

Research on college English jigsaw teaching method based on mother tongue culture

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Abstract. To realize effective research of college English methods, a kind of college English jigsaw teaching strategy based on native language culture is put forward. Firstly, current situation of college English jigsaw teaching strategy is researched by utilizing questionnaire and research sample is selected from a university in Northeast China with complete majors of arts, science and engineering and rhythmic gymnastics and with relatively strong representativeness. Secondly, college English teaching method of the university is analyzed and designed by utilizing jigsaw teaching strategy and based on native language culture, where “original group” and “new group” adopt a kind of cyclical pattern. Finally, test analysis is carried out by empirical analysis and result analysis is provided, which provides research thought for college English jigsaw teaching strategy based on native language.

Key words. Native language culture, College English, Jigsaw teaching strategy, Fractional analysis.

1. Introduction

At present, professional English teaching mode adopted by all colleges mainly includes: “language analysis+ translation”, “reading + writing”, “translation+ writing” and “vocabulary explanation + translation”. Mainstream of current professional English teaching mode is “translation + reading” teaching. The author also adopts such mode in teaching process to explain some professional terms and professional vocabularies and translate teaching material sentence by sentence and students are required to complete some homework or read and translate some extracurricular English materials. Such teaching mode is favorable for students to master certain

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language knowledge and translation skill and can improve profession literature reading ability of students. However, in practical teaching process, there are still some defects in “translation+ reading” teaching mode.

This teaching mode adopts traditional grammar translation teaching method centralized on teacher and teacher dominates in whole class and translates text meaning and explains language points and students are passive knowledge receivers and fail to participate in class activities actively. In addition, the mode focuses on cultivation of reading ability to students, while it has neglected training for practical English application ability and influence of native culture and fails to reach requirement of teaching outline of improving foreign language application ability of students. To change the condition, a professional English learning environment shall be created, such as professional English learning group, etc. to establish continuously a professional English discussion platform whenever and wherever possible. Such teaching method originates from jigsaw class teaching mode of famous American educator and sociologists Eliot·Arlen·Sunder and method at that time is to divide teaching task and hand over to different groups to learn and divide and reorganize group after group learning; all members in group teach what they learn and teachers supervise and remark to establish a kind of independent, cooperative, friendly and harmonious learning atmosphere among students to improve learning efficiency. Because teachers cannot give full consideration when members of all groups share, class teaching mode is integrated later and group is not divided again and group that learns certain contents will teach in front of rest groups, which develops to present jigsaw teaching adopted by college English class.

Jigsaw teaching strategy is adopted quite commonly in college English class and has become a valid supplement for traditional college English class focused on teaching of teachers, while its theoretical significance and practical effect are less researched and many teachers think that it is a kind of common and simple teaching method and exploration for its theoretical connotation is few and less standard in practical application. Therefore, the research tries to know application condition of the teaching method in college English class, learning effect of students and native culture influence and existing problems by empirical investigation and read and analyze by applying constructive theory and put forward improvement strategy based on empirical investigation.

2. Status survey for jigsaw teaching strategy in college English class

(I) Sampling. Research samples are selected from a university in Northeast China with complete majors of arts, science and engineering and rhythmic gymnastics and with relatively strong representativeness. Research adopts questionnaire and interviewing method. To guarantee representativeness of sample, the Author will select samples 120 people, hand out 120 questionnaires, recycle 115 valid questionnaires, including 111 valid questionnaires by combination method of simple random sampling and stratified sampling according to proportion of students in all schools and departments. In addition, 40 students and 20 teachers are selected otherwise to

interview deeply.

(II) Research tool. Prepare first draft of questionnaires by collecting domestic and foreign typical representative questionnaires relevant to teaching method and analyzing theoretical model of jigsaw teaching by combining with constructive theory. Questionnaires are divided into two parts of application condition and application result of jigsaw teaching by forecasting and revising first draft of questionnaires: 1. survey design on application condition: ideal model based on jigsaw teaching (designed according to constructive theory) takes application process of jigsaw teaching as order and designs questionnaires questions, which aims at knowing present application condition of jigsaw teaching, including application frequency and specific steps of teachers in application process, etc. 2. Survey design on application effect: referring to traditional lesson learning, students will carry out self-evaluation to learning effects charged by their own group and other groups and general learning effect.

(III) Data treatment. Research carries out statistic analysis to data by applying data statistics software SPSS17.0.

3. Jigsaw teaching method

Student teams and achievement divisions (STAD), Teams-games-tournaments (TGT), Jigsaw, Jigsaw ID, C Learning together (LT), Group investigation (GI), Team accelerated instruction (TAI), Cooperative integrated reading and composition (CIRC).

“Cooperative learning method” is a kind of teaching systematic and structural method. Its proceeding method is to allocate students to a heterogeneous group depending on ability and gender of students and teachers encourage group members to coordinate, support and cooperate mutually by various routes to improve personal learning effect and reach team target simultaneously. In cooperative learning, each student is not only responsible for his own study, but also is responsible for study of other students and everyone has opportunity to succeed and can make contribution to team and contribute to success of group. It is shown by research of group cooperation learning mode that there are following 8 methods: student teams and achievement divisions (STAD), Teams-games-tournaments (TGT), Jigsaw, Jigsaw ID, C Learning together (LT), Group investigation (GI), Team accelerated instruction (TAI), cooperative integrated reading and composition (CIRC).

Foresaid modes have their advantages and disadvantages and Jigsaw series is applied mostly in English learning. Original meaning of Jigsaw is “jig saw”, which is a kind of wood working tool-saw. In addition, there is a kind of extended meaning, namely, “jigsaw game”. As name of a kind of western teaching mode, some call its English name directly and some translate English into Chinese as jigsaw teaching mode. Jigsaw teaching was initiated by Eliot-Arlen-Sunder in 1970s in Texas. At that time, America relieved racial segregation system and students from different nationalities appear in the same class. However, long-term nationality misunderstanding causes the lack of communication and trust among different races and it is difficult for them to get along with each other friendly and there are hostile com-

petitions, which make normal education disordered. Under such condition, Arlen and his students have initiated jigsaw class teaching mode, also called as complementary teaching method and have established a kind of independent, cooperative and friendly learning atmosphere among students. Since then, such teaching method has been promoted gradually and has been applied widely from primary schools to colleges and from languages to other subjects.

Jigsaw teaching method is a kind of teaching method based on text and has strong operability no matter on theory or practice. Firstly, teachers (or teachers and students) negotiate to divide a complete learning task (topic) into several parts (small tasks) and students of the whole class are divided into several groups and each group completes a subtask and then continues to communicate by being divided into several new groups to teach and learn from each other in class activities and students learn from merits of others to make up for their own demerits to complete the learning task jointly and obtain corresponding learning result. Steps of jigsaw teaching method are shown as Fig. 1.

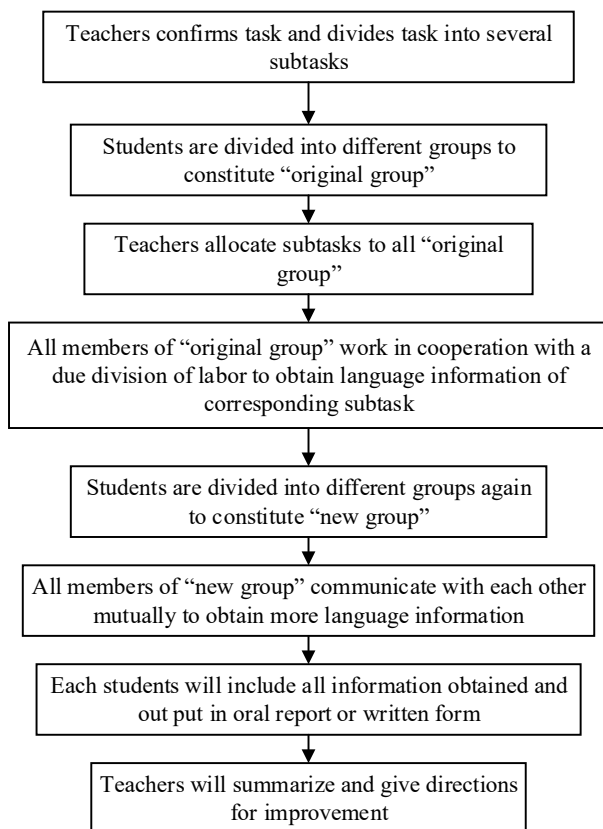


Fig. 1. Step for jigsaw teaching strategy

Where, “original group” and “new group” adopt a kind of recycle mode, as shown

in Fig. 2. Each student of the “new group” comes from different “original group”, therefore, each “new group” has students who are familiar with each subtask and a complete task can be finished by combining such mode. Such method is just like that each student puts his own local picture to corresponding position to constitute a complete picture.

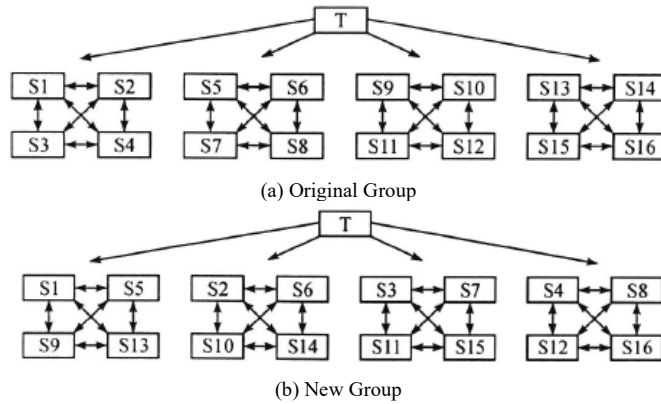


Fig. 2. Grouping mode of jigsaw teaching strategy

Compared with learning of traditional group, jigsaw teaching strategy emphasizes indispensable function of individual effort and contribution of group member and requires students to apply various languages skills of listening, speaking, reading and writing and to learn automatically and listen to each other mutually and share with each other to obtain greatest mental satisfaction in sense of achievement to complete task in group and further improve learning motivation level, which is favorable for cultivation of cooperative spirit of students. Such teaching method has greatly improved mutual degree between students and students, teachers and students, students and materials, which is favorable to develop metacognitive capability, which is namely, ability of students to control and master learning process and adjust learning strategy at any time to make them master learning contents and learn to study automatically in mutual teaching and learning process.

4. Experimental analysis

During the experiment process, experimental class and control class were taught by the same teacher but in different teaching methods. So the author organized the data of the two classes separately. Compared with the similar results in pre-questionnaire, it was easy to tell the differences between experimental class and control class. Therefore, the author decided to make analysis on the post-questionnaire separately. The result of post-questionnaire of control class is shown in table 1.

Table 1. Results for post-questionnaire of control class (%)

Questions	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
1	1	7	14	14	64
2	7	15	22	25	30
3	14	20	22	24	20
4	19	18	31	17	15
5	15	17	20	22	26
6	10	19	25	22	24
7	14	27	19	19	21
8	12	7	17	21	43
9	4	12	10	31	43
10	11	10	19	36	24
11	7	14	12	31	36
12	7	12	19	29	33

The result of the first description shows that more students (with 14% agree and 64% strongly agree) found out the importance of reading in learning a language. Though the control class was taught in traditional method, they had the same two reading lessons with experimental class in a week. Students had more opportunities to read different English articles. However, in question two, just 7% more students seem to enjoy the reading activities in English classes. And in question three, just 44% (with 24% agree and 20% strongly agree) of the students expressed that they were more satisfied with their reading performance. Because the teaching process of control class was nearly the same with before, it was not new for them and they haven't any more interests in the class. Their thinking towards reading did not have obvious change.

Question four to seven focused on students' autonomous behavior on reading. For the students' ideas on how well they can perform in the reading process, we can see from the Figure 3 below.

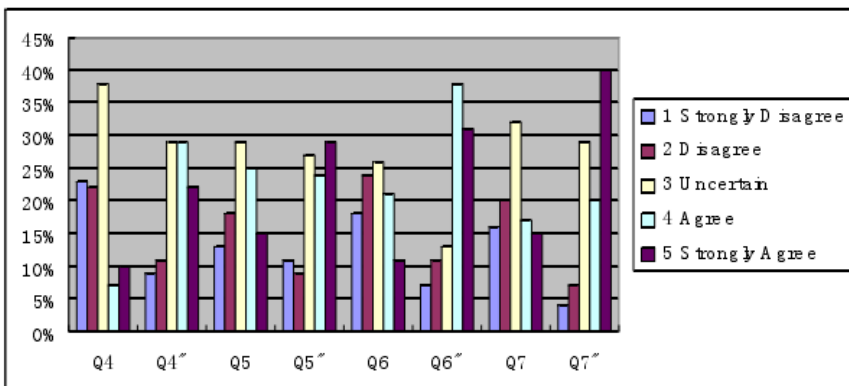


Fig. 3. Results of question four, five, six and seven

In figure 3, Q4, Q5, Q6, Q7 are the question items of the pre-test. Q4", Q5", Q6", Q7" are the question items of the post-test. 34% more of the students implied in question four that they were more willing to read after class, e.g. English newspaper and magazines, articles, etc. The interesting reading materials in the class and different forms of cooperative activities intrigued students' willingness to read out of the textbook. But in question five, just a few students indicate that they can get more reading skills from the class. With more reading practices, 37% more students said that they can read faster than before. Compared with 36% (with 16% strongly disagree and 20% disagree) of students were not interested in reading English articles, in post-questionnaire, just 11% (with 4% strongly disagree and 7% disagree) of the students show unwillingness to do so.

Question items eight to twelve were about the students' idea on the teacher's classroom strategy and group learning. Figure 4 below shows the results.

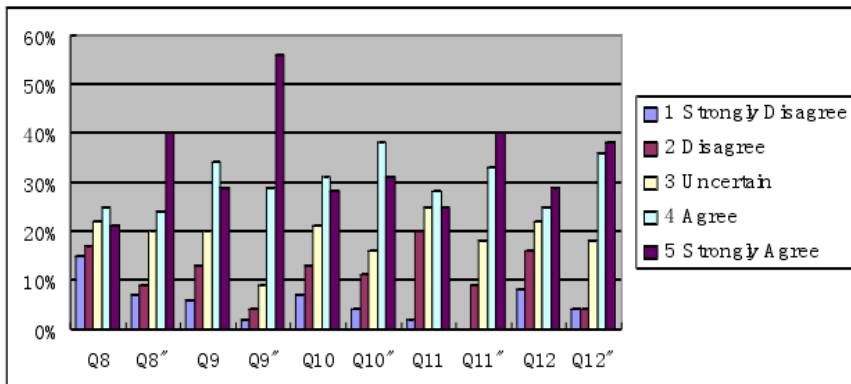


Fig. 4. Results of question eight, nine, ten, eleven and twelve

Analyzing on the data above, more students prefer the jigsaw teaching strategy 22% more students thought that they can learn more new words and sentences now. In jigsaw reading, students have more time to deal with new contents because they just have to focus on their own part. On the other hand, they were taught by other group mates with new items in other parts of the article. In question ten, just 10% of the students changed their mind on the promotion and help of the partner. More participants meant to cooperate with the team and they were expected to do it better and better.

5. Result analysis

In survey, there are 31.5% students feeling active change of jigsaw teaching strategy, while rest 68.5% students fail to feel better teaching effect of jigsaw teaching strategy than traditional class. As shown in data that difference of learning effect of students in part charged by their own group from that of in sharing with other groups is significant. Why?

1. Teachers fail to implement standard of jigsaw teaching in place. According to

survey result, most students reflect that learning effect of their own group is better than traditional class, which specifies that such method has its own advantage. Group shall be expert in the part by learning and researching if it is required to teach in front of the whole class, which is favorable to promote automatic and cooperative learning of group member and motivate their learning initiative. However, there are still a part of students holding that learning effect of part charged by their group is worse than traditional class in research. By interview, it is found out that there is problem of this part of students in cooperative learning link after class and labor division in group is unclear and responsibility is not specified to each person and some only look on with folded arms. Basic requirement and specification for cooperative learning is unclear and there is no clear learning purpose and they only complete task of the group roughly. Teachers fail to make necessary evaluation and guidance to the group, which leads to absence of mind in cooperative learning after class and leisure of group sharing in class and better learning effect is failed to be reached. It is obvious that present unremarkable whole effect of present jigsaw teaching is related to teaching specification implementation of teachers and teachers are not familiar with jigsaw teaching theory and implementation is substandard, which shall be improved.

2. Sharing method fails to develop the strong points and avoid the weak points. Seen from research, nearly half of students reflect that learning effect of group sharing with others is worse than traditional class. It specifies that the teaching method is defective. Learning of students on part charged by their own group is only a small piece of “jigsaw” and learning of most contents to the lesson depends on sharing of other groups. Although teaching method is simple and feasible, teaching effect is worse than teaching effect of traditional class teachers no matter on reasonability, completeness, authority or degree of proficiency for teaching skill for students. Advantage of students sharing lies in that students can know each other and can interact effectively and students have a lot of time to research and read this part and present this part in various methods if a group of students prepare teaching contents of a part, which can attract attention of other students than pure teaching by teachers. However, seen from research, group sharing almost all adopts teaching method and interaction with audiences is few, which fails to develop the strong points and avoid the weak points and is unfavorable to learning of part charged by other groups and shall be improved.

3. Evaluation method cannot motivate enthusiasm of students effectively. Influence of evaluation method on learning attitude of students is great. Most students admit that they feel relaxed when their own group completes sharing and they think that their own task on the lesson is basically completed. Seen from interview, students do not know task of the class is to learn all contents, including listening to sharing of other groups, while their usual score is related to performance during sharing. During learning sharing contents of other groups, present evaluation method does not have binding force and motivation to them. In traditional college English class, teachers will take usual speaking and performance for attending a lecture as important reference for usual score, while in present jigsaw teaching, during sharing of other groups, teachers usually sit in front row of class and only pay attention

to performance of sharing group and fail to concern performance of other groups in class, which leads to reduction of enthusiasm of students during sharing of other groups. It is obvious that difference of learning effect of present jigsaw teaching is related to evaluation method and the evaluation method fails to motivate enthusiasm of students for all contents and shall be improved.

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References

- [1] R. XIA: (2007) *On the Orientation of Mother Tongue in College English Teaching*[J]. Journal of Jinling Institute of Technology.
- [2] W. U. TING: (2015) *The Input Strategy of Mother Tongue Language Based on the Intercultural Third Space*[J]. Overseas English.
- [3] Y. JIA: (2014) *Review of Disfigurement of Mother Tongue "Culture Aphasia" in College English Learning*[J]. Tribune of Education Culture.
- [4] J. TEUBNER: (2009) *The relational XQuery puzzle: a look-back on the pieces found so far*[J]. Computer Science - Research and Development, 24, No. 1-2, 37-49.
- [5] Z. RAHMAN: *Reinforcing student's vocabulary through puzzles game (a pre experimental study at second grade SMPN 1 Jonggol-Bogir)*[J]. UinSyarifHidayatullah Jakarta Fakultas Ilmu Tarbiyah Dan Keguruan.
- [6] B. KEYSAR, S. L. HAYAKAWA, S. G. AN: *The foreign-language effect: thinking in a foreign tongue reduces decision biases.*[J]. PsycholSci, 23 (2012), No. 6, 661-668.
- [7] WALVOORD B E: *Students' Spirituality and "Big Questions" in Introductory Religion Courses*[J]. Teaching Theology & Religion, 11 (2008), No. 1, 3-13.
- [8] L. BOYNTON: *When the Class Bell Stops Ringing: The Achievements and Challenges of Teaching Online First-Year Composition.*[J]. Teaching English in the Two-Year College, 29 (2002), 298-311.
- [9] S. ABDI: *Staying I(r)a)n: Narrating Queer Identity from within the Persian Closet*[J]. Liminalities, (2014), No. 10.
- [10] E. KIMBALL: *Commonplace, Quakers, and the Founding of Haverford School*[J]. Rhetoric Review, 30 (2011) No. 4, 372-388.
- [11] S. MADYA, B. SUGENG, S. MAARIF, ET AL.: *Developing a Model of Teaching English to Primary School Students*[J]. Teflin Journal, 15 (2004), No. 2.
- [12] A. MICHELIS: *Food and Crime*[J]. European Journal of English Studies, 14 (2010), No. 2, 143-157.
- [13] J. W. LEE: *The Effect of Ethnic Identity and Bilingual Confidence on Chinese Youth's Self-Esteem.*[J]. Alberta Journal of Educational Research, 54 (2008), 83-96.
- [14] R. MENEGHINI, A. L. PACKER: *Is there science beyond English?*[J]. Embo Reports, 8 (2007), No. 2, 112-116.

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