Discussion on the Scheme of Setting up Computer Race

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Keywords: Computer race, Development, Ability

Abstract. Computer Education is a modern education in the middle schools now. As well, it’s also a necessary course of senior high school entrance examination. Computer education meets the urgent need of education "facing modernization, facing the world and facing the future". Computer courses will gradually become an independently middle school knowledge and skills of the combination of the basic disciplines.

Current Situation and Reasons of Domestic Computer Race
At present, the level of computer education in our country still has a big gap, especially compared with the advanced level of the developed countries:

First, the teachers are not stable, the professional computer teachers are still very short in general, the level of education development is unbalance in different regions, the hardware facilities are generally lag behind, and so on.

Second, the base installation systems are not standard. Which learning objectives should elementary school junior high school and high school chooses. This is the same as the materials of books. Few school paid more attention to computer education, especially in the north of China. They usually put their focus on the subject of College Entrance Examination. Now a series of books or a principle of computer education is in urgent need. They need a guide and a standard. AI is very popular in China today, not only in the university but also in the middle school, even the preschool. At the same time, many match of robot are held between every ages. So we should add this part in the computer materials of middle school.

Third, students study from zero level whatever they stay in, so they learn the basic materials three times in general. There is a bad join between the two grades. So we need a standard, and we need to practice the standards indeed. The computer race won’t have a successful without a practically computer education.

Discussion on Computer Race of Middle School Students
With the development of computer education all over the country, the computer race began developing with it, the scale and degree of computer race become larger and larger, so it is an urgent problem to deal with the relationship between computer race and students. The following recommendations are made here:

(1) Solve the problems of the relationship between computer race and computer popularization correctly.
(2) Encourage young people to be aggressive and brave.
(3) Selection is only a direct purpose of computer race. The ultimate goal of race is popularization.
(4) Computer race training is quality education, not examination-oriented education.

Computer Contest Setting and Computer Contest Content Setup
The general form of computer race in middle schools, most of the races are basically the same, the form of organization is not accurate and comprehensive. High school computer race must be based
on the curriculum, content, methods and teachers. To improve students' quality and realize the modernization of computer race is the final purpose.

The computer race of middle school is a combination of knowledge and skill. The content of the race should not be apart from the reality of society.

**Content Setting of Computer Race in the Middle Schools**

First, the basic principles of selecting the content of computer race in middle schools

1. The content of the race should be mainly practical, especially innovative and in-depth.
2. Improve the method of race, pay attention to the principle of combining "mental movement with hands" and "moving brain and hands".
3. Pay attention to the cultivation of students' ability.
4. Pay attention to cultivating students' psychological quality.
5. The contents of the race must not be exceeded from those acceptable to the students, we should gradually cultivate and stimulate students' ability to solve difficult problems and stimulate students' desire for knowledge.

Second, in order to assess the basic knowledge of students, comprehensive, application capability, and to stimulate students' thirst for knowledge and innovative thinking on the basis of maintaining the relative stability of the syllabus and the possible acceptance and understanding of the excellent students, the race questions are appropriately changed in accordance with the following trends.

1. To increase the compactness of the combination of knowledge in class;
2. To increase the diversity and flexibility of solving problems;
3. To increase the proportion of open test questions.
4. To increase the practicability of the questions.
5. To increase the quantity of the questions about AI.

**Computer Race in Middle School Play the Role of About Information Technology Course**

The aim of the race is to cultivate the students' interest in learning computer knowledge. Deepen the understanding of computer knowledge, to improve the ability of flexible use of computer knowledge, promotion quality education in middle schools.

**Promoting the all-round Development of Students' quality.** Computer races should stimulate students' interest in learning information technology. To increase students' scientific literacy, to promote students to develop good feelings, cultivate students' good will, to improve students' innovative ability and provide a stage to show their intelligence for a group of high school students who enjoy learning and has some achievements or some ideas.

**Computer race can Cultivate their Team Spirit.** Enhance cooperation and communication capacity. Students who take part in computer races often form a computer race group for extracurricular activities. Because all the members have a strong interest in computers, so the group make exchanges and cooperation, researches together. Students learn from each other in cooperative learning, promote each others, experience happiness, enhance communication, and healthy growth. They are aggressive, wide-ranging exchanges, unity and cooperation, those will allow students to go further on the road to race, even their career.

**The Development of Computer Race has Promoted the Improvement of Teachers' level.** The computer race provides a wide space for the development of middle school teachers. Promote middle school teachers to greatly improve the level of knowledge, speed up the pace of knowledge renewal, and cultivate awareness of lifelong learning.

**Computer Race is Conducive to the Development and Improvement of Teachers' level of Practical Experiment Teaching.** Computer is a subject based on experiments. Many programs and works are found and summarized from experiments. Computer experiment course is the most effective teaching form to carry out all-round computer education. Because this characteristics, computer experiment teaching it plays a unique role in cultivating students' hands-on ability
stimulating students' interest in learning promoting the development of creative thinking and establishing a scientific mode of thinking. Experimental teaching is different from classroom teaching, it is the best place to cultivate students' knowledge, ability and quality. The students will get nothing if they read book only.

**Computer race can Perfect and Promote Teachers' application of Modern Educational Technology.** In many cases, it is necessary to visualize the abstract and difficult-to-understand knowledge to help students understand it. At this point, we need to use teaching aids, multimedia and other auxiliary teaching methods. Teachers can accumulate a great deal of information and experience in this process. There are so many interesting-class held for the preschool children, their subjects are all kinds and children have high interesting on it. Such as the mini mobile car, robots are popular. So teachers in middle school should put their focus on the popular matches out of their schools.

**How to Organize Computer Races**

**Organization Mode of Computer Race Training in Middle Schools.** As the computer equipment is gradually configured in middle schools, the computer knowledge teaching and race activities are becoming more and more popular in the middle school, which makes the computer education and race work in the middle school become more and more standard teaching from the experimental experiment.

Opening of universal computer compulsory courses Universal computer compulsory course in middle school, it is a kind of teaching form for all the students, and it will be the main position for the middle school to carry out computer education. As the development of information society, the use of computer and mobile phone are necessary to everyone. So maybe everyone should have the ability to programming in the future just like we have the drive license today. A big requirement is needed in the future, everyone should have the programming license. So the children should get a large number of computer knowledge. Where? Of course it is in the school.

**Setting up a Computer Science Group.** Subject group of computer in middle school is one of the main projects to deepen the reform of middle school education and open up the second classroom activities. The main participants in this computer teaching model are the students with good computer performance in each class. They have intense on some subjects, or they had some appearance on some subjects. Activities that focus on learning computer knowledge, broaden and deepen the knowledge of programming. These subjects will make middle school students to use computer language to design and solve some practical problems. Not only for the race but also for their works in the future employment or further education to lay a solid foundation, so that students in their respective posts in varying degrees to play their own advantages in the use of computer work.

**Setting up a Computer Race Training Group in Middle Schools.** The computer race training group is a special position for students to learn computer knowledge. Learning computer of middle school students is a powerful promotion and motivation. A few or more people were selected from popular classes and subject groups to form a computer contest training group. Planning, to carry out the task, content implementation, personnel implementation, time implementation as a prerequisite, conducting computer knowledge training for students, this is another effective mode of computer education in middle schools. This method provides a greatly improvement of the middle school students to operate the computer comprehensive adaptability and computer thinking ability, for the development of high school computer race.

To sum up, popular classes, subject groups, the race training team should be independent and mutually reinforcing. When the conditions of teachers and equipment are complete, it is a new way to reform the curriculum structure of middle school to carry out three kinds of computer teaching activities in different levels, which can cultivate the "seedling" of computer talents of different levels.
**The Five Key Links of Developing Computer Race in Middle School.** (1) Hardware. (2) The construction of teaching materials. (3) Teacher training. (4) Development of software. (5) Variety of race events.

**Reference**


