

## English Cooperative Learning Mode in a Rural Junior High School in China

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Received: December 29, 2016

Accepted: January 23, 2017

Online Published: February 6, 2017

doi:10.11114/jets.v5i3.2199

URL: <http://dx.doi.org/10.11114/jets.v5i3.2199>

### Abstract

Cooperative learning is one of the most recognized and fruitful research areas in modern education practice. It has been widely used in many countries as an effective teaching strategy to improve class efficiency and students' comprehensive language ability since the 1990's. This paper takes JA Junior High School, a rural junior high school in Nantong, China, as a case to explore its English cooperative learning mode. A questionnaire was designed based on nine factors namely learning expectation, learning interest, learning initiative, emotional experience, cooperative awareness, cooperative ability, learning effectiveness, learning evaluation and English usage level. The purpose is to try to find whether gender, grade and academic achievements have an effect on English cooperative learning. 515 valid questionnaires were collected and analyzed by t-test and One-way ANOVA. After analysis, it turned out that these three factors have an impact on the effectiveness of English cooperative learning. The results showed that the differences of gender, grade and academic achievements should be taken into consideration in accordance with the characteristics of rural middle school in constructing the English cooperative learning mode.

**Keywords:** cooperative learning, cooperative learning mode, English cooperative learning, rural junior high school

### 1. Introduction

In recent years, cooperative learning has been a hot topic, as it has broken the past rigid classroom teaching mode and to some extent eliminated the drawbacks of traditional teaching. Students make a great progress under cooperative learning because cooperative learning makes learning easy and pleasant, and advances students' learning abilities significantly. In 2001, the Ministry of Education promulgated and implemented the "Basic Education Curriculum Reform (Trial)" (Ministry of Education, 2004) and clearly pointed that our education must cultivate students' ability to cooperate actively. The National English Curriculum emphasized that the basic task of compulsory education was to cultivate students' ability of self-learning and the spirit of cooperation that was formed during learning. Under this circumstance, the old teaching style cannot satisfy the demands of modern education so education reform is imperative. Cooperative learning has replaced traditional class teaching because it's not only the trend but also a necessary direction for future teaching.

Jing'an (JA) Junior High School is an ordinary rural school in Nantong, China. Under the influence of the four-year comprehensive implementation of cooperative learning, students whose enrolling score ranked nearly the last of the county rose to rank the second place after they have studied here for three years. In JA, seven English teachers are responsible for teaching 14 English classes and each teacher has a tight teaching schedule. Most research studies of cooperative learning previously focused on schools with rich teaching resources and high quality students, seldom focus on the implementation of cooperative learning in rural areas, especially English education in rural schools. As a country of agriculture, although Chinese government advocates the integration of urban and rural areas, in essence, the huge education resources inequity between urban and rural areas still exist. The left-behind children are the main body of rural education, and they need not only material support but also fair education opportunities, even if possible, more advanced education modes and concepts than urban schools. Only in this way can rural schools solve their problems of shortage of teachers and reverse the disadvantages of poor qualified students. This paper is to introduce the JA mode in Chinese rural middle school, as well as the influence of cooperative learning on students' English learning.

## 2. JA Mode

The JA mode can also be called “problem-based learning” mode, which has two meanings. The first one is that problems are prerequisite of learning. No problems, no learning. Problems can make students’ thinking collides with another, and students’ learning ability can be improved in the process of presupposing problems, solving problems and recreating problems. The second one is that in the process of problem-based learning, the learning style is the peer learning between student-student and student-teacher. In JA Junior High School, “instruction” has new meanings, including “teacher instructs students”, “student instructs other students”, and “instructs other students to learn”. Therefore, teaching others has becoming a better way of learning. Learning to listen is a basic learning quality that teachers and students should have in cooperative learning class. Only when they learn how to listen, can they form deep thinking, meet their thinking collides, and then propose valuable questions. Their class concept is that giving more autonomy back to students, giving them how to cooperate, providing them more class time, as well as inquiring interest (Chu & Zheng 2016).

The implementation of JA mode can be divided into two parts and eight steps. One part is the cooperation between students in class and the other part is the cooperation between students and teachers before and after class. Problem-based cooperative learning the remarkable feature of JA mode, which includes eight steps, grouping strategies, preliminary solution, resolving problems, bringing all the problems together, asking questions, evaluation strategies, and excellent training.

### Step 1 Grouping Strategy

In the preparation period, students are divided into groups of six, based on their exam marks and comprehensive consideration of their English learning level. The whole class is divided into 7 heterogeneous groups, and in accordance with each member’s English exam scores, students are numbered 1 to 6. No.1 is the leader of the group who got the highest score in English in this group, and No.2 is the vice team leader, whose mark ranked the second highest. No.3 and No.4 are students who ranked in the middle of the class and No.5 and No.6 are low-achieving students in this class. Three sets of desks are put facing each other and the classroom is surrounded by whiteboards which belongs to all the teams. In order to ensure the participation of students, the leader and vice leader of each team sit in the middle of the group and each of them are in charge of two students nearby.

### Step 2 A Preliminary Solutions

According to teaching content, students preview their tasks differently. First the teacher asks students to review what they will learn, and fill in the blanks on the questionnaire form. No.5 and No.6 are assigned to show their answers first and No.1 and 2 have to correct the answers of No. 5 and No. 6. After that, No.3 and No.4 add additions. When they have reached an agreement of their answers, they write them on the whiteboard. The teacher picks one group to make presentations and at the same time, other students stand around the whiteboard of the picked group to check their answers and add additions in time. In this process, teacher has to stand by and make timely correcting.

### Step 3 Resolving Problems

Before this step, the teacher sets up a transition part to help students review what they have learned. S/he prepares some questions for students, when students attempt to answer those questions, they are doing a review. Also she writes some tips about the class’ language points on the whiteboard and then they come to step 3. The task of this step is previewing what students are going to learn and trying to fill in the blanks on the questionnaire form. When students are mostly done, the leader of the group writes his answers on their own whiteboard, all team members discuss their leader’s answers and add additions if necessary. Finally, the teacher chooses one group to make presentations and other students listen and correct their mistakes.

### Step 5 Bringing All the Problems Together

The mission of this part is finishing the exercises in the questionnaire. The teacher has prepared some exercises in the questionnaire in advance to check the effectiveness of students’ preview. This time, No.4 and 5 students need to write their answers on the whiteboard and it is No.3 student’s turn to amend their answers. Upon completion of the former part, the teacher will ask students to do the exercises in the textbook but students have to finish these exercises independently. After that, the teacher assigns No.6 students of each group to write their answers on the whiteboard. Then student No.1 needs to correct No.6’s answers and helps No.6 to solve the problems. The vice leader of the group checks answers with the other group members. At last, the teacher explains some common problems and the students read the answers together.

### Step 6 Asking Questions

At this step, students have to ask questions about what they have learned just now. First they ask questions within the

group and then the teacher picks some students to show their questions to students in other groups and asks the other students to give their answers. For those questions students could not answer or answer incompletely, the teacher adds additions. Finally, the teacher will review and summarize some key language points of the class.

#### Step 7 Evaluation Strategy

The JA school's formative assessment mainly uses point-oriented way, which means that when student answers one question correctly s/he gets one point. The starting point is zero and the leader of the group is responsible for recording scores of his members. Besides answering questions, good deeds can create points. Someone who violated the rules will be punished by deducting points. The whole class will rank the total scores once a week and groups and students who rank in the top 10 will be rewarded and placed on the honor roll, but exam scores are not used as reference for ranking. Though the formative assessment will not be considered in students' final score, this process helps them consolidate a good foundation for their English learning, and will be definitely demonstrate in their final exam.

#### Step 8 "Excellent" Training

JA Junior High School creates a new measurement to solve underachievers' problems, namely tutor-in-advance (asking underachievers to preview what they have to learn before class) and teachers facilitate them in this process) This method will enable those underachievers to take part in class activities instead of being confused for the whole class. For those students who perform well in other subjects but weak in English, autonomous learning and doing exercises is a good way. Teachers take control of the exercises that students have to do and as well as the time they should be used in English learning.

### 3. Cooperative Learning and Its Theoretical Basis

#### 3.1 Definition

The idea of Cooperative learning in western countries runs a long course from a remote source; even early in Talmud (Xiu, 2003) mentioned that everyone should look for study partner. In the 1st century BC, Marcus Fabius Quintilianus of Roman advocated that students could benefit a lot from mutual teaching. From the in-depth research of cooperative learning carried out in England by Lancast and Bell at the end of the 18<sup>th</sup> century to the real cooperative learning conducted by America educator Park and Dewey, cooperative learning kept evolving. It was not until 1960s that cooperative learning became popular and gained great development during mid-1970s to 1980s. The typical representatives of cooperative learning are Slavin, Guskey and Johnson brothers. Slavin defined cooperative learning as a teaching technology where students study in groups and they are awarded or recognized on the basis of the whole team performance (Slavin, 1994). According to Johnsons, cooperative learning refers to using group strategy in teaching to promote students study to the great extent in common activities (Johnson & Johnson, 1988). In Sharan's definition, cooperative learning is a general term of the method of organizing and promoting teaching. The cooperation between students is the feature of all the methods. In class, the realization of peer cooperation relies on group activities; a group usually consists of 3 to 5 people. Group acts as a social organization unit and the students study through peer interaction and communication, they also learn by personal study (Sharan, 1980). Wang's definition of cooperative learning is that cooperative learning is a teaching strategy system which aimed at promoting mutual cooperation in heterogeneous group to reach common learning goals and rewarding on the basis of group over-all achievements (Wang, 2002).

#### 3.2 Theoretical Basis for Cooperative Learning

##### 3.2.1 Social Interdependence Theory

Kurt Kafka, the founder of Gestalt psychology, proposed the theory of group as a dynamic whole, the interdependence between groups members in which could vary from each other in the early 20th century. Lewin and Deutsch (1949) further developed and explained this theory. Deutsch's students Johnsons defined it as "social interdependence theory". There are three kinds of social interdependence structures: positive interdependence, negative interdependence and no interdependence. In positive interdependence, individuals will encourage each other and make progress together. In negative interdependence, also named competition; individuals will hinder each other from succeeding. In no interdependence, there is no interaction and impact between individuals. They all focus on their own work. Based on these, Johnsons pointed out that there were three goal structures in class—cooperation, competition and doing it alone. These three goal structures determine the realization of personal goals respectively. Under cooperative goal structure, the realization of personal goals is associated with collective cooperation, namely personal goal is consistent with collective goals. Under the competition structure, the realization of personal goals will exert influence on the realization of others' goals, in other words, there is conflict of interest. And in undergoing-it-alone goal structure, there's no connection between individuals. The essential factor of cooperative learning is positive interdependence. From the perspective of social interdependence theory, the core of cooperative learning could be expressed as when people gather

together to work for a common goal, what inspire them is the power of unity. Interdependence provides energy for everyone to make them (1) encourage each other, willing to do anything to promote team success, (2) help each other (3) and love each other, because people all love the feeling of being helped to achieve their goals and cooperation can enhance this contact (Wang, 2005).

### 3.2.2 Motivation Theory

The motivation theory mainly studies the reward of students' activities or goal structure. In the three goal structure Deutsch (1949) defined, motivationist thought which cooperative goal structure (in contrast to competition) creates a situation where the achievement of personal goals depend on team success. Thus, to reach the final success of their own, team members have to do whatever is helpful to the success of the team. And what's more important is to encourage their peers to try their best. Under this kind of collaborative reward structure, students personal hardworking will contribute to the success of other students. Therefore, it will be easier to form the atmosphere of mutual learning and helping. Johnson brothers (1993) held the view that learning motivation was produced by means of personal communication. The essence of it embodies a positive interdependence established on personal interaction. To stimulate this learning motivation, the most effective mean is to establish a relationship of "community of interest". Under the influence of community relations, team members will form a collective consciousness of "one for all, all for one" (Johnson, Johnson & Holubee, 1993).

### 3.2.3 Developmental Theory

Developmental theory insists that the interaction between children for appropriate tasks will facilitate their master of vital concept. Children's cognition and social development are progressed through peer interaction and communication. Vygotsky (1983)) was firmly against the using of knowledgeable test to estimate the intelligence of students, and that's the reason he put forward the concept of zone of proximal development as a strong support to debate against it. The zone of proximal development is an area of skill set which is wider than the area that the subject can reach. It is impossible to achieve this skill set without the assistance of the teacher or peer. Vygotsky (1983) employed this kind of theory to show that people should concentrate on what students are able to do in a social setting. In many cases, students are equipped with the ability to complete a task within a group before they are able to complete it on their own. Vygotsky argued that a major shortcoming of standardized tests was that they only measure what students were capable of on their own, not in a group setting where their minds were being pushed by other students<sup>9</sup>. Similarly, Piaget (1952) believed that social experience knowledge: language, rules, moral and symbolic system can only be acquired in the interaction with others. As a result, many Piagetists called for increasing cooperation activities. They emphasized that the interaction of learning task itself can improve students' performance. Students will be able to learn from each other because discussion will produce cognitive conflict and insufficient inference will be exposed, eventually this will lead to higher quality understanding (Jin, 2005).

## 4. Methodology

**Subjects:** The subjects of the research are 515 students from JA Junior High School.

**Research Questions:** (1) Does students' gender have an impact on their cooperative learning? (2) Do student's grades have an impact on their cooperative learning? (3) Do student's academic achievements have an impact on their cooperative learning?

**Instruments:** In this study, self-designed questionnaire is used and the data is analyzed by SPSS 16.0. The questionnaire is designed from the following 9 dimensions. Q 11 is from Factor 1 Learning Expectation; Q 4 and 8 are from Factor 2 Learning Interest; Q 5, 6, 14, 15 are from Factor 3 Learning Initiative; Q 7, 9, 10, 37 are from Factor 4 Emotional Experience; Q 16, 17, 18, 19, 20, 21, 22 are from Factor 5 Cooperation Awareness; Q 23, 24, 25, 27, 28 are from Factor 6 Cooperation Ability; Q 12, 13, 29, 30, 31, 34 are from Factor 7 Learning Effectiveness; Q 32, 33, 35, 36, 38, 39 are from Factor 8 Learning evaluation; and Q 26 is from Factor 9 English Usage Level. The purpose of this questionnaire is to further know the study situation of the students in a cooperative learning mode.

### Validity and Reliability

In order to test the content validity of the surveys, a panel of experts was used as suggested in the research (Creswell, 2015). The researcher asked professors with expertise related to the study to discuss and analyze the questions in the survey.

In order to test the reliability of the survey, Cronbach's Alpha ( $\alpha$ ) was used. Cronbach's Alpha is a coefficient of internal consistency, and commonly used as an estimate of the reliability of a psychometric test for a sample of examinees. Nine factors were tested for reliability. The total Cronbach's Alpha is 0.932, and the Cronbach's Alpha for each dimension is ranged from 0.710 to 0.870. The correlation coefficients among the dimensions is ranged from 0.377 to 0.785; and the correlation coefficient between the total and each dimension is ranged from 0.584 to 0.875. All coefficients are significant. That shows that the questionnaire has a high reliability and validity.

## Data Analysis Strategies

For the purpose of this research, a quantitative design was employed to test the hypotheses posed for the study. The 16th edition of the Statistical Package for the Social Sciences (SPSS) software was used for descriptive and statistical analyses of the data. In this study, t-test and ANOVA were used to test for instrument reliability, and variability and correlation of the surveys and factors. Descriptive analysis included reporting the mean and standard deviation of each category of the questionnaire. The t test was used to test for a significant difference of nine factors in gender; One-way ANOVA was used to show whether there was a significant difference in grade and academic achievements,

Data Collection: 600 questionnaires on the effectiveness of English cooperative learning were distributed to the students from JA Junior High School on May 10<sup>th</sup>, 2016. The time to answer the questionnaire was not restricted. Finally, a total of 515 valid questionnaires were collected.

## 5. Results

### 5.1 Frequency of the Students' Questionnaire

Among 515 students, 51.8% are female, and 48.1% are male; 39.6% are from grade one, 33.1% from grade two, 27.3% from grade three. As for academic achievements, 17.1% ranked A (A represents excellent), 28.3% ranked B (B represents good), 28.7% ranked C (C represents fair), 17.5% ranked D (D represents pass), and 8.4% ranked E (E represents fail).

### 5.2 Comparison of 9 Factors in Gender

Table 1. Comparison of 9 factors in gender

|                           |        | N   | Mean  | SD   | t         |
|---------------------------|--------|-----|-------|------|-----------|
| F1 Learning Expectation   | male   | 247 | 4.22  | 1.07 | -2.351*   |
|                           | female | 268 | 4.43  | .90  |           |
| F2 Learning Interest      | male   | 247 | 7.63  | 1.93 | -3.340**  |
|                           | female | 268 | 8.17  | 1.74 |           |
| F3 Learning Initiative    | male   | 247 | 14.36 | 3.78 | -2.430*   |
|                           | female | 268 | 15.12 | 3.38 |           |
| F4 Emotional Experience   | male   | 247 | 15.63 | 3.49 | -2.818**  |
|                           | female | 268 | 16.45 | 3.13 |           |
| F5 Cooperation Awareness  | male   | 247 | 28.21 | 5.35 | -3.663*** |
|                           | female | 268 | 29.90 | 5.05 |           |
| F6 Cooperation Ability    | male   | 247 | 20.10 | 3.75 | -3.604*** |
|                           | female | 268 | 21.23 | 3.37 |           |
| F7 Learning Effectiveness | male   | 247 | 22.74 | 6.13 | -2.053*   |
|                           | female | 268 | 23.73 | 4.78 |           |
| F8 Learning Evaluation    | male   | 247 | 21.99 | 4.27 | -3.919*** |
|                           | female | 268 | 23.39 | 3.82 |           |
| F9 English Usage Level    | male   | 247 | 3.14  | 1.30 | -.996     |
|                           | female | 268 | 3.25  | 1.20 |           |

Note: \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

T test showed that there was a significant difference in Gender for 8 factors, female students have higher score than male students in learning expectation, learning interest, learning initiative, emotional experience, cooperation awareness, cooperation ability, learning effectiveness and learning evaluation; but for factor 9 English usage level, there was no difference.

### 5.3 Comparison of 9 Factors in Grade

One-way ANOVA showed there was a significant difference in grade for Factor 1 Learning Expectation,  $F(2,512) = 3.430$ ,  $p < .05$ , indicating the difference of grade on learning expectations in English cooperative learning. According to post hoc test, third year students have a higher expectation on their English learning than first year student.

One-way ANOVA showed there was a significant difference in grade for Factor 3 Learning Initiative,  $F(2,512) = 3.359$ ,  $p < .05$ , indicating the difference of grade on learning initiative. According to post hoc test, this kind of difference mainly exist between grade one and grade two students. In cooperative learning, grade one students are more initiative than other students.

One-way ANOVA showed there was a significant difference in grade for Factor 7 Learning Effectiveness,  $F(2,512) = 3.734$ ,  $p < .05$ , indicating the difference of grade on learning effectiveness. According to post hoc test, there is a significant difference between grade three and grade one. Grade one students have gained more during the English cooperative learning process.

One-way ANOVA showed there was a significant difference in grade for Factor 9 Usage of English,  $F(2,512) = 13.559$ ,  $p < .01$ , indicating the difference of grade on usage of English. According to post hoc test, the first year students are more willing to use English to communicate with each other in English cooperative activities than the third year students.

Table 2. Comparison of 9 factors in grade

| Factor                    | Grade  | Mean  | SD   | F         | Post hoc |
|---------------------------|--------|-------|------|-----------|----------|
| F1 Learning Expectation   | First  | 4.24  | 1.1  | 3.430*    | 1,3      |
|                           | Second | 4.28  | 0.1  |           |          |
|                           | Third  | 4.51  | 0.81 |           |          |
| F2 Learning Interest      | First  | 8.03  | 1.96 | 1.697     |          |
|                           | Second | 7.7   | 1.86 |           |          |
|                           | Third  | 7.99  | 1.67 |           |          |
| F3 Learning Initiative    | First  | 15.25 | 3.65 | 3.359*    | 1,2      |
|                           | Second | 14.35 | 3.7  |           |          |
|                           | Third  | 14.51 | 3.29 |           |          |
| F4 Emotional Experience   | First  | 16.5  | 3.57 | 0.703     |          |
|                           | Second | 15.84 | 3.3  |           |          |
|                           | Third  | 16.29 | 2.99 |           |          |
| F5 Cooperation Awareness  | First  | 29.1  | 5.47 | 0.854     |          |
|                           | Second | 28.7  | 5.62 |           |          |
|                           | Third  | 29.48 | 4.46 |           |          |
| F6 Cooperation Ability    | First  | 20.84 | 3.85 | 0.344     |          |
|                           | Second | 20.56 | 3.68 |           |          |
|                           | Third  | 20.6  | 3.09 |           |          |
| F7 Learning Effectiveness | First  | 24.06 | 6.41 | 3.743*    | 1,3      |
|                           | Second | 22.78 | 5.11 |           |          |
|                           | Third  | 22.64 | 4.21 |           |          |
| F8 Learning Evaluation    | First  | 22.75 | 4.43 | 0.403     |          |
|                           | Second | 22.47 | 4.01 |           |          |
|                           | Third  | 22.87 | 3.8  |           |          |
| F9 English Usage Level    | First  | 3.48  | 1.27 | 13.559*** | 1,2      |
|                           | Second | 3.19  | 1.19 |           |          |
|                           | Third  | 2.79  | 1.16 |           |          |

Note: \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

#### 5.4 Academic Achievements on 9 Factors

Table 3 Comparison of 9 factors in academic achievements

|                         |   | Mean  | SD   | F         | Post hoc |
|-------------------------|---|-------|------|-----------|----------|
| F1 Learning Expectation | A | 4.67  | 0.78 | 15.638*** | A,C      |
|                         | B | 4.62  | 0.67 |           | A,D      |
|                         | C | 4.25  | 0.89 |           | A,E      |
|                         | D | 3.99  | 1.2  |           | B,D      |
|                         | E | 3.63  | 1.43 |           |          |
| F2 Learning Interest    | A | 8.76  | 1.55 | 21.053*** | A,C      |
|                         | B | 8.4   | 1.59 |           | A,D      |
|                         | C | 7.8   | 1.78 |           | A,E      |
|                         | D | 7.2   | 1.77 |           |          |
|                         | E | 6.35  | 2.17 |           |          |
| F3 Learning Initiative  | A | 16.94 | 2.71 | 30.304*** | A,B      |
|                         | B | 15.67 | 2.85 |           | A,C      |
|                         | C | 14.42 | 3.42 |           | A,D      |
|                         | D | 13.34 | 3.53 |           | A,E      |
|                         | E | 11.23 | 4.13 |           | B,C      |

Note: \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

One-way ANOVA showed there was significant difference in academic achievements for all the factors. As for Learning Expectation,  $F(4,510) = 15.638$ ,  $p < .05$ , indicating the difference of academic achievements on learning expectation. According to post hoc test, compared with other academic groups of students, students who belong to A and B group have a higher expectation about their academic achievements.

As for Learning Interest,  $F(4,510) = 21.053$ ,  $p < .05$ , indicating the difference of academic achievements on learning interest. According to post hoc test, there is no significant difference between students who belongs to A and B group, D and E group.

As for Learning Initiative,  $F(4,510) = 30.304$ ,  $p < .05$ , indicating the difference of academic achievements on learning

initiative. According to post hoc test, there is no significant difference between students from C and D group on learning initiative.

Table 4. Comparison of 9 factors in academic achievements

|                          |   | Mean  | SD   | F         | Post hoc |     |
|--------------------------|---|-------|------|-----------|----------|-----|
| F4 Emotional Experience  | A | 17.38 | 2.62 | 21.851*** | A,C      | C,D |
|                          | B | 16.94 | 2.9  |           | A,D      | C,E |
|                          | C | 16.1  | 3.04 |           | A,E      | F,C |
|                          | D | 14.66 | 3.58 |           | B,D      | B,E |
|                          | E | 13.05 | 3.62 |           |          |     |
| F5 Cooperation Awareness | A | 32.13 | 3.44 | 33.961*** | A,B      | B,D |
|                          | B | 30.7  | 3.94 |           | A,C      | B,E |
|                          | C | 28.46 | 5.16 |           | A,D      | C,E |
|                          | D | 27.22 | 5.13 |           | A,E      | D,E |
|                          | E | 23.3  | 6.4  |           | B,C      |     |
| F6 Cooperation Ability   | A | 22.45 | 2.53 | 13.982*** | A,B      | B,E |
|                          | B | 21.15 | 2.94 |           | A,C      | A,E |
|                          | C | 20.45 | 3.68 |           | A,D      | B,D |
|                          | D | 19.76 | 3.65 |           |          |     |
|                          | E | 18.21 | 4.9  |           |          |     |

Note: \* $p < .05$     \*\* $p < .01$     \*\*\* $p < .001$

As for Emotional Experience,  $F(4,510) = 21.851$ ,  $p < .05$ , indicating the difference of academic achievements on emotional experience. According to post hoc test, there is no distinctive difference between students from B and C group on emotional experience. It is the same for students of D and F group.

As for Cooperation Awareness,  $F(4,510) = 33.961$ ,  $p < .05$ , indicating the differences of academic achievements on cooperation awareness. According to post hoc test, there is no distinctive difference between students of C and D group on cooperative awareness.

As for Cooperation Ability,  $F(4,510) = 30.304$ ,  $p < .05$ , indicating the difference of academic achievements on cooperation ability. According to post hoc test, there is no notable difference among students from group C, D and E on cooperation ability.

Table 5. Comparison of 9 factors in academic achievements

|                           |   | Mean  | SD   | F         | Post hoc |     |
|---------------------------|---|-------|------|-----------|----------|-----|
| F7 Learning Effectiveness | A | 26.4  | 3.71 | 34.627*** | A,B      | B,D |
|                           | B | 25.03 | 5.55 |           | A,C      | B,E |
|                           | C | 22.62 | 4.6  |           | A,D      | C,D |
|                           | D | 21.17 | 4.57 |           | A,E      | C,E |
|                           | E | 17.28 | 5.98 |           | B,C      | D,E |
| F8 Learning Evaluation    | A | 23.58 | 4.48 | 5.040**   | A,E      | B,E |
|                           | B | 23.27 | 3.81 |           | C,E      |     |
|                           | C | 22.67 | 4.11 |           |          |     |
|                           | D | 21.81 | 4.42 |           |          |     |
|                           | E | 20.86 | 2.77 |           |          |     |
| F9 English Usage Level    | A | 3.57  | 1.19 | 4.186**   | A,B      | C,E |
|                           | B | 3.16  | 1.19 |           | A,C      | A,E |
|                           | C | 3.24  | 1.25 |           | A,D      | B,E |
|                           | D | 3.04  | 1.21 |           |          |     |
|                           | E | 2.7   | 1.39 |           |          |     |

Note: \* $p < .05$     \*\* $p < .01$     \*\*\* $p < .001$

As for Learning Effectiveness,  $F(4,510) = 34.627$ ,  $p < .05$ , indicating the difference of academic achievements on learning effectiveness. According to post hoc test, there is a remarkable difference among all these groups of students on learning effectiveness.

As for Learning Evaluation,  $F(4,510) = 5.040$ ,  $p < .01$ , indicating the difference of academic achievements on learning evaluation. According to post hoc test, there is a greater difference between students of group F and other students on learning evaluation.

As for the Usage of English,  $F(4, 510) = 4.186$ ,  $p < .01$ , indicating the difference of academic achievements on the usage of English. According to post hoc test, there is no obvious difference among students of B, C and D group on English usage level. However, there is a prominent difference between students of group A and group B.

## 6. Discussion

### 6.1 Impact of Gender on Students' Cooperative Learning

According to the results above, it turned out that compared with male students; female students have a higher expectation for their learning performance. They are more interested in English cooperative learning and enjoy this new learning style. Their affection of cooperative learning makes them take an active part in it with richer emotional experiences than male students. English cooperative learning has also improved female students' learning initiative and they will preview the text before class and reflect their performance after class. Female students show a stronger sense of cooperation, they are easier to work with and their cooperative ability improves faster than male students. Since English cooperative learning is more recognized by female students than male students, their overall skills have experienced a great improvement and they are more satisfied with their performance.

### 6.2 Impact of Grade on Students' Cooperative Learning

Based on the results above, third year students have a higher expectation to perform well in English learning. However, compared with first year students they are lacking of the motivation of action. First year students are the main beneficiaries of the conduction of English cooperative learning. Their integrated skills improve a lot during this process and they are more willing to use English in activities.

### 6.3 Impact of Academic Achievements on Students' Cooperative Learning

Firstly, the data tells that students from group D and E (the students who believe their English level is around the passing line) have lower learning interest than students of other groups and students of group A and B (the students who believe they have a higher English proficiency) show higher interest and a higher learning expectation. Secondly, the students of group C and D (the students whose English proficiency is at the medium level or just pass) show they are lacking of the inner power to catch it up. Thirdly, Students from group A (the students whose English is excellent) have a richer emotional experience than students from group D and E (the students who believe their English level is around the passing line). Students of A and B group perform a higher level of cooperation ability than students of C, D and E group. The top students in the class are equipped with the ability to cooperate with other students. Finally, Students from group E strongly support the implementation of cooperative learning although they do not harvest a lot from it, but students from group A who benefit a lot from this process are not determined supporters of this kind of learning mode. Instead, they prefer the old teaching style.

## 7. Suggestions

### 7.1 Gender Division

According to the results above, it turned out that compared with male students; female students have a higher expectation for their learning performance. They are more interested in English cooperative learning and enjoy this new learning style. Female students show a stronger sense of cooperation, they are easier to work with and their cooperative ability improves faster than male students. Since English cooperative learning is more recognized by female students than male students, their overall skills have experienced a great improvement and they are more satisfied with their performance

### 7.2 Grade Organization

Grade differences have an essential effect on the conduct of cooperative learning from data above. Although low-grade students are not as knowledgeable as high-grade students, they have higher learning initiatives, and they are more willing to take part in these activities and gained better learning effectiveness. If distinct English language storage and learning characteristics are the key factors, teachers have to consider when they design diverse activities for cooperative learning. Another factor must be grade. For example, when low-grade students are the main teaching subject, emphasis should be given on students' initiative and creativity. Attentions are ought to be paid to the cultivation of students' language skills instead of language knowledge.

### 7.3 Academic Achievements Organization

The shift from the traditional learning mode to cooperative learning is a problem, because not all students can be quickly involved in cooperative learning and adapt to the rhythm of the cooperative learning process. The teacher should require students to have a preliminary study before they carry out cooperative learning. Besides, it is important to give graded assignments in cooperative learning, which not only monitors students but also ensures the degree of students' participation. Also the data reflect an important problem that low-achieving students have a higher recognition than those top students in English cooperative learning. Moreover, the open questions in questionnaire test this finding. Students who perform well in class believe teacher's explanation and prefer the traditional class, so it is highly significant to fully arouse the enthusiasm of these students. Low-achieving students recognize the way of cooperative learning, but they are lacking of cooperation ability, which is an urgent problem to solve.

## 8. Conclusion

Is English cooperative learning the lifesaving drug to the rigid English education now? No one knows. It makes no sense to pursue the diversity of teaching modes and makes superficial reform decisions rather than shaking the root of the whole exam-oriented education system to the ground. From the current situation of the implementation of basic education curriculum reform, it is evident to see that the latest theoretical results have not been applied to teaching practices yet and the decayed education system remains. What mode is the most suitable mode for rural middle school English learning? For the current situation, cooperative learning seems to be the best way. On the one hand, the academic pressures at rural middle schools are lighter than urban middle schools, and schools can leave more time and space for students to cooperate and learn mutually. In terms of presentation and opportunity, rural students have more chances to express and show themselves in class. On the other hand, confronted with the fact of shortage of teachers, the unevenness of learning quality of students and limitation of teachers' capability, a new way has to be found out to make all of these up; students' autonomous learning and cooperative learning seems to be the right way. Considering both the learning ability of students and teachers' teaching ability, JA mode, care and guide as the core of it, based on action research and problem interaction, is suitable for rural middle school English education. This research is inevitably limited in that it only focuses on the cooperative learning mode of one rural middle school and also it does not combine theoretical theories with practical teaching, which may define it as incomplete, expecting to be compensated in studies of the future.

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## Appendix

### Questionnaire

Dear students,

This investigation is about the English cooperative learning mode which has been carried out in our school for a period of time. Please read every item carefully and circle the number according to your personal situation. To protect every student's privacy, this questionnaire is anonymous.

1. English level ( )

A. Excellent      B. Good      C. Fair      D. Pass      E. Fail

2. Gender ( )      A. Male      B. Female

3. Grade ( )      A. First      B. Second      C. Third

The five numbers after each question represent different degree of coincidence. **1** means “**I definitely disagree with it**”, **5** means “**I completely agree with it**”; the greater the number, the more agreeable I would be. There is no right and wrong answer, you just need to answer these questions according to your own situation and circle the numbers.

4. Cooperative learning has aroused and improved my learning interest. 1 2 3 4 5
5. I prepare for English cooperative learning and preview the lessons. 1 2 3 4 5
6. After English cooperative learning, I reflect on my performance in class. 1 2 3 4 5
7. After experiencing English cooperative learning, I have become more confident in English learning. 1 2 3 4 5
8. I like English cooperative learning. 1 2 3 4 5
9. In English cooperative learning class, I can get along well with my classmates. 1 2 3 4 5
10. In English cooperative learning class, the whole class is united as one. 1 2 3 4 5
11. I hope my English proficiency will be improved in English cooperative learning class. 1 2 3 4 5
12. In English cooperative learning class, I think my speaking and listening skills have been improved. 1 2 3 4 5
13. In English cooperative learning class, I think my reading and writing skills have been improved. 1 2 3 4 5
14. In English cooperative learning class, I have learned to set a goal for my English study and work hard. 1 2 3 4 5
15. In English cooperative learning class, I take an active part. 1 2 3 4 5
16. When I'm not quite sure about some problems, I like to discuss with my group members. 1 2 3 4 5
17. I am willing to share my study materials and help others in English cooperative learning. 1 2 3 4 5
18. I like to listen to my classmates' opinions in English cooperative learning. 1 2 3 4 5
19. I will point out other group members' mistake and help them correct it. 1 2 3 4 5
20. I think group members should help each other. 1 2 3 4 5
21. When the group members disagree with each other, we will discuss together. 1 2 3 4 5
22. I think the group members will cooperate with each other to resolve disagreements. 1 2 3 4 5
23. I am clear about my role and duty in English cooperative learning. 1 2 3 4 5
24. I actively cooperate with other students to complete tasks in English cooperative learning. 1 2 3 4 5
25. We will follow the direction of the team leader and express our opinions one by one once we get our learning task.  
1 2 3 4 5
26. We communicate with each other in English during English cooperative learning. 1 2 3 4 5
27. The group member will cooperate with each other to complete teacher's task. 1 2 3 4 5
28. In English cooperative learning class, I have learned to respect other's opinions. 1 2 3 4 5
29. In English cooperative learning class, I can memorize all the language points. 1 2 3 4 5
30. In English cooperative learning class, I can understand English knowledge better. 1 2 3 4 5
31. In English cooperative learning class, I can apply the English knowledge I have learned to life better.  
1 2 3 4 5
32. I think cooperative learning helps me a lot. 1 2 3 4 5

33. I am satisfied with the ways of evaluation in and after class. 1 2 3 4 5
34. I am satisfied with my performance in English cooperative learning. 1 2 3 4 5
35. I prefer the traditional learning style to English cooperative learning. 1 2 3 4 5
36. Compared with the classmates, I believe more in teachers' explanations. 1 2 3 4 5
37. I dare to express my opinions in front of my classmates because of the adoption of English cooperative learning.  
1 2 3 4 5
38. I think the adoption of English cooperative learning has improved everyone's English proficiency level. 1 2 3 4 5
39. I think the adoption of cooperative learning cannot improve my English academic achievements. 1 2 3 4 5
40. Have you changed a lot since the school adopted English cooperative learning?
41. What's your opinion on English cooperative learning in your school?
- Thank you for your cooperation! Best wishes!

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