

# The Effect of Cooperative Learning Mode Applied in the University Students' Shaping Class

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This study try to explore an effective cooperative learning mode in line with the needs of shaping classes, promoting the healthy development of the students. Methods: randomly selected two classes of first-year undergraduate students in Beijing Normal University who studying shaping lessons, one is the experimental class with 30 persons taking 10 weeks teaching experiment, the other the control class with 31 person using conventional teaching mode. Conclusion: (1) The Cooperative learning can promote students' mastery of technical skills. (2) The cooperative learning on the mental health level of the experimental group were improved to some extent. (3) The cooperative learning will help to improve the students' panic mood. (4) The cooperative learning can help to relieve the level of stress. (5) The cooperative learning help to improve the interpersonal skills of the students, and the effect is remarkable. Suggestions: (1) Try to use cooperative learning mode in shaping classes. (2) To do a similar study in Physical Education, the experimental period can be extended and the sample size should be increased.

*Keywords:* Effect; Cooperative Learning; Teaching Mode; Shaping Class

## Introduction

Cooperative Learning rised in the United States in the early 1970s, and got a substantive progress in teaching theory and strategy system in the mid-1970s to the mid-1980s. Cooperative learning is a teaching mode refers to the form of a group of students with different levels of learning ability, through a series of learning activities, completing a common learning goals. A large number of studies have shown that cooperative learning can improve classroom psychological atmosphere, improve the academic performance of students, and promote the effectiveness of student intellectual quality good development significantly. There are little study of cooperative learning in Physical Education, and lacking effective operating mode. This study aims at through making teaching experiment in students' Shaping class, assessing the impact of cooperative learning on students technical skills and mental health, exploring an effective cooperative learning mode which can not only meet shaping classes' need but also can promote the healthy development of the students.

## Research Methods

### Object

Randomly selected first-year undergraduate students in Beijing Normal University, two public physical education classes, the experimental class with 31 students and the control class with 30 students. Before experiment the two classes took homogeneity test.

### Research Tools

In this study, using four measuring instruments: 1) Students' Mental Health Diagnostic Scale (UPI) (Fumin Fan, Jianzhong Wang, 1993). 2) Students Pressure measurement questionnaire

--- full version(Hengchan Yin, 2006). 3) Profile of moodstates (POMS)( Peili Zhu, 1994). 4) The college students interpersonal comprehensive Diagnostic Scale(Richang Zheng).

## Experimental Implementation of the Program

### Experimental Time and Variable Control

In this study, a 10-week teaching experiment took with exactly the same level of experimental classes and control classes of teachers, teaching content, teaching schedule, assessment methods. Control classes in accordance with conventional teaching methods and teaching, experimental class with cooperative learning.

### Implementation of Cooperative Learning Mode Cluster Approach

Reference to personality and other factors in the experimental classes, mainly based on academic performance at the same time, 30 people divided into a group within heterogeneous, homogeneous outside of group of six teams, each group of five people. The members of the group remains unchanged during the whole experiment. Each team member to assume a certain role in the group, and to make them capable of interdependence, mutual promotion, and bear some responsibility to actively contribute to the common goal of the team.

According to the needs of the teaching content, team members in the cooperative learning assume different roles. The five kinds of roles:

- 1) Organizers. Responsible for organizing refresher on lesson content, and practice new teaching content;
- 2) Observers. Responsible for technical review and all members of the practice in the observation group action, and gives the error correction prompts;
- 3) Referee. Teaching team contest judge responsible for the work, if the referee any unfair behavior, the team can not give any reward;

4) Recorder. Responsible for group activities, group and team members access to the records and statistics of the reward situation;

5) Summarist. Organizational groups in the class before the lesson exercises and team members collaborate with each other, communication discuss and summarize the discussion, of praise good experience, shared with other groups in the teacher after school summary.

Members role of changes once every two weeks in the 10 weeks of the experiment, as much as possible so that each member of the rotation of the office all the roles.

Teach Cooperation Skills

In the present study, the teachers while teaching expertise, but also to teach students cooperation skills. Good cooperation skills not only enable students to better collaboration and communication, thereby increasing the effectiveness of group learning and improving students' interpersonal skills and social adaptability.

Incentives

Experimental class to achieve mutual collaboration, common learning better teaching objectives rated "excellent" group and individual awards. The results of each lesson registration given scores extra points in the final statistics. Teaching teachers should be given more accurate and appropriate verbal praise and encourage group students encouraging each other.

Experimental Monitoring, Regulation and Feedback

In this study, two semi-structured interviews took in the beginning of the experiment and at the end of once to understand the feelings of the students' understanding of the lesson and class.

In addition, the process of group activities monitoring and regulation, as well as the result of feedback given to group activities, to ensure the quality of cooperative learning. Teachers are familiar with each team, and be aware of the advantages and disadvantages of the various members, and regulating the activities of the various groups in a targeted manner.

Monitoring of group activities through interviews, results feedback, discover the problems students grasp the activity time to master the process direction, to understand the students' attitude, if necessary, make the appropriate adjustments to ensure that the effect of cooperative learning.

Evaluation Methods

The evaluation of this study include both academic evaluation, also include the evaluation of the learning process that is cooperative group activities; including teacher evaluation, also include student self-assessment.

Statistical Methods

In this paper, the statistical collation and analysis use the SPSS10.0 software on the experimentally measured data.

Results and Analysis

Homogeneity Analysis Before the Experiment

As can be seen from **Table 1**, before the experiment, the students' mental health, emotions, stress, interpersonal score no significant difference between the control group and the experimental group. Before the experiment, the control group and the experimental group students in mental health, emotional, stress, interpersonal homogeneity.

The Technical Skills Comparative Analysis

1) Hold the control group and the experimental group in the comparative analysis on the level of technical skills to master

Students in the experimental group and the control group after the experiment, by the two-body teachers evaluation of technical skills, to take the average of the two teachers scoring as each student's final grade, the final score of the experimental group and control group studentst-test results are shown in **Table 2**.

As can be seen from **Table 2**, the control group and the experimental group students to master the technical skills scores were compared, no significant difference, but the experimental group, the average points higher than that of the control group, the experimental group were much better grasp of technical skills.

2) After the experiment, the of physical control group and the experimental group in the comparative analysis of the level of mental health

Pretest posttest scores on the mental health of the average difference of body control and experimental groups, t-test, and the results are shown in **Table 3**.

As can be seen from **Table 3**, the control group and the experimental group students measured difference between the test scores was no significant difference in the level of mental health forward. But lower than the pre-test, post-test scores of the experimental group improved description of the experimental group were the level of mental health.

Table 1.

The control group and the experimental group in mental health, Mood, stress, interpersonal score on the t-test.

|                             | Control group |         | Experimental group |         | t      | P     |
|-----------------------------|---------------|---------|--------------------|---------|--------|-------|
|                             | M             | SD      | M                  | SD      |        |       |
| Mental Health               | 1.82          | 0.983   | 1.57               | 0.898   | -1.031 | 0.307 |
| Emotion                     | 310.11        | 32.691  | 293.20             | 36.390  | -1.857 | 0.069 |
| Pressure                    | 2.1063        | 0.49748 | 2.0196             | 0.44941 | -0.697 | 0.489 |
| Interpersonal-relationships | 7.43          | 4.887   | 8.27               | 4.989   | 0.646  | 0.521 |

Table 2.

Physical control group and the experimental group t test the technical skills to master scores.

|                             | Control group |       | Experimental group |       | t    | P    |
|-----------------------------|---------------|-------|--------------------|-------|------|------|
|                             | M             | SD    | M                  | SD    |      |      |
| Technical Evaluation scores | 83            | 0.756 | 86                 | 0.817 | 1.51 | 0.05 |

Table 3.

Physical control group and the experimental group (after the experiment - before the experiment in the mental health level t-test) scores.

|               | Control group |       | Experimental group |       | t      | P    |
|---------------|---------------|-------|--------------------|-------|--------|------|
|               | M             | SD    | M                  | SD    |        |      |
| Mental Health | 0.12          | 0.756 | -0.23              | 0.817 | -1.816 | 0.08 |

Mental health level of the t-test results there is no significant difference may be due to: the experiment was only 10 weeks, time is short, cooperative learning model figure teaching can not be formed on the level of mental health than conventional teaching mode a significant effect.

Reason may be lower than the pre-test post-test scores of the experimental group as cooperative learning, students follow the group heterogeneity between groups the homogeneity principle of small groups within the group evaluation of the individual to the group's overall performance as the basis for team members to each other help, common progress. Each member active play to their strengths, to help other team members, and the arrangement of the role of the different tasks within the group so that each member has the opportunity to contribute to the progress of the team. This mechanism makes each member's strengths has been the show will, insufficient relative to others the weaknesses was always someone to give a helping hand, so the individual's sense of accomplishment, frustration less, the level of mental health will naturally improve.

3) Experiment, body control group and the experimental group comparative analysis on the emotional

Emotional score and its seven dimensions, body control and experimental groups approached measured the average difference between the test scores of the t-test results are shown in **Table 4**.

As can be seen from **Table 4**, the control group and the experimental group students approached in the emotional score and its seven dimensions measured difference between the test scores were no significant differences. Among them, the control group, in addition to energy, self-esteem improved, the total score and the other five dimensions of change are tend to be emotional deterioration. The panic sentiment improved, the students of the experimental group score and the other six dimensions of the changes are to the emotional variation. The control group and the experimental group: Although there is no significant difference in the emotional score, but the experimental group students panic emotional improvement was better than the control group.

**Table 4.**

Physical control group and the experimental group (after the experiment - before the experiment on the emotional score and its seven dimensions t test) scores.

| Dimension           | Control group |        | Experimental group |        | <i>t</i> | <i>P</i> |
|---------------------|---------------|--------|--------------------|--------|----------|----------|
|                     | M             | SD     | M                  | SD     |          |          |
| tensity             | 1.64          | 8.161  | 1.60               | 8.950  | -0.019   | 0.985    |
| anger               | 1.82          | 6.254  | 0.17               | 9.907  | -0.754   | 0.454    |
| fatigue             | 1.75          | 7.787  | 0.00               | 11.809 | -0.661   | 0.511    |
| depression          | 0.29          | 5.943  | 0.37               | 7.810  | 0.044    | 0.965    |
| energy              | 0.32          | 10.670 | -0.77              | 19.488 | -0.261   | 0.795    |
| panic               | 0.39          | 9.162  | -1.13              | 10.972 | -0.573   | 0.569    |
| self-esteem         | 2.32          | 11.072 | -2.80              | 14.700 | -1.490   | 0.142    |
| the emotional score | 3.25          | 30.051 | 4.57               | 48.204 | 0.124    | 0.902    |

The reason may appear experimental group students panic mood is greatly alleviated the teaching mode. Learning task in the face of cooperative learning, team members collaborate with each other to resolve the various difficulties, improve learning efficiency, save your energy consumption, reduce panic mood naturally. Conventional teaching students more when they face a variety of learning tasks, fewer opportunities to get help from others, and often will know what to do, resulting in the panic mood.

Emotional t-test results there is no significant difference may be due to: the experiment was 10 weeks shorter time cooperative learning model figure teaching can not be formed on the impact on the emotional level of the more significant effects than conventional teaching mode.

4) Experiment, body control group and the experimental group comparative analysis on the pressure

Approached body of experimental and control groups in the pressure of the total score and its four dimensions measured the average difference between the test scores of the t-test results are shown in **Table 5**.

As can be seen from **Table 5**, the control group and the experimental group students approached in the pressure score their four dimensions measured difference between the test scores was no significant difference. The control group test scores in the cognitive dimension of reactions and emotional responses decreased, the experimental group have lower test score in the pressure of the total score and its four dimensions on this pressure improvement in the experimental group were in the control group.

The reasons for this situation: in the mode of cooperative learning, the students help each other, mutual guidance, increased communication and exchange, the pressure of sharing, so the pressure of the experimental class students and their improvement in the level of each dimension. Participation in sports activities can give vent to the negative emotions of students, reduce the pressure on students, the control group was an improvement in cognitive reactivity and emotional reaction dimension.

5) Experimental, comparative analysis of body control group and the experimental group on the interpersonal relationships

Interpersonal score and its four dimensions, the the physical experimental group and control group approached measured the average difference between the test scores of the t-test results are shown in **Table 6**.

**Table 5.**

Physical control group and the experimental group (experimental pressure score and its four dimensions - before the experiment) t-test scores.

| Dimension                   | Control group |       | Experimental group |       | <i>t</i> | <i>P</i> |
|-----------------------------|---------------|-------|--------------------|-------|----------|----------|
|                             | M             | SD    | M                  | SD    |          |          |
| Physiological responses     | 0.12          | 0.396 | -0.06              | 0.387 | -1.731   | 0.089    |
| Behavioral responses        | 0.04          | 0.460 | -0.04              | 0.467 | -0.678   | 0.501    |
| Cognitive responses         | -0.11         | 0.449 | -0.14              | 0.605 | -0.196   | 0.845    |
| Emotional reactions         | -0.03         | 0.344 | -0.12              | 0.609 | -0.672   | 0.504    |
| the total score of Pressure | 0.00          | 0.320 | -0.09              | 0.401 | -0.984   | 0.329    |

As can be seen from **Table 6**, approached the measured difference between the test scores of the control group and the experimental group students in people score, socially Dating, dimension with the opposite sex, there is a very significant difference, there was a significant difference in the interpersonal dimension. Experimental group of students the interpersonal score their four dimension scores have decreased interpersonal relationships improved significantly. The control group of students the interpersonal score their four dimension scores have improved interpersonal relationships deteriorate. This shows that cooperative learning will help improve the interpersonal skills of the students, and the effect is significant.

The reason for this may be: cooperative learning mode, students guiding each other, help each other, the pressure of sharing mood. More contact between the students and the students, communicative dating, social skills, the ability to interact with the opposite sex has been improved.

### Physical Experiments Before and After Comparative Analysis of the Results of Interviews

Experiments before and after the experiment, two semi-structured interviews and observations of the teachers in the teaching process, students have a more significant improvement in the the master teaching content at the same time emotional state, feeling of pressure, and interpersonal. For example, some students, they talked about in the interviews own gym class before and after the mood is very good, "such a good mood continued into the next morning," in Shaping class very happy, very relaxed, able to ease the pressure of school life, the opportunity to communicate within the group a lot, met a lot of new friends, "Shaping class' packet form of teaching let us know more new friends, and class, also keep in touch with each other. Through the observation of classroom teachers found that students in cooperative learning mode, help each other, mutual guidance significantly increased communication between students, enthusiasm for learning has improved markedly.

## Conclusions and Recommendations

### Conclusion

1) The control group and the experimental group students in the technical skills to master scores comparison was no significant difference but the experimental group average higher than

**Table 6.**

The control group and the experimental group interpersonal score and its four dimensions (after the experiment - before the experiment) t-test scores.

| Dimension                              | Control group |       | Experimental group |       | <i>t</i> | <i>P</i> |
|--|---------------|-------|--------------------|-------|----------|----------|
|  | M             | SD    | M                  | SD    |          |          |
| conversation                           | 0.39          | 1.571 | -0.33              | 1.322 | -1.909   | 0.061    |
| communication                          | 0.82          | 2.091 | -1.00              | 1.838 | -3.529   | 0.001**  |
| interpersonal                          | 0.58          | 1.643 | -0.37              | 1.098 | -2.573   | 0.013*   |
| intercourse with opposite sex          | 0.61          | 1.548 | -0.43              | 1.165 | -2.905   | 0.005**  |
| the total score of Interpersonal Score | 2.39          | 6.130 | -2.13              | 3.785 | -3.408   | 0.001**  |

\*\**P* < 0.01, \**P* < 0.05.

that in control group, the experimental group were much better grasp of technical skills.

2) The control group and the experimental group students measured difference between the test scores was no significant difference in the level of mental health forward. Experimental group posttest score lower than the pre-test, cooperative learning on the mental health level of the experimental group were improved.

3) The measured difference between the test scores was no significant difference in the control group and the experimental group students emotional score and its seven dimensions approached. Among them, the control group, in addition to energy, self-esteem improved, the total score and the other five dimensions of change are tend to be emotional deterioration. The panic sentiment improved, the students of the experimental group score and the other six dimensions of the changes are to the emotional variation. The control group and the experimental group: Although there is no significant difference in the emotional score, but the experimental group students panic mood of improvement in the control group, indicating that cooperative learning will help to improve the students' panic mood.

4) The control group and the experimental group students approached in the pressure score their four dimensions measured difference between the test scores was no significant difference. The control group test scores in the cognitive dimension of reactions and emotional responses decreased, the experimental group have lower test score in the pressure of the total score and its four dimensions on cooperative learning help to improve the level of stress.

5) The control group and the experimental group of students in the interpersonal score, communicative dating with the opposite sex dimension approached measuring the difference between the test scores exist very significantly with differences exist on the interpersonal dimension significantly with the difference, on the conversation dimension without significantly with difference. Experimental group of students the interpersonal score their four dimension scores have decreased interpersonal relationships improved significantly. The control group of students the interpersonal score their four dimension scores have improved interpersonal relationships deteriorate. This shows that cooperative learning will help improve the interpersonal skills of the students, and the effect is significant.

### Suggestion

1)It is suggestion in shaping classes to try cooperative learning model.

From the experimental study of 10 weeks, body teaching using cooperative learning model can be very significant to improve students' interpersonal, cooperative learning has better in all dimensions of the part of the dimension of the level of mental health and emotional indicators, pressure indicators improving effect. Therefore, it is suggestion to try using cooperative learning model in the physique class of teaching.

2) It is suggestion to do a similar study in the Physical Education to extend the experimental period, increasing the sample size.

In the level of mental health, emotions, stress, physique class use cooperative learning mode compared to the conventional teaching mode although there is no significant difference, but in the part of the dimensions of these indicators experimental group and the control group, a big difference, and apt to be remarkable. Better than conventional teaching mode to improve

the effect of cooperative learning on these indicators. The experiment was only 10 weeks, the sample is small, such as experiments continue to increase the sample size, might better show the differences between the cooperative learning mode with conventional teaching Physical Education.

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