Track and Field Online Curricula Evaluation System Design for Universities Physical Education

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Abstract—**Purpose of this paper is to perfect track and field online curricula evaluation system, improve the teaching effect evaluation in the process of teaching. Research methods: by the research technique of literature search, the expert interview, the system design, the software establishment, questionnaire survey, the mathematical statistics. Results: Firstly Home page modules--cue and Response Evaluation are fast and effective; secondly function of automatic statistic and editing of assignments, exams will benefit to assess students' ability to understand teaching content and analysis ability, as well as to assess the working efficiency of teachers grading the homework; thirdly Forum evaluation module will automatically statistical data and save the content of teacher-student interaction; fourthly evaluation of teaching statistics offers an honest reflection on the teaching effect that are the teachers' and students' performance in the class; fifthly each module with a clear content goals, connected smoothly and easy to control knowledge points browse. Conclusion: this course evaluation module can effectively reflect the effect of the implementation of teaching content as well as the users' grasping situation; the periodical self-test will help students make an objective judgment on their study, which can promote the communication between teachers and students, and to evaluate the teaching schedule modifications constantly.**

Index Terms—**university, Track and Field, online curricula, evaluation system, set up**

I. I. INTRODUCTION

Nowadays, Sport Department pays a great attention on physical education teaching evaluation, the main evaluation criteria: the course-field equipment, the specific teaching materials, student behaviors, the students' skills (learning ability), the teaching methodology, teachers' classroom organization capacity, classroom communication between teachers and students and so on.

Because of the constantly reduce of practical lessons and students individual differences (including physical quality difference, technical difference and the development of different interests) make the track and field online teaching more and more important. Putting the track and field online curricula as an auxiliary teaching method into teaching practice can ease the phenomenon of shortage teaching classes, limited learning content and the lack of communication between teachers and students, etc. However, the current evaluation system module construction of track and field is still in the germination stage and its related literature is rare which makes a bad influence on the development of

the in-depth study of the online course evaluation. Assignments, tests, forum, teaching statistics and so on, network module setting and application into practice will conducive to the track and field online curricula effect-oriented development.

II. STUDY OBJECTS AND METHODOLOGY

A. Objects

Taking Guangzhou University track and field online curricula evaluation modules as the examples to make an evaluation system research.

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 evaluation 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 evaluation 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 Qualm Science Ltd, and Flash Premiere and etc.
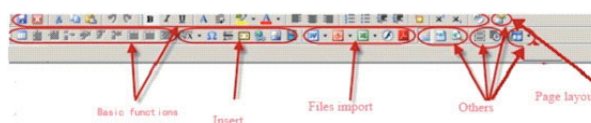

Figure1. The blending editor ware

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 editor (Figure2).
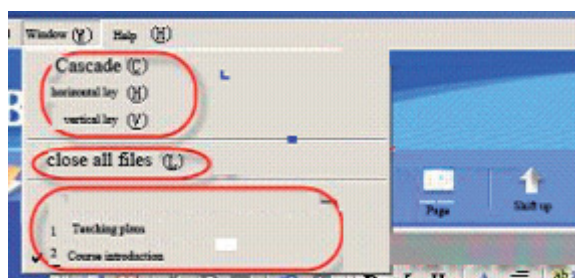

Figure3. web courseware facture window

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).
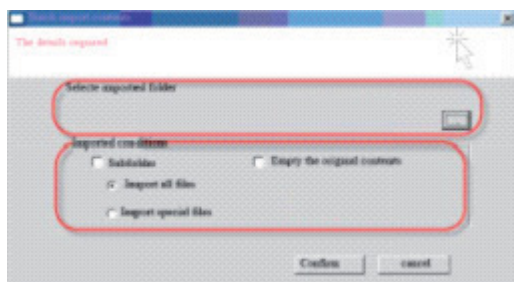

Figure 4. Content import

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, 20 experts, 200 students had joined into the questionnaire survey(160 students come from physical education, grade one to grade four, each of grade with 40 students; 40 students come from major-social sport), were all withdrawn, and the withdrawal rate is 100%.

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 WEB COURSE EVALUATING SYSTEM IN TRACK AND FIELD
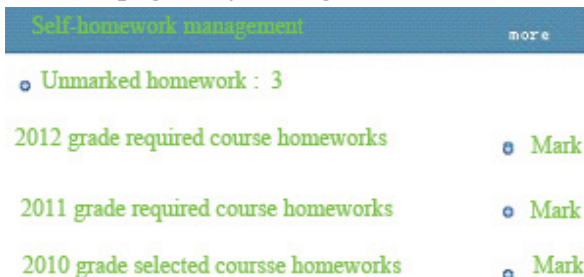
A. Home page "self-management"

Figure5: Self-homework management

Homework management: With the Homepage management tips, we can get some information such as the assigned homework, suggesting the number of unmarked homework, the unsubmitted homework and the completed-homework students. The users can click directly into the correcting-homework directory (uncommitted- homework students or marked homework) to know the students' number, name, time of submission (or time of uncommitted), scores (or re-submitted homework), operation, etc. In the unmarked-homework directory, users can check the student's name, title of the homework, the submitted time, homework description, homework content, question-answers, the students relay, sores(percentage score and rank score), homework comment(can be text and picture). Teachers can check the unmarked homework and the processing of correcting. With the functional bottom "return", "last one", "correcting and the last", "next", "correcting and next", users can complete the whole marking process continuously (Figure5).

In the uncommitted directory, users can quickly inform students to submit the unfinished homework with the appendix link in the students e-mail information and sending an E-mail or a message to them.

Through checking the marked homework student's name, number, submission time, scores and the re-corrected homework, the users can make a comprehensive evaluation on the degree of completion homework, which are the using-time of students hand in their homework, the degree of the students master learning content, to judge whether its properly march to the teaching schedule or not.

Management question-answer: Teachers can think over the questions which are offered by class or team, check the reply-number, name, answers and so on on the Homepage, clicking the "reply" button to make an assessment on the students' view immediately (specific evaluation form can be words, pictures, marks and the quotation text) (Figure 6).

Figure 6: My question and answer

Questionnaire survey management: "My management questionnaire" on the Homepage, it is convenience for the users to vote on the questionnaire issued by questionnaire statistical management. Clicking button "issues management" or "questionnaire management" enters into assessment.

Figure7: My questionnaire management

Questionnaire survey can be divided into issue management, questionnaire management, and questionnaire vote. In the issue management, each of questionnaire contains one or more than one questions, meanwhile it also can be added some questions, correcting questions and delete questions; questionnaire management can be added, correcting or delete, publish questionnaire and review it; the users can vote on the published questionnaire in questionnaire vote (Figure7).

Questionnaire survey management can be divided into questionnaire libraries to publish questionnaire and history questionnaire. Questionnaire libraries available to create, modify, delete and publishing the questionnaire, the publisher is optional scope and manner. After publishing questionnaire, it can only be modify, while the out of date questionnaire will be classified to history questionnaire automatically. My questionnaire library, ongoing-questionnaire, history-questionnaire and so on, which are listing in questionnaire schedule, can be made a statistical evaluation, such as create theme, create time, creator, operating (editing, delete, optional management) and the others.

Testing management : The testing-paper list contains "ongoing-test", "unmarked test", "marked test", "the other class's and grade's test", which are easy to be checked and corrected.

The homework's title, student's number, name, the test-paper submission time and scores can be seen in the unmarked homework list. The column of "correcting test" and "delete" could re-correct and delete the test-paper. Meanwhile, it can make a statistics on "unmarked students", "uncommitted students" and "submitted students". Quiz Property is used to check quiz name, description and the Test-paper Manner (import paper, title, the strategies of selecting topic) (Figure8).
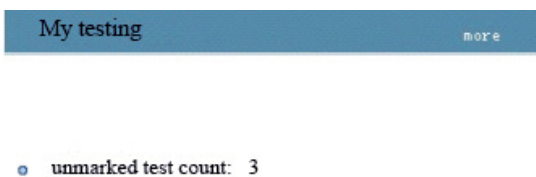

Figure8: The user management test

In the Homepage, teachers click the column "my management test" to know which one is unmarked and click the "correcting" mark to enter into the correcting process to correct the unmarked one. Clicking the button of "correcting test-paper" enter into correcting paper list to review the testing, score and evaluate. After the whole correcting process, the users could move on to the last one or next one continuously.
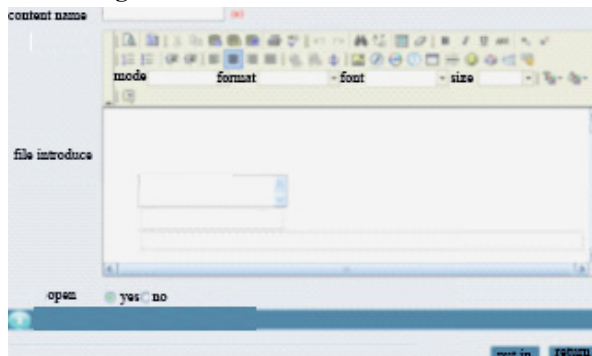
B. Testing

Figure 9: Questions and types of questions

Self-quiz and testing: The background course curricula→ click "self-quiz or testing" → "setting up topic or setting up questions(filling in the blank, the conception, right or wrong, short-answers, essay)" → types of the questions and the each score, degree of difficulty, selecting and submission; the content of text questions could modify and edit its style, format, font size, images, files, plotting etc.. It can submit test results automatically after the students had finished the practice or test in each time; at the same time, with some reference and suggestion companying with standard answers, the learners will repeatedly do the practices to enhance their acquaintance to this sort of questions. According to their asynchrony practices in different learning stages on different question-types or an assessment on the master degree of course content, the learners can setting up a relative reference to improve their learning skills (Figure9).
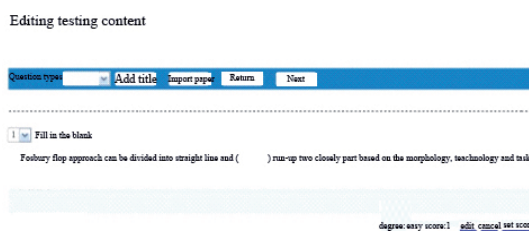

Figure10: Editing testing content

Testing: In the page "setting up curricula"→"testing management"→"arrangement testing can set up the deadline of testing and selecting the testing-class. The answers whether open or not, ticking class and click "submit" testing arrangement. Arranging test schedule can check the implementation. During editing test content, the questions can be added, corrected and deleted. From "add questions" in the drop-down list, click "add questions "or "import papers", which are selecting types of questions(filling in the blank, the conception, right or wrong, short-answers, essay), submitted reference answers, scores, the degree of difficulty(easy or difficulty) and the others.

C. homework

The students, class and submission time are restrained in Homework assignments. Putting column- "course teaching" into list of Homework assignments' "homework management", which can re-assigning homework and checking, exporting homework.

Users can check the unmarked homework which lists in "my homework management" on the Homepage. If there are some unmarked homework in the list, users could click the mark which lists on the right, "correcting", to enter into correcting process. (Figure11).

Figure11: Unmarked homework listing

Users are available to delete the correcting and content with the column "correcting homework" and "deleting" in the unmarked homework listing including title of the homework, student's number, name, submission time, scores. Making a statistics on "unmarked students", "uncommitted students", "submitted students", through column of checking, users could make a comprehensive review on the selected class and the student's homework. (Figure11).

Clicking the button of "correct homework" into homework list to have a check, score, evaluate, users can do the same correcting work, after the whole correcting process, on the last on or the next one continuously, which is convenient for teachers making a better grasp on the teaching content to adjust their teaching schedule immediately (Figure11).

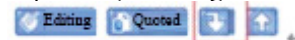## D. Interaction between teachers and students (Forum)

Figure12: The titles of modules

Teachers log in the background curricula, clicking "Teaching Curricula" → " Course Forum"→ The titles of modules→ publishing a new question or answering the question.

Clicking "a new question" in the titles of modules, entering into a new page to write down a new question, it also can publish a vote or debate when publishing a new question. Clicking a question title and entering into the question, users could edit the question, as well as resume, retrieve, setting up as the answers, top and setting up as "Essence" (Figure12).

Clicking "editing", teachers could re-edit the published content during checking the questions in the Course Forum. And reply can be divided into "quotation reply"

and "fast reply". "Quotation reply" is to click "quoted" entering into the replied quotation page, which quotes the corresponding speaker's message back automatically. After filling the content, clicking the button-"submit", users finish the resume process completely. "Fast reply" locates under the Review question, clicking the drop-down "arrow" logo and answers the question directly.

As shown in the picture,
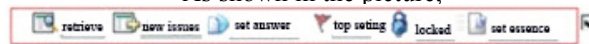
the fuctions are listing as follows:

(1) Clicking "retrieve", entering into research page, write down the key words, questions which meet the demands of retrieve or clicking the "advanced retrieve" to have a research. (2) Teachers select some valuable posts which are worth to be discussed to set up on the top of page and those posts will list on the question list. (3) The locked question only can be checked, nor reply any more. (4) According to a certain questions, teachers could set up some relative correct answering-post as the standard answers. (5) Some illustrated, profound connotation and thought-provoking questions can be treated as "the Essence".

In the section titles, it allows to check this phrase of teaching schedule with clicking "all of question" to show up classified questions. The essence questions are a sort of questions that students pay most attention to and the most practical questions. "Voting" is a kind of gathering that voted by students on some published questions offered by the previous users. According to a certain question, "debating" is a series of continuous debating records which benefit to promote student's expression, analysis and judgment ability.

The replied content can be edited by the means of text, images, files, and marks during the title replied process. In this way, it is helpful to express the analysis of technical actions in track and field with pictures description directly, and the simplicity of the problem evaluation.

E. teaching statistics

Teaching statistics contains the teachers' online time, the course progress which is responsible for this teacher, the workload of this responsible course teacher and the teaching achievement and another elements. Mainly, my total online time, the total time of learning this course, the number of marked homework, the number of marked testing, the number of unmarked homework, the number of unmarked testing, the number of my questions, the number of unanswered questions and so on.

The statistics and quantity of my workload are described as the number of arrangement homework, the number of correcting homework, the number of arrangement tests, the number of my source, the number of my testing-papers, the number of my quiz-questions, the number of teaching content and the number of the course properties, etc.
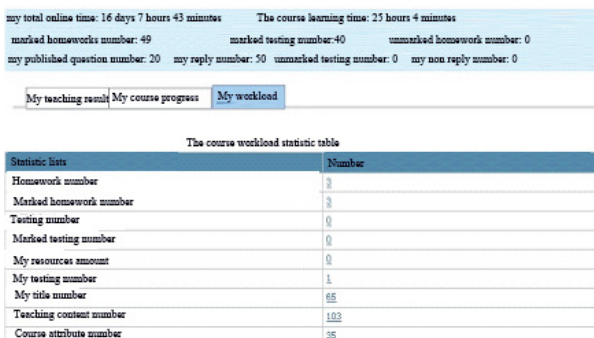
Figure13: Teaching statistics

All of my course progress contains courses names, the number of marked homework, the number of marked testing, the number of unmarked homework and the number of unmarked testing, which reflects a statistics of teachers reply assignments, tests and the percentage of absence; the number of my questions, the number of answered questions, the number of unanswered questions reflect the number of that student should answer, but not answered questions.

Clicking into the course "Track and Field 2", "a statistics of my course progress" is a kind of statistics that the selected courses of students' learning progress which includes name of students, the number of finished homework, the number of completed testing, the number of unfinished homework, the number of uncompleted testing, the number of my questions, the number of answered questions, the number of unanswered questions and the totality of online time.

The totality of students' online time, all of courses learning time, this course learning time; students' learning achievement statistics include: the amount of finished homework, corrected daily homework average scores, the highest score of homework, the amount of completed testing, corrected daily test average scores, the highest score of test; students learning progress contains the amount of unfinished homework, the amount of uncompleted test, the amount of my questions, the amount of answered questions, the amount of unanswered questions, etc.

A statistics of class's name, the number of finished homework, corrected homework average scores, the highest score of homework, the number of completed testing, corrected tests average scores, the highest score of test, etc can be exported in Excel in My teaching achievement module. Clicking class's name into the schedule of this class teaching achievement statistics which contains all the students' homework that the class is managed by this user (enable), and the user also can get a statistics of the state of the completed tests and the total time of online. Mainly there are student's names, the number of finished homework, the number of corrected homework average scores, the best score of homework, the number of completed tests, corrected tests average scores, the best score of test and the online time (Figure13).

IV. RESULTS AND ANALYSIS

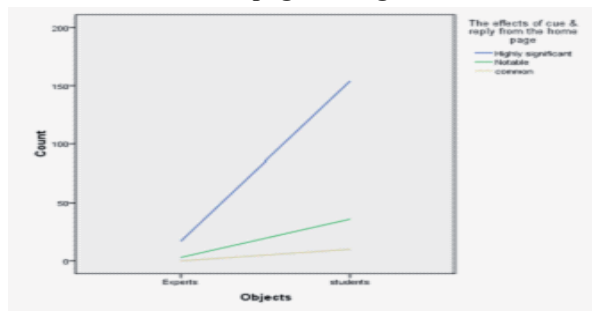### A. the effect of Homepage management

Figure 14: the effect of Homepage management

As Fig 14 showing, 85% experts believe that the effect of cue and replied system in evaluation modules on Curricula Homepage is very efficient and remarkable, 15% experts believe that it efficient; 77% students insist on that evaluation is very significant and efficient, 18% students think it is significant, 5% students think it is correct, nobody advocate the evaluation is nonsense.

On the whole, modules of homework, my question, research, questionnaire and testing on Curricula Homepage can efficient illustrate the effect of assignments, state of completion, and replied system which are arranged by users. With the automatic statistical system on Homepage, evaluation module can make an automatic statistics on the arrangement content, quantity, object and so on and it also can make a fast-reply to a certain question, which is convenience for teachers and students to evaluate the completed teaching assignments.
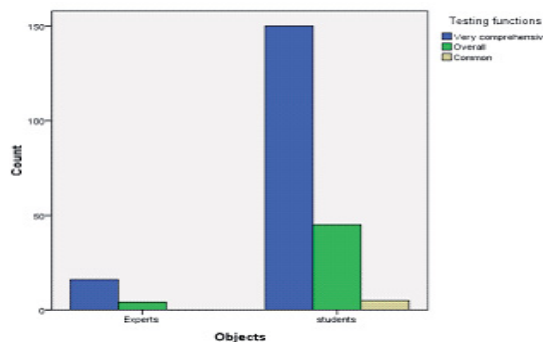
B. Testing function

Figure 15. Testing function

As Fig 15 showing up, 80% experts believe that testing-curricula is very comprehensive, 20% experts hold a positive attitude; 75% students believe that the evaluation is very comprehensive, 22.5% students believe that it is overall, and only 2.5% students think it is ok; nobody think it is meaningless. All in all, this module is a comprehensive set of testing papers in different categories, balance question-scores, hinting answers, making an automatic statistics on the ongoing-statement relatively, to diversify the editing corresponding path of the users(words, files, folders, images, videos, logos), which are convenient for teachers and students to make a tracing test on course progress.

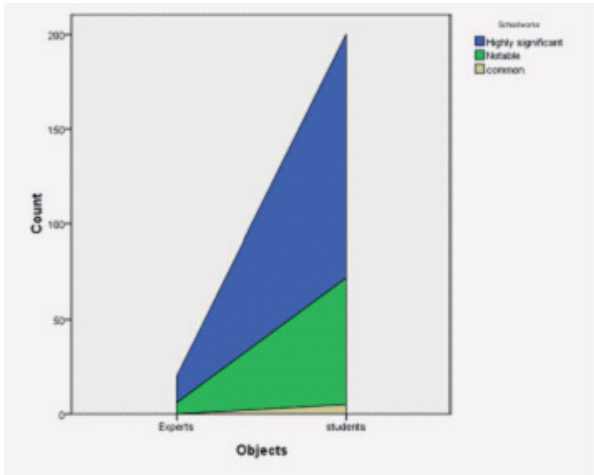## C. homework evaluation system

Figure: 16 effect of homework design

Seeing from Fig 16, 70% experts hold on that module of curricula homework design is highly significant, 30% experts think it is obvious; 64% students believe that the effect of this applied module is highly significant, 33.5% students believe it is significant, 2.5% think is ok, and nobody think this course's design and implementation is useless. Generally speaking, this module operates with a systematical homework-library, variety types of question-homework, diverse instruments used to arrange homework's content, and a statistics on the statement of homework's submission, correcting and its implementation, etc., which are benefit to make a statistic on the distribution of the homework knowledge in course teaching; good for students in a planed way to grasp the process of teaching content, evaluate student's ability to understand and analysis the teaching content, meanwhile, it also with a systematic statistical function to make a statistic on the efficiency of teachers correcting homework.
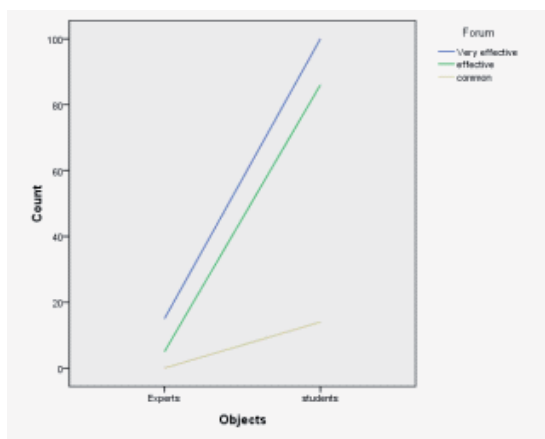
D. Effect of Forum

Figure 17: Effect of Forum

As Fig 17 suggesting, 75% experts believe that Curricula Forum's setting up and implementation is very efficient, 25% experts believe that it is efficient; 50% students hold on that it is positive, 43% students think it is efficient and 7% think it is ok, nobody think it is nonsense. As a whole, according to some related questions, Forum could promote an interaction between teachers and students,

immediately reflect students' attitude toward the professional questions and their ability to resolve and analysis questions, whether they are match to the teaching schedule or not. Meanwhile, with the automatic statistic and save function in this module system, it is helpful to evaluate the teaching effect.
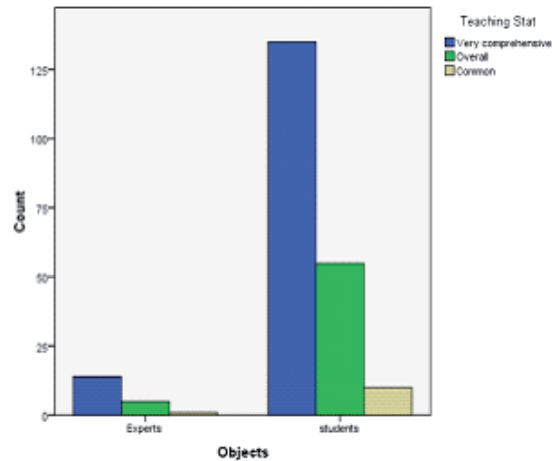
E. Teaching statistics

Figure 18: Teaching statistics

Some results can be found in Fig 18, 70% experts believe that design of Curricula teaching module is very comprehensive, 25% experts believe it is comprehensive, 5% experts think it is ok; 67.5% students think the evaluation is very comprehensive, 27.5% students think it is comprehensive and 5% think it is ok, nobody think it is a meaningless thing to design such kind of teaching module. All in all, this module truthfully reflects an effectiveness evaluation on teachers' and students' performance in class, and it also with a function to count the progress of each module automatically.

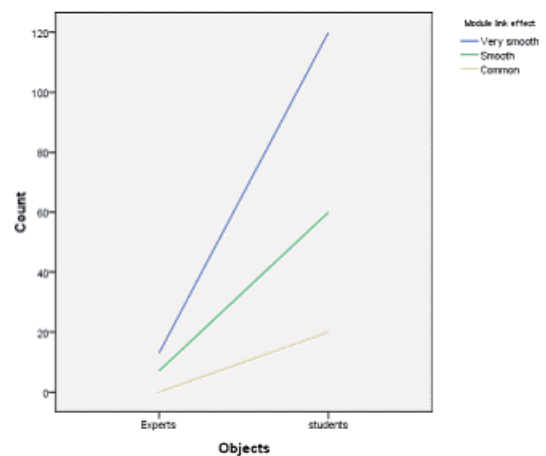## F. Link effect of each curriculum evaluation module

Figure 19: Module link effect

Getting some results from Fig 19, 65% experts think the link between each of curriculum module is very smooth, 35% experts think it is smooth; 60% students think it is

very smooth, 30% think it is smooth, 10% think it is ok; nobody think it is useless. Overall, each of modules has clear target content; links between each guiding path are smooth, which is easy for teachers and students to grasp the knowledge points and entering into browsing.

V. CONCLUSION

Online track and field curricula evaluation module is expressed by the construction of homework, testing, Forum, teaching statistics, Homepage management, which reflects the implementation of teaching content, effect of user grasp knowledge; students could make a phrasal knowledge self-checking to promote a continuous evaluation on the modifications of the teaching schedule during the communication between teachers and students; the systematical automatic statistics is convenient to teachers and students having an overall understanding of course property project completion, and is also benefit to them making a comprehensive assessment of this course teaching.

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