

Research and Strategy on Fitness Course Development in Universities of Shanxi Province

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Abstract

In recent years, fitness course is a new physical education curriculum in colleges and universities in our country that has positive effect to promote the development of contemporary college students' physical and mental health. But the course teaching has many problems to be solved, which is at the development stage and still is not perfected. This article uses the literature material, interview, questionnaire survey and other research methods, respectively in 10 colleges and universities of different regions of Shanxi Province, finds out the factors restricting the development of colleges and universities in Shanxi Province fitness course, puts forward the countermeasures. Studies have shown that college students have a keen interest to fitness, bodybuilding, participation motivation is good, but the low level of cognition. Effect is obvious that college students to participate in fitness bodybuilding exercise. However, the evaluation of college students is not high for the courses in health fitness. Disqualified facilities, lack of class hour unreasonable factors also restrict the nation-wide fitness course.

Keywords: *college; health; development; fitness and body-building course*

1. Introduction

Fitness and body-building is a sport which is supposed to improve human's healthy, strength and beauty. As one of the new- rising sports, due to its positive effects in physique strengthening, body building and disease preventing, fitness and body-building has quickly swept the world [1]. College students, standing on the leading edge of fashion, are in more favor of the sport, in addition, the environment of colleges is good to develop fitness and body-building sport; therefore, colleges and universities are the most ideal places to develop this sport. The sport of fitness and body-building was introduced in China in the 1980s and even later in Chinese colleges. How to effectively conduct the course of fitness and body-building in higher schools, especially in non-sports major engineering colleges is worth considering and working out a solution.

In China, at present, college students, due to the heavy load of various courses and pressure of getting jobs, are commonly in hidden physical and mental trouble, which undoubtedly is a challenge for educators, psychologists and physical educators. Taking active part in fitness and body-building may not only be good to college students' physical and mental health, but also strengthen their physique, improve body shape and increase their self-confidence so as to deal with various challenges in life [2].

2. Object and Methodology of the Study

2.1. Object of the Study

The object of the study is the development of fitness and body-building course in the engineering university in Shanxi province. To make the study more universal, the study

investigated 2000 college students from 10 colleges and universities from various areas in Shanxi province (including Shanxi University, Taiyuan science and technology university, Shanxi normal university, Datong university, Lvliang college, Xinzhou normal college, Changzhi college, Jinzhong college, Yuncheng college and Jincheng vocation and technique college). They are respectively 100 freshmen (60 males and 40 females) and 100 sophomores (60 males and 40 females) from each university or college, so the study findings can basically reflect Shanxi province's college students' cognition to fitness and body-building course.

2.2. Study Methodology

(1) Literature consulting

To meet the needs of the study, the author consulted above 20 recently published books and 30 articles in regard to physical education sociology, school physical education, fitness and body-building, psychological and physical guidance, and then, analyzed and systemized the materials to lay the foundation of the study.

(2) Questionnaire

The author sent out 2000 questionnaires to 2000 students from 10 universities or colleges, get back 1940 copies, the recovery rate was 97%, among which, 1832 copies were effective and the effective recovery rate was 91.6%.

(3) Mathematical statistics

The author collated the effective questionnaires, and dealt with the data by using SPSS17.0 to give data support of the study.

3. Findings and Analysis

3.1. The Status of Fitness Classes in Engineering Universities

(1) The situation of college students' physical and mental health

Table 1. Survey on the Affecting Factors of College Students' Physical Health (N=1832)

<i>Affecting factors</i>	<i>N</i>	<i>%</i>	<i>order</i>
Having no breakfast	531	29%	3
Bad habit(smoking, drinking)	1528	83.4%	1
Irregular daily routines(staying up late)	597	32.6%	2
Lack of exercise	513	28%	4

The above listing items are major affecting factors and they are multiple choices.

The physical and healthy test of college students reflected that in recent years, Chinese college students' physical and healthy condition has been falling. Many reasons caused this phenomenon, and apart from some social problems, the main causes are students' daily living habit and behaviors. Through the survey on the factors affecting college students physical and mental health, we found (see Table 1) that 83.4% college students had bad living habit like smoking, drinking, eating junk food *etc.*; that 32.6% college students had long-term irregular daily routines; that 29% college students frequently had no breakfast; and that 28% students lacked exercise because of disliking working out.

On Chinese college campus, myopia takes up such a major proportion among students that in some class 80% students are near sighted. Obesity, which is common among youths, is another healthy concern about college students. After interviews, we knew that 28% college students never did physical exercise because they were busy with their study, lack of common sports sense or failure in forming good exercising habit; that many bad living habits such as staying late at night, excessively playing computer games, smoking and drinking (male students) and eating lots of junk food (female students) led to their

less strength and obesity; and that 29% students did not have breakfast because of getting up too late in the morning.

Table 2. Survey on the Factors Affecting College Students' Mental Health (N=1832)

<i>Affecting factors</i>	<i>N</i>	<i>%</i>	<i>order</i>
School record	403	22%	3
Interpersonal relationship	568	31%	2
The ability of adaptation	728	39.7%	1
Love affairs	330	18%	4

The above listing items are major affecting factors and they are multiple choices.

The survey on the factors affecting college students' mental health (see Table 2) showed that the number 1 affecting factor was the concern about their ability of adaptation, and 39.7% college students were worried that they could not well adapt the outside social surroundings; the second was interpersonal relationship, and 31% college students feared they could not get well along with other students; the third factor was School record, and 22% students had heavy pressure due to the worry about their poor school performance; the last factor was problems about love affairs, and 18% students had mental burden and disordered daily life because of being unable to deal with relationship problem.

Born in the 1990s, the era of rapid economic development, current college students have been enjoying so abundant material wealth and been nourished by so much good food, dressed in good clothes that they live wonderful lives and thrive. But meanwhile, the ever-changing society brings college students more competition and pressure, which caused more or less mental problems to college students, such as loneliness, self-abasement, sleeplessness, neurasthenia, being down in spirits, low self-esteem, *etc.*. Students with one or more of these problems for a long term were under sub-health status, and even worse, had to see a doctor [3].

The above findings showed that many of the current college students did have more or less physical or mental healthy problems. Except the worse problems, which need seeking medical advice, most of them can be recovered through adjusting daily routines, forming good living habits, adjusting mental attitude *etc.*. Colleges and universities could help students to balance emotions and cultivate optimistic living attitude through organizing colorful campus cultural activities. Plus, encouraging college students to actively attend physical exercise is a perfect method to improve their mental and physical health. Taking fitness and body-building course could effectively solve students' physical and mental problems, which was worth spreading around higher schools.

(2) Favorite degree of college students' fitness and body-building sport

Table 3. Survey on How College Students Favor Fitness and Body-Building Sport (N=1832)

<i>How like Fitness and Body-Building</i>	<i>N</i>	<i>%</i>
Like	1740	95%
Dislike	92	5%

According to the survey on how college students favor fitness and body-building, we saw (Table 3) that 95% college students liked this sport, while only 5% students disliked it.

The investigation was easy but important. It showed that fitness and body-building was popular with current college students, and it had good foundation to be spread among college students.

(3) Engineering college students' cognition about fitness and body-building sport

Table 4. Survey on College Students' Cognition about Fitness and Body-Building Sport (N=1740)

<i>Value and Role</i>	<i>N</i>	<i>%</i>	<i>order</i>
Enlarge Muscles	748	43%	1
Lose weight	400	23%	2
Strengthen physique	244	14%	3
Improve body shape	191	11%	4
Adjust mental pressure	87	5%	5
Cultivate sport conscience	52	3%	6
Others	18	1%	7

Through the survey of 1740 college students who liked fitness and body-building sport on their cognition about this sport, we saw (Table 4) that 43% students considered the sport as a way to enlarge muscles; 23% students believed it helped to lose weight; 14% students thought its obvious effect was to strengthen people's physique; 11% students regarded it as a good way to improve body shape; 5% students thought it could adjust mental stress; 3% students hold the idea that doing it regularly could cultivate people's sport conscience.

Maybe because males took up a large proportion of the students being surveyed, less than half students considered fitness and body-building as a way to enlarge muscles. In addition, male students tended to build up a strong body to show masculinity. Losing weight was regarded as the second function of the sport. Being favor of high-calorie food and drink, plus their heavy study burden and lack of sports caused many young people to gain weight. So many students, especially girls were eager to lose weight and keep fit through this sport. Quite a few students believed college students can strengthen their physique and improve body shape by doing this sport.

Obviously, college students' cognition about fitness and body-building was subjective. Objectively speaking, taking regular fitness sport in long term was beneficial to build up strong bodies, enlarge muscles, improve health, strengthen people's physique; it was also helpful to improve body shape, correct deformity; the other function of it was to adjust mental pressure, cultivate students' taste, improve function of nervous system and train the virtue of strong will [4].

(4) Engineering college students' motives of doing fitness and body-building sport

Table 5. Survey on College Students' Motives of doing Fitness and Body-Building Sport (N=1740)

<i>Motives</i>	<i>N</i>	<i>%</i>	<i>order</i>
Body building	713	41%	1
Lose weight	348	20%	2
Release pressure from study	244	14%	3
Earn a credit	157	9%	4
No other sports option	157	9%	5
Cultivate sports conscience	69	4%	6
Others	52	3%	7

Sports motive, the inner progress of individuals, is the inner driver for a person to engage in a sport, while the behavior of doing a sport is supported to be the result of the progress [5]. Good motives ensure a person to take an active part in sport and persist in it. According to the Survey on College Students' Motives of doing fitness and body-building sport, we knew (see Table 5) that 41% college students did fitness and body-building sport on the purpose of building body shape and strengthening muscles; 20% students did it for

losing weight and keep fit; 14% for releasing pressure from study; 9% did it just in order to earn a credit; another 9% chose it only because they had no other sports options, and 4% students took part in it for cultivating sport conscience. 3% students did this sport for the sake of others reasons.

College students are at the later stage of adolescence, which is the vital period for them to form correct views of the world and life. At this period, they tend to be strongly self-conscientious, uphold everything nice and closely follow social trends, eager for perfection, especially for sound and beautiful body shape and figure. As a result, fitness and body-building sport is their ideal choice [6]. A healthy balanced diet, together with regular aerobic exercise like doing fitness and body-building is certainly helpful for college students to lose weight and keep fit. Heavy pressure from study and various tests had negative effects on students, while sports, especially fitness and body-building is undoubtedly a good approach to release pressure. Physical exercise is supposed to increase students' willpower and to cultivate many nice virtues like courage, unyielding and fighting spirits. The survey showed that 75% students choose this sport for the sake of positive motives, and only 25% for impure motives, whom should improve their cognition of the sport.

(5) Students' evaluation of fitness and body-building course.

Table 6. Survey on Students' Evaluation of Fitness and Body-Building Course (N=1236)

<i>Items</i>	<i>Very good</i>	<i>Good</i>	<i>Ordinary</i>	<i>Bad</i>	<i>Very bad</i>
Curriculum	24%	69%	7%	0	0
Teacher	42%	50%	8%	0	0
Teaching methods	19%	64%	17%	0	0
Teachers' action modeling	48%	31%	21%	0	0
Teachers' error correction	40%	24%	36%	0	0

7 out of the 10 higher schools being investigated offered elective fitness and body-building courses. The investigation to 1236 college students from the seven higher schools about their evaluation of fitness and body-building course showed (see Table 6) that 93% students affirmed the curriculum on the fitness and body-building, believing it helpful for their mental and physical health; 92% students were very satisfied with their teachers; 83% students thought teachers' teaching methods very good; 79% students appreciated teachers' action modeling during training; 64% thank for teachers' error correction and thought it useful.

The result of students' evaluation about the course reflected the quality of teaching to some degree, which stimulated teachers' working enthusiasm and initiative, and teachers tend to regard the feedback from students as a guide to sum up experience and lessons. As a new-rising elective course, there was big room for the course of fitness and body-building to be improved, the content arrangement and teaching methods were imperfect yet. According to the survey, since there were no "bad" or "very bad" answers, we saw college students basically highly praised this course. That proved the course had developed well so far. But quite a few students gave "ordinary" answer to the questions about teaching methods, action modeling and error correction, to which, teachers should pay enough attention and re-examine the current situation of the fitness and body-building course and try to keep improving it [7].

3.2. The Affecting Factors of the Development of Fitness Course in Universities

(1) Less teaching hours and unreasonable allocation

Table 7. Allocation of Teaching Hours (N=7)

University or College	Strength train		Shape train		Aerobics train		Theoretic course	
	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate
Shanxi University	14	43.8%	6	18.7%	10	31.3%	2	6.2%
Taiyuan Science and Technology University	16	50%	4	12.5%	8	25%	4	12.5%
Shanxi Normal University	14	43.8%	6	18.7%	8	25%	4	12.5%
Datong University	12	37.5%	6	18.7%	10	31.3%	4	12.5%
Xinzhou Normal College	14	43.8%	6	18.7%	8	25%	4	12.5%
Jinzhong College	18	56.3%	4	12.5%	8	25%	2	6.2%
Yuncheng College	16	50%	4	12.5%	10	31.3%	2	6.2%
Mean	14.9	46.6%	5.1	16%	8.9	27.8%	3.1	9.6%

In the 7 higher schools investigated that offered elective fitness and body-building course, the course was taken 32 hours in total in a term (16 weeks a term and 2 hours per week). In general, teaching material focused more on strength training, which took up 46.6% of the total teaching hours; the second was aerobic training, taking up 27.8%, Body shape training took up 18.7% and the related theoretic course took up 9.6%.

The arrangement of teaching hours was one of the affecting factors of classroom teaching quality. About 32 teaching hours for such an important course was relatively less. During this short teaching span, students could only scratch the surface of the course. Partly because some teachers did not deep study the methodology of body-training and did not profound the principle of the teaching of this course, strength training was unreasonably emphasized [8-9]. Teachers should put other related theories (such as human body anatomy, excess energy recovery, sleeping and diet matters needing attention, precaution of sport injury, etc.) into teaching content, in order to enrich the connotation and change the former single teaching model. Only in this way could the course be scientific and practical, sound and rich.

(2) Short of and outdated site facilities

Table 8. The Situation of Site Facilities if Fitness and Body-Building Sport (N=10)

University or College	Gym (N)	Aerobics venues (N)
Shanxi University	1	2
Taiyuan Science and Technology University	1	2
Shanxi Normal University	1	2
Datong University	1	1
Xinzhou Normal College	0	1
Jinzhong College	1	1
Yuncheng College	1	1
Lvliang College	0	1
Changzhi College	0	1
Jincheng Vocation and Technique College	0	1

Gymnasium and aerobic venues were basic site facilities to do fitness and body-building. The survey on the site facilities of the 10 higher schools showed (see Table 8) that 6 out of the 10 schools respectively had one special gymnasium, and without exception, the gymnasiums were small-sized and the fitness equipments were old and outdated; There were only one or two aerobic venues (some with mirror wall and barre) in these 10 higher school.

Site facilities were the necessary condition for schools to develop physical education, and directly affecting the quality of the teaching of P. E., extracurricular sports and training [10]. The Gymnasium and aerobic venues in these 10 universities and colleges were far from being enough for 10 thousand or dozens of thousands students to take their elective fitness and body-building course. The fact that university site facilities were lack and outdated decreased the quality of fitness and body-building teaching and frustrated students' initiative to choose the course.

(3) The effect of the examination system and content on students' election

Examination system was an important scale to measure the effect of class. As an elective course, fitness and boy-building class was different from required courses in examination system. For example, the examination mans and teaching content were unified in the higher schools in the whole Shanxi province, which, to some degree, restrained the development of the course and limited students to deep learn the course. According to the survey, so far teachers scored students mainly on the basis of their performance of strength and aerobic tests; some students took the course for the sake of interest and others only for the credit but not for interest [11].

According to the survey, 31.7% students held the view that it was unreasonable to attach too much importance to technique rather than attitude while evaluate the achievement of fitness and body-building course, which was easy to frustrate the initiative of the students without talent but working hard, and daily performance should be taken into consider for assessment. A majority of students proposed that assessment should focus more on sport attendance and learning advance extent, that is to say, daily performance and individual's progress should be considered.

(4) The effect of teaching design and procedure on the promote of the course

Table 9. Survey on the Affecting Factors of Teaching Quality (N=1236)

<i>Affecting factors</i>	<i>N</i>	<i>%</i>	<i>order</i>
Less-targeted teaching content	321	26%	1
Insufficient warm-ups	173	14%	4
Rigid Teaching methods	112	9%	6
Potential sport injury	136	11%	5
Unreasonable teaching arrangement	198	16%	3
Lack of atmosphere	222	18%	2
Others	74	6%	7

The survey to 1236 students on the main problems in fitness and body building class showed (see Table 9) that 26% students maintained that less-targeted teaching content was the biggest problem in the course; 18% students held the view that lack of sport atmosphere greatly affect their attendance interest; 16% students thought the teaching arrangement was unreasonable; Some students agreed to other various factors such as insufficient warm-ups, potential sport injury and rigid teaching methods *etc.*

Table 9 showed that if the teaching content was not on the basis of students' physical qualifications, hobbies and interests or requirements, but on the syllabus and outline arrangement, students would gradually lose the interest in fitness and body-building class or just take production-line approach on this class [12]; A class without a favorable atmosphere tended to make students get bored of it, especially in strength training; Students reflected that the teaching arrangement was not so reasonable that they drilled less of the items they liked but even more strength training; warming up activities and the worry about the potential sports injury were also the factors influenced the quality of the teaching of this course. Another problem was the rigid and outdated teaching methods, which were lack of energy and creativity. Thus, boring arose spontaneously. Since

teachers dominated the classroom teaching process, they should try hard to improve their teaching by exploring well-targeted content, applying various teaching methods, setting nice classroom atmosphere and stimulate students' enthusiasm. That required them to do lots of work after class [13].

3.3. The Countermeasures of the Developing of Fitness Course

(1) Reinforce the publicity to deepen students' understanding of the sport

Taking regular part in fitness and body-building is helpful to enlarge muscles, promote health, improve body shape, and cultivate sports-conscience, *etc.*. Due to never doing fitness, having no concept about the value and worth, and significances of fitness and body-building, many students lack enthusiasm in this sport, which has hidden its spread around universities. Non-sports major universities should reinforce the publicity to deepen students' understanding of the sport, and to educate students and teachers fully know the value of the new-rising sports so as to improve teachers' ability of teaching this course.

(2) Increase and enlarge gymnasium and venues to offer site facilities guarantee

With the development of society, fitness and body building will be more and more popular with college students and tends to be the most favorable elective course. While in stark contrast with the upward tendency of the sport, site facilities in higher schools fall behind. So increasing and enlarging gymnasium and venue to offer site facilities guarantee is the problem demanding the universities for prompt solution.

(3) Highlight function of fitness and work out rational allocation

In teaching content of fitness and body-building course, the function of "fitness" should be highlighted and competition training be decreased. Both of theory and practice should bet equal emphasis. The course should embody the principle of "teach through lively activities", letting students learn and enjoy exercise in stress-free environment [14]. Since the practice teaching of the course is based on the theory of fitness, which includes sports anatomy, sports psychology, sports medicine, *etc.* The idea of "technical course is more important than theoretical course in physical education" should be abandoned. Theoretical lecture should take up more teaching hours to meet P. E. teaching requirements.

(4) Diversify teaching methods and humanize the organizational forms

The teaching methods of physical education (such as explanation, direct vision, integrated and disintegrated teaching, practice, circulate practice, competition, error-correct, *etc.*) are all suitable for fitness and body-building teaching. Teachers should use it in flexible practice according to the character of fitness and body-building elective course [15]. The course includes theoretic lecture and technique class. The former is composed of not only theoretic lectures and homework, but also audio-visual education; The latter consists of technique course, teaching practice, teaching contest, *etc.* Classroom organization forms should fully embody humanization and be designed on the purpose of serve well the students.

4. Conclusion

Different teachers, students, teaching condition, teaching content, teaching methods, organization forms and teaching evaluation make difference the quality of fitness and body-building elective course. The purpose of the course is to teach students to grasp the methods to exercise scientifically and form good habits of working out regularly. Teachers are supposed to pay equal emphasis on both theory and practice, highlight the function of "fitness" to help students improve their muscles, build up their strength.

At present, College students are faced with various challenges and pressure, which affect their mental and physical health more or less. Doing fitness and body-building is undoubtedly a good way for them to get rid of these potential healthy dangers. It's a

priority for college students to know and accept fitness and body-building course. That is also the purpose of the study.

References

- [1] W. Le and L. Bei, "Sport World", vol. 11, (2010), pp. 99-100.
- [2] L. Qing and H. Jinxin, "Sci. and Technol. Info", vol. 11, (2010), pp. 151-153.
- [3] Schmid E. R., Kunz M. and Zausinger S., "Neurosurgery", vol. 6, (2006), pp. 1054-1065.
- [4] Y. Qilun and L. Medi., Furt. Edu, vol. 4, (2014), pp. 108-110.
- [5] Z. Guoqing, L. Ping and Z. Yong, "Spor. Sci. Lite", vol. 10, (2012), pp. 95-96.
- [6] Merkel M. J. and Brambrink A. M., "Anaesthesist", vol. 8, (2008), pp. 794-802.
- [7] S. Ye, C. Chen and F. Hu, "World J. of Engng. and Technol. Educ.", vol. 3, (2013), pp. 260-266.
- [8] J. Guiping, "Fitness and Body-building", Beijing: Beijing University Press, (2006), pp. 7-14.
- [9] G. Jun, "J. of Jiamusi College. of Educ.", vol. 7, (2013), pp. 428-429.
- [10] Z. S. Talas and A. Duran, "Energy Edu. Sci. Technol. Part A", vol. 2, (2012), pp. 741-748.
- [11] L. Y. Kun and S. Ping, "Spor. Cult. Guid", vol. 11, (2013), pp. 58-61.
- [12] A. Z. Saka, "Energy. Edu. Sci. Tech. Part. B.", vol. 4, (2011), pp. 725-738.
- [13] S. Kejin, "The Current Situation and Countermeasures of Fitness and Body-building Elective Course", Wuhan: Wuhan Institute of Physical Education, (2009), pp. 28-30.
- [14] W. Feng and W. Anbao, "Practice Body-building with the champions", Beijing: Beijing University Press, (2004), pp. 40-48.
- [15] W. Pengfei, X. Zhaobo, W. Ziqiang, Z. Jianjun, G. Yun and G. Yunpeng, Energy. Edu. Sci. Tech. Part. A.", vol. 4, (2013), pp. 2659-2670.

