ENDOGENOUS GENERATION MECHANISM OF ENGLISH LEARNING ANXIETY BASED ON PSYCHOLOGICAL THEORIES

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Abstract

Many foreign language learners suffer from learning anxiety, due to the accumulation of mental stress in language learning. This paper attempts to disclose the endogenous generation mechanism of English learning anxiety among middle school students in China. To this end, 533 middle school students were selected for a questionnaire survey and individual interviews on English learning anxiety and its psychological influencing factors. The survey data were subjected to multivariate variance analysis, multiple regression analysis and path analysis. The results show that English learning anxiety is not high among middle school students in China, but indeed affects their learning performance; the English learning anxiety is significantly affected by efficacy, deep motivation and ambiguity tolerance, and indirectly influenced by positive attribution and surface motivation. The research findings make it easier to ease or eliminate the English learning anxiety of middle school students.

Key words: *Psychological Theory, English Learning Anxiety, Endogenous Mechanism.*

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INTRODUCTION

Since the 1950s, some scholars have found that in the process of foreign language learning, some learners will produce some resistant and negative emotions, and this finding has urged the researchers to study the impact of learning anxiety on foreign language learning (Solomon & Wynne, 1954; Bartholomew & Victor, 2004). Years of research have shown that foreign language learning anxiety has a certain effect on the English learning performance (Mower, 1956; Scovel, 1978), but so far, there is still no consensus on the relationship between foreign language learning performance and learning anxiety (Dewaele, 2002).

Many studies have shown that learning

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anxiety has many negative effects on foreign language learning (Weinstein, Cubberly, & Richardson, 1982). For example, some students deliberately postpone language learning or change their majors because of learning anxiety, they avoid communicating with other students or giving presentation in the foreign language classes, some students may even produce excessive self-denial because of the fear for negative evaluation, and thereby resulting in the failure in examinations (Chipman, Krantz, & Silver, 1992; Zaider, Heimberg, Fresco et al., 2003).

In addition to general observations, the researchers also conducted extensive empirical research on the influence of foreign language learning anxiety on students' growth and psychology (Seccia, 2006). Through questionnaire survey, many researchers have drawn the conclusion that learning anxiety has a negative impact on foreign language learning, and students whose anxiety is severer tend to have lower foreign language scores (Novy, Stanle, Averill et al., 2001). Some researchers

Figure 1. **Endogenous psychological influencing factors of English learning anxiety**
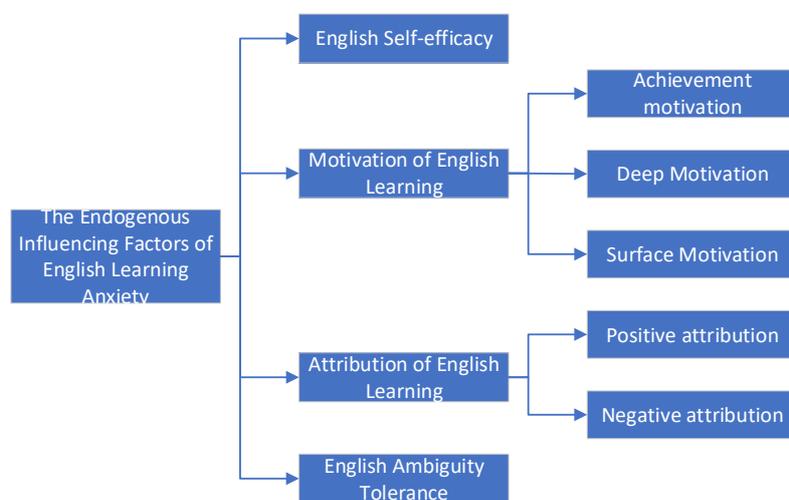
believe that anxiety not only affects the total score of the foreign language, but also has a negative effect on the specific aspects in foreign language learning, such as listening, speaking, reading or writing. Canu studied the influence of learning anxiety on learners' psychological emotions (Canu, 2008); Sinclair et al. studied the influence of learning anxiety on speaking, writing, reading, and listening performances (Sinclair, Siefert, Slavinmulford et al., 2012); Hirsch et al. studied the various negative influences of learning anxiety on the speaking proficiency, the planning time before writing, and the reading and listening abilities (Hirsch, Hayes, Mathews et al., 2012).

There are many reasons that will cause the foreign language learning anxiety, generally, there are external factors (such as learning environment, family education, etc.) and internal factors (such as the learner's attitude, the desire for English cognition, etc.). Psychologists generally consider the learner's emotional feedback as a negative impact, that is, even if the external conditions are good, they won't be willing to learn further, nor to communicate with others (Selkirk, Bouchey, & Eccles, 2011).

Therefore, in this context, this paper attempts to discover and study the endogenous influencing factors of English learning anxiety from the perspective of the decision theory of psychology, and the conclusions of this study can better apply the cognitive psychology to the English teaching methods.

REASONS FOR FOREIGN LANGUAGE LEARNING ANXIETY

In general, the causes of learning anxiety can be divided into external and internal factors. Students' self-abilities, personality traits, intelligence level, academic performance, family environment, parents' educational expectation, and academic workload are all related to students' anxiety. External factors such as society, school, and family are the causes of middle school students' anxiety disorder. The exogenous factors mainly include: family expectation and educational method, the teaching method of teachers, college entrance examination competition and employment pressure, and the competition among students, etc. Endogenous factors come from the individual learners have a direct negative influence on learners' internal self-esteem and values, such as achievement motivation, mental orientation, mood, temperament, and learning result attribution (Mohammadi, 2014).

Psychological theory tells us that the internal factors are decisive factors. If someone does not want to learn, even good enough external environment can't shake his/her mind of refusing studying, therefore, external factors can only exert their effects through internal factors, in other words, among the factors that have an effect on foreign language learning anxiety, the individual factors of learners are crucial. When the external factors such as competitive

pressure, academic pressure, and public opinion are almost identical, different learners would have different psychological feelings and they would exhibit different levels of learning anxiety, which is obviously determined by the endogenous factors. Under the current situation of increasing external factors, it is more necessary to strengthen learners' self-control and self-regulation of their internal factors. Based on other literatures and psychological theories, the endogenous factors affecting middle school students' English learning anxiety are summarized, as shown in Figure 1.

EMPIRICAL RESEARCH

Subjects

Two middle schools in Tianjin were selected as the research targets, one of which is an ordinary middle school and the other is a key middle school. 533 student subjects were randomly selected, and the composition of the subjects is shown in Table 1.

The overall level and characteristics of middle school students' English learning anxiety

The overall level and characteristics of middle school students' English learning anxiety are shown in Table 2. Based on the overall characteristics of the data, in order to explore the influence of gender, school and grade on English learning anxiety and the interaction between various factors, the analysis results are shown in Table 3.

For students of different genders, the comparison of the grade differences in the total

scores of English learning anxiety is shown in Figure 2.

It can be seen from Figure 2 that the English learning anxiety of the junior-three and senior-three grades students in the key school is significantly lower than that of ordinary middle school students; while the English learning anxiety of the senior-one and senior-two grades students in the key school is significantly higher than that of ordinary middle school students.

For students from different schools and grades, the characteristics of English learning anxiety are shown in Figure 3.

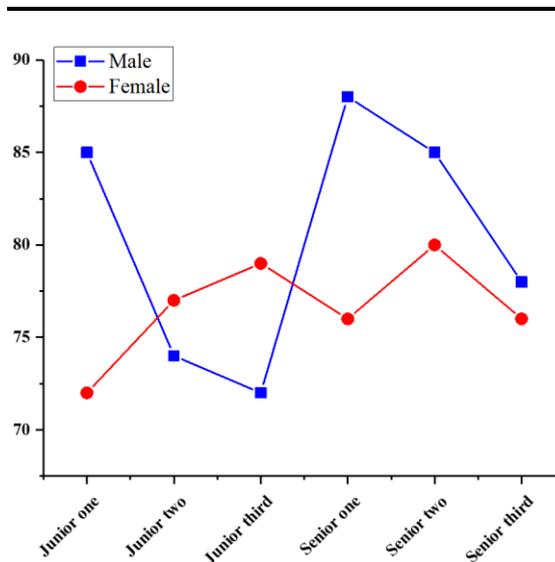*Figure 2.* **Comparison of English learning anxiety of different gender students in different grades**

Table 1. **Composition of the subjects**

	Category	Key Middle Schools	General Middle Schools	Sum
Gender	Male	170	114	284
	Female	126	122	248
Grade	Junior one	53	46	99
	Junior two	52	47	99
	Junior third	64	35	99
	Senior one	8	51	59
	Senior two	53	46	99
	Senior third	37	40	77

Table 2. **English learning anxiety characteristics**

| Dimensions	Examination anxiety rate	Classroom anxiety	Communication Rate	Negative Assessment Anxiety	Listening Anxiety	Total Anxiety
Average value	3.02	1.93	2.94	2.87	2.59	2.69
Standard deviation	0.83	0.84	0.85	0.87	0.84	0.72

Table 3. **Multivariate variance analysis of the total scores of English learning anxiety**

Source of variation	Df	Mean square	F value	Sig
School	3	292.174	0.864	0.513
Grade	6	714.056	1.935	0.232
Gender	3	2271.925	5.888	0.14
School*Grade	6	1647.998	4.305	0.124
School*Gender	3	442.567	1.246	0.413
Grade*Gender	6	1436.197	3.767	0.126
School*Grade*Gender	5	501.324	1.395	0.398

Table 4. **Correlation coefficients between each influencing factor and English learning anxiety**

	Category	Examination anxiety rate	Classroom anxiety	Communication Rate	Negative Assessment Anxiety	Listening Anxiety	Total Anxiety
	Self-efficacy	-0.489	-0.551	-0.497	-0.665	-0.48	-0.666
Attribution	Negative Attribution	0.551	0.698	0.602	0.698	0.615	0.734
	Positive	0.191	0.002	0.104	0.092	0.148	0.105
	Total score	0.47	0.401	0.438	0.465	0.46	0.512
Motivation	Surface Motivation	0.18	0.049	0.027	0.014	0.124	-0.577
	Deep Motivation	-0.109	-0.258	-0.341	-0.393	-0.191	-0.349
	Achievement motivation	0.374	0.149	0.285	0.209	0.276	0.288
	Total score	0.117	-0.114	0.385	-0.197	0.006	-0.112
Fuzzy Tolerance		-0.331	-0.319	-0.392	-0.39	-0.399	-0.482

Figure 3. **Characteristics of English learning anxiety of students in different grades from different schools**
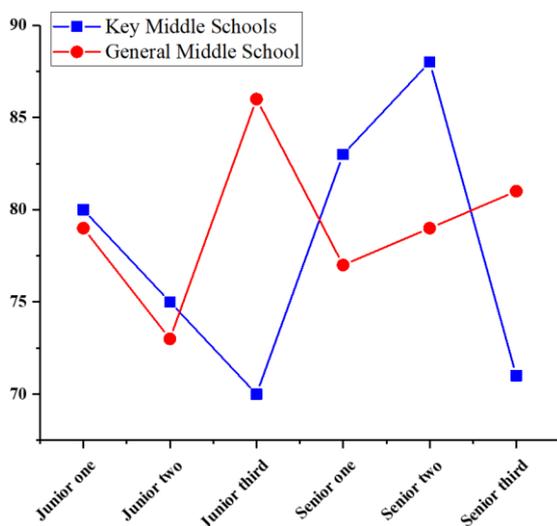
It can be seen from Figure 3 that the English learning anxiety of students from junior and senior graduating classes of the key middle school is significantly lower than that of ordinary middle school students, while the English learning anxiety of students from junior-one and senior-two grades of key middle school is significantly higher than that of ordinary middle school students.

Influence of endogenous psychological factors on learning anxiety

The correlation coefficients between each psychological influencing factor and the English learning anxiety are shown in Table 4.

Table 4 shows that there is a significant correlation between the learners' intrinsic psychological factors such as the self-efficacy, achievement motivation, ambiguity tolerance and deep motivation, and the English learning anxiety.

The method of successive approximation was adopted to screen the independent variables, the psychological factors that were substituted into the regression equation were, in turn: self-efficacy, ambiguity tolerance, achievement motivation and negative attribution, and the multivariate correlation coefficient is 0.854. That is to say, the four variables substituted into the regression equation can jointly predict 85.6% of the English learning anxiety. In addition, from the results of variance analysis of the regression equation we can see that the f-value reaches a very significant level, so we can establish the following regression equation:

Learning anxiety = -0.619 * self-efficacy - 0.192 * ambiguity tolerance + 0.152 * achievement motivation + 0.079 * negative

attribution (1)

In order to further understand the indirect effects of different endogenous psychological factors on English learning anxiety, the regression coefficients between each influencing factor were obtained through multiple regression analysis. Based on this, the indirect effects of psychological factors on English learning anxiety were calculated and the results are shown in Table 5.

It can be seen from Table 5 that there are obvious direct effects between these psychological factors, which indicates that some psychological factors can also affect the English learning anxiety indirectly by affecting other factors. The specific manifestation is that, although positive attribution, surface motivation, and deep motivation have no direct

impact on English learning anxiety, they have an indirect effect on English learning anxiety by affecting other factors. Positive attribution affects learning anxiety indirectly by affecting the achievement motivation factor, surface motivation affects learning anxiety indirectly by affecting the achievement motivation factor, and deep motivation affects learning anxiety indirectly by affecting ambiguity tolerance and self-efficacy.

Further, Figure 4 shows the path analysis of the effects of various psychological factors on English learning anxiety, from the figure we can clearly understand the endogenous mechanism of the effects of different psychological factors on English learning anxiety.

Figure 4. **Path analysis of the influence of psychological factors on English learning anxiety**
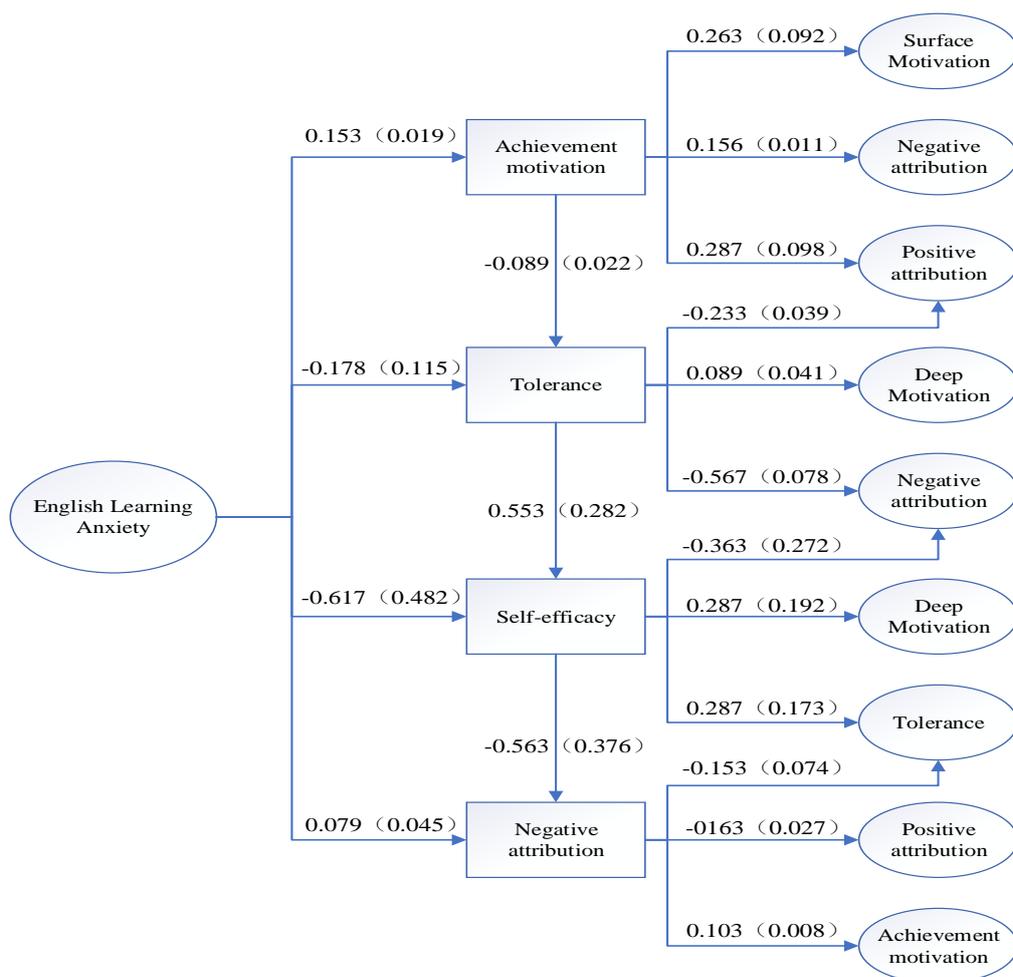
Table 5. **Multiple regression analysis of different psychological factors of English learning anxiety**

Dependent variable	Independent variable	Standard regression coefficient B	Relevance coefficient R	R2	T value	Meaning hierarchy
Self-efficacy	Negative attribution	-0.386	-0.647	0.274	-11.855	0.012
	Deep Motivation	0.339	0.596	0.203	10.292	0.012
	Tolerance	0.305	0.61	0.187	8.805	0.012
Tolerance	Self-efficacy	0.466	0.61	0.283	8.404	0.012
	Positive attribution	-0.212	-0.166	0.052	-5.744	0.012
	Negative attribution	-0.147	-0.456	0.086	-3.308	0.013
	Achievement motivation	-0.078	-0.173	0.029	-2.336	0.031
Achievement motivation	Deep Motivation	0.103	0.374	0.045	2.053	0.054
	Positive attribution	0.291	0.356	0.108	6.182	0.012
	Surface Motivation	0.269	0.351	0.099	5.743	0.012
	Negative attribution	0.162	0.101	0.025	3.53	0.012
Negative attribution	Self-efficacy	-0.543	-0.647	0.378	-12.587	0.012
	Positive attribution	-0.152	-0.135	0.036	-4.342	0.012
	Tolerance	-0.135	-0.456	0.081	-3.256	0.013
	Achievement motivation	0.112	0.101	0.021	2.72	0.019

Figure 4 shows that self-efficacy, ambiguity tolerance, achievement motivation, and negative attribution have direct and indirect effects on English learning anxiety by affecting other psychological factors.

CONCLUSIONS

Based on psychology, this paper explored the endogenous generation mechanism of English learning anxiety and drew the following conclusions:

(1) The English learning anxiety questionnaire needs to have good reliability and validity to accurately reflect the English learning anxiety of middle school students;

(2) Overall, middle school students' English learning anxiety is not high, but English learning anxiety has a negative impact on their performance;

(3) Among the psychological factors, self-efficacy, deep motivation and ambiguity tolerance have an impact on the English learning anxiety of middle school students to a large extent. Although positive attribution and surface motivation do not directly affect learning anxiety, they can still have an indirect impact via other factors.

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