

Feedback Control Training Method Applied in the Basketball Teaching

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Abstract. In the basketball teaching, the teacher uses the classroom teaching feedback and periodic feedback control approach to let the students master the skill of basketball which has a certain role in promoting their skills. Using feedback control method can make the students receive more multi-channel input information and the teacher receives feedback information which, in turn, lets teacher timely control the teaching process. Under the condition of not increasing class hours, the teaching has strong pertinence and teacher purposely, speeding up the students' master of the correct sports skills. The use of feedback teaching method can make the whole teaching process more scientific and systematic, so as to achieve the best teaching effect.

Introduction

With the development of science and technology, the emergence of various new scientific theories has brought vigor to most fields. While we continue to deepen teaching reform today, the application of the feedback teaching may be a topic that once talked about but be put forward again today, because many experts and scholars have done a lot of research on this problem in many literatures. However, as a physical education teacher, in the usual searching for various documents, I always feel that the feedback teaching is narrowed in writing not in the application of teaching practice. Through the years of teaching practice, I use the feedback control method of teaching to improve the students' mastering of skills in basketball teaching. There are some differences in control teaching with feedbacks and those without in basketball teaching.

With the deepening of the reform of physical education, research on the teaching methods and improving teaching quality has become a very important content in current reform. Sport teaching is a controllable information transfer process. Therefore, by using the method of information feedback in teaching, the true information of the students' master the knowledge and skills in the learning process can be timely obtained. This method lets teachers adjust the teaching methods and provide a reliable basis to teach students in accordance with their aptitude.

The teaching methods can be more scientific. The method of information feedback control is applied in basketball teaching and we can explore an effective teaching method and provide reference for improving the teaching quality of basketball. How to use feedback method in the basketball teaching is discussed here combined with my personal feelings, for you all to make references and have discussions.

1. The Basic Principle of Feedback Teaching Method

1.1 Feedback

Feedback is the basic concept of the theory of control. Feedback is a process in which information about the past or the present influences the same phenomenon in the present or future. As part of a chain of cause-and-effect that forms a circuit or loop, the event is said to "feed back" into itself. The feedback teaching method is the use of system theory, information theory and control theory principle to build a teaching method. Both teachers and students are in a harmonious situation and cooperative atmosphere.

The teachers guide students to learn to use the system, knowledge and take the development of ability as the goal. This underlines the timeliness of information exchange and information feedback between teachers' teaching and students' learning, which improves the comprehensive teaching method of classroom teaching quality. Research has shown that, the feedback teaching method in college basketball elective courses teaching, compared with the conventional teaching method, is advantageous to the students' technology skills and theoretical knowledge which can effectively improve the technological achievement of students.

1.2 The Feedback Teaching Method

Feedback teaching method takes the feedback information as the main line, which goes all through the self study. It changes the traditional teaching method of the students' listening to everything the teacher told them. The class information is changed from one-way transmission to multiple. The characteristics of this approach are: under the guidance of teachers, students learn, think, summarize, and create. Then the knowledge is put out, using the feedback for inspection, regulation, selection and control to achieve the review of knowledge, cultivating ability and developing intelligence.

1.3 The advantages of feedback teaching method

The feedback teaching method is beneficial to information feedback and control. It is conducive to student learning ability. It is favorable to the development of teachers' teaching students in accordance with their aptitude and personality. It overcomes the stereotyped thinking mode and optimizes the classroom teaching.

2. Feedback Teaching Method applied in the Basketball Teaching

Basketball is a game which requires a broad range of skills, in order to perform at a high standard. The game of basketball provides a singular opportunity to study the perception of skilled performance, since fans, coaches, athletes, and announcers all consider streaks to be a factual part of the game. A skilled performer demonstrates characteristics and abilities which allows them to perform consistently at a very high level. A skilled performer is often stronger, more flexible, better coordinated, balanced and fitter than unskilled performers. They are able to perceive, decide and act in a manner that is efficient in terms of both energy and time.

A motor (or movement) skill is an activity that involves muscular movements, with the correct degree of muscular control, to complete a reasonably complex predetermined task. There are four main methods that are used in order to gauge the level of an athlete's motor skill. These methods include the three stages of learning, types of skills, types of practice and types of feedback.

A layup is a one-handed shot made from near the basket. According to the motor skill method of classification of skill, a layup is serial, meaning in order to perform the skill accurately and effectively, there are several discrete tasks which need to be executed.

During the testing phase for each basketball skill, results clearly indicated that I was at the cognitive stage of learning with regards to my performance in basketball layups. Therefore, in order to improve my motor learning as part of skill acquisition I have chosen basic drills to assist in developing the correct routine for basketball layup's.

Basketball teaching is a multi-factored complex teaching system. In order to make the teaching process smooth and achieve good results, teachers must often adjust properly to the teaching system. The student feedback information acquisition in the learning process can be the followings:

- (1) The feedback information of the teachers
- (2) Student's own feedback information in practice;
- (3) Observed information from students in practice and idea exchanges.

In the process of teaching, teachers are wanted to make timely adjustments to teaching and keep the dynamic balance in teaching. Teachers should get feedback information from students in practice as much as possible. Timely feedback to students and guidance to students to practice is important.

Students should actively participate in, in many ways, providing the feedback information in learning process. Teachers should give full play to their initiatives as a leading role in teaching and learning.

3. Feedback Control Methods in Training

3.1 Immediate Feedback Control Training

Immediate feedback control is, in the teaching and training process, the teachers transform the output action information of student athletes, visually observed by teachers or coaches, into visual information. Through the analysis of the cerebral cortex, teachers draw the conclusion and immediately give response to the students making them understand clearly about the actual state of the results of their own implementation.

Teachers make adjustments in the course of practice. As students or athletes are beginning to practice hand chest pass process, exposing some problems, teachers or coaches should immediately issue mandatory information, like "vertical elbow" and "a palm, finger I", so students can practice in accordance with the teachers or coaches' feedback. Teachers doing this can timely help students and athletes master the skilled movements. In the instant feedback control, teachers or coaches must notice and issue immediate feedback control information simply, clearly and strongly, seizing the key. Too complicated instant feedback control information will cause the students or athletes in a nervous and intense status. They do not know how to do, which affects the actual effect of teaching and training.

3.2 Afterwards Feedback Control Training

Afterwards feedback control in training is that teachers or coaches in teaching a tactic or after a training class or during pause time of games and when a tight game ends, summarize students' advantages and disadvantages that they should pay attention to in the future. Through the summary, students should understand what is right and what is wrong, on which they need further strengthen in the course of practice or a game. Students should not end practice or a game confuse or incorrect information. This is the afterwards feedback control training. Unlike immediate feedback control training which is rather intuitive, it needs a certain period of time. But by sticking to it, its effect will gradually appear.

3.3 Periodic Feedback Control Training

Periodic feedback control training is after a stage (a week, a month or a year) teaching, the original plan is revised according to students' or athletes' performances in the tests or examinations. Through comparison analysis, a new plan is made and a much more effective method is added, making the expected performance in the next stage teaching prior to the actual performance (measured in the teaching and training). This requires teachers or coaches to be good at collecting teaching materials in practice.

Such as original materials of students or athletes before their teaching and training, generally include: name, gender, age, height, weight, health, hobbies, characteristics, physical quality (general and specific), consciousness, tactics mastered and application in actual use. At the same time, after each teaching and training process is finished (a week, a month or a year), the measured data should be processed. The visual information should be transformed into statistic information filed, namely, the establishment of students' basketball training records.

This helps analyze and summarize the teaching and training process objectively, all in all, better periodic feedback control training is conducted. The advantage of periodic feedback training is to narrowing the differences between the expected performance in teaching and training and the actual one. The teaching and training plans made before are prior to the ordered and practical measured

index, reducing large fluctuations and deviations in the teaching and training process.

4. Conclusion

In basketball teaching and training, feedback control training method only refers to one of the entire control theory applied in teaching and training. With the further application and research, there will be more and more effective control method on the teaching and training. Appearance of methods of control in teaching and training will change the method of random control by experience in the past, making the training process more scientific and systemic. Optimization of the training effect can be reached in the teaching and training in a relatively short period of time.

References

- [1] Emmet.Richards, Vorvick.Linda, Avnon.Tovi, Robins.Lynne. 《Improving Teaching by Teaching Feedback》. Medical Education. 2008
- [2] Wandzilak.Thomas, Bonnstetter.Ronald, Mortensen.Lynni. 《Examining Congruence among Teaching Objectives, Classroom Behavior and Student Learning: Feedback for University Professors》. Journal of Teacher Education. 1994
- [3] Weizel. Richard. 《Survey Seeks Feedback on Recreation》. Connecticut Post (Bridgeport, CT). 2007
- [4] Reyer.Liz. 《Teaching doctors want feedback from patients》. Daily Telegraph. 2004