Research on University Track & Field Web Course's Basic Attributes Columns

Weiliang Lin
GuangZhou university physical college, Guangzhou, Guangdong, China.

Abstract—**The purpose of this paper is to perfect the effective construction of the web course's basic attributes modules, so as to help students get to know the personnel allocation and the resource integration efficiently and facilitate their learning online. The research methodology includes literature study, interview, system design method, software programming method, questionnaire survey and mathematical statistics and etc. Results: Firstly, the links between all the basic attributes modules are reasonable and fluent and it is also rich in content; secondly, the teaching staff and resource scale are reflected; thirdly, the course descriptions guide students to know the distribution of the course content better; fourthly, the course's self-evaluation and construction plan can objectively reflect its current situation and its development direction in the future. Conclusions: The content of the modules can effectively reflect the basic information of the faculty of the course, the whole teaching structure, teaching means and methods used in the course, the teaching conditions and effects and the construction schedules of online resources.**

Keywords—**university, track & field, web course, attributes, design**

I. INTRODUCTION

Currently web courses are becoming more and more popular in physical education institutes, and more and more universities pay great attention to web course which is a supplementary means of physical education. By supplementing T&F(track & field) teaching with web courses, the problems of limited learning materials, a shortage of class hours in classroom teaching, and a lack of a platform where students and teachers can communicate conveniently. However, the construction of T&F web courses is still in its initial stages at present, and there is a lack of related literature, which hampers the further development of the web course. The current designs related to T&F web course's attributes are different, and there is also a lack of systematic description of the teaching staff of the course, the statistics of the overall distribution, the overview of the course's content, the reform of teaching means and methods and the in-depth study of the situation of course history and its tendency.

II. STUDY OBJECTS AND METHODOLOGY

A. Objects

Take content design of Guangzhou University track & field web course's basic attributes columns as the study object.

B. Methods

Literature study: Consult related books and databases: Physical Education Teaching Outline of Track and Field in Guangzhou university Physical Culture Institute, Theory and Method of Teaching Training of Track and Field, collect related formation from home and abroad as the reference and basis for the design of the web course.

The interview methods: Gather views and advices from experts and professors from Schools of Computer Science and School of Physical Education. To further analyze the needs of students through interviews to insure the suitableness of the web course content and the activity content system.

The system designing methods: According to the requirements of learning theory and targets of practice class teaching, the logical relation between teaching content and its resources decides the self functions of the teaching modules and how they will be bonded organically.

The method of software editing: According to the regulations of Modern Long-Distance Resource Design Technique Criterion, carried out by Ministry of Education in 2000, the curriculum module of this web course is designed with the WCB courseware, which was developed under the cooperation of Guangzhou University and Nanking Qiaomu Science Ltd, and Flash Premiere and etc.
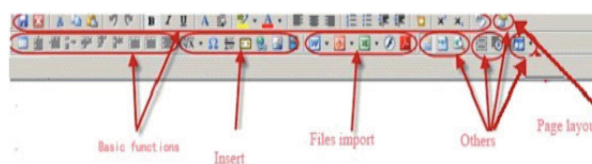

Figure 1. The blending editor ware

The web page editor: Its function buttons: Basis function button, the editor buttons of webpage property, insert buttons, file buttons, file import buttons, others buttons (Figure1).

Figure 2. The formula editor

The formula editor: Open the formula editor through page editor or subject editor and there are two kinds of formula editors (Figure2).
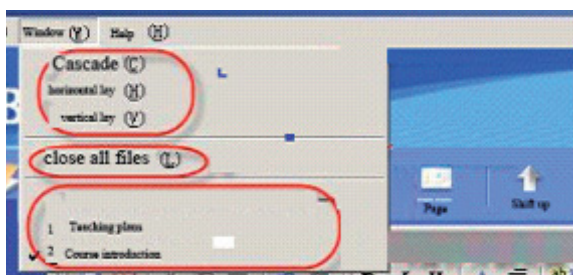

Figure 3. Web courseware facture window

The editor of common columns and section page : Users can edit the columns and sections via editor area or open the pages of different columns and click Window menu to choose different menu item to design the display mode of the columns in the main window. When the page is in full screen display, users can switch the pages by clicking page tittles in the Window menu (Figure 3).

Importing contents: If users batch transfer the file content into the courseware, right click the common columns or chapters directory and then click Import content in the shortcut menu, and then choose the files that will be imported and set the importing conditions and click Confirm, after the system pops up Confirm, importing is done (Figure4).
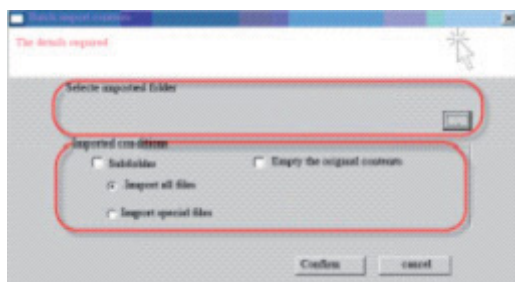

Figure 4. Content import

Questionnaire survey: On Jan 18, 2013, 220 shares of questionnaires referring to the T&F network course, which had been handed out to experts and students in the network center and in T&F teaching field in Guangzhou University, were all withdrawn, and the withdrawal rate is 100%. Among the people surveyed, there were 20 experts and 200 students, of whom 40

were form social sports department and 160 were form physical education department, which 40 students were from each grade of.

The mathematical statistics: Use SPSS 16.0 statistical software to account the 220 shares questionnaires from the experts and students of the network center and class teaching in Guangzhou University, it provides empirical evidence for the study.

III. THE DESIGN OF T&F WEB COURSE'S BASIC ATTRIBUTES

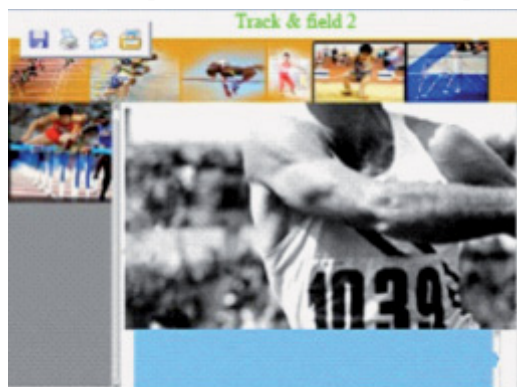#### A. The basic requirements of the web home page

Figure 5. The home page of T&F web course

Home page displays the representative features of running, jumping and throwing. The pictures of running display the event's feature of speed with shots of starting, hurdling and finishing actions; the pictures of jumping display the event's action and space beauty with wonderful shots of long jump landing moments and over the bar moments in high jump; the pictures of throwing event display its beauty of power with shots of the technical movements in last effort of throwing discus and hammer. The pictures on the home page are arranged in the order of running, jumping and throwing, and the proportion of the pictures is harmonious, which can give students a general image of T&F events and motivate students to learn. The colors of the pictures are soft, but they still are visually stimulating because of the color effect (Figure 5).

B. Course description

Figure 6. Course description

TABLE I.

THE FORM OF COURSE INTRODUCTION

Course Title	Track and Field		
Course Code	1700103	Course Type	Major Required Course
Nature of the Course	Specialized Elementary Main Course	Scope of Application	Physical Education Major
Credit Points	2	Prerequisite Course	None
Class Hours	32	Practicum Hours	22
After-School Hours	None	Methods of Assessment	Test
Producer	Lin Weiliang	Checker	Zheng x x
Design Unit	Physical Education Department of Physical Education School	Date	September, 2012

The brief introduction modules of T&F web course consist of required, elective and minor courses introduction modules, and they explain the main content of this course briefly with its Chinese and English titles, course codes, course types, course nature, scope of application, credit points, prerequisite courses, class hours, practicum hours, after-school hours, methods of assessment, the writer, checker, design unit and date and etc (Figure 6).

The T&F web course column displays its educational objectives, teaching mode, skill assessment and certificates needed. It also helps to strengthen students' professional skills, according to the characteristics of physical education, by the mode of combining studying and working, so as to train skilled professionals with good judging and organizing abilities to cater to the needs of teachers of elementary and high schools in the society. The teaching mode mainly consists of practice activities after class and school, which include having students attend academic lectures and take part in teaching activities in school, guidance in practical training and communicating through the online platform. Get the professional ability, events certificates and the certificate security system through practicum of teaching related content. (Charter 1)
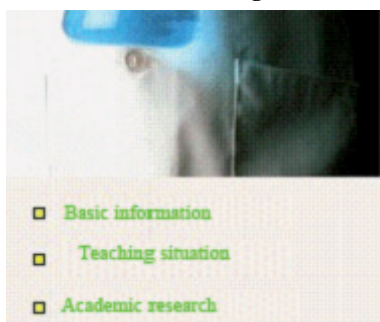
C. Course director and teaching team

Figure 7. Course director

Course director: The descriptions of the course director's basic information, teaching situation, academic achievements play an important part in helping students get a good knowledge of the course director (Figure 7).

In the basic information module, there is the course director's picture, name, sex, birth date, final education background, professional ranks and titles, phone number, education background, degree, fax number, school, E-mail address, postal address, research area and etc., which show the most basic information of the director and help students know more about the course director.

The teaching situation column displays the courses the director has taught and the activities he/she has participated in for the last 5 years. The main courses' titles, types, class hours per week, total class hours, the number of periods taught, total number of students. For example, the required or elective courses of a certain grade, the class hours per week is 2 or 4, total class hours is the number accumulated in the past five years, the number of periods taught is the number of semesters that have been taught for, and the total number of students shows how many students have taken this course. The activities related to this course include T&F referee grade training, organization of the level tests, the honors gained in provincial and city T&F meetings, situations of provincial and city sports tests monitoring.

The academic research column displays the director's academic achievements, such as the research projects the director undertook in the past 5 years, symposiums attended at home and abroad and papers published and etc. The research projects column contains the date, level (city level, provincial level, state level or international level), titles, finished or not; symposiums attended column contains level (city level, provincial level, state level or international level), ways of participating (specially invited, make speeches, paper exchange on wall, just attend the lecture), awards (excellence award, first prize, second prize, third prize and etc.); papers published column contains research area, levels of the journal (provincial level, state level or international level), collection situation(ISTP, EI, SCI and etc.)

Figure 8. Chief course instructors

Chief course instructors: The chief course instructors module consists of the chief instructors' basic information (photos, names, sex, birth date, major, profession, E-mail address), main courses (T&F skills, T&F referee rules, T&F training and getting a job in T&F area), projects undertaken or participate in (school level, provincial level, ministry level, state level), published papers (titles, titles of the journals, the order of authors, date of publishing), awards and honors(titles of the awards, the awarders, award level and date).
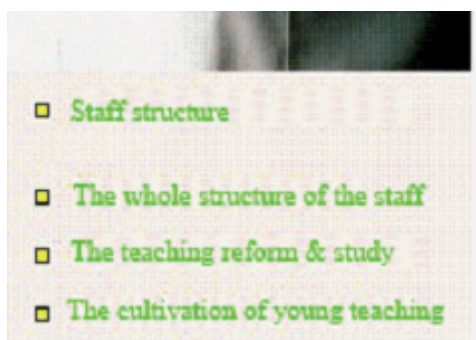

Figure 9. Teaching staff

Teaching staff: The Staff Structure shows the chief course instructors' sex, birth date, majors, specific posts (director, chief instructor, teaching researcher), and their specific courses (T&F referee, T&F required, elective and minor courses), and there is also a reasonable allocation of lecturers and high ranked professors.

The Whole Structure of the Staff include education background structure, age structure, and structure of graduation school and teachers allocation situation (the proportion of teachers to students). The teaching staff consists of 5 teachers, of whom young teachers account for 40% and middle-aged and old teachers account for 60%, and 60% of the faculty have postgraduate degrees. The 5 teachers are form Guangzhou Sports University and Wuhan Sports University, they all have physical education background, two thirds of them have taught for over 15 years, and they all have great annual evaluation and are good teamworkers. The number of students of a semester is about 120, and the faculty-student ratio is 1:24.

The Teaching Reform and Teaching Study shows the past five years' discipline construction, T&F major construction, talents cultivation objectives, reform of course system, the compiling of teaching materials and auxiliary materials, the structure of web courseware, the study and construction of practical teaching, relative scientific research projects in T&F teaching, the papers on educational reform and research published on major journals at home and abroad, and the honors and awards gained for teaching research.

The Cultivation of Young Teachers includes content of helping young teachers engage in advanced studies for degrees, setting good example with experienced and excellent teachers to help, instruct and lead young teachers, and encourage young teachers to do teaching researches and take part in academic conferences at home and abroad seo as to form a good academic atmosphere and build a good teaching team.
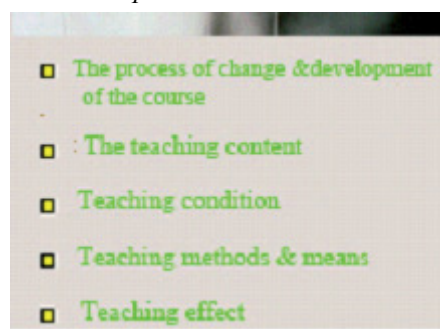
D. Course Description

Figure 10. Course Description

The process of change and development of the courses in Guangzhou University is as follows: T&F courses (required and elective) were taught after the establishment of Physical Education Department in 1998, and after the establishment of School of Physical Education in 2005, T&F required, elective and minor courses were mainly taught in Physical Education Department and Sport Society Department, there were a lot of changes in the teaching team and the content of courses. Funded by Guangzhou University, T&F web courses were started in 2010 to improve the quality of T&F teaching.

The Teaching Content module gives a general description of T&F required, elective and minor courses and class hours for different grades in the Physical Education Department and Sport Socialogy Department. It consists of theory course and practice course. The theory course teaches T&F referee rules, training and teaching methods, scientific research, survey of T&F sport, T&F fitness principle, T&F sport fields and etc. Practice course teaches heel-and-toe walking race, middle and long distance race, relay race, hurdle race, middle school obstacle race, high jump (leap style and fosbury flop), long jump (knee-tuck type and hang style), triple jump, shot put (side-ward slide and back-ward slide), and javelin throw. It also includes the focus, difficult points and their solutions of the course. And this module shows clearly which courses have to be evaluated and commanded and which are merely introduced to students and a theoretical test are enough (Figure 10).

Teaching Condition includes the usage and construction of teaching materials and auxiliary materials which are to help students with their self-

learning, supporting practical teaching effect, practical teaching environment, and web teaching environment. Track and Field and Advanced Course of T&F Sport, which are both excellent textbooks for university students, are adopted for the T&F required course and elective course respectively, in addition to the newly updated electronic textbooks on T&F referee rules, training methods and etc. in 2011. The forums of assignments, tests and courses in the web course provide a platform for students and teachers to communicate in real and non real time, which guarantee the timely effect evaluation on classroom teaching and which are conductive to the development of T&F courses (Figure 10).

Teaching Methods and Means includes the flexible use of many effective teaching methods, besides the common classroom demonstration teaching method, interpretation method, integrated teaching method, section teaching method, simulation teaching method, and the method of preventing and correcting wrong performance, contrastive teaching method is also employed, which can make a better use of high level teaching, training, officiating and internship cases to help student analyze their own deficiencies; The combination of practice and theory runs throughout the exercises and thinking of related content after class; Students will have assignments and tests when every section is over, and there will be a summary of every teaching period; The electronic cases in the web courses make up for the lack of reference books; Teachers' essays and lesson preparation notes are shown on the web for students; teachers interact with students on class, mobilize their initiatives, encourage them to improve their abilities of analyzing and solving problems and make multimedia courseware to change the traditional theoretical teaching method; students will have more chances to practise on their skill on class, for example, students will take turns to be in charge of the organization of class preparation activities; students' abilities of T&F race, officiating and training after class will also be improved. (Figure 10)

The effect of T&F teaching course is reflected in the diversity and updating of its teaching content and the science of its teaching methods and means. The latest case analysis and the interaction between teachers and students are provided in the course, whose chief instructors are evaluated excellent by experts and students at the end of each semester, which also reflect the effect of this course (Figure 10).

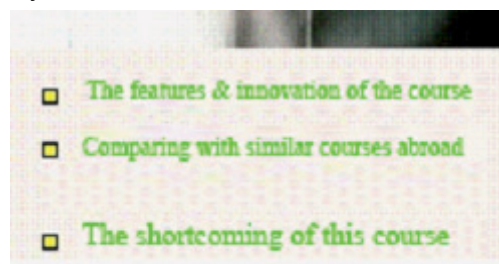## E. Self-evaluation and Construction Plan

Figure 11. Course self-evaluation

Course self-evaluation: The features and innovations of the course are mainly reflected as follows: the teaching is suitable, its structure is reasonable and systematic, its theoretical focus stresses the demand of sport teaching course, concepts are clear and the content is integrated and optimized; this web course's characteristic online platform is developed through the collaboration of Technology Original Co. and Guangzhou University to support the online teaching of T&F course, which lays stress on the cultivation of students' abilities of application and innovation.

Comparing with similar courses abroad, our chief instructors have lots of experience in teaching required, elective and minor courses of physical education and social sports and have compiled T&F textbooks, completed many research on the teaching methods and think highly of the teaching reform and the improvement of teaching philosophy, which are the advancement of course content and teaching method, the logicality of the knowledge evolution, the systematicness of the course system and student-focused idea.

The shortcomings of this course are that it is too theoretic, the collocation model of prerequisites and the content of elective courses needs to be improved, the means of creating an active classroom atmosphere and how to teach students according to their aptitude also need further study; there is still a lack of funds which is a tumor of course research, and the situation of attending T&F academic conferences is not satisfactory.

Figure 12. Course construction plan

Course construction plan: The future goals of this course are to produce a high level teaching demonstration course with distinctive features, to display modern T&F teaching thought, to feature in cultivating talents with good foundamentals, quality, and ability, and to improve teaching results with advanced teaching technology, methods and means （Figure 12）.

The steps of course construction: first, build a high level teaching team through optimizing the rank and age structure of teachers; second, proceed to improve teaching content, method, means and CAI courseware and practice web course teaching; third, complete the whole set of teaching materials; fourth, improve the T&F research of the teachers (Figure 12).

All courses will be uploaded on the web course in two years according to the Online Course Plan. The lists of web resources include course introduction and description, course directors, chief instructors, teaching videos, teaching content, exercises and tests, communication between teachers and students, and there are related materials and references for students to download (Figure 12).

IV. RESULTS AND ANALYSIS

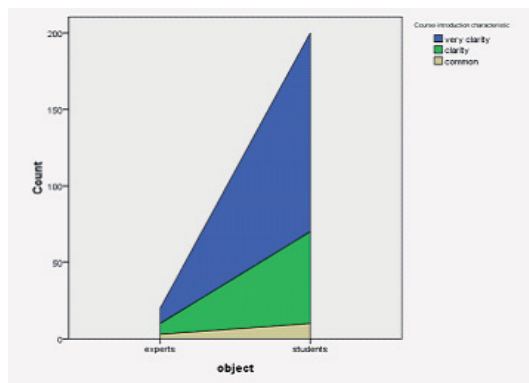### A. Characteristics of course introduction

Figure 13. course introduction characteristic

As the Figure 13 shows, 50% of the experts think the course introduction is very clear, 35% think it is clear and 15% think it is so so. 65% of the students think it is very clear, 30% think it is clear and 5% think it is so so, nobody thinks it is unclear. Generally, students can get a very clear overview of the T&F course through the course introduction, course title, course type, suitable students, class hours of theoretical and practical classes, the producer, the course features and etc.

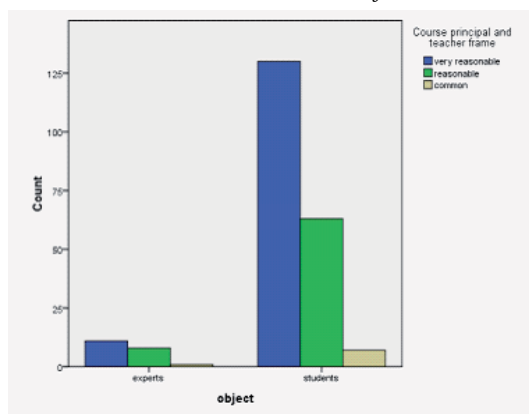### B. Course directors and structure of teachers

Figure 14. Course directors and structure of teachers

As Figure 14 shows, 55% of the experts think the module of course directors and structure of teachers is designed very well, 35% think it is designed well, 10% think it is so so; 65% of the students think it is designed very well, 31.5% think it is designed well, 3.5% think it is so so; nobody thinks it is not reasonable. Generally, this module can display the main features of the directors and chief instructors reasonably, helping students know better the basic information of the directors and the teaching structure, teaching ability, academic achievements, faculty structure, teaching reform and the cultivation of young teachers and etc. (Figure 14)
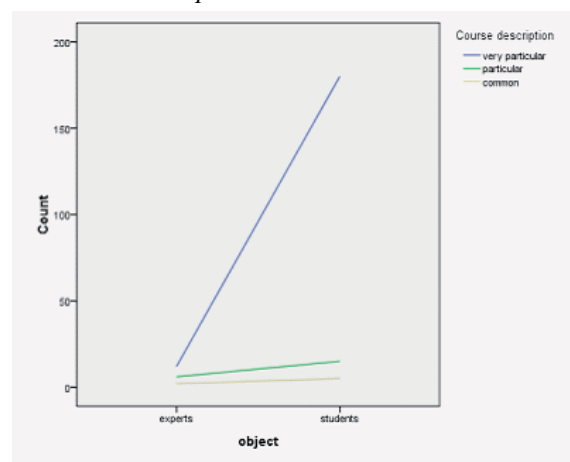
C. Course Description

Figure 15. course description

As the Figure 13 shows, 60% of the experts think the course description is very specific, 30% think it is specific and 10% think it is so so; 90% of the students think it is very specific, 7.5% think it is specific and 2.5% think it is so so, nobody thinks it is not specific. Generally, the experts and students think the course description can reflect this T&F course's main process of change and development in and out this university, the specific teaching content, optimized teaching condition, the scientificalness of the teaching methods and means and the remarkable teaching results (Figure 14)

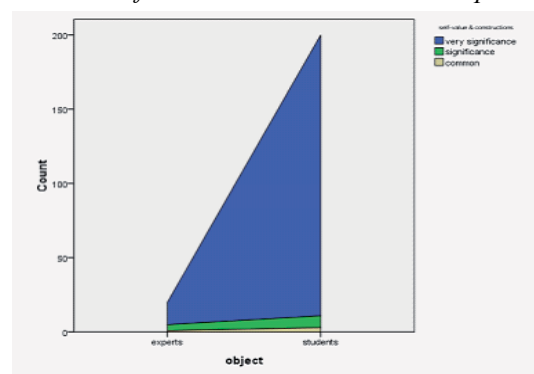### D. Course self-evaluation and construction plan

Figure 16. Self-value & construction

We can see from Figure 16 that 75% of the experts think the course self-evaluation and construction is very significant, 20% think it is significant and 5% think it is so so. 94.5% of the students think it is very significant, 4% think it is significant and 1.5% think it is so so, nobody thinks it is not significant. Generally, course self-evaluation high light the features and innovations of the course, and the level it is at comparing with similar courses abroad and its shortcomings; its goal of construction is clear, the systematic construction is being carried out step by step, the online resourcees has reached a certain scale, the future plan of resource use has a good pertinence. The Course Self-evaluation and Construction Plan module can evaluate the present courses, plan the development of the course purposefully and help teachers and students get to the advantages and disadvantages of the course and improve the implementation of the course together.

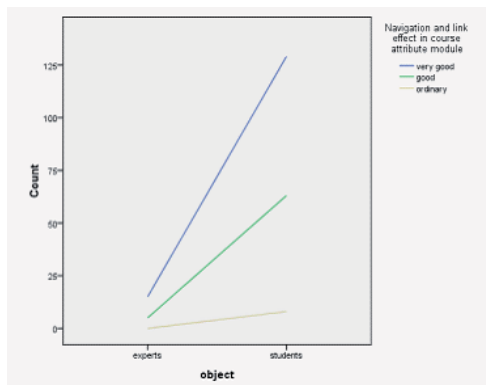### E. Navigation and link effect in course attribute module

Figure 17. Navigation and link effect in course attribute module

As the Figure 17 shows, 75% of the experts think the course navigation and link effect is very good, 25% think it is good. 64.5% of the students think it is very good, 31.5% think it is good and 4% think it is so so, nobody thinks it is useless. Generally, all modules of the T&F web course attributes have clear content target and navigation path, the links are smooth, which are convenient for teachers and students to browse the knowledge points, and the sensory effect of the modules are excellent (Figure 14).

V. CONCLUSION

The course attributes are reflected with the settings of Home Page, Course Introduction, Course Directors and Teaching Team, Course Description, Course Self-evaluation and Construction Plan, the content of all the modules can specifically display the course's basic information of the faculty, the whole teaching structure, the teaching methods and means, the present teaching conditions and effects, the online resources,

the particular development direction, and the fluent links between all the modules, which help students get to know the present and future situations of the course conveniently and quickly.

REFERENCES

[1] Mao kun, Zhan Jing, Yang Aidong, "The Design of College Physical Education", Journal of Beijing sport university, vol 3, no. 28, pp. 380-409. 2005.

[2] Zhang Jian, "Explore on the internet course design of computer brainpower in the field of college physical", Journal of Zhejiang physical science, vol. 3, no. 27, pp.78-80, 2005.

[3] Wang Wenjun, Huang Zhiwu, "The design and development of web course in physical education of higher school", Journal of Beijing sports university, vol.10, no. 29, pp. 1416-1417, 2006.

[4] Gong Zhengwei, Xujun, " Study on the development model of web course of school physical base on the background of distance education", Journal of Capital physical college, vol. 2, no. 20, pp. 87-90, 2008.

[5] Wu Xiao, "Study on the Web construction from Physical college's course teaching", Journal of Anhui physical science, vol. 4, no. 30, pp. 83-85, 2009.

[6] Guo Hong, Huang Yushan, Deng Shuxun, Zen Fan, "The design on Web course from sport body science", Journal of physical science, vol. 2, no. 21, 2001.

[7] Cha Chunhua, Zhang Baohua, "Research on Web course's designs of bonny gym base on resource study", Journal of Capital physical college, vol. 2, no. 19, pp. 142-146, 2007.

[8] Chen Xiaoping, "The teaching model was reformed with the techniques of modern internet", Journal of Liberation physical college, November 2000.

[9] Zhang Xueliang, "The development of CAI courseware and internet teaching from college physical", Journal of Tianjin university, vol. 1, no.2, 2002.

[10] Cao Zhenfeng, "The internet design of good course base on biodynamics of ASP. NET", Journal of Hubei Wuhan physical college, 2010：5.

[11] Dewan, S., & Dewan, D. "Distance Education Teacher as a Leader. Learning from the Path Goal Leadership Theory", MERLOT Journal of Online Learning and Teaching, vol.6 , no.3, 2010.

[12] Arbaugh, J.B. Sage, "Guide, Both, or Even More? An Examination of Instructor Activity in Online MBA Courses", Journal of Computers & Education, vol. 55, pp. 1234-1244, 2010. http://dx.doi.org/10.1016/j.compedu.2010.05.020

[13] Shea, P.,& Bidjerano, "T. Learning Presence: Theory of Self-Efficacy, Sef-Regulation, and the Development of a Communities Of Inquiry in Online and Blended Learning Environments", Journal of Computers & Education, vol. 55, pp. 1721-1731, 2010. http://dx.doi.org/10.1016/j.compedu.2010.07.017

AUTHOR

Weiliang lin is with the Physical education Department, Guangzhou University, Guangzhou, China (e-mail: Linweiliang70@163.com).