

# *An Empirical Research on the “Integrated Teaching Mode” of College English from the Perspective of the Memetics*

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**Abstract:** Since the Memetics was introduced into China, scholars have applied it into each aspect of English teaching such as listening, speaking, reading, writing and translating. Whereas it needs to integrate each aspect of college English teaching together so as to achieve the purpose of cultivating students' English application abilities in an all-round way. In this research, we establish an “integrated teaching mode of listening, speaking, reading, writing and translating” and make the corresponding empirical research. The result of the research shows that the new teaching mode can cultivate better learning habits for the students, effectively enhance students' interest in learning and improve their learning motivation and academic results. As a result, their comprehensive application abilities can be totally enhanced.

**Keywords:** *Memetics; Integrated teaching mode; College English; Empirical research*

## I. INTRODUCTION

Meme, the headword of the Memetics, is coming from *The Selfish Gene* written by Pro. Richard Dawkins in 1976 [1]. And in 1999, Susan Blackmore made a definition for this word in her book *The Meme Machine* as “a command which is stored in brain (or other object) and is propagated through imitation and carries out various kind of activities” [2]. Then, *Oxford English Dictionary* defines meme as “a unit of cultural information, such as a cultural practice or idea, that is transmitted verbally or by repeated action from one mind to another.” Ritt Nikolaus regards memes as mental patterns, “which copy themselves from one brain to another when communication and language acquisition take place” [3].

Chinese scholars Ziran He and Xuelin He introduced the Memetics into China in 2003 [4]. Since the first issue of a series of domestic papers on Memetics and its application research on the *Foreign Language Research* in 2008, more and more scholars have applied the Memetics to the English teaching research, including vocabulary, audiolingual, translation, writing, grammar and reading [5-11]. Scholars mainly focus on introducing the inspiration and teaching experience of applying the Memetics in one or two aspects of

language teaching, whereas seldom on the integrated application of listening, speaking, reading, writing and translating, or make the corresponding empirical research. In view of this, in order to mobilize students' interest in English learning, cultivate their good learning habits, improve their comprehensive English application ability, and also further enrich the empirical research of college English teaching based on the Memetics, we integrate the Memetics with each aspect of practical teaching, including listening, speaking, reading, writing and translating, and finally verify its feasibility and effectiveness through questionnaire, classroom observation, quizzes, interviews and other assessment methods. Thus, we establish a college English teaching mode with the perspective of the Memetics, which is called as “integrated teaching mode of listening, speaking reading, writing and translating” (hereinafter referred to as “integrated teaching mode”), and make corresponding empirical research based on the consideration of the students' cognitive abilities and emotional characteristics[11].

## II. THEORETICAL BASIS OF EXPERIMENT

According to the Memetics, language memes can be reflected in three sides: education and knowledge imparting, use of the language itself and the exchange and communication through messages[12] [13]. The life cycle of memes has 4 phases: assimilation, memorization, expression and propagation. Ways to replicate and propagate language memes are the meme genotype with the “same contents and different forms” and the meme phenotype with the “same forms and different contents”. Compared with the individual meme, memplexes can be propagated more easily.

## III. EXPERIMENTAL DESIGN

### A. Experimental Problems

The research aims to solve the following problems:

1) Compared with the current teaching mode, can the “integrated teaching mode” further improve students' English level?

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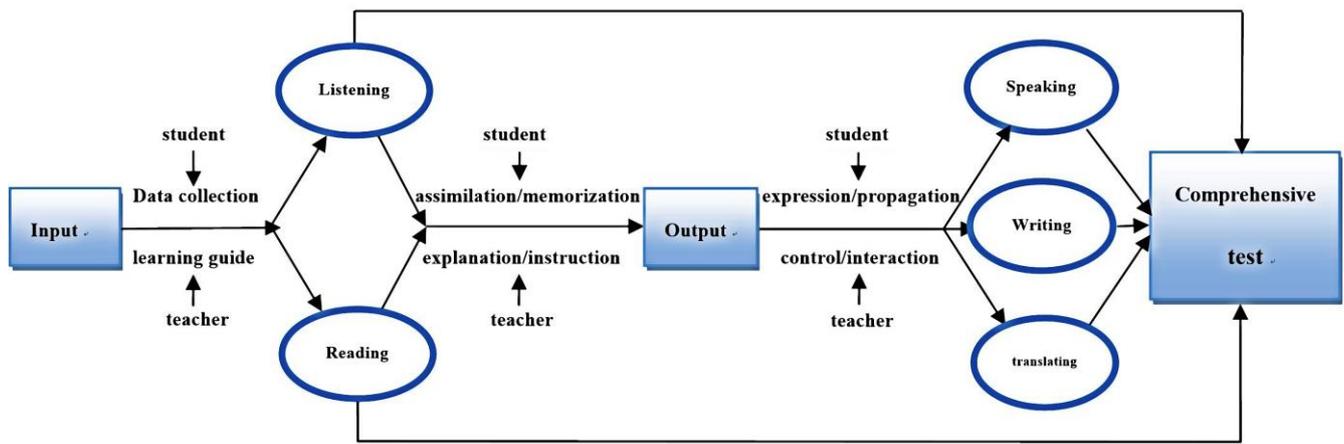


Fig. 1. Basic construction model of the "integrated teaching mode"

2) Compared with the current teaching mode, can the "integrated teaching mode" have different influences on students' English learning habits and motivation?

**B. Experimental Object**

We selected 94 first-year undergraduates of non-English major from two classes of liberal arts of an ordinary university in Wuhan, one class majors in human resources with 47 students (13 boys, 34girls), and the other class majors in accounting with 47 students (12 boys, 35 girls). We take the final exams results (100 scores) of two classes in the first semester to conduct independent sample t-test. The test result (see TABLE I.) showed that the average scores and the standard deviation of the two classes were very close without significant difference ( $p=.664>.05$ ). In general, the overall English performances of the two classes are roughly the same, suitable for comparative test. We take the Human Resources Class as an experimental class (hereinafter called as Class I), and take the Accounting Class as the control class (hereinafter called as Class II).

TABLE I. T-TEST RESULTS OF THE FINAL EXAMINATION IN THE FIRST SEMESTER

Class	N	Mean Value	Standard Deviation	T Value	P Value
Class I	47	70.17	12.009	-.537	.664
Class II	47	71.51	12.202		

**C. Experimental Process**

This experiment lasted two semesters from February to December. The experiment constructed and implemented the "integrated teaching mode".

1) Construction of Teaching Mode

The "integrated teaching mode" is divided into 3 phases:

- a) Input: assimilation and memorization;
- b) Output: expression and propagation;

c) Comprehensive test of the "integrated teaching mode".

See above Fig. 1 for the basic construction model.

2) Operation of the "integrated teaching mode"

a) Input: assimilation and memorization

This phase is the precondition for the successful implementation of the "integrated teaching mode".

Before class, teachers would prepare the learning guide by choosing the content which are practical, close to life and easily imitated from memes' three dimensions of the fidelity, fecundity and longevity based on the current knowledge level, hobbies and expressive ability of students. The learning guide covers the aspects of listening, speaking, reading, writing and translating, which guides the students to search for the materials from books and the internet in the library, autonomous learning center and other places. Students read, recite, retell, imitatively translate and write (assimilating and memorizing) the contents of related materials (memes), making sound preparation before class. The purpose of this phase is to help the students to internalize each message into their own knowledge, and cultivate their autonomous learning ability and good study habits.

b) Output: expression and propagation

This phase shows students' understanding and absorption of all kinds of knowledge, and promotes students to further supplement of new knowledge, forming a virtuous cycle of learning.

Through all kinds of class activities and class practice, teachers present the language memes assimilated and memorized in early step to the students in a way which the students feel interested and are willing to accept. There are various forms of class activities and practices, including meme genotypes, such as repeat, recitation and sentence-making; meme phenotype, such as imitative writing sentences, oral composition, imitative conversation and relevant sentence translation [14]. These methods make the boring language learning interesting, strengthen the interaction between

teachers and students or among students, which enlivening class atmosphere. More important is that these vocabulary and grammar memes will be internalized into memplexes that can be flexibly used. In this phase, special attention should be paid to the fact that teachers should effectively control the classroom, actively encourage the replication and propagation of positive language memes, create a good language environment and ensure normal classroom order.

c) Comprehensive test of the "integrated teaching mode"

According to the Memetics, compared with the individual memes, memplexes can be propagated more easily. The purpose of this test is to integrate the individual memes and small memplexes into larger memplexes, and leave profound memory on students by involving them into various kinds of presentations so as to realize the development of learned knowledge to successful memes with high fidelity, fecundity and longevity [15].

Comprehensive test of the "integrated teaching mode" includes the test to each aspect of listening, speaking, reading, writing and translating. It consists of 3 phases. The first phase is "listening and reading", which tests whether the pronunciation of the students are correct according to the audio materials. The second phase is "testing", which mainly aims at translating and writing. Teachers will ask students to make imitation to write and make sentences with the words, phrases and sentence patterns which have just been explained. The third phase is "presentation", which is the most important phase. After learning of each unit, two periods of students' presentation is set with various forms to test their comprehensive application ability. For instance, the students can use the learnt sentence patterns to write the scenario script according to the contents or topics of the text and present them in class. The degree of difficulty for presentation varies from different students, whereas it is necessary to cover the learnt knowledge points, and it should be presented in English. In order to ensure the third phase smooth, teachers shall organize learning teams with 6-8 students for the complementary effect of their genders, characteristics and English abilities and convenience of rehearsal at the beginning of the first semester. Suitable presentation topics and materials will be given one week in advance, and presentations will be made in turn after rehearsal.

3) The assessment system of teaching mode

In order to test the effect of the "integrated teaching mode", we establish the assessment system under the teaching mode, including summative assessment and formative assessment.

Summative assessment includes final exam, CET-4 and CET-6. About 70% of the questions in final exam are objective questions, and the code of points for subjective questions shall refer to that of CET-4 and CET-6. In order to ensure a high score reliability coefficient, examination papers are graded according to the assessment standard and the avoidance principle. Formative assessment includes questionnaire, classroom observation, interview, classroom activity participation, quizzes and other in-class tests.

During the implementation process, the research team members discussed and analyzed the problems in the experiment through classroom observation and teaching reflection so as to perfect the implementation and ensure the effectiveness of the final experimental results.

The research team members also test whether the classroom teaching design has reached the expected goal through data analysis of the above assessment results, and constantly improve the classroom teaching design according to the assessment results, so that the "integrated teaching mode" can achieve relatively ideal teaching effect.

#### D. Collection of Experimental Data

1) Test

At the end of the experiment, we took an independent sample t-test on the final exam scores of Class I and Class II in the third semester, and analyzed whether Class I improved faster than Class II through the experiment in the two semesters.

2) The questionnaire survey

In order to see whether the "integrated teaching mode" had an impact on students' learning motivation, we adopted the motivation type questionnaire designed by Kun Li [16]. The exploratory factor analysis of the survey data showed that the questionnaire has good structural validity and reliability [17]. The questionnaire includes 8 factors, including 40 items: (1) interest enhancement, including 7 items; (2) performance goal arousal, 7 items; (3) master goal arousal, 6 items; (4) self-reward, 5 items; (5) consequences envisaged, 4 items; (6) task value enhancement, 3 items; (7) volitional control, 4 items; (8) self-efficacy improvement, 4 items. It is scored with a 5-point Likert scale.

In the early stage of the experiment, we pretested this learning motivation questionnaire in Class I and Class II, and collected a total of 94 valid questionnaires (47 from Class I and 47 from Class II).

In the later stage of the experiment, the learning motivation questionnaire used in the pre-test was tested again in Class I and Class II. A total of 94 valid questionnaires (47 from Class I and 47 from Class II) were collected.

3) Interview

After the test, we respectively chose 2 students with high, medium and low English level from the Class I on the principle of voluntariness, and interviewed them separately for their feedback about the "integrated teaching mode".

## IV. RESULTS AND DISCUSSION

### A. The influence of the "integrated teaching mode" on students' English proficiency

The statistical analysis method was used to analyze the results of the final examination in two classes. The result showed that, compared with current teaching mode, the

“integrated teaching mode” can better improve the English level of the students. In the pre-test TABLE I, the average total score of Class I is 1.3 points lower than that of Class II, while TABLE II shows that the average total score of Class I is 3 points higher than that of Class II, and  $p=.003 <.05$ . It shows that the average English proficiency of Class I is significantly different from that of Class II, and its level of improvement was obviously higher than that of Class II.

TABLE II. T-TEST RESULTS OF THE FINAL EXAM OF THE THIRD SEMESTER

Class	N	Mean Value	Standard Deviation	T Value	P Value
Class I	47	73.29	6.3448	1.785	.003
Class II	47	70.27	9.712		

The results of the final exam reflect the students’ English skills except speaking, and whether the students’ speaking ability can be improved was confirmed by the teachers’ classroom observation and students’ feedback in the interview.

In the process of teaching experiments, the project team members made classroom observations in the early, middle and late stages respectively, and believed that the students had greatly improved and been progressive in speech initiative, and frequency, and fluency.

In view of the interview record, some students thought that “teachers create more context, and the opportunities to speak English in class increases. Activities of speaking urge me to pay more attention to the listening, and I have more courage to express than before”. Some students said that “conversation and presentation can not only practice oral English but also improve friendship between classmates”. Other students considered that “in view of speaking, we all had made all-round improvement in English speaking, and we can use what we have learned to practice our oral English”. Students had more opportunities to speak, and more intensive desire to speak. Many students hoped that teachers would have more time to stay with them so as to guide them to speak English.

*B. The influence of the “integrated teaching mode” on students’ English learning motivation*

We have conducted overall and independent sample t-test on the pretest and posttest results of learning motivation questionnaire. The results (see TABLE III.) shows that, there was no significant difference between the mean value and standard deviation of the two classes ( $p=.111 >.05$ ). And the posttest results ( $P=.027, <.05$ ) shows that the overall motivation of Class I was not only higher than that of Class II, but also much higher than that of pretest results. To further analyze the effect of each factor on the learning motivation of students, we conducted the independent sample t-test. The test results (see TABLE IV.) shows that the average level of the motivation factors in Class I was higher than that of Class II, among which there were significant ( $p <.05$ ) differences in interest enhancement, self-reward, volitional control, and self-

efficacy improvement. These data indicate that, the “integrated teaching mode” was deeply welcomed by students. It can effectively improve the students’ interest in learning, stimulate their enthusiasm for learning and strengthen their learning volition and self-efficacy. On the other hand, it was also a strong support for the propagation law of the Memetics, i.e. good memes easily attract students’ attention and receive understanding and acceptance and they will also be actively imitated and copied by students, which will enhance students’ desire and interest of expression and propagation.

TABLE III. T-TEST RESULTS OF LEARNING MOTIVATION AS A WHOLE

	Class	N	Mean Value	Standard Deviation	T Value	P Value
Pre-test	Class I	47	3.0014	.16975	.155	.111
	Class II	47	2.9949	.23329		
Post-test	Class I	47	3.7606	.30949	6.766	.027
	Class II	47	3.2456	.42022		

TABLE IV. T-TEST RESULTS OF VARIOUS FACTORS OF STUDENTS’ ENGLISH LEARNING MOTIVATION IN POST-TEST

Factor No.	Class	N	Mean Value	Standard Deviation	T value	P value
(1)	Class I	47	3.9058	.33073	10.52	0.006
	Class II	47	2.9473	.52954		
(2)	Class I	47	3.7416	.43945	7.923	0.052
	Class II	47	2.9200	.55888		
(3)	Class I	47	3.6489	.47932	1.598	0.080
	Class II	47	3.4716	.59046		
(4)	Class I	47	3.3106	.45456	1.565	.003
	Class II	47	3.1085	.71010		
(5)	Class I	47	3.8298	.43957	5.858	.101
	Class II	47	3.2234	.55715		
(6)	Class I	47	4.0496	.60982	3.991	.353
	Class II	47	3.5177	.68033		
(7)	Class I	47	3.7926	.43087	2.293	.008
	Class II	47	3.5160	.10298		
(8)	Class I	47	3.9521	2.17	1.812	.030
	Class II	47	3.7305	.65576		

It can be seen from the interview record that all the interviewees thought that compared with the current teaching mode, the “integrated teaching mode” has “transferred the teaching from passive cramming to active participation”, which is “more conducive to mobilize students’ interest and enthusiasm”. Students gave affirmation to the methods such as words-reading, discussion, imitative conversation, role play, imitation of sentences and passages for translation and writing and knowledge review applied in class. They thought that “it seems that imitation and duplication are simple, in fact more extra work are needed.” They need to search for materials extensively and conduct assimilation and memorization before class according to the learning guide so that they can finish various in-class learning activities. This teaching mode

“effectively involves the students into the process of learning. Students can participate in the class learning more easily with more sense of achievement and self-confidence.” Many students also thought that “they are more concentrated in class than before, and they have turned a passive learning into active one”.

## V. CONCLUSION

Guided by the relevant national education policies and regulations, the research attempts to combine the Memetics and second language acquisition theory to make foreign language teaching reform. This research is not only a challenge to students' learning ability, but also a test of teaching ability of teachers. Taking Memetics into college English teaching can help it back to rational sense, reconsider the traditional teaching methods and help learners to learn the language faster. The “integrated teaching mode” is based on the constant reform on teaching mode, and the improvement of students' learning results has fully shown that the “integrated teaching mode” is successful and can be applied and promoted in the future teaching. It also makes regulating effect on students' learning motivation, effectively cultivates good habits of students in active learning, mobilizes the students' learning interest and enthusiasm and enhances students' self-confidence and the sense of achievement, which will play an important role on the lifelong development of students. At the end of the experiment, we entrusted the Sci-tech Novelty Search Workstation of Wuhan University of Technology to take sci-tech novelty search on the “integrated teaching mode” of college English from the perspective of the Memetics. According to the sci-tech novelty report, “no literature reports identical to the contents of the novelty search point has been found”. It shows that this teaching mode is original and also an innovation of the Memetics in college English teaching mode, which has far-reaching significance for the application research of the Memetics and the reform of college English teaching.

However, language learning in class obviously cannot meet the requirements. How to seek better ways to mobilize students' enthusiasm of learning after class is a challenge for teachers in both time and energy. How to further extend the teaching to the second classroom will be a question that teachers need timely considered.

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