

# Impacts of English Learning Strategies, Interests, and Anxieties on English Learning Achievements: Taking Example from Chinese College Students

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**Abstract**—This article explores the correlations between Chinese college students' English achievements and their learning strategies, learning interests, and learning anxieties, in a bid to analyze further the differences made by the effects of respondents' individual variables (gender, age, expertise, and allowance) on students' learning achievements. Based on literature review and questionnaire analysis, the following findings are obtained: 1. While the percentage of respondents who ranked their English achievements as medium or above reached 72.67%, the percentage of those who actually passed CET-4 or CET-6 was merely at 57.00%. 2. These percentages of respondents, who possessed learning strategies, learning interests, and learning anxieties, took up 65.67%, 84.67%, 60.33% respectively. 3. College students produced a noticeably positive correlation between their English achievements and their learning strategies and learning interests. 4. These respondents' age and expertise cast a significant impact on their achievements, as their expertise also affected learning strategies, and their age and expertise affected learning interests conspicuously. Therefore, this article urges teachers, government agencies, and scholars to formulate pedagogy, policies, and research addressing the need of differentiated education based on students' learning achievements, strategies, and interests, and other individual variables.

**Keywords**—English learning strategies, English learning achievements, English learning interests, English learning anxieties

## I. INTRODUCTION

In recent years, numerous English learning strategies aimed for bringing higher achievements have been advocated to promote economic, political, and cultural activities and exchanges at the individual, industrial, and international levels. Following the trend, this article adopts Oxford and Burry-Stock's (1995) ESL/EFL version of the Strategy Inventory for Language Learning (SILL) to explore the correlation between Chinese college students' English learning strategies and proficiency results. In a classic study, Oxford and Burry-Stock (1995) specified six learning strategies: Memory Strategies, Cognitive

Strategies, Compensation Strategies, Metacognitive Strategies, Affective Strategies and Social Strategies. While current literature addressing these strategies and their effects is rich and obtainable, such as Mitis and Gavriilidou (2016), which highlights the individual's achievements resulted from different learning strategies, few studies pay due attention to Chinese students' learning strategies and their achievements [1]. This study is one of the early efforts to bring Chinese students' cases into the increasingly international studies on English learning strategies.

According to our review of literature, the English learner's interest (anxiety) has a positive (negative) correlation on the application time and efficiency of his or her learning strategy, but makes little impact on the learner's performance. Despite this discovery, the relationship of learner's interest (anxiety) to his or her choice of learning strategies is often overlooked, and the scarcity of literature on this topic has caused difficulty for researchers to perceive learning interest and anxiety as an influential mediating force. To fill the lacuna, this article modifies Schraw and Lehman's (2001) Interest Classification Scale and Foreign Language Classroom Anxiety Scale (FLCAS) proposed by Horwitz, et al. (1986) in order to examine the reliability of individual interest and anxiety more carefully to determine the relationship between Chinese college students' learning strategies and English proficiency [3,4]. Additionally, this article makes modifications to interest and anxiety factors based on interview outcomes. For example, Schraw and Lehman's (2001) interest factors were tailored from five into four categories: Potential Interest, Active Interest, Assignment-Based Interest and Knowledge-Based Interest (with the removal of Text-Based Interest) [3]. Also relevant to this discussion are anxiety models proposed by Horwitz, et al. (1986), including Communication Apprehension, Test Anxiety, Fear of Negative Evaluation, etc., whose models try to establish the relationship between learning interests (anxieties) and English achievements through considering the contributions of learning strategies and individual factors.

To expand recent interdisciplinary studies on education, communication, and sociology, this article aims to explore

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the correlations between college students' English learning achievements and their learning strategies, learning interests, and learning anxieties, in a bid to analyze further the impacts of respondents' individual variables (gender, age, expertise, and allowance) on the aforesaid relationships. In a recent study, Ellis (2015) suggested that the learner's individual factors (age, attitude, learning style, motive, and individuality) should be taken more seriously to verify the causal relationship between one's learning strategies and achievements [7]. The remaining article is organized as hereunder. In section 2, both the hypothesis and research methods regarding college students' English learning strategies, achievements, and interest and anxiety are briefly reviewed. Section 3 provides the description and analysis of the statistical results of the questionnaires, followed by utilizing the results for the validation of the hypothesis. Section 4 provides the conclusions, and attempts to give an outlining of the future works at the end.

## II. THE HYPOTHESIS AND METHODS

Under the diverse backdrops and rapid communications of today's international politics, economies, and cultures, learning English helps cultivate and promote one's social status and circle at transnational political, economic and cultural levels. A wealth of literature has addressed and proven the necessity of existence of English learning studies. Very few, however, have ever put together English learning strategy, achievement, and learning interest and anxiety and discuss their relationships. This article shows its theoretical contribution and uniqueness by adopting a quantitative method to analyze learning interest and anxiety. According to CNKI, relevant research (with "English learning" as the topic) were initiated in 1958. The publication volume peaked in 2011 (1,699 pics) and the number of published articles (with "English learning," "interest," "anxiety," "strategy," and "motive" as the keywords) totaled to 21,246 in 10<sup>th</sup> December, 2018. Up to now, the number of relevant research on college English learning (as the topic) published in China reached 1,900, research on learning interest totaled to 1,630, research on learning anxiety totaled to 411, research on English learning strategy totaled to 191. Surprisingly, there are only 2 articles devoted to conceptualizing the relationship between English learning interests and learning strategy; 2 others on English learning anxiety and learning strategy. Their research methods employed simplified statistics and qualitative analyses [8].

The variables of English learning achievement can be measured with the items that are understood as follows: students' self-recognized English proficiency and the test-based learning achievement. On the one hand, the self-recognized achievement was assessed by students' self-evaluation on their English proficiency. On the other, the test-based achievement was determined by the reality of whether the respondents passed the CET-4 test administered by the Ministry of Education in China. It is a rule that only students who passed CET-4 could take the

upper-level exam, CET-6 test. The passing rate for held at universities was estimated at around 28%.

The variables of English learning strategy can be measured by: 1. Memory Strategies: measured by asking respondents whether they utilized mental association, visual symbolism, afterclass review and body language, etc., to preserve information in short-term memory or long-term memory. 2. Cognitive Strategies: measured by asking respondents whether they learned English through constant practices, classification, comprehension, analysis, and inference; or whether they utilized English derived from one's own thinking and speaking patterns. 3. Compensation Strategies: measured by asking respondents whether they would substitute difficult English sentences with synonyms and similar syntaxes if they encountered any situation requiring them to use unfamiliar English. 4. Metacognitive Strategies: measured by asking respondents whether they would monitor the learning process, control learning situation, and assign learning style and evaluate learning outcome. 5. Affective Strategies: measured by asking respondents whether they would deal with emotion and adjust motives while learning English. 6. Social Strategies: measured by asking respondent whether they like to interact and cooperate with others while learning English [2,9].

The variables of English learning interests can be measured by: 1. Potential Interest: measured by asking respondents whether they have positive feelings towards learning English, such as joyful participation, perception of English as an avenue to character development, capacity advancement, and problem solving. 2. Active Interest: measured by asking respondents whether they take efforts in mastering English, facing challenge, and overcoming setback. 3. Assignment- and Knowledge-Based Interest: measured by asking respondents whether their willingness to learn would grow based on learning assignment and knowledge [3,10].

The variables of English learning anxiety can be measured by: 1. Communication Apprehension: measured by asking respondents whether they become nervous, frightened, or panic if they fail to command a good communication scenario. 2. Test Anxiety: measured by asking respondents whether they become nervous and anxious due to their fear of errors in an English exam. 3. Fear of Negative Evaluation: measure by asking respondents whether they generate negative evaluation upon other people's reaction to one's English [4,11].

The variables of individual factors can be measured by the gender, age, expertise, allowance of the respondents. Based on the interview outcomes, this article divides the age measure scale into two categories: below 20-year-old and above 21-year-old; expertise measure scale into English major and non-English major users; monthly allowance measure scale into below RMB 2,000 and above RMB 2,001 [7,11].

### III. THE STATISTICAL RESULTS

In this study, EXCEL and SPSS 24.0 software has been employed for developing descriptive statistics, independent samples T tests, and analysis of variance.

This study's questionnaire is surveyed online on December 1-10, 2018, in China. The number of the valid responses reached 300, whose individual factors can be described as follows: (1) Gender: male 33.67%, female 66.33%. (2) Age: below 20-year-old 71.33%, above 21-year-old 28.67%. (3) Expertise: English major 53.33%, and non-English major 46.67%. (4) Monthly Allowance: average monthly allowance below RMB \$2,000 accounted for 53.00%, and above RMB \$2,001 accounted for 47.00%.

The statistical results of the variables affecting learning achievements can be described as follows: learners who identified their self-recognized English achievements as medium or above represented 25.67%, learners who passed both CET-4 and CET-6 represented 25.67%, who passed CET-4 represented 31.33%, who failed both tests represented 43.00%. Additionally, learning strategies were affected by the following variables: 65.67% respondents recognized their use of learning strategies, the proportion of which can be shown this way (from large to small): users of Compensation Strategies represented 65.00%, of Cognitive Strategies 62.33%, of Affective Strategies 60.33%, of Social Strategies 57.33%, of Metacognitive Strategies 56.67%, of Memory Strategies 50.00%. As for learning interests, majority of respondents reacted positively: 84.67% showed they were driven by interests, the proportion of which can be shown this way (from large to small): the percentage of respondents with Assignment- and Knowledge-Based Interests reached 83.67%, with Active Interest 74.00%, with Potential Interest 62.67%. Meanwhile, over a half of respondents agreed that anxiety

played a role: 60.33% indicated that they were afflicted by various learning anxieties, the proportion of which can be shown this way (from large to small): the percentage of respondents with Communication Apprehension reached 62.67%, with Test Anxiety reached 61.33%, with Fear of Negative Evaluation reached 45.67%.

This study analyzes how Chinese college students' learning achievements may interact positively or negatively with considerations of learning strategy, interest, and anxiety, and the ANOVA can be expressed in Table 1. The analysis generates a statistically significant interaction between Chinese college students' learning achievements and their learning strategies and interests, whereas learning anxieties form a significant interaction with the students' self-recognized achievements. For example, our findings highlight the following noticeable positive interactions:

1. Learning strategies and Active and Potential Interests form a significant interaction with English learning achievements.
2. Assignment- and Knowledge-Based Interests, Communication Apprehension, Fear of Negative Evaluation form a significant interaction with self-recognized achievement.
3. Test Anxiety enacts a significant negative impact on test-based achievement.

To probe into aforesaid results, we consider the impacts of respondents' individual factors (gender, age, expertise, and allowance) on their achievements (and in relation to strategy, interest, and anxiety). This study shows the correlations between respondents' individual factors and English achievements using independent variables of individual factors in Table 2.

TABLE 1. INDEPENDENT SAMPLES T-TEST FOR ENGLISH ACHIEVEMENTS AND INTERACTIVE FACTORS (STRATEGIES, INTERESTS, AND ANXIETIES)

		English Learning Achievements	
		Self-recognized	Test-based
English Learning Strategies	Overall	19.80***	8.59***
	Memory Strategies	11.12***	4.66**
	Cognitive Strategies	18.83***	9.60***
	Compensation Strategies	18.53***	8.12***
	Metacognitive Strategies	18.20***	9.88***
	Affective Strategies	15.29***	5.99**
	Social Strategies	17.17***	5.32**
English Learning Interests	Overall	10.64***	4.25*
	Potential Interest	12.2***	4.36*
	Active Interest	13.12***	5.05**
	Assignment- and Knowledge-Based Interests	3.55**	1.97
English Learning Anxieties	Overall	3.02*	0.80
	Communication Apprehension	2.82*	0.08
	Test Anxiety	1.55	3.26*
	Fear of Negative Evaluation	3.19*	1.01

a. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001

According to Table 2, the respondents' age and expertise were factored in the learners' achievements significantly. For instance, junior respondents' self-recognized achievement was notably higher than that of senior respondents', whereas senior respondents' test-based achievement was conversely higher than that of junior respondents'. Another obvious example showed that English majors generally achieved higher than non-English majors.

Table 2 also makes visible that, just as the respondents' expertise affected their learning strategies, the respondents' gender and expertise claimed significant influence on their learning interests. For instance, female respondents generally showed stronger learning interests (Active Interest and Assignment- and Knowledge-Based Interest) than male respondents. Also, it goes without saying that the frequency of use of language learning strategies and possession of learning interests (potential and active) by English majors were significantly higher than those by non-English majors. Particularly, learners in possession of a larger amount of allowance generally showed a significantly higher frequency of use of social strategies than those whose allowance was smaller.

After consulting with the questionnaire results, our

study indicates the significant correlations between Chinese college students' English learning achievements and their learning strategies, learning interests, and learning anxieties, while also taking into account the different meanings and effects brought by respondents' individual variables (gender, age, expertise, and allowance) upon students' learning achievements. These correlations can be understood as follows: (1) Over 70% college students' self-recognized language achievement was rated above medium, whereas in reality only 50% students had passed CET-4 or CET-6 examinations. This imbalance illustrated a significant difference between students' beliefs and the reality. (2) The percentages of respondents, who possessed learning strategies, learning interests, and learning anxieties, were 65.67%, 84.67%, and 60.33%. The high percentages suggest that in addition to interest and major, students in possession of higher frequency of use of learning strategy and higher frequency of anxiety normally achieved significant impacts on their English performance. (3) The expertise of respondents produced statistically significant interactions with students' achievements, strategies, and interests. English majors generally displayed higher English achievements, strategies, and interests.

TABLE 2. INDEPENDENT SAMPLES T-TESTS FOR ENGLISH ACHIEVEMENTS AND INDIVIDUAL VARIABLES (GENDER, AGE, EXPERTISE, AND ALLOWANCE)

		Respondent's Individual Variables			
		Gender	Age	Expertise	Allowance
English Learning Achievements	Self-Recognition	-	9.12** (2.37*)	16.97*** (-3.09**)	-
	Test-Based Result	-	0.15 (-3.34**)	2.95 (-2.26*)	-
English Learning Strategies	Overall	-	-	1.77 (-3.45**)	-
	Memory Strategies	-	-	5.62* (-3.18**)	-
	Cognitive Strategies	-	-	0.94 (-3.15**)	-
	Compensation Strategies	-	-	0.82 (-3.04**)	-
	Metacognitive Strategies	-	-	0.41 (-2.92**)	-
	Affective Strategies	-	-	1.99 (-3.31**)	-
	Social Strategies	-	-	1.41 (-3.23**)	$3.41 \times 10^{-4}$ (-2.15*)
English Learning Interests	Overall	6.93** (2.74**)	-	9.92** (-2.89**)	-
	Potential Interest	-	-	11.10** (-2.89**)	-
	Active Interest	0.46 (2.81**)	-	8.76** (-3.42**)	-
	Assignment- and Knowledge- based Interests	2.70 (3.48**)	-	-	-
English Learning Anxieties	Overall	-	-	-	-
	Communication Apprehension	-	-	-	-
	Test Anxiety	-	-	-	-
	Fear of Negative Evaluation	-	-	-	-

<sup>b</sup> \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001

In light of aforesaid discussion, this article carries the following pedagogical implications: (1) due to the inconsistency between self-recognized achievement and

test-based achievement, we believe it is a teacher's duty to discern the causes to such confusion and collision and help students improve their test scores. (2) Given the significant

causal relationships between learning achievement and learning strategy, interest, and anxiety, teachers and authorities should consider them valuable sources and guidance for designing new curricula aimed to facilitate students' foreign language acquisition. (3) As this study has indicated a strong interaction between learning strategy and learning interest, teachers may help students acquire and establish new and efficient learning strategies as the language course seeks to enhance the learners' motivation and confidence during the course of language acquisition.

#### IV. CONCLUSION

As the degrees of internationalization and people's education are soaring incessantly in China, foreign language learning has become one of the essential subjects in Chinese educational fields. The aim of this study is to establish the correlation between Chinese college students' English achievements and learners' strategies, interests, and anxieties, and to analyze the reliability of respondents' individual variables such as gender, age, expertise, and allowance to affect the relationship between achievements, learning strategies, and interests/anxieties during the course of this research.

Based on the questionnaire results, we can draw the following conclusions: (1) More than 70% college students' self-recognized language achievement was rated above medium, whereas in reality only slightly more than 50% students had passed CET-4 or CET-6 examinations. (2) Over 80% college students showed interests in learning English, whereas over 60% students would utilize learning strategies and harbor anxious feelings towards learning English. (3) As this study suggests that there are statistically significant interaction between college students' learning achievements, use of strategies, and learners' interests and anxieties, we urge that teachers, government agencies, and scholars take corresponding measures and policies and undertake similar research with new approaches or concerns. (4) Furthermore, we recommend that teachers, government agencies, and scholars should prioritize pedagogy, policies, and research addressing the need to differentiate students based on the following individual variables that our research has corroborated:

1. The respondents' learning achievements were highly correlated to their age and expertise.
2. The respondents' learning strategies were significantly interacted with their expertise.
3. The respondents' learning interests were deeply impacted by their gender and expertise.

Given the credibility of our findings, this article hopes to venture some modest recommendations on future research. (1) Given the stable and positive relationship between learning strategy and learning achievement, it is expected that more qualitative and quantitative data should be collected to analyze and decrease inconsistency between student's recognition and test outcome of their English

proficiency. (2) Going beyond explaining the difference (between the learner's belief and the reality), researchers should further diagnose which learning strategy is more frequently used and anxiety-reducing to determine the relationship between anxiety and learning strategy. Such research proposes a more thorough study on the interaction between affective learning strategies and types of language anxiety, keeping us to search for the most effective and up-to-date anxiety-repellent learning strategy. (3) Although anxiety and choice of learning strategy are not a focus in this study, it is our contention that the relationship between the two requires deeper exploration. Previous research has assumed that anxiety affects the quantities and types of strategies, but whether these exists a reciprocal relationship between the two still stands at an embryonic stage and demands a more sophisticated study. (4) Moreover, as the degree of learning anxiety (interest) will vary dependent on the user's familiarity with the language, differences and similarities between English majors' and non-English majors' learning anxieties (interests) should be investigated, together with other individual variables, to form a more complete picture of this area. (5) Provided that language anxiety and learning strategy become a dominant research subject, more nuanced studies on their interactions will be presented (such as place-specific research) to push the academia to imagine the multicultural and multilingual future research environment. (6) Finally, as language training in college is increasingly treated as a process of cultivating students' skills of active learning, it is suggested that in the future research the relationship between active learning and other variables affecting language achievement, learning interest, and learning anxiety is to be prioritized to emphasize the practical value of ESL/EFL studies.

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