

Article

Motivation and Its Effect on Language Achievement: Sustainable Development of Chinese Middle School Students' Second Language Learning

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Abstract: The spread of COVID-19 has changed the traditional education pattern, and prolonged home isolation and online learning have brought unprecedented challenges to second language teaching and learning. A sample of 1036 Chinese students from four representative middle schools participated in the research. The results indicated four motivations: intrinsic interest, learning situation, personal development, and immediate achievement. There were significant gender differences in English learning motivation. Moreover, intrinsic interest and personal development motivation had a significantly positive impact on English learning achievement, while learning situation had no significant impact, and immediate achievement motivation had a significantly negative impact. The findings highlight the cultivation of students' learning autonomy and school-family interaction to promote the sustainable development of middle school students' second language learning.

Keywords: COVID-19; middle school students; motivation; achievement; personal development; intrinsic interest



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1. Introduction

With the spread of the COVID-19 pandemic, a great many countries announced the temporary closure of schools, which affected more than 91% of students in the world. This situation is unprecedented. Long-term home isolation has disturbed the normal life and learning pattern of students [1]. In order to protect the well-being of children and ensure their sustainable learning, UNESCO launched the COVID-19 Global Education Coalition in March 2020, to help countries address the gap in teaching content and network connectivity, and to provide inclusive learning opportunities for children and young people during this sudden and unprecedented suspension of classes [2].

In this context, schools in various countries have responded to the call of UNESCO for school closures and actively adopted the online teaching mode [1]. Although middle school students in Beijing have returned to school many times to resume face-to-face teaching, the impact of multiple home isolation caused by COVID-19 on their learning has far-reaching consequences [3]. Most studies believe that COVID-19 has a negative impact on students' learning, but the impact on second language (L2) learning is still unclear [4]. Second language learning is a teaching activity that relies heavily on school situations [5]. Sudden online teaching has brought unexpected challenges to second language learning [6].

Second language education is not only an important tool for global development and communication, but also an important medium for cultivating innovative talents in the new era [7]. Motivation determines the priority of students in learning a second language, and motivation is the central engine of effort, willingness, and task completion [8]. Research on motivation for second language learning has generally attempted to answer

the question of motivational types, while little is known about the interpretation of the inner structure. Research on gender differences in motivation has mostly focused on analyzing the results of gender differences between boys and girls, but little is known about the causes of such gender differences. Past research has shown that learning motivation affects students' academic achievement [9]. However, researchers have mainly focused on the motivational impact on achievement, with little attention paid to how motivation affects student achievement, and few studies have identified the role that motivation plays in affecting students' academic achievement.

Additionally, studies on the motivation for learning a second language have not given enough consideration to middle school students as a whole, and discussions about the motivation for learning English have largely focused on college and high school students, with little attention and research given to middle school students. In the context of the COVID-19 pandemic, online learning and home isolation have had a tremendous effect on middle school students. Without face-to-face engagement, second language acquisition is exceedingly challenging for children [10]. Investigation of motivation can explore the main willingness of students' second language learning at this time, and can inform the impact of motivation on academic achievement to facilitate educators to tailor their teaching. Therefore, under the background of the COVID-19 pandemic, the study of second language learning motivation is particularly important for sustainable learning and growth of middle school students.

2. Literature Review

Research on motivation for second language (L2) learning has gone through several stages, and overall, the trend is to move from a social psychological perspective to motivational contexts and dynamics [11,12]. Basically, motivation of second language learners could be divided into three main areas [5]. The first area is socio-educational theory of second language acquisition, such as integrative and instrumental motivation [8]. The second is self-determination theory (SDT), which mainly contains intrinsic and extrinsic motivation [13]. The third is the L2 motivational self system (L2MSS), which contains three levels, and is the dominant model in current research on motivation for second language learning [11].

2.1. Motivation Composition

Gardner proposed a framework of instrumental and integrative motivation from socio-educational theory, where instrumental motivation was a tool for language learners to achieve their goals and success, and integrative motivation was a learner's interest in language and culture, desire for interaction, and emotional identification with another cultural group [14]. Csizér and Dörnyei [15] believed that integrative motivation was the main motivation for second language learning. However, some opponents argued that instrumental motivation of English learners occupied the main component, mostly pragmatic motivation, such as examination [16,17]. Gardner and MacIntyre [18] believed that both integrative and instrumental motivation coexist. This argument was advocated by Gao, et al. [19] and Dos Santos [20], who believed that integrative and instrumental motivation were not mutually exclusive.

Gao, Zhao, Cheng, and Zhou [19] classified second language motivation into seven types through factor analysis such as intrinsic interest, learning context, personal development, etc. Previous studies on the composition of motivation are numerous [15], however, general research mainly explores the types of motivation, but not the inner structure. There is no shortage of research on the motivation of second language learners among English-speaking countries, but research on second language learners in non-English-speaking countries is rare [21]. The COVID-19 outbreak has put immense load on the world's school learning [22]; in this particular context, second language learning is undergoing unprecedented challenges [10]. The influence of school closures has led to great changes in students' motivation [23], and distance learning could produce geographic disparities in

times of school lockdown [24]. As a result, research on middle school students' motivation in non-English-speaking countries seems particularly significant.

Intrinsic motivation is defined as doing an activity for its inherent pleasures, rather than for some separate benefit. Extrinsic motivation is a concept that applies whenever an action is taken to achieve a distinct goal [13]. The natural human tendency to learn and assimilate is reflected in intrinsic motivation. Extrinsic motivation, however, is said to vary significantly in terms of relative autonomy, and can therefore either represent extrinsic control or genuine self-regulation [25]. Both intrinsic and extrinsic motivation have proven to be correlated with students' learning autonomy, willpower and outcome [26,27]. However, this component makes it challenging for us to comprehend second language learners' learning experiences, including the significance of learning contexts for distance learning during the pandemic period [28].

Due to the impact of COVID-19, middle school pupils are more dependent than ever on their families, rather than their instructors, for learning [29]. In recent years, as second language learning contexts have changed, it seems difficult to generalize the various dimensions of motivation for second language learning only from instrumental and integrative, or intrinsic and extrinsic perspectives. Dörnyei and Ushioda [30] proposed the L2 motivational self system, which consisted of three components: the ideal L2 self; the ought-to L2 self; and the L2 learning experience [31]. The L2 motivational self system has become the dominant model for second language learning motivation research in the past decade [11]. In reality, the three layers of the L2 motivational self system could be used to explain both intrinsic and extrinsic motivation [21]. Therefore, applying the L2 motivational self system hypothesis might aid in unraveling the puzzles surrounding language learning motivation.

2.2. Influence of Gender

According to a prior study, female students were more motivated to learn than male pupils [32]. This claim was validated in recent research by Jiao, Wang, Ma, You, and Jiang [5]. Female students exerted more effort than male students, which led to superior academic performance [33]. Compared to male students, female students demonstrated greater external motivation [34]. D'Lima, et al. [35] claimed that female students studied more diligently than male students and had more ambitious goals for individual growth. Girls were therefore more likely than boys to attain better accomplishment.

During lockdown in the COVID-19 pandemic, it was shown that male students were more extrinsically driven than intrinsically motivated, whereas female students scored similarly on both self-perceived motives. Compared to male pupils, female students had much higher levels of motivation [36]. A recent study showed that male students had higher levels of increased anxiety due to COVID-19. Female students had higher levels of motivation than male students [37]. Therefore, it is of special significance to study the gender differences in middle school students' motivation for second language learning in the context of the COVID-19 pandemic.

2.3. Motivational Impact on Second Language Achievement

Motivation study largely believed that motivation could help with academic outcome [28]. Recent studies [38] indicated that learning motivation had a predictive effect on achievement [9]. The stronger the motivation to learn English, the higher the English achievement, and the weaker the motivation to learn English, the weaker the English achievement [39]. A recent study indicated that intrinsic interest motivation had a positive influence on English ability, whereas learning situation motivation had a negative effect [5]. This means that intrinsic interest tends to increase students' learning outcomes, whereas unfavorable learning environment tends to disadvantage individuals.

Generally, teachers play an important role in creating an enjoyable environment in the ecology of second language instruction [40]. During the COVID-19 pandemic, this context may not rely as heavily on schools and teachers as traditional contexts, with the

family becoming the primary venue for distance learning, and the home serving as the basic learning context for students throughout the lockdown period [29]. Intrinsic interest is recognized as a dominant influence on academic performance under multiple motivational theoretical perspectives. This intrinsic interest makes students enjoy the process of learning, thus promoting learning effectiveness [40]. As a result, in times of school closures, intrinsic interest motivation cannot be underestimated.

The traditional Confucian culture promotes the belief that learning leads to achievement, which indicates that learners may eventually fulfill their dream via personal efforts [41]. Calafato [42] found that the need for personal growth was the primary motivator for students to acquire a second language, which was influenced by factors such as economic relationships. This motivation had been shown to have a positive effect on learning outcomes. Students' motivation for personal development was a positive predictor of academic achievement [43]. Motivation stimulated by a desire for rewards, such as test taking, was not related to perseverance [44]. This revealed that motivation for immediate achievement was not conducive to sustainable development.

Overall, research on motivational impacts and academic achievement has begun to replace the argument over composition in studies on second language learning motivation. Apart from intrinsic motivation, learning situation, social contexts, and personal growth are increasingly significant influences on second language acquisition. Few studies have given distance learning adequate consideration, especially in the setting of lockdown, and most prior studies on second language learning motivation concentrate primarily on face-to-face learning. The issue of motivational types has been resolved by the current study on students' motivation for second language acquisition. However, there has not been enough focus on the internal structure of middle school students' motivation. Similarly, gender variations and the impact of motivation on language learning outcomes have not been thoroughly investigated.

Notably, motivation appears to be strongly related to academic success among pupils [45]. Although prior research has demonstrated that motivation influences students' academic accomplishment to varied degrees, it is unknown how motivation affects students' academic achievement, and further study is needed to solve this question. Students' individual inputs and goals in second language acquisition are influenced by the link between motivation and academic accomplishment. As a result, greater study into the influence of motivation on accomplishment is required.

2.4. Purpose of the Study

The purpose of this study is to investigate middle school students' motivation in second language learning in the context of COVID-19, with an emphasis on internal structure, gender differences, and motivational influence on English accomplishment. As a result, we can give some references for the sustainable development of L2 learning for middle school students, to mitigate the impact of lockdown during the pandemic.

This study focuses on the complexity of middle school students' English learning motivation in the context of the COVID-19 pandemic. Through an empirical investigation, this study aims to provide specific answers to questions regarding the internal structure of English learning motivation among middle school students, the gender differences, and its impacts on English performance. This study selected pupils from four representative middle schools in Beijing. As a result, the current study concentrated on the following research questions:

- What are the inherent structures of Chinese middle school students' English learning motivation?
- Are there any distinctions between male and female students?
- What effect does motivation have on middle school students' English academic accomplishment?

3. Theoretical Frameworks

Dörnyei and Ushioda [30] compiled the strengths of dominant theories of L2 motivation and proposed the L2 motivational self system. The L2 motivational self system model has been used as an analytical model in the great majority of investigations, and this orientation is related to its flexibility to many applied situations [46].

The ideal L2 self, the ought-to L2 self, and the L2 learning experience are the three components of the L2 motivational self system, which is developed from the theory of possible selves and social psychology [31]. The phrase “ideal L2 self” describes how strongly learners believe they will acquire a second language in a perfect setting. It portrays the ideal learning state that second language learners can attain in the future and is a strong motivator for second language learning. This element includes integrative and instrumental motivations. Integrative motivation and the ideal L2 self are actually complementary and isomorphic [47].

The ought-to L2 self embodies one’s trust in oneself and avoids unfavorable outcomes by meeting expectations of others. This section represents learning’s external expectations rather than its internal vision. As a result, the extrinsic motivational tool mostly reflects this component. The L2 learning experience is a type of situational and executive motivator based on the learning context and experience. Curriculums, teachers, peer learners, and experiences of outcomes are all included [48]. Meanwhile, the perceived quality of second language learners’ engagement in the second language learning process is thought to be the biggest predictor of motivated behavior [49].

Considering the impact of the COVID-19 outbreak, this study collects data mainly during the time of school closures. Therefore, the theoretical framework is based on the premise of distance learning. The home environment has served as the main context for students’ online learning. As a result, the new classroom environment for second language learning needs to consider information technology and parental support. Lockdown and online learning during the epidemic tends to trigger gaps in academic achievement [29]. Therefore, in this particular context, the theoretical framework for second language learning needs to be reconsidered with a focus on the ought-to L2 self and the L2 learning experience. In this respect, we seek to combine the framework with the context of the impact of the COVID-19 pandemic.

Since the beginning of the twenty-first century, the L2 motivational self has been extensively conducted to explain learners’ anticipated learning effort and motivating behavior. For instance, a recent study highlighted the motivating inclinations of Chinese English learners by a large-scale empirical survey [49]. A shift in vision and intention had an impact on the growth of motivation [34]. Other research investigated four motivations and examined the motivational impact on students’ accomplishments based on the L2 motivational self [5].

Motivational studies are starting to place more emphasis on the L2 learning experience, particularly its most crucial component, the learning circumstance, as opposed to the ideal L2 self level and ought-to L2 self level [49]. Situational factors have been found to be crucial and significant for students’ second language learning [10]. The learning environment has transformed from a school setting to a home setting under the COVID-19 context. Based on the background of lockdown and distance learning, the students’ motivation has to be reevaluated.

Based on the L2 motivational self system [30], the purpose of this study is to investigate the internal structure of middle school students’ English learning motivation, with a focus on the variations between boys and girls, as well as motivational influence on second language accomplishment in the context of the lockdown.

4. Materials and Methods

4.1. Participants

In this study, we used random samples from four representative Beijing middle schools with a large number of pupils. Samples of students from grades seven to nine were chosen

at a 1:2 ratio, encompassing three grades. Participation in this study was entirely voluntary and anonymous. A total of 1100 questionnaires were issued, with 1036 receiving valid replies; 94.2% of people responded. Table 1 shows the sample information.

Table 1. Sample details ($n = 1036$).

Variable		Frequency	Percentage
Gender	Male	491	47.4%
	Female	545	52.6%
Grades	Seven	519	50.1%
	Eight	391	37.7%
	Nine	126	12.2%
Schools	A	100	9.7%
	B	292	28.2%
	C	311	30.0%
	D	333	32.1%

These representatives came from four different districts, representing samples of middle schools in Beijing. The research was conducted in Beijing in a COVID-19 lockdown period. The participants all experienced at least two rounds of lockdown from the pandemic, and our data was collected during school closures. The data contains comprehensive items covering key issues such as gender, motivation, and second language performance.

4.2. Instruments

The original project of the English Learning Motivation Questionnaire for Middle Students was adapted and carried out in accordance with the Questionnaire on the English Learning Motivation Types for Chinese Students [19]. Duplicate items would be consolidated, and those that did not fit the scope of the research should be removed. The first questionnaire was conducted to consist of 30 items in total. To assess English learning motivation, a five-point Likert scale (from 1 = extremely inconsistent to 5 = extremely consistent) was utilized. The higher the score, the greater the drive to study English.

Additionally, some of the themes were modified appropriately, with an emphasis on middle school children. Before the formal survey, 140 students were chosen for a pilot study (trial run in small scale) utilizing the first questionnaire prior to the distribution of the questionnaires. The surveys were conducted after unnecessary items were removed.

Finally, four middle schools were selected, and questionnaires were distributed.

4.3. Data Analytic Procedure

The data was statistically analyzed using SPSS 20.0 software (IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY, USA, IBM Corp.; 2011.). Exploratory factor analysis (EFA) was performed on English learning motivation of middle school students on this premise. Confirmatory factor analysis (CFA) was performed using the Amos 20.0 program (Arbuckle J.L. Amos, Version 20.0. [Computer Program]. Chicago, IL, USA: IBM SPSS; 2011.) to assess the model fit.

5. Results

The results of the survey for middle school students include the internal structure of motivation, gender differences, and motivational impact on second language achievement. The internal structure was conducted through exploratory factor analysis and validated by confirmatory factor analysis. Four dimensions of L2 motivation were investigated. In addition, the variance between male and female students was tested through ANOVA. Moreover, the motivational impact on L2 achievement was conducted through multiple linear regression. Intrinsic interest and personal development motivation were found to have a significant positive effect on English achievement, whereas learning situation had no effect, and immediate achievement had a significant negative effect.

5.1. Item Analysis

Half of the data ($n = 518$) from the total sample ($n = 1036$) were randomly selected from the officially administered test for item analysis and exploratory factor analysis. The correlation between each item and the total score was calculated by correlation test, and items with insignificant correlation coefficients should be removed.

To delete the question items with insignificant correlation coefficients, item analysis was performed using the significance test of the criteria ratio (CR), the highest 27 percent of the total score of the questionnaire test, and the lowest 27 percent of the total score as the threshold between high and low scores. Combined with the correlation analysis, the correlation between each question item and the total value of motivation was significant. Therefore, the study did not find any questions with insignificant correlation coefficients, and all questions could be entered into the factor analysis.

5.2. Exploratory Factor Analysis of the Motivational Structure

SPSS 20.0 statistical software was used to perform exploratory factor analysis (EFA) on the questionnaire data, and the spherical test by KMO and Bartlett revealed that the $KMO = 0.877$ and Bartlett's sphericity test were significant (approximately $CMIN = 4210.755$, $df = 171$, $p = 0.000$), suggesting that similar factors existed in the data correlation matrices and that the questionnaire was acceptable for exploratory factor analysis. The major component analysis approach was used to extract components and common factors from the 30 items, yielding the first factor load matrix of the questionnaire. The loading matrix of the rotated factors was then obtained, according to the oblique rotation method. According to psychological statistical theory, several items were deleted according to the following principles: (1) the items with factor loading values less than 0.5 should be deleted; (2) the items with common degree less than 0.4 should be deleted; (3) two or more factors in the questionnaire with obvious cross-loading should be deleted.

Eleven elements were eliminated after combining data statistics and theoretical analysis results, leaving 19 items. On the remaining data, exploratory factor analysis was performed once again, and four components with eigenvalues larger than one were retrieved according to the standard. The cumulative interpretation's overall variance was 62.640% (See Table 2).

Table 2. Exploratory factor analysis (EFA) results.

The Questionnaire Items	Intrinsic Interest	Learning Situation	Personal Development	Immediate Achievement	Communality
21. Like the English language itself.	0.867				0.763
19. Have special interest in English language learning.	0.842				0.719
23. Interested in English literature.	0.834				0.705
18. Interested in English-speaking countries.	0.796				0.661
20. Interested in English songs/movies.	0.768				0.591
1. Like with English at first sight.	0.700				0.512
7. Like English teacher after entering middle school.		0.860			0.752
5. Like English teacher before entering middle school.		0.790			0.631
10. Like English lessons after entering middle school.		0.771			0.600
9. Like English textbooks after entering middle school.		0.750			0.566
8. Enjoy the quality of lessons after entering middle school.		0.741			0.563

Table 2. Cont.

The Questionnaire Items	Intrinsic Interest	Learning Situation	Personal Development	Immediate Achievement	Community
30. Symbol of education/culture.			0.820		0.694
29. A stepping stone to life.			0.797		0.656
25. Meet parents' expectations.			0.743		0.574
16. Get a good job.			0.715		0.538
26. Study/work abroad.			0.700		0.519
3. Get high score in examination.				0.853	0.733
2. Parents/teachers ask me to learn.				0.738	0.562
11. Get a diploma.				0.735	0.561
Eigenvalue	5.517	3.607	1.594	1.183	
Contribution rate %	29.039	18.985	8.389	6.226	
Cumulative contribution rate %	29.039	48.024	56.413	62.640	

As shown in Table 2, middle school students' motivation for learning English includes four dimensions: intrinsic interest, learning situation, personal development, and immediate achievement. Intrinsic interest motivation refers to "enjoying the English language itself, having a special interest in English language learning, being interested in English literature, being interested in English-speaking countries, being interested in English songs/movies, and like the English at first sight." Situational motivations encompass "enjoyment of English teachers, courses, materials, and the quality of lessons." Personal development motivations include "education symbols, life gateway, meeting parents' expectations, getting a good job, studying and working abroad." Motivations for immediate achievement include "obtaining higher level of education, my parents want me to study, getting a diploma."

5.3. Confirmatory Factor Analysis of Motivational Structure

Based on the exploratory factor analysis results, Amos 20.0 statistical software was used to conduct confirmatory factor analysis (CFA) on the remaining half of the formally tested data ($n = 518$). In order to evaluate the four-factor model that best described middle school students' motivation for learning English, four variables were included: intrinsic interest, learning situation, personal development, and immediate achievement. Confirmatory factor analysis findings revealed that $CMIN/df = 3.140$, $RMSEA < 0.08$, GFI , CFI , IFI , and TLI were all more than 0.90 in the fitting indices of structural equation modeling (SEM), demonstrating that the CFA model had a strong structural fit [50] and validating the multidimensional structural hypothesis of the questionnaire on English learning motivation of middle school students, as shown in Table 3.

Table 3. Confirmatory factor analysis (CFA) fitting index of the model.

Fitting Index	CMIN	df	CMIN/df	RMSEA	GFI	CFI	IFI	TLI
Value	458.427	146	3.140	0.064	0.910	0.921	0.921	0.907
Standard			<5.0	<0.08	>0.90	>0.90	>0.90	>0.90

5.4. Reliability Analysis

After screening, the whole questionnaire's internal consistency coefficient (Cronbach's α) was 0.836, and reliabilities for the four aspects of intrinsic interest, learning situation, personal development, and immediate achievement were 0.884, 0.835, 0.800, and 0.706, respectively. This suggested that the English Learning Motivation Questionnaire for Middle School Students had a rather high reliability value.

The standard regression rate (SRW) of potential variables for each item on the questionnaire varied from 0.554 to 0.856, all greater than 0.5 ($p < 0.001$), according to CFA findings. The construct reliability (CR) values of four motivations were all considerably greater than

0.70. It could be indicated that the English Learning Motivation Questionnaire for Middle School Students had strong convergent validity, and CFA statistical findings matched EFA statistical findings, as shown in Table 4.

Table 4. Confirmatory factor analysis (CFA) results.

Latent Variables	Observation Variable	EFA's Factor Loading	Cronbach's Alpha	The CFA's SRW	AVE	CR
Intrinsic interest	21. Like the English language itself.	0.867		0.856	0.556	0.881
	19. Have special interest in English language learning.	0.842		0.768		
	23. Interested in English literature.	0.834		0.815		
	18. Interested in English-speaking countries.	0.796	0.884	0.728		
	20. Interested in English songs/movies.	0.768		0.675		
	1. Like with English at first sight.	0.700		0.604		
Learning situation	7. Like English teacher after entering middle school.	0.860		0.837	0.497	0.829
	5. Like English teacher before entering middle school.	0.790		0.815		
	10. Like English lessons after entering middle school.	0.771	0.835	0.636		
	9. Like English textbooks after entering middle school.	0.750		0.620		
	8. Enjoy the quality of lessons after entering middle school.	0.741		0.577		
Personal development	30. Symbol of education/culture.	0.820		0.700	0.426	0.784
	29. A stepping stone to life.	0.797		0.799		
	25. Meet parents' expectations.	0.743	0.800	0.554		
	16. Get a good job.	0.715		0.585		
	26. Study/work abroad.	0.700		0.594		
Immediate achievement	3. Get high score in examination.	0.853		0.781	0.473	0.727
	2. Parents/teachers ask me to learn.	0.738	0.706	0.654		
	11. Get a diploma.	0.735		0.618		

5.5. Investigation of Internal Relationships among Four Motivational Factors

Table 5 displays the findings of the correlation coefficient matrix between each motivational component and the overall score. All of the variables were connected with one another and were significantly correlated with the overall score. The correlation coefficient ranged between 0.361 to 0.745, which was greater than the correlation among the factors, and further supported the scale's strong structural validity.

Table 5. Correlation matrix among factors, and between factors and overall score.

Factors	Intrinsic Interest	Learning Situation	Personal Development	Immediate Achievement	Overall Score
Intrinsic interest	1				
Learning situation	0.141 **	1			
Personal development	0.533 **	0.208 **	1		
Immediate achievement	−0.197 **	0.359 **	0.089 **	1	
Overall score	0.697 **	0.665 **	0.745 **	0.361 **	1

Note: ** means $p < 0.01$.

5.6. Characteristics of Middle Students' English Learning Motivation

5.6.1. English Learning Motivation in Each Factor

Table 6 displays average findings for the overall scale and each motivational component for Middle school students' English learning. We derived four dimensions of motivation by EFA and CFA. The motivations of each dimension were recalculated variables, and the target variables were edited according to means of the statistical functions. For the target variables, the dimensional means of each motivation were derived and then presented in the table.

Table 6. Mean values of each factor and overall score.

Factors	<i>M</i>	<i>SD</i>
Intrinsic interest	3.48	1.01
Learning situation	3.06	1.03
Personal development	3.63	0.90
Immediate achievement	2.95	1.12
Overall score	3.33	0.64

In comparison, the mean value of motivation for personal development was the highest ($M = 3.6335$), and the mean value of motivation for immediate achievement was the lowest ($M = 2.9472$), indicating that middle school students had the strongest motivation for personal development and the weakest for immediate achievement.

5.6.2. Gender Differences in Students' Motivation

According to the one-way ANOVA analysis, there was significant gender difference in motivation of intrinsic interest, $F(1,1034) = 13.695$, $p < 0.001$. The gender effect of personal development was also significant, $F(1,1034) = 4.089$, $p = 0.043$, and so was the overall score, $F(1,1034) = 6.174$, $p = 0.013$, as shown in Table 7. The results indicated that girls' intrinsic motivation ($M = 3.59$) was substantially greater than boys' ($M = 3.36$), girls' personal development motivation ($M = 3.69$) was considerably higher than boys' ($M = 3.57$), and girls' overall motivation ($M = 3.37$) was significantly higher than boys' ($M = 3.28$).

Table 7. Gender differences: one-way ANOVA results.

	Source	SS	<i>df</i>	MS	<i>F</i>	<i>p</i>
Intrinsic interest	Between Groups	13.744	1	13.744	13.695	0.000
	Within Groups	1037.646	1034	1.004		
	Total	1051.390	1035			
Personal development	Between Groups	3.317	1	3.317	4.089	0.043
	Within Groups	838.715	1034	0.811		
	Total	842.032	1035			
Overall score	Between Groups	2.532	1	2.532	6.174	0.013
	Within Groups	423.983	1034	0.410		
	Total	426.515	1035			

5.7. Motivational Impact on Students' English Achievement

The test results demonstrate the effects of English learning motivation on English achievement of middle school students, and the results of multiple linear regression are shown in Table 8.

In this study, a multiple linear regression model was used for statistical analysis. The independent variables were intrinsic interest, learning situation, personal development, and immediate achievement, and the dependent variable was the student's academic achievement in English. The equation expression was as follows:

$$Y = 75.243 + 1.711X_1 + 1.067X_3 - 1.233X_4$$

$$R^2_{Adj} = 0.049, F = 14.188 (p = 0.000)$$

The results of the multiple linear regression showed that English achievement of middle school students was significantly influenced by intrinsic interest, personal development, and immediate achievement. English academic performance was positively impacted by intrinsic interest and personal development, but negatively impacted by immediate achievement drive. Y changes by 1.711 for every unit change in X_1 , 1.067 for every unit change in X_3 , and -1.233 for every unit change in X_4 .

Table 8. Results of multiple linear regression.

Model	Non-Standardized Coefficient		The Standard Coefficient	t	Sig.
	B	Standard Error			
(Constant)	75.243	2.089		36.025	0.000
Intrinsic interest (X_1)	1.711	0.481	0.136	3.554	0.000
Learning situation (X_2)	0.554	0.418	0.045	1.324	0.186
Personal development (X_3)	1.067	0.523	0.076	2.041	0.041
Immediate achievement (X_4)	-1.233	0.394	-0.108	-3.128	0.002
R^2	R^2_{Adj}	F			
0.053	0.049	14.188			

6. Discussion

6.1. Research Findings

This study investigated middle school students' motivational structure of English learning, examining gender differences and influence on students' English learning outcome.

The internal structure of middle school students' motivation for learning English was a significant contribution. The result showed that there were four basic sources of motivation for middle school pupils studying English: intrinsic interest, learning situation, personal development, and immediate achievement. The term "intrinsic interest motivation" describes a love of the English language as well as an interest in literature, nations, music, and movies. Students' satisfaction with English teachers, texts, and courses is referred to as situational motivation. Symbols of education and success, stepping stones in life, living up to one's parents' expectations, and landing a decent career are all examples of personal development motivation. The urge to take tests, parental and school expectations for education, and receiving a diploma, are all examples of the immediate accomplishment incentive.

There were significant gender differences in English learning motivation among middle school students. The one-way ANOVA analysis showed that motivation of middle school girls was significantly higher than that of boys. In terms of intrinsic interest, personal development, and overall motivation, girls were significantly higher than those of boys.

Multiple linear regression demonstrated that students' English learning motivation had a significant impact on their English learning performance. English achievement was significantly influenced by intrinsic interest, personal development, and immediate achievement motivation. Intrinsic interest and personal development motivation had a significantly positive impact on English accomplishment, whereas immediate achievement motivation had a negative effect.

6.2. Research Question 1: The Inherent Structure of Middle School Students' English Learning Motivation

Compared with previous studies on the types and structure of English learning motivation, it was found that there were many overlaps between middle school students' English learning motivations and those of students with other levels. Compared with Gao, Zhao, Cheng, and Zhou [19], students' English learning motivation was characterized by intrinsic interest, learning situation, personal development, and immediate achievement. Compared

with a recent study on the structure of English learning motivation [5], they all had intrinsic interest, learning situation, and personal development motivation. In comparison, middle school students were found to possess immediate achievement motivation.

6.3. Research Question 2: Gender Differences between Male and Female Students

Female Students Outperformed Male Students in Terms of Intrinsic Interest, Personal Development, and Total Motivational Value

Numerous studies have shown that female students are much more motivated to study English than male pupils [34]. The findings of D'Lima, Winsler, and Kitsantas [35] were confirmed by this study. Effort was a mediating variable of motivation that impacted English language learners' academic achievement [32]. This study supported the findings of You, Dörnyei, and Csizér [34], which showed that females had more ambitious self-development goals than boys, and put more efforts into their studies. Therefore, it was evident that middle school girls worked harder, and put in more effort than boys, to learn English.

The results were consistent with the recent study that girls possessed higher value in terms of intrinsic interest, personal development, and overall motivation [5,33]. Boys are more likely than females to experience anxiety during a school closure period [37]. As a result, girls might be more motivated to study than boys [36]. Reducing students' anxiety could be a helpful way to promote motivation in the future; generating positive emotions could assist boys boost their motivation to learn, and therefore promote sustainable development of second language learning.

6.4. Research Question 3: Motivational Effect on English Accomplishment

6.4.1. Intrinsic Interest and Personal Development Motivation Had a Significantly Positive Effect on English Accomplishment

The study initially validated the hypothesis that motivation predicted academic success. The more motivated you were, the higher your academic success [51]. Intrinsic interest and personal development motivation were important predictors of students' English academic success [43]. This investigation supported the findings that interest and individual development had a strong favorable influence on academic success [40]. It was clear that intrinsic motivation and personal growth played a favorable influence in improving English learning performance. Middle school pupils learnt English because they were interested in the language itself, the culture of English-speaking nations, and the future development of obtaining a job. However, based on the mean value of motivation, personal development motivation was the strongest, while intrinsic interest motivation was slightly lower. This demonstrated to us that the most important goal of middle school students' English learning was personal development, while intrinsic interest was a less important motivation.

According to the ideal L2 self, from the L2 motivational self system, intrinsic interest mirrored the interest component [31]. Middle school pupils' enjoyment of the second language itself was demonstrated by their intrinsic drive. Intrinsic interest is a kind of intrinsic motivation, which refers to the autonomous motivation "for their own sake". Students enjoy learning from their personal interests [52]. This motivating behavior generates its own pleasure and satisfaction rather than needing outside pressure or motivation [53]. Taylor, et al. [54] believed that a student's own interests were crucial to their success in school. According to the findings of Froiland and Worrell [55], intrinsic interest could predict students' engagement, which in turn encouraged better academic performance.

The research verified previous research results of personal development [19]. Based on the L2 motivational self system, personal development motivation reflected the ideal L2 self [31]. In this respect, middle school students' motive for learning English embodied a more useful instrument. The findings echoed the personal development motivation of

previous research [5]. It is in line with the idea that learning makes success, which means that through personal efforts, you can finally realize your dream [41].

Nevertheless, this study revealed that, among the four motivational types, the mean of intrinsic interest was lower than the mean of personal development. The result might have a negative impact on student engagement and performance. Due to the outbreak of the COVID-19 pandemic, lockdown has created a lot of uncertainty for students' distance learning, and this uncertainty has brought anxiety that diminishes their interest in learning [37,56]. It is undeniable that middle school students still have to deal with the pressure of personal growth and exams in the near future [57]. The students' drive to learn is somewhat diminished by this decline in intrinsic interest [58]. Schools should therefore optimize educational resources to support students' intrinsic interests, enhancing their motivation for learning and academic success. Simultaneously, schools should provide emergency distance learning training to teachers to improve their ability to deal with future unpredictable changes.

6.4.2. Immediate Achievement Motivation Had a Significantly Negative Impact on English Achievement

According to the L2 motivational self system, immediate achievement motivation was represented in the ought-to L2 self. It represented a broader range of utilitarian reasons and was embodied in external types [48]. Previous research believed that obtaining excellent examination results could realize personal dreams in the traditional structure of Chinese society [59]. On the contrary, the finding in this study had a reverse predictive effect on academic achievement. This study discovered that immediate achievement motivation predicted academic achievement negatively [60]. Penk, et al. [61] believed that immediate achievement motivation, such as test-taking, had a significant predictive effect on academic achievement. However, the current study revealed the opposite conclusion. This study demonstrated that the motivation of immediate achievement, such as passing an exam or receiving a diploma, had a negative impact on English performance. The performance in English declined with motivation. Simultaneously, the greater the pressure from parents and school, the lower the students' achievement [37]. Middle school students would find learning English to be counterproductive under this pressure. In contrast to the results of Wang and Rao [9], the responsibility pressure put on students by school and family could have a negative impact on their academic performance.

Academic achievement is heavily influenced by outside pressures or factors [52]. Academic achievement could be evaluated in terms of straightforward extrinsic rewards or punishments, while being similar to extrinsic incentives [13]. Here, intrinsic motivation has a characteristic with learner autonomy, namely the degree of desire, which motivates academic accomplishment [27]. Autonomous types of motivation have been found to increase student engagement, academic results, and health in the past [62]. This may be facilitated by the fact that motivated students work harder in class. [63].

In the context of the pandemic, the abrupt change in teaching approach has forced teachers and students to communicate mainly through the internet [64]. Numerous studies have found that pupils' emotional demands during the pandemic surpass their academic accomplishments. The appeal to grades has an unintended consequence on pupils' academic achievement [10]. According to the study of Daniels et al. [23], online tests were more likely to lead students to decide to cheat, which had a negative impact on academic performance during the pandemic. In order to boost the sustainable learning impact, parents and teachers should work together to increase children's learning autonomy, willpower, and awareness of involvement.

6.4.3. Learning Situation Motivation Had No Significant Effect on English Accomplishment

Based on the L2 motivational self system, learning situation motivation paralleled the L2 learning experience. In terms of situational motivation, teachers and curriculums are the most influential elements [48]. The environment usually plays a key role in shaping

language learning [41]. Although previous studies suggested that second language learners were highly dependent on their learning context, and this could influence students' academic achievement [65], the study discovered that situational motivation had no significant effect on students' English achievement. This study appears to contradict the findings of Dörnyei [66] that second language learning experience was the best predictor of motivated conduct. A favorable learning environment placed learners at an advantage, whereas an unpleasant learning environment placed learners at a disadvantage [67]. Based on the results of this study, we could conclude that traditional learning situation motivation had no influence on learning outcomes.

First and foremost, this may be attributed to Beijing's favorable learning environment and adequate distribution of educational resources [68]. Beijing is a typical Chinese educational hub with abundant academic materials [69]. The data implies that middle school students in Beijing are relatively satisfied with their English teachers, teaching materials, and curriculum. This demonstrates that the learning contexts of middle school students in Beijing do not differ significantly, and the key factors determining students' English learning achievement are not learning situation, but intrinsic interest, personal development, and immediate achievement. As a result, the effect of learning situation motivation on pupils' English outcome was insignificant. Teachers and parents should target their teaching and intervention efforts at these motivational levels.

Second, children's learning contexts are altered by distance learning in the context of the COVID-19 pandemic. According to a recent study by Goudeau, Sanrey, Stanczak, Manstead, and Darnon [29], children's reliance on the learning setting at school has steadily transferred to the home as a result of school closures. Parental guidance and support have a significant impact on how well children learn. For pupils, being unsupervised, a lack of technology, and a lack of family support were the primary issues with distance learning. The family, therefore, becomes a key factor in determining variations in pupils' cultural capital throughout the pandemic, and lockdown may widen the achievement gap across socioeconomic classes [10].

Parent-school communication should be improved to capitalize on the favorable benefits of home learning environments in shaping children's learning habits and sustainable learning plans [70]. Parental involvement and assistance (for example, monitoring, guiding, and habit formation) will become more vital in second language learning. In addition to the everyday efforts of instructors, the future of second language instruction will require supervision and aid from home education [10]. Students will be able to foster long-term second language acquisition via effective home-school engagement.

7. Conclusions and Implications

To summarize, this study investigated four distinct forms of English learning motivation in Chinese middle schools, paying special attention to variations between female and male students. The influence of motivation on English performance has been studied. Intrinsic interest and personal development motivation are considerably favorable influences on English success, but immediate achievement motivation is strongly detrimental. Furthermore, learning situation motivation has little effect on the result of English learning. The specifics of the impact of COVID-19 have been found, and thoroughly examined.

This study has made three main contributions. First, the majority of earlier motivational studies were carried out in English-speaking nations with European or American cultural backgrounds. Little research on motivation has been undertaken by nations that do not use the English language [21]. This study provides a valuable reference for upcoming scholars throughout the world, as it examines middle school pupils' motivation to learn a second language in a non-English-speaking nation. The second contribution is theoretical breakthrough. In the past, scholars have underemphasized the social psychology approach and underemphasized the ideal L2 self, particularly its integration and instrumental drive [5]. The theory is thoroughly investigated in this work, with a combination of the ideal L2 self, the ought-to L2 self, and the L2 learning experience under the L2

motivating self system [49]. The third innovation is to consider the impact of the COVID-19 pandemic. The study examines the motivations of middle school students who study at home during the pandemic, as well as the specific effects of lockdown on their drive. This has enlightenments for the research of second language motivation and the sustainability of second language learning during an emergency.

Based on the above research findings, we draw the following implications: Firstly, students' enthusiasm for studying should be increased in order to internalize their drive to learn English. Intrinsic curiosity is a significant motivator for students' learning [53]. As a result, in second language education, schools and teachers should focus on cultivating students' inner interests in order to improve their English learning outcomes. From the perspective of student sustainable development, teachers should effectively tailor the learning according to students' aptitudes. Efforts should be made to increase learners' positive attitudes toward their second language learning progress, as well as to create a pleasant second language learning atmosphere, in which learners feel encouraged and motivated [71].

Secondly, teachers and parents should encourage different methods of evaluating students. Personal interactions between parents and students appear to have a significant effect on students' purposeful participation in the learning process [72]. In order to promote student learning outcomes during a lockdown period, schools should not stop at traditional exams to evaluate students. Family education and evaluation should be encouraged to be involved in the education of students. Multiple assessments could be used in schools, such as a mix of formative and summative assessments.

Last but not least, the ability of schools to deal with emergencies should be increased, as should students' ability to adjust to environmental changes. In the future, students' back to school learning and home learning may occur frequently. Schools should improve their capacity to handle crises and provide teachers with distance training [10]. Simultaneously, communication between home and school should be improved, and guidance for home education should be enhanced so that the home may also serve as a favorable learning context for pupils. Since future learning contexts are uncertain, students should develop the awareness and ability to learn wherever they are. The capacity of pupils to adjust to contextual changes should be strengthened as well.

8. Limitations and Future Work

This study investigated the English learning motivation of middle school students in the context of the COVID-19 outbreak, it did not consider the influence of the non-epidemic on students' motivation. Future studies could analyze motivation variations between home and school learning. Moreover, the study used middle school pupils in Beijing as its sample and did not include students from the western region, particularly those from economically underdeveloped areas. Future research could make a comparison between eastern and western areas. Finally, this study identified the impact of home situation on second language learning motivation. However, each family's home environment is unique, so future research could look into the impact of cultural capital and parental companionship on students.

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