



Construction of Sports Rehabilitation Vertical Curriculum Group from the OBE Perspective

Xinmiao Zhang^a, Yongheng Pei^b, Chengdong Zhu^{c*}

College of Physical Education, Liaoning Normal University, Dalian, Liaoning, 116029, China

^a14111965930@qq.com, ^bA13898852256@163.com,
^{c*}625127414@qq.com

Abstract. In sports colleges sports rehabilitation courses, for example, establish the output orientation (OBE) as the guiding ideology of the longitudinal curriculum group, scattered in different semester highly related course integration, from the professional basic course, concise core knowledge, with time (semester) as the context, the core knowledge through progressive reinforcement form knowledge chain, help students to build knowledge system. Taking the physical education major as an example, the specific programs of curriculum objectives, curriculum setting, assessment and evaluation are given. The construction of vertical curriculum group plays an important role in cultivating students' core quality and building knowledge system.

Keywords: output-oriented teaching method; longitudinal curriculum group; sports rehabilitation curriculum reform

1 INTRODUCTION

The major and curriculum reform with Outcome-based Education (OBE) as the leading idea has gradually become the mainstream of college education in China. The OBE education philosophy focuses on three themes: "results" and "results" in curriculum design, student-centered in teacher-student relationship, and the dynamic process of "continuous improvement" in curriculum construction^[1]. The curriculum design based on this teaching concept can effectively improve the learning effect of students, accelerate the adaptation to the needs of social work, and improve the accuracy of employment. With the amount of knowledge and information, and rapid development, many subject course construction development speed lags behind the social development speed, lead to the teaching content presents the course isolation, loose content, the phenomenon of social practice, higher education gradually cannot meet the needs of time development, cannot fit the requirements of OBE assessment. Therefore, the research on the curriculum group construction has emerged^[2-4]. This study will take the sports rehabilitation courses in the physical education courses in normal universities as an example to explain the problems existing in the current curriculum development, and put forward the solution strategies such as establishing vertical curricu-

© The Author(s) 2024

M. S. H. Talpur et al. (eds.), *Proceedings of the 2024 4th International Conference on Internet Technology and Educational Informatization (ITEI 2024)*, Atlantis Highlights in Social Sciences, Education and Humanities 27, https://doi.org/10.2991/978-94-6463-560-7_27

lum groups, condensing the core knowledge chain, and connecting the comprehensive knowledge network.

2 THE MAIN PROBLEMS EXISTING IN THE CURRENT SPORTS REHABILITATION COURSES

2.1 Overlap of Some Knowledge Points between Courses

Due to the lack of professional training scheme design top design, lack of macro perspective, curriculum overall design is not enough elaboration, different teachers, and concentrated preparation and discussion, lead to not reflect the connectivity between the course, there are some knowledge between course content repeat teaching phenomenon, so that the education waste, course extension and expand hours, teaching content, course depth and breadth is poor.

2.2 Poor Grasp of Public Knowledge Points between Courses

As the first course of other courses, professional basic courses play the role of building the knowledge system and strengthening the public knowledge points, and the knowledge points between courses have certain relevance and continuity. When formulating the teaching content, the teachers do not design the course from the perspective of professional development. They still simply impart knowledge based on the textbook, and lack of concise and intensive education of the core knowledge points of the major. Leading to some knowledge that should have been taught in the pre-course that needs to be reintroduced in the post-course. Wasting teaching time is not conducive to the construction of students' knowledge system.

2.3 Part of Teaching Content is Ailed from Reality

With the advent of the era of information explosion, the updating speed of textbooks cannot meet the needs of some courses closely related to the society, which leads to the contradiction between the original knowledge reserve of textbooks or teachers and the growing knowledge needs of students and the society. Sports rehabilitation courses, for example, the country will "national health" rise to national strategy, sports promote health as an important means, vigorously promote the development of health and rehabilitation industry, and sports rehabilitation related knowledge and information, social demand for health guidance, rehabilitation therapy, however, the current teaching content and social reality, cannot meet the needs of the development of The Times. At the time of course construction, the separation of theory course and practice course is more shackto the integration of new knowledge. It is necessary to organically combine theory course and related practice course, condense important knowledge points, cultivate students' exploratory learning ability, combine with practice course, cultivate students' innovative practice ability, and jointly enhance students' core competitiveness^[10].

2.4 Evaluation Method

Teaching evaluation is an important way to reflect the learning effect of students. At present, the main evaluation methods are still mainly closed-book examination and practice report assessment, with a single evaluation method and a solidified method. A single assessment method can not accurately reflect the students' real learning effect, ability and quality. The solidified evaluation method makes students easy to be passive and idle, which is not conducive to the development of the teaching process.

3 CONSTRUCTION IDEAS OF LONGITUDINAL CURRICULUM GROUP MODE

3.1 The Construction Concept of the Vertical Curriculum Group

With the development of OBE theory, the longitudinal curriculum group research with subject construction as the starting point has been mentioned again. It is generally recognized in concept: vertical course group refers to several courses with great relevance and continuity in teaching content and obvious sequential sequence in the arrangement of class hours^[2-4]. The horizontal curriculum group has different opinions in the curriculum composition, and has the ability cultivation as the element^[2]Take social practice as the element^[3], The course group constructed with the knowledge points as the elements^[4]. This study tends to take knowledge as elements, but advocate from the perspective of development of concise knowledge, combined with different semester teaching content gradually rich inherent core knowledge, promote the extension of knowledge, combined with more semester, multidisciplinary evaluation way to strengthen students' memory of core knowledge and consolidate, pay attention to the fusion of parallel knowledge, promote the further construction of knowledge network.

The establishment of vertical curriculum group is based on the constructivism and humanism theory, OBE education theory, according to the course content and social needs, and according to the unified output objectives of the curriculum content, arrange teaching order, in order to help students build their own knowledge system.

3.2 Vertical Course Group Construction from the Perspective of OBE

The construction of OBE vertical course group includes three processes: building the vertical course group, condensing the core knowledge chain, and connecting the comprehensive knowledge network. As shown in Figure 1.

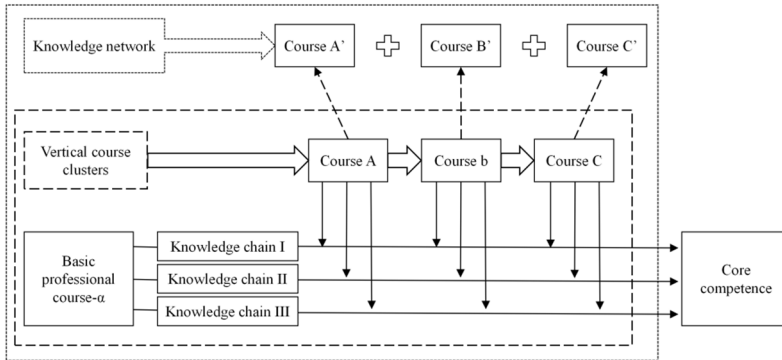


Fig. 1. Schematic diagram of OBE longitudinal course group construction

The role of vertical course group is to provide a platform for the construction of knowledge system, drive the knowledge chain with knowledge points, and finally form a knowledge network, and form a three-dimensional knowledge system of point, line, surface and body. First of all, it should be clear that the elements that constitute the core quality of students of this major, Conise core knowledge, Finally, form the core competence; Secondly, the core knowledge points should be repeatedly strengthened in several courses with high relevance and good continuity, Combined with the characteristics of each course, the corresponding extension and expansion, Form a chain of knowledge, Through the continuous extension of each knowledge point, Collision with other professional development courses, Finally, to form a knowledge network; Finally, under the joint efforts of theory class, experiment class, practice class, social practice and graduation thesis, Cultivation meets the needs of the current society, Excellent talents with good knowledge, practice, innovation and socialist core values.

4 CONSTRUCTION OF VERTICAL CURRICULUM GROUP FOR SPORTS REHABILITATION

4.1 Course Objectives and Tasks

Curriculum objectives and tasks are the starting point of course teaching, and the curriculum objectives based on OBE are the micro-mapping of graduation requirements, reflecting the corresponding teaching characteristics^[5, 6]. In Liaoning normal university sports college physical education (normal) professional, for example, the major aims to cultivate "in basic education and secondary education school engaged in sports teaching, extracurricular sports activities, extracurricular sports training and competition work, and can engage in school sports science research, school sports management, social sports guidance work of outstanding sports specialized talents"

(the professional level 2018 training plan). After training, students should have the work and research ability in school physical education teaching and training; in the school physical education teaching and management, teachers need to understand the physical development characteristics of students of different ages (especially primary school to high school) and related health care knowledge, and have the theoretical and practical knowledge of prevention, diagnosis and treatment (first aid) common sports diseases and sports injuries, to deal with emergencies^[7].

At present, there are three courses of sports rehabilitation (32 hours, the third semester), Chinese medicine physical therapy massage (32 hours, the third semester), physical education and health care (48 hours, the sixth semester). Physical education and health care is the main course of this major, and physical education rehabilitation, traditional Chinese medicine physiotherapy and massage are the limited professional courses. When constructing the vertical curriculum group, take physical education health care as the core course, highlighting the teaching content of school physical medicine massage as the practical course, highlight the study of regulating human body function, eliminating fatigue and preventing injury and injury, take physical education rehabilitation as the application of physical education rehabilitation therapy in different injuries and diseases, let students understand the main methods and applicable scope of physical education rehabilitation, and lay a foundation for physical education health care. Motor anatomy, exercise physiology, and exercise nutrition serve as the pre-basic courses.

4.2 Course Content Planning

(1) Adjust the course content

To reflect the effective benchmark education concept (OBE) as the guiding principle, from the construction sports rehabilitation course group as a starting point, both the front course teaching content, and other parallel courses, improve sports health care, sports rehabilitation, Chinese medicine care massage teaching content, repeat between course to streamline or adjust focus, highlight the teaching needs and social needs, mainly for five years after graduation should have the ability to cultivate.

Sports health care as the core course, the school sports health, fitness, disease, injury related content as the key content, the elderly, women sports health related knowledge as the content, the first aid and massage content is given priority to in order to consolidate review, understanding, combined in its related practice courses (Chinese medicine health massage, sports human science experiment), but through the classroom discussion, classroom practice, homework form strengthen the related content of the course. Therefore, the expected goal is changed to: to master the knowledge of physical education and practice, understand the knowledge of physical health care of different groups, and master the first aid methods and rehabilitation methods of sports injuries.

Traditional Chinese medicine health care massage class to cultivate students' practical ability as the main goal, with the sports health care massage part as the main foundation, with the intermediate massage content as a supplement, hands-on practice as the core thought, highlight the characteristics of sports and sports, training and

sports class before, in and after the three stages for project detail different sports massage technique, combined with the actual situation, with scene teaching method introduced professional sports team medical work content, emphatically fatigue recovery after sports, sports injury treatment and relief, etc. For example, when introducing lower limb massage, combined with the actual situation of students list different items (long, short distance running project) lower limb muscle characteristics, combined with "sports training", "sports biochemistry" about "under different energy system training effect and metabolites" knowledge, through the embodied cognitive experience wrong training way lead to muscle mass change, and master the rehabilitation technique for different situations, strengthen the scientific training knowledge. Practical course and theoretical course have complementary effects, in line with the teaching concept of OBE, and highlight the cultivation of practical ability of social needs^[8].

As a knowledge expansion course, physical rehabilitation mainly introduces commonly used physical rehabilitation techniques, cooperating with the knowledge of traditional Chinese medicine physiotherapy and massage. In the teaching process, the relevant content of bone and muscle in physical anatomy is strengthened through the introduction of rehabilitation diagnosis methods and rehabilitation treatment techniques. Because the health care knowledge of middle-aged and elderly women is weakened in the main physical education health care, the corresponding emphasis is introduced in this course.

(2) Adjust the assessment and evaluation methods

The OBE-based course evaluation focuses on the students' learning outcomes^[9]. The evaluation of vertical curriculum group construction highlights the role of knowledge chain in the whole process of teaching, arranging the core knowledge points for multiple assessments in different courses to strengthen the students' memory and verify the memory effect; on the premise of highlighting the teaching effect, reflecting the teaching content of cultivating students' core values, using a variety of evaluation methods, including multimedia and micro lessons into the evaluation methods^[11].

For example, in cultivating students majoring in physical education (normal education), it is required to submit video homework and social practice reports in the form of homework to cultivate students with the ability to make micro-courses, practical operation ability, social service consciousness and related qualities of gratitude. The video requires students to explain 2-3 massage techniques and show the operation process. The video is required to be equipped with subtitles, necessary explanations, background music, animation special effects and other contents. The social practice report requires students to provide a voluntary massage service to teachers, school workers or family members, take photos and write notes. Finally, the students' homework is evaluated, and lead the students to communicate and discuss in class.

5 CONCLUSION

OBE perspective of sports rehabilitation class longitudinal curriculum group construction adhere to the results oriented as the thought, to help students build knowledge

system as the construction goal, with time (semester, hours) for the development of the main line, with professional main course as the core, strengthen professional course, outstanding social practice, expand professional development, promote students to form a system of knowledge system, master professional skills.

Therefore, the teaching objectives, curriculum setting, assessment and other aspects are designed according to the needs of school sports and social sports guidance, and responsible for the development of students. Curriculum in the core knowledge chain as clues, the sports rehabilitation related courses closely linked into a series of courses, echo, 20, is not only the rigorous course, and real-time update dynamic mechanism, from the perspective of macro build big curriculum system, to the student's core quality training and knowledge system construction has an important role.

ACKNOWLEDGEMENTS

Funding: This work was supported by Research Project of Humanities and Social Sciences of the Ministry of Education (23YJC890060), Sports, Art, and Labor Education Practice Project of Liaoning Normal University in 2023(LSJGTM202305)

REFERENCE

1. Spady W G.Outcome-Based Education: Critical Issues and Answers.[J].American Association of School Administrators.1994: 207.
2. Li Jian "vertical new dimension" on "design ability course group" and "design ability teaching and research section" in the undergraduate design teaching setting [J]. Education and teaching forum.2013(18): 221-222.
3. Liu Bin, Zhou Min, Tong Chunsheng. PLC longitudinal curriculum group construction from the OBE perspective [J]. Experimental technology and management.2016 (3): 197-201, total of 5 pages.
4. Yao Jianguyun, Wang Juan. Construction of "point, line and surface" vertical course group in OBE Vision [J]. Higher education forum.2017(12): 69.
5. Shi Xiaoqiu follows the course teaching design and implementation of the professional certification OBE concept [J]. Research on higher engineering education.2018, 172(05): 160-166.
6. Wang Yongquan, Hu Gailing, Duan Yugang, and other output-oriented curriculum teaching: design, implementation and evaluation [J]. Research on higher engineering education.2019(3).
7. Curriculum structure and system of physical education and health care in physical education [J]. Journal of Shenyang Physical Education College.2003(3): 63-65.
8. Meng Qinghui, Zhou Chunyue, Liu Ying, et al. Research on the innovation mode of undergraduate graduation practice under the OBE concept [J]. Experimental technology and management.2016(33): 22.
9. Su Peng, Li Manli based on the concept of general education OBE [J]. Research on higher engineering education.2018(2): 129-135.
10. Liu Hanqing. Cultivating practical ability: exploring practical teaching mode based on OBE concept [J]. Science and Technology Wind, 2024, (19): 34-36.

11. Zhao Li, Wu Yingying, Zhang Guoqiang, et al. Optimization and integration of teaching content of sports human science course group [J]. Sports Technology, 2022,43 (03): 137-139.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

