



An Empirical Research on EFL in General High School

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Abstract. Learners' differences play a decisive role in language learning. There is a need to strengthen the research from the perspective of gender difference under the second language motivational self-system learning English as a foreign language. The research explores the impact of the second language motivational self-system on the effectiveness and academic performance in English learning in general high school with empirical research and finally puts forward scientific strategies to stimulate the learning motivation of general high school students.

Keywords: Second language motivational self-system · General high school English · English Language Learning · Academic performance

1 Introduction

Today's world is an era of rapid development of information technology represented by computers [1]. The total amount of knowledge is far beyond our imagination, and the way of knowledge dissemination and learning has undergone fundamental changes. Therefore, today's learning is no longer the traditional fixed mode of "teaching" and "learning" within the scope of schools. Flexible learning and lifelong learning have become the trend in the future. Therefore, learners' autonomous learning is emphasized by lifelong learning, that is, active and voluntary learning. Nowadays, as a global universal language, English still plays an important role in education and teaching at all stages in China. With the changing requirements of the times, English education pays more and more attention to the cultivation of students' competence. Therefore, in addition to receiving the knowledge taught by school teachers, it is more important for learners to form autonomous learning behavior at the school stage. In the curriculum plan, the National English Curriculum Standards for General High School mentions that the training goal of general high schools is to "further improve students' comprehensive quality, strive to develop core literacy, so that students have ideals, beliefs and sense of social responsibility, scientific and cultural literacy, lifelong learning ability, autonomous development ability and communication and cooperation ability" [2]. Autonomous learning behavior is necessary for lifelong learning and autonomous development ability. In the implementation proposal, it is stipulated that general high school students are required

to pay attention to “cultivating students’ autonomous learning, cooperative learning and inquiry learning. Teachers are required to allow students to independently select and use network resources according to their learning needs and cognitive interests, and complete language practice activities in multiple channels and ways.” According to the curriculum standards, the cultivation of autonomous learning has been placed in a very important position in English, which is one of the three learning methods that require general high school students to focus on in the English classroom.

Learning from the research results at home and abroad and using empirical research methods, China’s foreign language teaching community has made some remarkable achievements in the research of second language (L2) motivational self-system in English learning. But there is still a lack of in-depth and systematic research on the role of the L2 motivational self-system in English as a foreign language, and how factors interact and affect academic performance. Meanwhile, according to [3], most studies reported the results combined for males and females, thus precluding any comparisons between the two genders.

Based on the systematic research and summary of the existing research results, this paper makes an empirical study on English Teaching in General High schools under the theory of the second language (L2) motivational self-system. The purpose of this study is to explore the following three questions: (1) what are the English learning motivation and self-system of year three students in general high school; (2) What are the gender differences between the ideal self and ought-to self between boys and girls of year three students; (3) What is the relationship between year three students’ English learning motivation self-system and academic performance. By studying the above three questions, this paper aims to explore the effectiveness of English learning in General High schools under the L2 motivational self-system.

2 Second Language Motivational Self-System Theory

To better carry out the follow-up research work, this paper will deeply analyze the concepts and theoretical basis related to the research of the paper, to lay a theoretical research foundation for the follow-up research.

2.1 The Systematic Background Theory of “Self-Motivation”

Since the 1990s, second language learning motivation has made great progress, thanks to two aspects: on the one hand, the core idea of “integrative motivation” in Gardner’s theory has been constantly challenged; On the other hand, a large-scale diachronic study in Hungary for 12 years provides an opportunity for people to rethink second language motivation. Zoltán Dörnyei and Csizer conducted a follow-up survey on a large sample of more than 1000 students and found that many aspects affect integrative motivation, and learners’ internal recognition of their identity is much greater than that of external language groups.

As more and more motivation studies are associated with learners’ self-identity, Zoltán Dörnyei draws lessons from the concept of “possible self” in personality psychology and social psychology to construct a new motivation research framework. Markus

(1989) defines “possible self” as “an individual’s thoughts about whom he may become, whom he wants to become, and who he is afraid to become in the future”. They divide the possible self into two categories: positive and negative, and believe that for individuals, the possible self is as real as the real self [4]. In a specific environment, the dynamic balance between one’s expected self and fear self will produce a more powerful motivation state than the two alone. Zoltán Dörnyei pointed out that “the possible self is a kind of self-expression in a person’s future state, including thoughts, images, and ideas. In most cases, it is the expression of a person’s future goals and aspirations (of course, including fear). Higgins defines “ideal self” as “the trait (such as ideal, ambition or hope) that someone expects to have.” [5] According to this theory, the self is divided into ideal self, ought-to self, and realistic self. The real self is the external expression of the characteristics that individuals (or others) think they have; the Ought-to self is the external expression of the characteristics that individuals (or others) think they should have (i.e. the responsibilities, obligations, conventions, etc.) that individuals should perform; Ideal self is the external expression of the characteristics (i.e. expectations, wishes, and hopes) that an individual (or others) wants the individual to have. The ideal L2 self and the ought-to L2 self work together on the real self. The former has the function of “promoting”, which can ensure that the real self develops in a good direction, and the latter has the function of “hindering”, which ensures that the real self does not develop in a bad direction. Dörnyei believes that Higgins’ ideal self is a positive possible self, and from the perspective of educational psychology [5], self inconsistency theory has great application value in motivation research, which is very suitable to explain the change process of individual motivation, and creates a perfect interface between personality psychology and motivation psychology. Therefore, he proposed a “second language motivational self-system” as an extension of the process-oriented motivation research paradigm.

2.2 The Theoretical Framework of “L2 Motivational Self-System”

Dörnyei’s “second language motivational self-system” includes three levels: the ideal L2 self, the ought-to L2 self, and the L2 learning experience [6] (Dörnyei, 200). Firstly, the ideal L2 self is some qualities that second language learners want to have in their ideal, such as hope, enthusiasm, and desire. It is a desire to reduce the gap between reality and the ideal self, which is consistent with the traditional integrated motivation and internalized instrumental motivation. Secondly, the ought-to L2 self means that learners believe that they should achieve their expectations or have certain characteristics to avoid possible negative results. Thirdly, the L2 learning experience focuses on the implementation of motivation. Situational motivation closely relates to the specific learning environment and previous learning experiences, such as teacher influence, syllabus, intergroup, and successful experience.

3 Data Collection and Analysis

This research aims at conducting empirical research on the L2 motivational self-system in general high schools in China. In this research, a convenient (non-probability) sample

Table 1. The distribution of participants by selected characteristics

Project	participant	Number of people	Percentage (%)
Gender	schoolboy	33	16.8
	girl student	163	83.2
Age of learning English	8 years old or under	6	3.1
	9–12 years old	118	60.2
	13–15 years old	69	35.2
	Over 16 years old	3	1.5
family background	countryside	92	46.9
	county town	64	32.7
	City	40	20.4
English level	very good	3	1.5
	good	10	5.1
	commonly	156	79.6
	difference	27	13.8

survey was conducted. This survey covers a total of 196 students of year 2 students in the Inner Mongolia Autonomous Region of China during the academic year 2020–2021. (See Table 1).

The research design is mainly quantitative, supplemented by qualitative. The main tools are questionnaires, interviews, and final examination results.

The survey questionnaire was developed based on the “Motivation questionnaire used in the 2013 Chinese survey” designed by Zoltán Dörnyei. At the same time, based on my own teaching experience, some changes were made to the questionnaire. The final questionnaire consists of two parts. The first part mainly investigates the subjects’ learning attitudes, interests, efforts, etc.; The second part is about the subjects’ personal information, such as gender, age, family background, and English learning time. All the questions of the questionnaire correspond to 14 categories of Zoltán Dörnyei: motivational behavior, the ideal L2 self, the ought-to L2 self as well as learning experiences. The questionnaire adopts a Likert 6 scale system (from 1 to 6), indicating from very disagree to very agree. The overall Cronbach’s alpha reliability coefficient of the questionnaire is 0.86, so the reliability of the questionnaire is acceptable.

To test the relationship between students’ English learning motivation self-system and English achievement, the researchers took the results of year three students’ English final examination in January 2022 as the basis for measuring students’ English language level.

3.1 Research Design

Data were collected in the class at the end of January 2022, by using the questionnaire. To eliminate students’ tension, the researcher set soft background music and told students

Table 2. Subscale of L2 motivational self-system

Sub item	Number of people	Average value	Standard deviation
Ideal L2 self	196	4.7333	1.27988
Ought-to L2 self	196	3.7333	1.22280
Learning experience	196	3.8667	1.50555

that this survey was purely academic research and was not related to class performance, exams or scores. Since it was not asked to sign names, the real situation was expected. The questionnaires were filled up in about 15 min by 196 students. In January 2022, the researchers collected the scores of 196 subjects in the final English test. All measurement data are statistically analyzed by social science statistical software SPSS16.0, which is divided into four steps: 1) input and sorting of original data; 2) Descriptive statistics were used to analyze the subjects' second language learning motivation and self-system; 3) An independent sample t-test was conducted to examine the differences in the use of motivation regulation strategies between the ideal self and ought-to self among students of different genders; 4) Finally, Pearson correlation analysis is used to investigate the relationship between second language learning motivational self-system and English achievement.

4 Research Results

4.1 The L2 Motivational Self-System of English Learning of General High School Students

The average and standard deviation of descriptive statistical analysis were used to reflect the subjects' L2 motivational self-system.

As shown in Table 2, the average value and standard deviation of the ideal L2 self, the ought-to L2 self, and learning experience in the students' English learning motivation are 4.73 ± 1.28 , 3.73 ± 1.22 , and 3.87 ± 1.51 respectively, and the average values of the three sub-items are greater than 3.5, which shows that the three sub-items in the L2 motivational self-system generally exist in students' learning and have a great impact on their English learning. Among them, the ideal L2 self has the greatest influence, followed by the influence of the learning experience, and the least influence is the ought-to L2 self. The ideal L2 self has a greater impact on English learning than the ought-to L2 self, which confirms a view in the second language motivation theory: "the more intrinsic and self internalized motivation is, the more promoting it is" [7]. The following is a descriptive statistical analysis of the three aspects of the L2 motivational self-system. The results are shown in Tables 3, 4, and 5. The ideal L2 self represents the highest level of second language a person dreams or expects to achieve. Table 3 shows that 77.1% of the students' ideal L2 self-level is higher than the average, which shows that most students can produce or already have the ideal L2 self-state. The tenth topic of the questionnaire is "I can imagine myself speaking English with international friends or colleagues". The average score on this topic is the highest, indicating that students

Table 3. The ideal L2 self scale

Arrangement	Frequency	Percentage
Below average	45	22.9
Above average	151	77.1
Total	196	100

Table 4. The ought-to L2 self-rating scale

Arrangement	Frequency	Percentage
Below average	95	46.3
Above average	101	53.7
Total	196	100

Table 5. The learning experience scale

Arrangement	frequency	percentage
Below average	70	38.3
Above average	126	61.7
Total	196	100

have a strong desire to communicate in English. The ought-to L2 self refers to the characteristics that people believe they should have to achieve certain expectations or avoid negative results. From Table 4, we can see that 53.7% of the students' L2 ought-to self-level should be higher than the average, which also shows that most of the students believe that it is their responsibility to learn English well, mainly due to the social environment, especially the pressure of employment conditions, the requirements of schools and the influence of peers. The second language learning experience refers to the motivation associated with the specific learning situation. It includes not only the surrounding learning atmosphere but also its own learning experience. For example, the achievements made or the appreciation of an English teacher's teaching style will affect the effect of second language learning. According to the data in Table 5, 61.7% of the subjects' second language learning experience is higher than the average level, which shows that the learning experience of this part of the students has a positive impact on English learning, and 38.3% of the students' English learning is negatively affected by their experience and learning environment.

Table 6. Gender difference scale of the ideal L2 self and the ought-to L2 self

Sub item	Gender	Number of people	Average value	Standard deviation	T-test	P value
Ideal L2 self	girl student	163	4.18	1.08	2.02	0.03
	schoolboy	33	3.90	1.03		
ought-to L2 self	girl student	163	3.63	1.12	2.01	0.04
	schoolboy	33	3.42	1.10		

4.2 Gender Differences Between the Ideal Self L2 and the Ought-to L2 Self

To verify whether there are differences between boys’ and girls’ ideal L2 self and ought-to L2 self, the researchers used an independent sample t-test on the questionnaire data. It can be seen from Table 6 that there are differences between girls’ and boys’ L2 ideal self ($t = 2.02, P = 0.03 < 0.05$) and girls’ and boys’ L2 supposed self ($t = 2.01, P = 0.04 < 0.05$). This shows that girls are more likely than boys to adopt a series of strategies to regulate learning motivation. This result can be used to explain why girls are generally better than boys in language learning. Previous studies have found that girls are better than boys in many aspects of language learning. For example, girls’ scores are higher than boys in the use of learning strategies [8]. The results of this study show that girls are better than boys in the regulation of the L2 motivational self-system, and can also provide evidence to explain the gender differences in language learning.

4.3 Correlation Between Learning Motivation Self-System and English Achievement

Pearson correlation analysis was used to test the relationship between students’ English test scores and second language motivational self-system. It can be seen from Table 7 that there is a large correlation between the ideal L2 self ($t = .197, P < 0.01$) and the second language learning experience ($t = .254, P < 0.01$) and academic performance. This shows that the two have a positive impact on students’ academic performance. The stronger the students’ ideal L2 self-motivation and the more successful the learning experience in the past, the easier it is to achieve better test results, and vice versa. In other words, a strong ideal L2 self and a positive learning experience can effectively improve students’ English test scores. At the same time, the data show that the correlation coefficient between the ought-to L2 self ($t = .041, P = 0.555 > 0.05$) and students’ English performance is not large. In other words, the social environment and school requirements have little impact on students’ English learning performance. This situation is worthy of further verification by collecting additional data. In short, according to the analysis data, the correlation between the three aspects of the second language motivational self-system and English achievement is as follows: second language learning experience > the ideal L2 self > the ought-to L2 self.

Table 7. Correlation scale between L2 motivational self-system and academic performance in English learning

Project		Ideal self	Ought-to self	Learning experience	Person correlation value
academic record	T-test	.197	.041	.254	P < 0.01
	P value	.005	.555	.001	P < 0.01
	Number of people	196	196	196	P = 0.555 > 0.05)

5 Conclusion and Enlightenment

This empirical study finds that: (1) L2 motivational self-system is common among general high school students and affects students' academic performance in English learning. Among them, the ideal L2 self has the greatest impact, the second language learning experience has the second, and the ought-to L2 self has the least impact. The results once again verify Dornyei's view: the study of the second language ideal self fits the motivation of foreign language learners in a foreign language environment (EFL). This view will help dispel the confusion of English motivation researchers for many years and clarify the difference between English learning motivation in ESL and EFL environments. (2) To strengthen the study of an insufficient report on the comparisons between the two genders in the L2 motivational system, this paper finds that boys and girls have different ideal L2 self and the ought-to L2 self in the second language learning motivational self-system. Girls' ideal L2 self and ought-to L2 self are higher than boys. (3) Students' ideal L2 self and second language learning experience are positively correlated with their academic performance. The higher their ideal L2 self and foreign language learning experience are, the higher their academic performance is, and vice versa. However, there is no significant correlation between ought-to L2 self and academic performance in English as a foreign language.

To make students have stronger motivational behavior, teachers should formulate scientific strategies to stimulate general high school students learning motivation, to provide a reference for relevant education and teaching practice. Teachers become their "motivational motivators". English teachers should strive to improve their personal quality, and curriculum design, and create a classroom atmosphere. Besides, teachers' behavior, personality, and teaching style will directly affect students' learning enthusiasm. For example, teachers with strong affinity and democratic teaching can help students improve their learning autonomy and internal motivation. As for the management of the classroom environment, teachers should create opportunities for students to share their learning experiences and jointly solve learning problems. A low anxiety and cooperative classroom atmosphere can better improve students' learning enthusiasm. Since the new foreign language learning motivation concepts such as "ideal L2 self" are more suitable for studying English learners in a foreign language environment (EFL) than the traditional motivation concepts, it can be assumed that if the teaching intervention

for “ought-to self” is implemented in English teaching, we will strengthen and gradually internalize students’ English learning motivation, stimulate students’ enthusiasm for English learning and improve students’ English learning performance.

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