Design Conception of Web Based Chinese Wushu Distance Education Platform (WEB-WTS)

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Abstract. This paper analyzes the development status of Wushu distance education based on Web. On this basis, the design of Wushu distance education system platform is macro and overall conceived. The requirements, objectives, functions and functions of the system platform are described and analyzed in detail. Through the decomposition and design principle of Wushu distance education system function, through the development of system platform, the distance education platform (wts-web) is developed, which promotes the popularization of Chinese Wushu.

Keywords: Wushu distance education platform (web-ws) · Wushu teaching · Design concept

1 Introduction

Wushu is the quintessence of China. As a traditional folk sport, it has existed for thousands of years in China, and Wushu education also has a long history. There are written records that from the spring and Autumn period, there have been martial arts masters specializing in martial arts. However, due to the influence of feudalism such as "different schools", "pass on inside but not outside, pass on male but not female" and the limitation of Wushu education methods and techniques, many Wushu schools and techniques disappeared. Nowadays, the rapid development of computer technology and network technology has triggered a revolution in the dissemination of knowledge and information [1]. Modern educational technology has also developed from audio-visual education to the real combination of teaching and network, which has forced the long-standing educational ideas, methods, means and modes to be updated, Distance education has become a very effective way of universal education, continuing education and job training. In order to meet the challenge of information society and break the limitation of traditional Wushu education, it is urgent to conduct in-depth research on Wushu distance education. This paper analyzes the current development status of Wushu distance education, on this basis, the design of Wushu distance education system platform for a macro, overall concept, focusing on Wushu distance education system needs, objectives, functional decomposition and design principles for a more detailed elaboration and analysis, in order to promote the sustainable popularization of Wushu through the construction of the platform, And then promote the development of national traditional culture.

2   The Current Situation of Wushu Distance Education in China

Long distance education is a new generation of education mode combining computer technology and multimedia technology. With the popularity of computers, the convenience of broadband Internet access and the change of people's concept, distance education, as an industry, is in a period of rapid development in recent years. Compared with traditional education, distance education can break through the limitations of traditional education in terms of educational resources (teachers, teaching materials, experimental and demonstration equipment) and educational methods (Unified progress, centralized and one-way teaching, etc.), and realize the sharing of educational resources and educational methods without constraints of time and space, While the educated can arrange their own learning plan and progress according to their own professional level and time, so as to realize the "personalized education" that traditional education can not achieve. In addition to the advantages of distance education itself, in the case of uneven distribution of educational resources, distance education is to informationize some traditional education, especially some of the best educational resources. For traditional education, distance education is a necessary supplement [2].

In order to facilitate the analysis and research, constraints are given to the multi-objective task scheduling problem, which is expressed by the formula:

$$\sum_{k=1}^{M} x_{ijk} = 1 \tag{1}$$

It means that any sample can only select one machine for calculation.

$$S_{k(j+1)} - n_{kj} \geq 0 \tag{2}$$

It means that the machine has no parallel computing ability, that is, it can only compute one sample at a time.

In addition, we also need to assume that: the samples of each task can not be stopped in the process of calculation; the same task samples are constrained by calculation order, and different task samples have the same priority; all tasks can be calculated at zero time.

3   System Requirement Analysis and Outline Design

3.1   The Goal of Web WTS System

Martial arts is a professional course for college students majoring in martial arts or physical education. There are teachers or coaches for systematic learning. For martial arts lovers, it is a non systematic educate. The web-wts system provides a network teaching and learning platform for these two types of teachers and students. Through the use of the system, we can consolidate and strengthen the effect of classroom teaching and make up for the lack of classroom teaching. Through the teaching system, teachers can release and manage the teaching content and related teaching information, arrange homework, organize discussion, communicate with students in real-time or non real-time, understand the problems in students' learning, and guide students [3–5]. According to their own situation, students independently choose to learn related content, ask questions, participate in discussion, online practice and simulation test.

3.2 Function Decomposition of Web WTS System

(1) Students learn. Students enter the web-wts system, take the title structure of each project as the navigation on the Internet, browse the teacher's multimedia teaching plans, lecture notes, lecture videos and other materials, and download or browse them directly for autonomous learning. Students must pass the system's identity authentication as legitimate users, in order to learn the core part of the content. According to the learning progress, unit test can be carried out, with each chapter as the unit). The unit test is maintained by the teacher in charge of the chapter (questions, test management, etc.). Teachers can maintain and modify their own chapters and unit test questions.

(2) Online examination. Student examination part: students log in and enter the examination subsystem. According to the number of questions set by the management module, question type, score and so on, the system randomly selects questions to form a test paper. Students test online. After the test, they submit the answers. The system automatically marks the test paper, records the scores, and intuitively feeds back the test results to students [6–9]. For the wrong questions, the system gives the correct answers, So that students can summarize and improve.

(3) Answer questions online. When students encounter questions in the process of learning after class, they can ask questions or get answers in time through the web WTS teaching system. The system provides students with the function of leaving messages and asking questions for a certain course chapter. After the teacher in charge of the chapter logs in, the unanswered questions will be automatically prompted for teachers to answer online.

(4) Teachers' personal classroom. According to the concept of web20, we set up a personal classroom for teachers. Teachers can use the professional courseware making tools provided by the website to make exquisite courseware, upload their own courses and price them. Teachers can manage their own students, manage homework, exams, answer questions, and provide teaching aids. Teachers can manage their own curriculum system. According to the charging items, teachers can participate in the sharing and query all kinds of data, including the charging situation of students. Teachers can participate in forums, chat and other exchange activities. At the same time, teachers themselves are students, and they can complete all the operations as a student.

4 Test and Analysis of Web WTS System

4.1 Software Testing Tools

Generally speaking, testing tools can be divided into white box testing tools, black box testing tools, performance testing tools, as well as testing management tools (test process management, defect tracking management, test case management) [10]. These products are mainly products of mercurylinteractive (m), segue, IBM Rational, Compuware and Empire "x", while Mi company's products are the mainstream.

White box testing tools are generally used to test code. The defects found in testing can be located at the code level. According to the different principles of testing tools, they can be divided into static testing tools and dynamic testing tools.

Static test tool: analyze the code directly, do not need to run the code, do not need to compile the code link, generate executable files. Static testing tools generally scan the code syntax to find out the places that do not conform to the coding specifications, evaluate the quality of the code according to a certain quality model, and generate the call diagram of the system. The representatives of static testing tools are: Logiscope software of telelog company; prqa software of PR company.

Black box testing tools are suitable for black box testing. Black box testing tools include function testing tools and performance testing tools. The general principle of black box testing tool is to use the script recording and playback to simulate the user's operation, and then record the output of the tested system and compare it with the pre-determined standard results [11, 12]. Black box testing tools can greatly reduce the workload of black box testing, in the process of iterative development, it can do regression testing well. Representatives of black box testing tools are: team test and robot of rational company; qacenter of Compuware company (see Fig. 1).
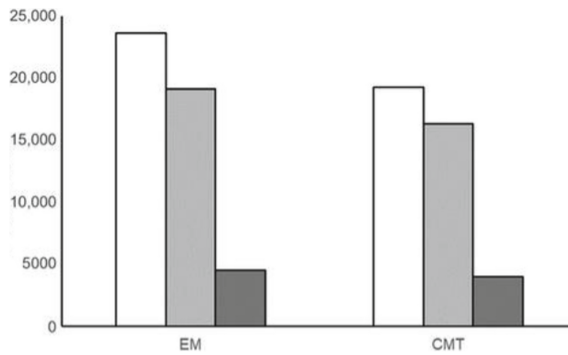

Fig. 1. Simulation for software testing tools

4.2 Analysis of Factors Affecting Service Performance

Bandwidth: bandwidth includes server outlet bandwidth, network line bandwidth and user access bandwidth. In case of insufficient bandwidth of any segment, for example, from the server to the student client PC, only 20K bandwidth can be obtained. The bandwidth occupied by video playback is usually higher than this value, and streaming playback appears intermittent or mosaic.

Server performance: for small and medium-sized websites, server performance has little impact on Web access, but has great impact on streaming media services [13]. Loading many services on a server at the same time, such as database, mail and other resource consuming services, affects the response speed of the server.

IIS: Microsoft's is, including Microsoft's windows 2003 operating system, is easy to be infected with viruses or hackers, and is sometimes congested and has to restart the server.

Programming: programming structure affects efficiency. For example, bad programming style, not paying attention to program structure and cumbersome processing.

Deployment mode: server and software configuration mode may affect performance. If traffic distribution, load balancing and server cluster strategy are carried out, the service effect will be greatly improved (see Fig. 2).
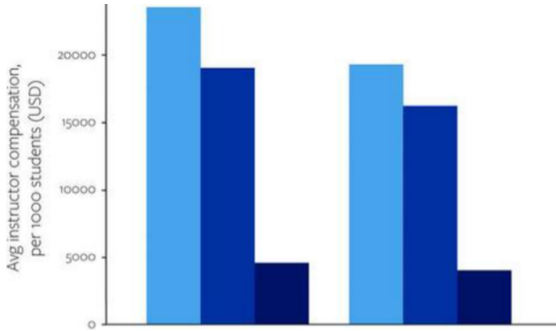

Fig. 2. Analysis of factors affecting service performance

5   School Martial Arts Between Social Expectation and Realistic Dilemma

5.1   Development Status

Throughout the hundred year history of the development of school Wushu, it is not difficult to find that since modern times, School Wushu has been formed and integrated into the new education between the "Shiyang sports debate" and the "Chinese and Western culture debate". It plays a unique value and function in inspiring the national spirit and strengthening the nation. It shoulders the historical mission of Wushu education and Wushu culture inheritance. Since the founding of new China, martial arts, as an important part of school education, has always been promoted and promoted by the education authorities. Whether it is the formulation of the syllabus or the compilation of teaching materials, the content and hours of teaching are strictly stipulated in different sections of our education system, From the objective data of Wushu education, such as curriculum, teaching content, popularity and talent training level, the development of Wushu in school is undoubtedly remarkable [14–16]. However, there are many problems in the quality and effect of Wushu education, "Although the party and the government have always attached great importance to the importance of Wushu in school education, the current situation of the development of Wushu education in schools is worrying. Although Wushu has been listed as a sports item in school education, Wushu teaching has not taken root in schools. 2." from 1987 to 2001, the content of Wushu education in schools has been revised many times However, there are still many problems to be solved.

5.2 The Trembling of Ideas: The School Wushu Education of "using Western Learning in Chinese"

Mr. Liu Sanyuan once said that the core and fundamental mistake of carrying forward national culture is that we are not lack of excellent traditional culture, but the education of excellent traditional culture. China's modern school education is a new type of education based on western education. 4. After the founding of the people's Republic of China, under the background of surpassing the United Kingdom and catching up with the United States, the Soviet Union's sports model entered China and accelerated the process of "Wushu Sports" in the process of copying and imitating. After that, Chinese martial arts voluntarily or involuntarily entered the circle of sports friends. "After our" processing and transformation ", Chinese martial arts has become a kind of sports. It can be said that the modern transformation of Chinese Wushu education is a process of transforming itself into Chinese style sports in the competition with western sports in the tortuous road of business difference and return 151. But we forget that "the western sports represented by the modern Olympic movement is the product of western industrial culture, It takes the scientific spirit as its leading culture, guides the competition, and pursues different ideas and goals from Chinese martial arts under the influence of traditional culture, With the feelings of cosmopolitanism and the vision of world holism, he regards the world as a family, emphasizes to view the world from the world, thinks about problems and governs the world from the perspective of the world as a whole, and thinks that conflicts and confrontations are only temporary disorder, which is characterized by the implicit nature of Chinese traditional culture. So there is a culture, there is a concept of movement, from the concept of movement, the eastern and western regional culture will have different colors. Obviously, Wushu education is different from physical education [17]. Chinese Wushu should be an independent discipline with its own discipline system. In a deeper sense, Wushu education is the education of Chinese culture, and physical education is the education of western culture. From the perspective of Tuyang sports.

5.3 Lack of Own Culture: "specious" School Wushu Inheritance

The cultural tradition of a nation is embodied in its national spirit. Cultural tradition is the immortal soul of a nation. It comes from the life of a nation through the ages, grows up in the repeated practice of a nation, and forms the collective consciousness and collective unconsciousness of a nation. In short, cultural tradition is national spirit. Therefore, the differences of national cultural spirit will inevitably lead to different cultural forms and expressions. In the education system, Wushu has always been different from any kind of foreign sports. It has the cultural tradition and emotional belonging of the Chinese nation. Because of this, the national culture embodied in Chinese Wushu is the fundamental reason for its inheritance, and it is the key to maintain the position of Wushu in the school education system. In a more fundamental sense, the reason why martial arts enter the campus is to spread K culture, carry forward national spirit and stick to cultural recognition. In the specific implementation process, we only take martial arts technology and martial arts movement as the foothold [18]. This method seems to inherit the national principle of "cultural inheritance", but it is actually a kind of blind behavior of "changing beams and columns", This phenomenon of "reading the classics

askew" directly leads to the reduction of martial arts education into a kind of martial arts education. As shown in Fig. 3. From the perspective of cultural inheritance and cultural education, martial arts with cultural functions has only become a sport with sports attributes. It can be said that this kind of "specious martial arts teaching sound" has nothing to do with its own cultural inheritance room.
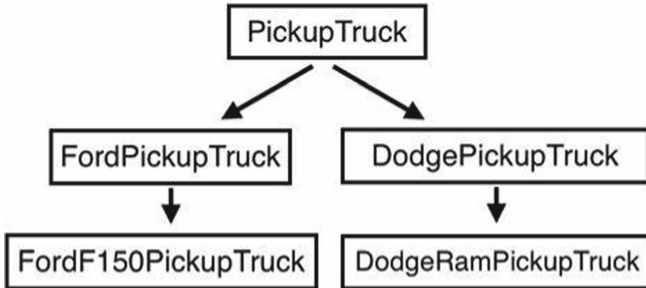

Fig. 3. The method of inheritance

6   The Way Culture of Chinese Wushu

6.1   Boxing Theory and Technique Theory in "Dao"

It seems that the idea of "the theory of all things in Taoism" is helpful to the liberation of sensibility and the equality of personality, so it is conducive to the development of Keji sports. However, its spiritual pursuit of simplicity and selflessness weakens the consciousness of Kezheng and the enthusiasm of adventure of Chinese people to a great extent. However, Taoism takes "Tao" as the core, thinks that Tao does nothing and advocates that Tao follows nature, which is in line with the idea of the unity of man and nature advocated by Wushu. In the view of Taoism, Tao is the origin of all things and the root of all things. "Qi" is a subtle, omnipresent, moving and changing material entity between nature and all living bodies, which constitutes the noumenon and law of Yumu. "Tao is the core of Taoist thought, and Tao is the innate condition for things to produce, move and change [19–21]. The so-called "Tao begets one, life begets three things." therefore, Taoism believes that without Tao, there would be no other things in the world. The Tao is also the principle, the method and the law. That is to say, if you master the Tao, you will get the Tao. Just as Mr. Jin Yuelu said: the most lofty concept and basic motive force in Chinese thought is the way that is not the way, the way that every family wants to say but can't do, the way that Chinese people naturally admire, the way that everything has to come from, have to follow, and have to return.

6.2   The Expression of the Idea of "integrity" and "Inaction" in Wushu

Tao Te Ching says: nothing is the beginning of heaven and earth; being is the mother of all things. Therefore, often without, want to see its wonderful; often have, want to see

its emblem. Generally speaking, it is: before the birth of heaven and earth, everything is nihilistic and nothing is called "nothingness". When heaven and earth produce all things, it is the beginning of all things, which is called internal angle. Observe its beauty, and conversely observe its boundary from some angles. Being and nothingness are two sides of the same thing, so the two are different from each other in name, such as wind. Wind can't be seen, but it really exists, and its function is self-evident. The great form has no shape. But we are often hearing about the folklore, school spirit, family tradition, style of work and style. In the same way, spirit, theory and belief are all invisible, but what people must have is that people have no spiritual world but only physical body, which is just like walking dead. For example, the cup is empty as if it were nothing, and the shape of the cup is something: the interior of the house is empty as if it nothing, and the wall is in its shape as if it were something. But people tend to see only some parts, and suddenly No. If you fill in the interior of the house, is the house still a house? Chinese wood seems to contain such a truth. Wumu ancient proverbs practice muscles and bones and skin outside, practice one breath inside and sink into the elixir field to express one's mind [22, 23]. Whether Qi exists has always been one of the hot spots of researchers. Although we hold the view that invisible may not exist, we also need to test its authenticity from many aspects. There are many different opinions about "Qi", which can be summarized as follows: breathing and breathing Qi; the other refers to the original Qi of the ancients.

7   Conclusion

Web WTS system design and development, access to a large number of information, research the latest development of distance education technology, and computer, network technology experts, distance education experts and martial arts educators were discussed, listened to their views and suggestions. During the test run, some martial arts enthusiasts were invited to try. The actual operation shows that due to the full use of system engineering theory guidance and practical development tools, the system design is rigorous, the layout is reasonable, the function is complete, and the user interface is friendly, which achieves the expected scientific research and design purposes.

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