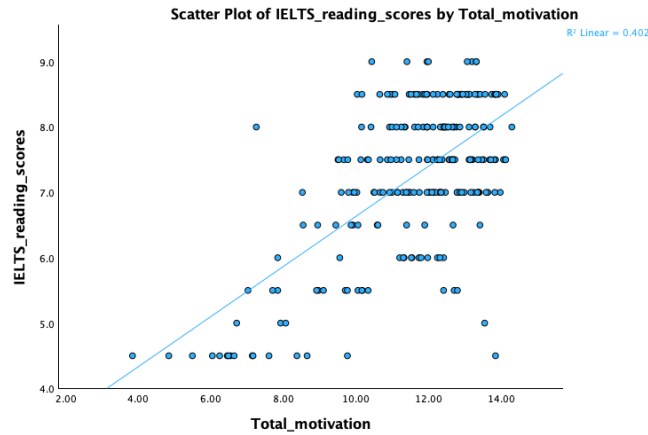


Figure 4. Scatter Plot of IELTS Reading Scores by Total Motivation

Table 5 shows that the p-value is below .05, indicating a significant relationship between efficacy and engagement and IELTS reading proficiency.

Table 5. Correlation Between Efficacy and Engagement and IELTS Reading Scores

<b>Correlations</b>			
		IELTS Reading Scores	
		Efficacy and Engagement	
IELTS Reading Scores	Pearson Correlation	1	.520**
	Sig. (2-tailed)		<.001
	N	242	242
Efficacy and Engagement	Pearson Correlation	.520**	1
	Sig. (2-tailed)	<.001	
	N	242	242

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

Table 6 also shows a p-value below .05, indicating a significant correlation between utility value and IELTS reading proficiency.

Table 6. Correlation Between Utility Value and IELTS Reading Scores

<b>Correlations</b>			
		IELTS Reading Scores	
		Utility Value	
IELTS Reading Scores	Pearson Correlation	1	.459**
	Sig. (2-tailed)		<.001
	N	242	242
Utility Value	Pearson Correlation	.459**	1
	Sig. (2-tailed)	<.001	
	N	242	242

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

Table 7 demonstrates a significant correlation between academic value and IELTS reading proficiency, with a p-value under .05.

Table 7. Correlation Between Academic Value and IELTS Reading Scores

<b>Correlations</b>			
		IELTS Reading Scores	
		Academic Value	
IELTS Reading Scores	Pearson Correlation	1	.424**
	Sig. (2-tailed)		<.001
	N	242	242
Academic Value	Pearson Correlation	.424**	1
	Sig. (2-tailed)	<.001	
	N	242	242

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

4.2.3 Correlation Coefficient for Motivation

Correlation coefficients were calculated to examine the relationship between motivation and IELTS reading performance. According to Cohen's (2013) guidelines for interpreting Pearson correlation coefficients (Table 8), the results indicate strong positive correlations, meaning higher motivation levels are linked to better IELTS reading scores.

I. Total Motivation

According to Table 4, the correlation coefficient between total motivation and IELTS reading scores is  $r = .634$ ,  $p < .001$ . This strong



positive correlation suggests that students with higher overall motivation tend to achieve better scores on the IELTS reading test, explaining 63.4% of the variance in reading scores.

II. Efficacy and Engagement

Table 5 shows that the correlation coefficient between efficacy and engagement (intrinsic motivation) and IELTS reading scores is  $r = .520, p < .001$ . This moderate positive correlation indicates that students who are more intrinsically motivated to engage in English reading activities perform better on the IELTS reading test, explaining 52% of the variance in reading scores.

III. Utility Value

As indicated in Table 6, the correlation coefficient between utility value (extrinsic motivation) and IELTS reading scores is  $r = .459, p < .001$ . This moderate positive correlation suggests that students who perceive utility in reading tasks for achieving personal goals tend to have higher IELTS reading scores, explaining 45.9% of the variance.

IV. Academic Value

Table 7 shows a correlation coefficient of  $r = .424, p < .001$  between academic value (extrinsic motivation) and IELTS reading scores. This moderate positive correlation suggests that students who value reading tasks for academic purposes tend to perform better in the IELTS reading test, explaining 42.4% of the variance.

Overall, the findings indicate that all three motivational dimensions positively correlate with IELTS reading comprehension, with higher motivation levels consistently linked to better performance.

Table 8. General Guidelines for Magnitude of Pearson Correlation Coefficient

Value of Coefficient	Degree of Correlation
$.1 < r < .3$	Weak
$.3 < r < .5$	Moderate
$r > .5$	Strong

4.3 Findings for Research Question III

The third research question aimed to identify which dimension of motivation most significantly predicts reading comprehension in IELTS using a multiple regression approach.

4.3.1 Checking for Normality

In addition to the histogram in Figure 3, the Normal P-P plot of regression standardized residuals for the dependent variable (IELTS reading scores) also assesses the normality of the residuals from the regression model (Osborne & Waters, 2019). The plot in Figure 4 shows that the points closely follow a 45-degree line, indicating that the residuals are approximately normally distributed, meeting a key assumption for linear regression (Montgomery, 2021).

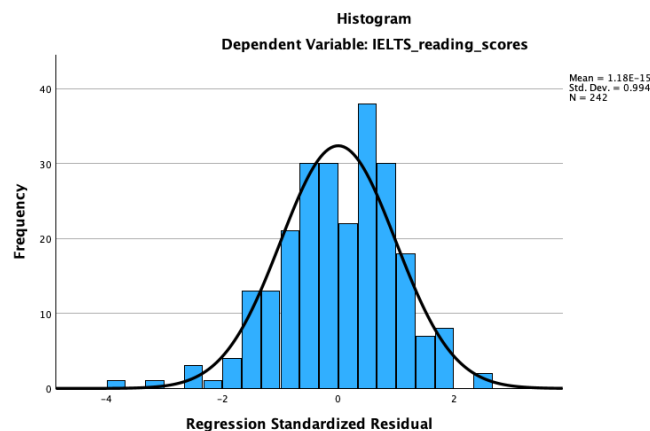


Figure 3. Histogram depicting the distribution of regression standardized residuals, centered around zero and evenly spread

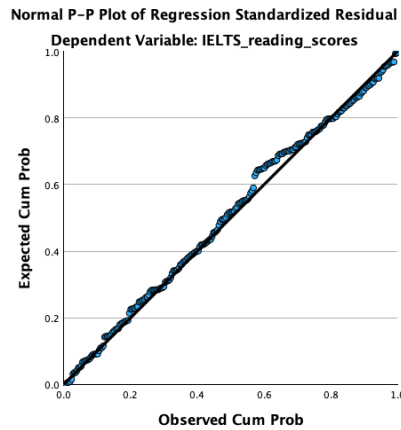


Figure 4. P-P plot illustrating that the residuals conform closely to a linear pattern, suggesting normal distribution

4.3.2 Comprehensive Analysis of Multiple Regression

I. Total Variation Explained (R<sup>2</sup> and adjusted R<sup>2</sup>)

Table 9 shows an R-squared value of 0.410, indicating that approximately 41.0% of the variance in IELTS reading scores can be explained by the three dimensions of motivation. The adjusted R-squared value of 0.402 accounts for the number of predictors and confirms that 40.2% of the variance is still explained by motivation dimensions after considering model complexity.

These values suggest a strong relationship between motivation and IELTS reading scores, indicating that motivation is a significant predictor, though other factors not included in the model may also influence reading scores.

Table 9. Model Summary for Multiple Regression of Motivation

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.640 <sup>a</sup>	.410	.402	.9107	1.223

a. Predictors: (Constant), Academic Value, Utility Value, Efficacy and Engagement  
 b. Dependent Variable: IELTS Reading Scores

II. Statistical Significance of the Model

Table 10 reports an F-statistic of 55.044 with a p-value below .001, indicating that the regression model is statistically significant and provides meaningful insights into the relationship between motivation and IELTS reading proficiency (Sureiman & Mangera, 2020).

Table 10. ANOVA for Multiple Regression of Motivation

ANOVA <sup>a</sup>						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1 Regression	136.948	3	45.649	55.044	<.001 <sup>b</sup>	
Residual	197.379	238	.829			
Total	334.326	241				

a. Dependent Variable: IELTS Reading Scores  
 b. Predictors: (Constant), Academic Value, Utility Value, Efficacy and Engagement

III. Interpreting the Coefficients

Interpreting the coefficients from the multiple regression analysis helps understand the effect of each motivational dimension on IELTS reading scores (Weisburd et al., 2022).

Table 11 shows:

- (1) A constant term of 2.696, representing the expected IELTS reading score when all motivation subconstructs are zero.
- (2) A coefficient of 0.504 for Efficacy and Engagement, indicating that a 1-unit increase in this intrinsic motivation dimension is associated with a 0.504-point increase in IELTS reading scores.
- (3) A coefficient of 0.351 for Utility Value, suggesting that a 1-unit increase in this extrinsic motivation dimension is associated with a 0.351-point increase in IELTS reading scores.
- (4) A coefficient of 0.315 for Academic Value, which shows that an increase of 1 unit in this extrinsic motivation dimension is lined to an increase of 0.315 in IELTS reading scores.

Considering that efficacy and engagement has the highest coefficient, it can be concluded that the intrinsic motivation is the strongest predictor of IELTS reading proficiency.

Table 11. Coefficients for Multiple Regression of Motivation

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.696	.358		7.534	<.001
Efficacy and Engagement	.504	.080	.347	6.268	<.001
Utility Value	.351	.077	.252	4.568	<.001
Academic Value	.315	.062	.268	5.111	<.001

## 5. Discussion

### 5.1 Analysis of Research Objective I

In this study, the first research objective is to measure the extent of motivation among Chinese students towards IELTS reading. Data analysis offered details in total motivation and three motivational subscales: efficacy and engagement, utility value, and academic value.

According to the descriptive statistics, Chinese students demonstrated a high level of motivation to English reading, which can be attributed to both intrinsic and extrinsic factors. Intrinsic motivation involves reading English out of personal interest, passion and involvement (efficacy and engagement), while extrinsic motivation relates to reading English for the purpose of either receiving external benefits (utility value) or improving reading comprehension for their academic development (academic value).

Since the mean score of efficacy and engagement ( $M = 4.23$ ,  $SD = 0.68$ ) was higher than that of utility value ( $M = 3.87$ ,  $SD = 0.75$ ) and academic value ( $M = 3.79$ ,  $SD = 0.73$ ), it can be concluded that Chinese students read English mainly because they are truly interested in it. In other words, their desire for English reading is intrinsic, instead of resulting from external factors, which contributes positively to preparing for IELTS reading test. This research finding is in consistency with what Maharsi (2020) has found, who conducted a study investigating reading motivation among undergraduates of a private college at Yogyakarta. The findings indicated that the level of intrinsic motivation is generally higher than that of extrinsic motivation.

### 5.2 Analysis of Research Question II

The second research objective in this study is to explore the correlation between motivation and IELTS reading achievement. Findings in this regard showed that there was a significant relationship between total motivation and IELTS reading achievement ( $p < .05$ ), which is consistent with previous research. For example, Ghavamnia and Kashkouli (2022) investigated how motivation influences reading comprehension among EFL students in Iran and found that there is a significant association between motivation and English reading achievement. Meanwhile, in a study conducted by Kanonire et al. (2022), Russian students in primary schools were selected as participants to discover that both intrinsic and extrinsic motivations positively impacted reading performance. Nevo et al. (2020) also confirmed that all dimensions of motivation positively correlated with reading proficiency among Hebrew-speaking students.

The correlation coefficients clarified the strength of the relationship between motivation and reading comprehension. Total motivation had a strong positive correlation with IELTS reading scores ( $r = .634$ ,  $p < .001$ ), indicating that higher overall motivation was associated with better performance on the IELTS reading test. Efficacy and engagement had a higher correlation coefficient ( $r = .520$ ,  $p < .001$ ) compared to utility value ( $r = .459$ ,  $p < .001$ ) and academic value ( $r = .424$ ,  $p < .001$ ), suggesting that students who were more intrinsically involved in English reading tasks performed better on the IELTS reading test. These results support the self-determination theory (Deci & Ryan, 1985), which suggests that intrinsically motivated individuals are more likely to engage in activities and persist through challenges, resulting in better performance. Han (2021) also found a positive relationship between intrinsic motivation and reading achievement among Chinese undergraduates majoring in English language.

### 5.3 Analysis of Research Question III

The third research question aimed to identify the primary predictor among different dimensions of motivation for IELTS reading achievement. Multiple regression analyses were conducted to determine which dimension of motivation best predicted IELTS reading achievement.

The regression model, including the three dimensions of motivation as predictors of IELTS reading scores, was statistically significant ( $F(3, 246) = 45.67$ ,  $p < .001$ ,  $R^2 = .654$ ). The coefficient for efficacy and engagement (intrinsic motivation) was the largest among the three motivation subscales ( $\beta = 0.504$ ,  $p < .001$ ), indicating that an increase of 1 unit in efficacy and engagement is associated with a 0.504-point increase in IELTS reading scores, holding all other variables constant. This finding suggests that intrinsic motivation related to efficacy and engagement is the best predictor of IELTS reading achievement. Utility value ( $\beta = 0.351$ ,  $p < .001$ ) and academic value ( $\beta = 0.315$ ,  $p < .001$ ) also significantly predict IELTS reading scores but to a lesser extent.

Findings from multiple regression analysis are consistent with prior studies. For example, Habók et al. (2020) chose Grade 6 and 8 students as his research subjects and found out that motivation mediates their reading ability in a significant way. Likewise, Fitriyah (2021) carried out research on Indonesian students and revealed that reading motivation did predict the development of their reading proficiency. Finally, Miyamoto et al. (2019) investigated middle school learners and drew a conclusion that intrinsic motivation did play a key role in

their reading achievement.

#### 5.4 Implications

Since this study revealed a significant relationship between motivation and IELTS reading achievement, the first implication is that IELTS teachers should pay attention to learners' motivation during reading class. In this study, it has been found that as motivation rises, so do IELTS reading scores. Therefore, learning motivation serves as an indispensable component to determine students' reading success.

Given that efficacy and engagement is the best predictor of IELTS reading scores, the second implication is that teachers should focus more on learners' intrinsic motivation during reading instruction (Hiver et al., 2020). Teachers are recommended to provide materials that can arouse learners' curiosity and enthusiasm to read. They are also suggested to design tasks that keep learners fully focused on reading or arrange assignments to learners that contributes to their sense of reading achievement.

Although extrinsic motivation is less predictive to IELTS reading, it has been found that utility value and academic value both significantly correlate with IELTS reading scores. As a result, the third implication is that teachers should also value the impact of extrinsic motivation on reading achievement (Alshuraiaan & Alme fleh, 2023). Teachers should give timely praise to learners when they make progress and convince them to read more so that they can do better in overall study.

#### 5.5 Research Limitations

There are two main limitations in this study. To begin, MERQ is a self-report instrument, whose results from participants may not reflect their real situation. Students tend to give socially acceptable answers instead of telling the truth (Durmaz et al., 2020). Future research can include qualitative methods, such as interviews, to look more deeply into the relationship between motivation and reading comprehension. Additionally, this study lacks demographic information, such as gender and age, to conduct comparative analysis. Further research can compare learners of different ages or genders to see if these factors also influence how motivation impacts IELTS reading performance.

#### Acknowledgments

Not applicable

#### Authors' contributions

Mr. Fang Minghui was the only author responsible for study design and data collection. Additionally, he drafted the manuscript and revised it. The author approved the final manuscript.

#### Funding

This research was self-funded.

#### Competing interests

The author declares that there are no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

#### Informed consent

Obtained.

#### Ethics approval

The Publication Ethics Committee of the Sciedu Press.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

#### Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

#### Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

#### Data sharing statement

No additional data are available.

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