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Xuelin Pang  
*Harbin Engineering University*

Zhengze Zhang  
*Harbin Engineering University*

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## **Experimental Research on the Teaching Mode of Cooperation and Competition in Physical Education**

Xuelin Pang<sup>a</sup> and Zhengze Zhang<sup>a</sup>

<sup>a</sup>Harbin Engineering University

### **Abstract**

There are great differences in skill levels among students in the class. It should be the focus of our work to improve students to the greatest extent through teaching, gradually narrow the gap between individuals, and improve the overall teaching quality. Therefore, the purpose of this study was to examine the effects of the teaching mode of cooperation and competition. The research group conducted two rounds of teaching experiments in Harbin Engineering University. The first round of experiments adopted an equal group pre-test and post-test experimental design. Solomon's four group design was used in the second round of experiment. The whole experimental process was standardized and rigorous to avoid Hawthorne effect. Teachers organized teaching according to the experimental scheme and steps of cooperative and competitive teaching mode. Two rounds of teaching experiments were followed with a previously validated internal motivation survey. After the first round of experiment, a questionnaire was conducted on the students of two classes. In the second round of experiment, an experimental class and a control class were investigated in the middle of the experiment. After the experiment, a questionnaire was conducted in the other two classes. The independent sample t-test results shows that the scores of the experimental class were significantly higher than those of the control class (P values were less than 0.05). The level of internal motivation in the experimental class was significantly higher than that in the control class (P values were less than 0.05). The effect of cooperative and competitive teaching mode is better than that of conventional teaching mode, and it is conducive to mobilize students' internal motivation, promote students' autonomous learning, and cultivate students' interest and hobby in sports. By using the methods of group mutual aid learning and group competition, students would improve their skill level through the joint efforts with peers and promote the development of their awareness of cooperation and competition.

*Keywords:* cooperation, competition, intervention, motivation