

A Study on the Quality Evaluation of Physical Education Courses in General Higher Education Institutions based on the Hierarchical Analysis Method —— High Jump Course as an Example

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Abstract: The high jump course is one of the core courses of the public physical education elective curriculum in Chinese universities and colleges, and is responsible for enhancing students' physical fitness and cultivating their comprehensive literacy. However, the current teaching system of general higher education institutions pays little attention to the evaluation of the teaching quality of public physical education high jump course, and the teaching evaluation system of public physical education high jump course needs to be further improved. This has directly led to the fact that the public PE high jump course in China has not yet reached the expected goal in terms of teaching activity organization and teaching quality control, and cannot effectively meet the requirements of the public PE high jump course reform. This paper takes the teaching evaluation system of public physical education high jump courses in general colleges and universities as the main research object, takes the main position of students as the guide, takes the hierarchical analysis method as the core, and innovatively establishes a course quality rating system that accurately reflects the real situation, so as to provide help for the construction of public physical education high jump courses in Chinese colleges and universities.

Keywords: General higher education institutions; High jump courses; Evaluation system; Hierarchical analysis

1. Introduction

The teaching of high jump is one of the important components of the public physical education system in general higher education institutions. The teaching of high jump course is beneficial to students' psychological health while improving their physical quality and function. However, there are still some problems in the construction of the teaching system of public physical education high jump courses in general universities. As a basic component of the teaching system, the quality evaluation system of public PE high jump courses is still in a blank state. This has hindered the development and construction of high jump courses in universities to a large extent. A good evaluation system for high jump courses would help public PE teachers to receive reliable feedback and to iterate and optimise their teaching content. On the other hand, there are many factors that need to be measured in the evaluation system, and it is relatively cumbersome to build, and needs to be constantly optimised to achieve the desired results.

Therefore, this paper takes the teaching evaluation system of public physical education high jump courses in general colleges and universities as the main research object, takes the students' main position as the guide, and takes the hierarchical analysis method as the core, and innovatively establishes a course quality rating system that accurately reflects the real situation, so as to help the construction and development of public courses of high jump series in higher education institutions in China.

2. Construction of a quality evaluation system for public physical education high jump courses in general higher education institutions

2.1 Analysis of factors influencing teaching quality

There are many factors that influence the quality of teaching in public physical education courses. Generally speaking, the

factors influencing the quality of teaching are mainly reflected in two aspects: the teacher factor and the venue equipment factor. The teacher factor includes the teacher's lesson preparation, the teacher's organisational skills and teaching effectiveness.

2.2 Indicator weights and descriptions of the teaching evaluation system

This paper uses the hierarchical analysis method as the main research method. Firstly, combining the commonality of public physical education teaching and the special characteristics of high jump course teaching, the primary indicators of the hierarchical analysis method model were determined as five aspects of lesson preparation, teaching facilities, course process, course effect and course evaluation feedback. Then, 18 expert professors of relevant majors were selected to screen the second-level indicators by rating, and combined with the principles of index system construction, the index description table of the high jump teaching quality evaluation system of public physical education courses in general universities was established, as shown in Table 1.

Table 1 Description of indicators of the teaching evaluation system of public physical education high jump courses in general higher education institutions

Tier 1 indicators	Secondary indicators	Weighting (%)	Indicator characteristics
Lesson preparation	Teaching Objectives	5.2	Whether the teaching objectives are clear and in line with the syllabus requirements
	Teaching Plan	7.9	Whether the analysis of the learning situation is accurate and whether the teaching objectives can be accomplished
	Lesson plan development	5.5	whether the lesson plan is well written and structured
Teaching facilities	Facilities	9.4	Whether the site can be built to meet the requirements of the course and whether the layout of the site is reasonable
	Equipment preparation	4.5	Adequacy of equipment and facilities to meet the exercise requirements of the course
Course process	Reasonableness of content	5.1	Whether the teaching content meets the requirements of the syllabus and teaching objectives, whether the skills learning process is scientific and whether the content is tiered
	Outstanding focus and difficulty	8.5	The accuracy of the content focus has a direct impact on the focus of student learning
	Teaching attitude	4.2	Teachers' grooming, mental state and discipline have a direct impact on the effectiveness of teaching delivery
	Training density	5.9	The intensity of training in line with the curriculum and the adequacy of student activities have a direct impact on student motivation
	Exercise load level	6.8	Is the amount and intensity of exercise scientific and does it have room for adjustment
Course results	Teaching objectives achieved	8.7	whether the students are proficient in the sport and whether the teaching programme has been successfully completed
	Ability to apply knowledge	3.9	Knowledge of the rules of the high jump, level of mastery of basic technical movements and ability to apply physical education knowledge as required
	Movement awareness development	5.9	Awareness of exercise and exercise habits, active independent learning
	Emotional attitude	4.0	The degree of liveliness of the classroom atmosphere, the harmony of the teacher-student relationship, and whether the students' main role is fully reflected
Course evaluation and feedback	After-school guidance	5.8	Whether the teacher's assessment is appropriate, feedback is timely and students are given correct guidance
	Teaching feedback	8.7	Whether teachers have access to authentic feedback from students and whether they can reflect on their teaching based on that feedback

As can be seen from Table 1, factors such as teaching plan, venue facilities, highlighting of important and difficult points, achievement of teaching objectives and teaching feedback are regarded by experts as the core influencing factors affecting the teaching quality of high jump courses. This indicates that in the teaching of public physical education high jump courses in

general universities, the setting of teachers' teaching contents and the arrangement of teaching process have a direct and significant influence on the teaching quality of the courses. In addition, considering that teachers have a decisive role in public physical education courses, subjective factors such as teaching attitude, emotional attitude and after-class guidance are also included in the course quality evaluation index.

2.3 Application of the course quality evaluation system

In this paper, a university was selected to conduct a study on the actual teaching of high jump courses at the university. Combined with the course quality evaluation system proposed in this paper, the study collected the evaluation results from the university's physical education course instructors and the students who participated in the classes. After data collection and collation, the final scores of each indicator at the university were obtained by multiplying the survey scores with the weights, as shown in Table 2. The higher the final score, the higher the quality of teaching corresponding to the indicator; while the lower the score, the more the teaching items corresponding to the indicator need further improvement and optimisation, so as to achieve continuous improvement of the overall teaching quality of public physical education courses.

Table 2 Results of the evaluation of the teaching quality of public physical education high jump courses in a university

Tier 1 indicators	Secondary indicators	Weighting (%)	Survey Score	Final score
Lesson preparation	Teaching Objectives	5.2	87	4.524
	Teaching Plan	7.9	95	7.505
	Lesson plan development	5.5	80	4.4
Teaching facilities	Facilities	9.4	89	8.366
	Equipment preparation	4.5	84	3.78
Course process	Reasonableness of content	5.1	82	4.182
	Outstanding focus and difficulty	8.5	77	6.545
	Teaching attitude	4.2	91	3.822
	Training density	5.9	78	4.602
	Exercise load level	6.8	85	5.78
Course results	Achievement of teaching objectives	8.7	91	7.917
	Ability to apply knowledge	3.9	87	3.393
	Movement awareness development	5.9	92	5.428
	Emotional attitude	4	80	3.2
Course evaluation and feedback	After-school guidance	5.8	79	4.582
	Teaching feedback	8.7	95	8.265

2.4 Analysis of evaluation results

The score evaluation results in Table 2 show that the college's high jump course performed well in four areas: teaching plan, teaching attitude, teaching objective achievement and teaching feedback. The teaching plan design of the teachers in the university is reasonable and feasible, in line with the teaching plan design specifications. The course instructors had positive and serious attitudes in class, frequent teacher-student interactions, and the teaching outcomes met the teaching objectives. This may be related to the importance that the public physical education teachers in this university attach to the teaching of the course, and the professionalism and dedication of the teachers play an important role in the teaching activities of the course.

However, the high jump course at this general college is relatively backward in terms of lesson plan development. The content of the lesson plans is relatively old and has not been updated in tandem with the curriculum reform. Teachers at this university need to strengthen their theoretical knowledge and revise the new version of the lesson plans in time to further improve the quality of teaching in the course.

3. Factors affecting the teaching quality of public physical education high jump courses in general higher education institutions

3.1 Less emphasis on the curriculum

The importance of public physical education courses in the university teaching system has always been at a reduced level. The importance of public PE courses is low, both in terms of the number of credits in the training programme and the planning of the curriculum. This decline in importance at the school level has led to a lower regard for PE at the student level, which in turn has affected the quality of the overall curriculum. Although the importance of public physical education courses in the

teaching and learning system of higher education institutions has remained low, it should receive more attention given the significant positive impact it can have on the physical and mental health development of students.

3.2 The standard of teachers varies

Overall, the biggest challenge currently encountered by universities in developing the quality of teaching and learning in public physical education programmes is the lack of relevant teachers. Colleges lack the talent of physical education teachers with sufficient experience to develop quality teaching and learning programmes. The reasons for the lack of highly qualified teachers in higher education institutions are manifold. Of concern is the fact that there are still major shortcomings in the system for training high jump teaching talent based on the current mechanisms for running public sport in China. A large proportion of high jump coaches and teachers with sufficient experience are concentrated in work units such as professional sports colleges. The general higher education institutions are still performing unsatisfactorily in recruiting outstanding teachers for physical education.

3.3 Late construction of venues and supporting facilities

The teaching of the high jump has special requirements for the training ground and therefore the course needs to be carried out with adequate facilities. In the case of the high jump, the lack of specific training areas can lead to a serious reduction in the quality of the programme. Therefore, for the development of high jump courses, the venue is particularly important. At present, most of the universities in China are still relatively backward in terms of the construction of high jump venues and supporting facilities. To a certain extent, this affects the learning and training of university students.

3.4 Students' enthusiasm to participate in high jump courses is low

On the whole, the university community is currently less motivated to take public PE courses at university. The reasons for this are, on the one hand, the high standard of physical education exams which leads to students becoming intimidated, and on the other hand, the lack of flexibility and openness in the physical education curriculum which leads to students having a poor experience in their participation in the course. The low enthusiasm of the university student body to participate in training in high jump classes has a significant impact on the current quality of high jump courses in our universities. This stems from the fact that universities have not yet developed a good learning environment for public sport high jump courses, while on the other hand this is also influenced by external factors such as teacher guidance. If the course teachers are unreasonable in terms of curriculum setting and put too much emphasis on theoretical knowledge learning, this will undoubtedly cause students to lack motivation for daily training, which in turn will have a negative impact on the effectiveness of student training.

4. An analysis of the path to optimize the teaching quality of public physical education high jump courses in general higher education institutions

4.1 Continued enhancement of public physical education faculty support in universities

The quality of teaching in PE courses must be improved with the support of good young teachers. Young teachers have a better understanding of what the students of today think and feel and are better able to integrate into the student body. Therefore, in order to improve the teaching quality of physical education courses in universities, universities can make greater efforts to absorb outstanding young teachers and provide more opportunities for the new generation of young teachers to show their talents and demonstrate their level. At the same time, universities should reasonably determine the evaluation content and optimise the evaluation system according to the actual situation in the performance assessment of teachers, so as to provide more accurate feedback on the problems and improvement directions of teachers in teaching activities and improve the teaching ability of excellent young physical education teachers.

4.2 Enhancement of high jump teaching venues and supporting facilities

At present, the development of public PE high jump courses in colleges and universities is faced with many practical problems such as the lack of teaching venues and the lagging construction of supporting facilities. In order to solve this problem, universities need to, on the one hand, raise the importance of public physical education courses, increase the support for the software and hardware facilities of physical education courses, reasonably plan the layout of the venues and increase the support of relevant supporting facilities. Colleges and universities should actively establish a student feedback mechanism, open up feedback channels for students' opinions, collect students' questions and suggestions regarding teaching venues and supporting facilities and amenities, and deal with the problems found in a timely manner.

4.3 Deepen the reform of teaching mode

The way to improve the teaching quality of public physical education high jump courses is to deepen the reform of the

teaching mode of high jump courses. In the context of the ongoing reform of public physical education courses in China, university courses in different sports are undergoing a round of reform of their teaching models. Different sports courses, according to their actual characteristics, combined with the latest theoretical research results of relevant pedagogy, are innovated in the teaching mode, and eventually achieve diversified teaching objectives. This will not only stimulate students' enthusiasm for learning and optimise the teaching framework of high jump courses, but will also lead to the integration of theoretical knowledge and practical exercises for students.

4.4 Building a student-centred teaching system

Compared to other university programmes, the delivery of public sport programmes is more dependent on student participation and cooperation. Therefore, students should be regarded as the main participants in the design and delivery of public PE courses. However, according to the feedback from the results of public PE courses in higher education institutions in China, although the teachers of PE courses in colleges and universities can complete their teaching tasks through active preparation and careful teaching, the overall PE courses lack communication and interaction between teachers and students, and a student-centred teaching system has not yet been built. This will have a negative impact on the teaching quality of public physical education courses in universities. Therefore, insisting on the main position of students is the key point that needs to be paid attention to in the teaching reform of public physical education courses.

5. Concluding remarks

This paper finds that improving the quality of teaching in public physical education courses does not happen overnight, and that teaching quality is related to a number of factors including preparation, teaching facilities and teaching processes. Improving the quality of teaching requires step-by-step optimisation and improvement of the relevant factors. From the feedback of the actual teaching results of public physical education high jump courses in universities, the teaching quality of different universities varies greatly, and most of them still pay attention to the teaching evaluation of high jump courses. This paper establishes a more complete quality evaluation system for high jump courses through hierarchical analysis and Delphi method. It is found that the index system constructed in this paper can systematically and accurately evaluate the high jump courses in colleges and universities, and then provide reference for the teaching reform of high jump courses. In practice, each school can adjust and optimise the index weights according to the specific situation in order to obtain more accurate evaluation results, which can then improve the teaching quality of university high jump courses in a targeted way.

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