



ISSN Print: 2664-7559  
ISSN Online: 2664-7567  
IJSHPE 2022; 4(2): 05-12  
[www.physicaleducationjournal.in](http://www.physicaleducationjournal.in)  
Received: 07-06-2022  
Accepted: 11-07-2022

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## Research on current situation of physical education in universities of central north cluster in Vietnam

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### Abstract

On the basis of theoretical and practical research on improving physical education in comprehensive educational reform and surveying the current situation of physical education quality assessment of students in Central North cluster university according to the current training program. A survey of 1586 students and 40 experts in Physical Education from 03 universities in the Central North cluster: Hanoi Pedagogical University 2, Tan Trao University and Hung Vuong University showed that learning Physical education is affected by many subjective and objective factors. This work investigates and researches the current situation of physical education in the universities of the Central North cluster, thereby emphasizing that in order to improve the quality of physical education, learning outcomes and movement activities, schools need to focus on three innovative training solutions in the direction of competency-based approach for students, including: Solution 1: Solution on extracurricular program; Solution 2: Solution on teaching method innovation; Solution 3: Solution on socialization of facilities and equipment. The solutions received high consensus of the research subjects.

**Keywords:** Situation, solutions, physical education, university in the Central North cluster

### 1. Introduction

In recent years, the study of physical education by students at universities and colleges in general is limited [6,7]. One of the cause is that the program has many inadequacies: the facilities are lacking, students' awareness and attitudes about the subject of physical education are not clear and correct. Most students consider PE as just a conditional subject, leading to disadvantages, and many are afraid of PE, consider it as a tiring subject or even a torture. They have little interest in this subject [4,5]. In some domestic works such as " *Research on the current situation of factors affecting the learning motivation of students at Hong Duc University* " by Nguyen Ba Chau [1], " *Physical education in the university receiving the ideology of liberal education* " by Vu Minh Cuong [2], " *Factors affecting the learning attitude of students at Da Lat University* " by Vo Thi Tam [8], " *Some theoretical issues on creating learning motivation for learners* " by Pham Quang Tiep [10], " *Current situation of physical education in Vietnam Agricultural Academy* " by Nguyen Van Toan [11]. Or some foreign works: " *Developing the Higher Education Curriculum* " by Dilly Fung [15], " *The Research University in Today's Society* " by Gerald Chan [17], " *Learning outcomes and instructional objectives: is there a difference?* " by Harden R. M. [18], " *Assessment and feedback in higher education* " by Teresa McConlogue [20] " *Shaping Higher Education with Students* " by Vincent C.H.Tong. Alex Standen, Mina Sotiriou [21], " *Outcome – based education: Critical issue and answer, handbook* " by William G. Spady [22] It can be seen that there are many research works on learning motivation, factors affecting learning outcomes at university, measures to improve teaching capacity, teaching capacity development, teaching and learning solutions. problem solving, management. [16], [19]. However, there is not any research aiming to find out the on students' side and the problems they are facing that affect the learning activities of the physical education subject, the factors affecting the job orientation after graduation to come up with measures and solutions to overcome and especially study the actual situation of physical education on students at the universities of the Central North cluster. From the theoretical and practical basis [13, 14], this research assesses the current situation of physical education work in the universities of the Central North cluster and the level of impact of these factors on the physical education learning [3]. During the research process, the topic used the following methods: Reading, analyzing, and synthesizing documents; method of discussion interview, pedagogical test method, sociological investigation method and mathematical and statistical method on SPSS 22.0 software.

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The research object of the topic is the factors affecting the learning of PE subject on: 50 teachers of PE and 1268 students at 3 universities of the Central North cluster, including: Hung Vuong University, Hanoi Pedagogical University 2 and Tan Trao University.

## 2. Findings

### 2.1. Research on the current situation of physical education in the universities of the Central North cluster

**2.1.1.** The current situation of physical education in the universities of the Central North cluster

**2.1.1.1.** The current status of the intra-curricular physical education curriculum of the universities in the Central North cluster

**Table 1:** Intra-curricular physical education subject program of the universities in the Central North cluster

S/N	School	Content	Total	Semester				
				1	2	3	4	5
1	Hanoi Pedagogical University 2	Practice	90					
		Physical education 1		30				
		Physical education 2			30			
		Physical education 3				30		
	General fitness test for students according to the standards of the Ministry of Education and Training	Không						
	Total		90	Standard lessons:108				
1	Hung Vuong University	Practice						
		Physical education 1		30				
		Physical education 2			30			
		Physical education 3				30		
	General physical fitness test of students according to the standards of the Ministry of Education and Training	Không						
	Total		90	Standard lessons: 90				
S/N	School	Content	Total	Semester				
3	Tan Trao University	General theory	7					
		Practice		98				
		Mandatory: Swimming	1	29				
		Elective 1: Choose 1 of the following subjects: Football 1, table tennis 1, volleyball 1, basketball 1, badminton 1, martial arts 1, athletics 1, swimming	5		40			
		Elective 2: choose 1 of the following subjects: Football 2, Table Tennis 2, Volleyball, Basketball 2, Swimming 2, Badminton 2, Martial Arts 2, Athletics 2	1			29		
	General physical fitness test of students according to the standards of the Ministry of Education and Training	No						
	Total		105	Standard lessons: 105				

From Table 2.1, it can be seen that the PE curriculum at universities in the Central North cluster has not yet agreed with each other on the number of credits, the subjects taught as well as the allocation of hours in the semesters and the standard time for teachers. This greatly affects the quality of

physical education work in schools and disadvantaged learners as well as teachers.

**2.1.1.2.** The current situation of the teaching staff of physical education at the universities in the Central North cluster

**Table 2:** Current situation of physical education teaching staff at universities in the Central North cluster in the 2017-2020 period.

School	Total number of staff and teachers	Education				Age			Education staff/student ratio
		Bachelor	Master	PhD	Assoc. Prof.	<30	30-50	>50	
Hanoi Pedagogical University 2	23	02	16	04	01	04	20	02	23/6.076
Hung Vuong University	11	0	11	0	0	01	10	0	11/4.018
Tan Trao University	09	0	09	0	0	02	02	0	09/3.924

Table 2.2 above shows us that the teaching staff of the universities in the Central North cluster are relatively equal in terms of the number of lecturers to the percentage of students.

**2.1.1.3.** Current situation of facilities for physical education at universities in the Central North cluster

The research shows that the facilities of the schools are weak in both quantity and quality. With such a large number of students, the demand is too high, leading to rapid deterioration. Therefore, it is urgent to upgrade and build new items for the purpose of physical education.

**2.1.1.4.** Current situation of extracurricular sports activities of students at universities in the Central North cluster

Percentage of students participating in sports activities of Hanoi Pedagogical University 2: 34.2% Percentage of students participating in sports activities of Hung Vuong University: 44,5% Percentage of students participating in sports activities of Tan Trao University: 17,45%

**2.1.4.5.** The current situation of learning outcomes and general fitness of students in the universities of the Central North cluster.

### a. Learning outcomes

**Table 3:** Learning outcomes of students in physical education at universities in the Central North cluster.

School	2016-2017 school year			2017-2018 school year			2018-2019 school year		
	Very good + good (%)	Average (%)	Below average (%)	Very good + good (%)	Average (%)	Below average (%)	Very good + good (%)	Average (%)	Below average (%)
Hanoi Pedagogical University 2	27.6	58.6	13.8	29.2	60.4	12.4	22.7	70.2	7.1
Hung Vuong University	15.2	52.5	32.3	17.8	58.3	23.9	19.2	60.3	20.5
Tan Trao University	14.1	70.6	15.3	15.4	72.3	12.3	23.4	64.9	11.7

Table 2.3 shows that, the remaining schools with a high percentage of students achieving fairly good grades (A and B) are still at a low level, and below average (D and F) are still accounting for a high percentage, as a result, many students must retake PE subjects. This proves that the level of physical strength and sports practice skills of students is still low, which is alarming for physical education at universities in the Central North cluster.

### b. Student's physical condition

General physical condition of male and female students at the universities in the North Central cluster according to the standards of the Ministry of Education and Training (Male: 620; Female: 648)

**Table 4:** Physical assessment of male students at universities in the Central North cluster according to Decision 53/2008/QĐ-BGD&ĐT (N = 620)

Entity	Grade	Lie on your back with sit-ups for 30 seconds (times)	Thrust in place (cm)	30m running (s)	4x10m Coordinated running (s)	5-minute free running (m)	Average % of tests	
Decision of the Ministry of Education	Good	>22	>225	<4,70	<11,75	>1060	--	
	Pass	≥17	≥207	≤5,70	≤12,40	≥950		
Hanoi Pedagogical University 2 (N = 342)	Good	mi	33	56	30	20	8.65	
		%	9.65	16.37	8.77	5.85		2.63
	Pass	mi	157	208	221	149	134	50.82
		%	45.91	60.82	64.62	43.57	39.18	
	Fail	mi	152	78	91	173	199	40.53
		%	44.44	22.81	26.61	50.58	58.18	
Hung Vuong University (N = 184)	Good	mi	29	41	21	17	13.26	
		%	15.76	22.28	11.41	9.24		7.61
	Pass	mi	96	115	108	90	75	52.61
		%	52.17	62.50	58.70	48.91	40.76	
	Fail	mi	59	28	55	77	95	34.13
		%	32.07	15.22	29.89	41.85	51.63	
Tan Trao University (N = 94)	Good	mi	06	13	10	08	02	8.30
		%	6.38	13.83	10.64	8.51	2.13	
	Pass	mi	38	46	41	36	26	39.79
		%	40.43	48.94	43.62	38.30	27.66	
	Fail	mi	50	35	43	50	66	51.91
		%	53.19	37.23	45.74	53.19	70.21	
	Pass	mi	8.89	18.89	7.78	6.67	3.33	50.44
		%	42.22	64.44	60.00	43.33	42.22	
	Fail	mi	44	15	29	45	49	40.45
		%	48.89	16.67	32.22	50.00	54.45	

From Table 2.4, we can see that the general physical level according to the standards of the Ministry, the male students at the universities in the Central and North cluster are particularly low.

Hanoi Pedagogical University: The average number of students who achieved good grades on physical tests was 8.65%, those who passed were 50.82%, and those who failed were 40.53%.

Hung Vuong University: The average number of students who got good grades on physical tests was 13.26%, those who passed were 52.61%, and those who failed were 34.13%.

Tan Trao University: The average number of students who achieved good grades in physical tests was 8.30%, those who passed were 39.79%, and those who failed were 51.91%.

Through the above findings, in general, the general physical level of male students at the universities in the Central North cluster has not yet met the requirements, accounting for a high percentage. This proves that the effectiveness of the physical education work of the schools is not adequate.

**Table 5:** Physical fitness assessment of female students at universities in the Central North cluster according to Decision 53/2008/QD-BGD&DT (N = 648)

Entity	Grade	Lie on your back with sit-ups for 30 seconds (times)	Thrust in place (cm)	30m running (s)	4x10m Coordinated running (s)	5-minute free running (m)	Average % of tests	
Decision of the Ministry of Education	Good	>19	>169	<5, 70	<12, 00	>940	--	
	Pass	≥16	≥153	≤6, 70	≤13, 00	≥870		
Hanoi Pedagogical University 2 (N = 420)	Good	m <sub>i</sub>	18	47	39	18	6.43	
		%	4.28	11.19	9.29	4.29		3.10
	Pass	m <sub>i</sub>	143	245	203	177	105	41.57
		%	34.05	58.33	48.33	42.14	25.00	
	Fail	m <sub>i</sub>	259	128	178	225	302	52.00
		%	61.67	30.48	42.38	53.57	71.90	
Hung Vuong University 2(N = 76)	Good	m <sub>i</sub>	05	14	09	12	04	11.58
		%	6.58	18.42	11.84	15.79	5.26	
	Pass	m <sub>i</sub>	22	44	39	33	29	43.95
		%	28.95	57.90	51.32	43.42	38.16	
	Fail	m <sub>i</sub>	49	18	28	31	43	44.47
		%	64.47	23.68	36.84	40.79	56.58	
Tan Trao University (N = 152)	Good	m <sub>i</sub>	05	16	10	05	03	5.13
		%	3.29	10.52	6.58	3.29	1.97	
	Pass	m <sub>i</sub>	37	75	60	54	28	33.42
		%	24.34	49.35	39.47	35.53	18.42	
	Fail	m <sub>i</sub>	110	61	82	93	121	61.45
		%	72.37	40.13	53.95	61.18	79.61	
	Pass	m <sub>i</sub>	46	68	54	47	27	37.81
		%	35.94	53.12	42.19	36.72	21.09	
	Fail	m <sub>i</sub>	74	44	56	67	95	52.50
		%	57.81	34.38	43.75	52.35	74.22	

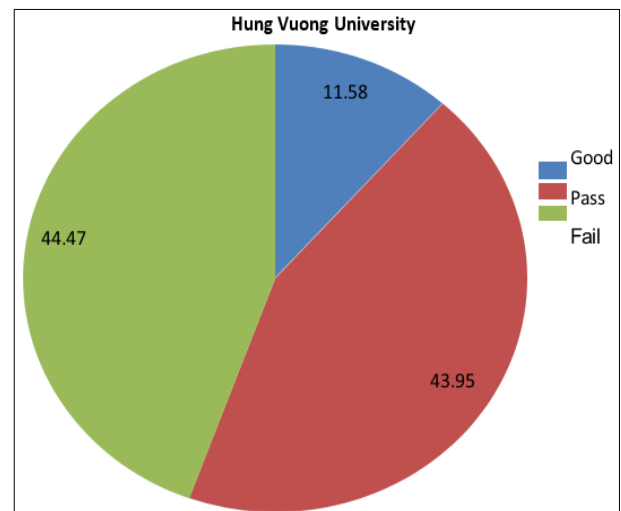
From Table 2.5, it can be seen that according to the general physical level according to the standards of the Ministry, female students at the universities in the Central North cluster is too low, the percentage of failing is still high:

Hanoi Pedagogical University 2: The average number of students who achieved good grades in physical tests was 6.43%, those who passed were 41.57%, and those who failed were 52.0%.

Hung Vuong University: The average number of students who achieved good grades on physical tests was 11.58%, those who passed were 43.95% and those who failed were 44.47%.

Tan Trao University: The average number of students who achieved good grades on physical tests those who passed were 5.13%, 33.42% pass, and those who failed were 61.45%.

Through the above results, in general, the general education level of failing female students at the universities in the Central North cluster accounts for a very high percentage. This proves that the effectiveness of the physical education work of the schools is not high. The general physical level of students at Hung Vuong University is shown in Figure 2.1 (illustration).)



**Chart 1:** Percentage of general physical level of students at Hung Vuong University

**2.1.4.6.** Causes limiting the quality of physical education of students at the universities of the Central North cluster

**Table 6:** Results of expert interviews about the causes that limit the quality of physical education of students in the universities of the Central North cluster (N = 40)

S/N	Cause	Response	
		m <sub>i</sub> , m <sub>i</sub>	%
1	The content of the curriculum is not appropriate	36	90
2	The quality and quantity of lecturers fail to meet the teaching requirements	6	15
3	There is a lack of facilities and training equipment quality is bad.	39	97,5
4	Extracurricular activities have not been developed extensively in the school	40	100
5	Teachers do not receive regular professional training	36	90
6	There is a lack of close attention from the school	30	75
7	Expenditure for sports activities	27	67,5

Through interviews with 40 experts and teachers currently teaching at universities in the Central North cluster, Table 2.6 shows that: The causes affecting the quality of PE training focus on the following 4 basic reasons: There are 100% that because extra-curricular activities have not been developed extensively among students in the whole school. 97.5% said that due to lack of facilities, training equipment quality is bad. 90% said that the content of the curriculum is not appropriate. 90% think that teachers do not receive regular professional training.

In short: From the interview to find out the actual causes, it is necessary to analyze and research specifically to step-by-step impact, invest and gradually improve the teaching activities as well as the general sports training movements of the school and change the content of the curriculum to be rich and appropriate in order to stimulate the interest of learners and promote their strengths. In addition, organize extracurricular sports activities to help students to stay away from pastimes such as playing video games, Facebook, alcohol [8].

### **Discussing the assessment of the situation**

Thus, to assess the current situation of physical education in the universities of the Central North cluster, we: Firstly, interview experts, managers and people working in sports and physical education at universities. the North Central cluster; assess by survey on the current situation of physical education in schools; interview the causes that limit the quality of physical education of students in the universities of the Central North cluster.

Through studying the current situation of the physical education work of universities in the Central North cluster, there are still many difficulties and shortages in terms of facilities, grounds, and learning tools in the program, failing to comply with the regulations of the Ministry of Education and Training. The content of the program is too simple, not diversified, and not towards the self-selected program. This reduces the student's interest and motivation so that the quality of lessons is low [12].

The number of students participating in extracurricular sports activities is small and at a spontaneous level without a systematic organization. Student sports tournaments organized by schools are few and unstable. In particular, all schools do not have multi-purpose gymnasiums, and every year, the organization of sports tournaments is very limited.

The current state of physical level of university students in the Central North cluster is shown in the following indicators: The general physical level of university students through 5 physical tests was assessed as reaching the strength of foot speed and quickness. The strength, endurance, dexterity, coordination, and general endurance, are weak [9].

The current situation of extracurricular sports practice of students in schools is limited, it is spontaneous and not organized properly. SPHN2 University has 34.20% of students participating in extracurricular sports at least 1 session/week; Hung Vuong University has 44.5% of students participating in extracurricular sports at least 1 session/week; Tan Trao University has 17.45% of students participating in extracurricular sports at least 1 session/week.

Thus, with the current internal curriculum and students not participating in extracurricular TT exercises, the general fitness level of university students in the Central North cluster is very poor. The rate of not meeting the standards set by the Ministry of Education and Training is high, especially for female students.

## **2.2. Proposing solutions to improve the quality of physical education in the universities of the Central North cluster**

### **2.2.1. Proposing a number of innovative training solutions in the direction of ability approach for students in physical education**

From the above research findings, and in reference to general and academic documents related to the research, the topic initially proposes training innovation solutions in the direction of competency approach for students of the Department of Physical Education [10], specifically:

#### **2.2.1.1. Solution 1: Solution on extracurricular programs Purpose**

Renovate the development of extracurricular physical education and sport programs in the direction of competency approach (such as CDIO, POHE). Help students participate in the learning process actively and effectively. Students will stick to the elements of the detailed outline, perform tasks according to competency-oriented goals.

#### **Content**

Review the training curricula, thereby making modifications according to the PE program in line with the school's goals and social needs. Meet the sports training needs of students and school staff. Universities in the Central North cluster should develop intra-curricular and extra-curricular programs to suit the physical conditions and aspirations of students.

#### **Method.**

Improve the content and form of organizing extracurricular sports in the direction of diversifying sports, giving priority to mass sports, and establishing sports clubs with instructors.

#### **2.2.1.2. Solution 2: Solution on teaching method innovation Purpose**

Innovate teaching methods to promote positivity, self-reliance and creativity, develop students' ability to act and collaborate.

#### **Content**

Review, adjust and supplement quality accreditation, focus on regular assessment and rational use of teachers in order to promote their qualifications, competence and strengths suitable to the job positions; Improve traditional teaching methods; Combine a variety of teaching methods.

#### **Method**

Issue documents to manage the testing and assessment process, organize the mastery, and raise awareness for relevant subjects; Foster the team with knowledge and teaching methods to develop necessary competencies and skills on testing and assessment according to the credit system, improving the ability to apply information technology; Complete management of the training organization process associated with the innovation of methods and forms of examination and assessment in accordance with training under the credit system.

#### **2.2.1.3. Solution 3: Solution on socialization of facilities and equipment Purpose**

Optimally exploit existing facilities, effectively use existing facilities, invest in facilities, equipment and tools to serve the teaching, learning and scientific research of the school.

**Content**

Review, repair and maintain sports facilities, available sports equipment and tools. In addition, strengthen the construction of sports facilities, purchase sports equipment and equipment to improve the quality of training and sports movements of the school.

**Method**

Make the most of and regularly clean, maintain and maintain existing tools and facilities. In addition, buy new equipment and sports equipment to ensure quantity and quality. Develop goals to strive for universities in the Central North cluster to ensure the area for students' sports activities according to Decision 2160/QD-TTg dated November 11, 2013 of the

Prime Minister (reaching 03m2/student by in 2020, 04m2/student in 2030).

**2.2.2. Determining the consensus level of the selected solutions**

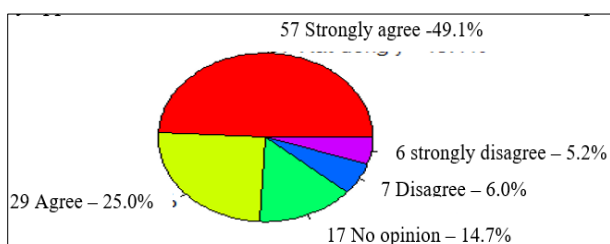
In order to find out the practical basis of the selected solutions, the topic has conducted interviews. The subjects are 29 leaders, managers, experts, lecturers. The content of the interview is to determine the priority of training innovation solutions in the direction of competency approach for students in the field of physical education.<sup>[8]</sup> The results of determining the reliability of the interview results to select solutions to improve the quality of physical education work for students at the universities in the Central North cluster are obtained as shown in the table below. 2.6

**Table 6:** Reliability of interview results to select solutions to improve the quality of PE for students at universities in the Central North cluster (N = 29)

Reliability Statistics				
Cronbach's Alpha			N of Items	
.837			3	
Item-Total Statistics				
Solution	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. Solution on extracurricular programs	12.0345	8.392	.734	.764
2. Solution on teaching method innovation	12.3448	8.020	.712	.773
3. Solution on socialization of facilities and equipment	12.3793	9.315	.574	.833

Calculation results of Cronbach's Alpha obtained in Table 2.6 show that: All interview solutions are accepted, with Cronbach's Alpha = 0.837 being a good scale; Cronbach's Alpha if Item Deleted of all solutions is from 0.764 to 0.833 < 0.837 and Corrected Item-Total Correlation is from 0.574 to 0.734, both greater than 0.4. That is, there is no need to remove any solution that can make Cronbach's Alpha of this scale greater than 0.837.

The results of the interview for selection of training innovation solutions in the direction of competency approach for students in the field of physical education are presented in the chart. 2.2.



**Chart 2:** Frequency of responses about solution selection

The results obtained in chart 2.2 show that: The highest frequency of responses is in the option "Strongly agree" with 57 comments, accounting for 49.1%; the "Agree" option is 29, accounting for 25.0%; The "No opinion" option is 17, accounting for 14.7%. Thus, the total answer options strongly agree and agree is 74.1%. In other words, the majority of opinions chose 3 groups of training innovation solutions in the direction of competency approach for students of the universities in the Central North cluster that the topic initially selected.

**3. Conclusion and recommendation**

**3.1 Conclusion**

From the above research findings, we may come to the following conclusions: The thesis has found 4 reasons that limit the quality of physical education (table 2.6). The thesis proposed 03 solutions to improve the quality for students of the universities in the Central North cluster, including: Solution 1: Solution on extracurricular program innovation; Solution 2: Solution on teaching method innovation; Solution 3: Solution on socialization of facilities and equipment. The solutions received high consensus of the interviewees.

**4. Recommendation**

It is necessary to apply the research findings to the practice of teaching PE at universities and colleges in the Central North cluster, including: Hanoi Pedagogical University 2, Hung Vuong University and Tan Trao University.

**5. References**

1. Nguyen Ba Chau. Research on the current situation of factors affecting the learning motivation of students at Hong Duc University. Education journal special issue June; c2018. p. 147-150.
2. Vu Minh Cuong. Physical education in universities receiving liberal education ideas, Education Journal. 2020;2:176-179.
3. Dang Ba Lam. - Educational programs aimed at developing learners' ability – Education Management Journal (Education Management Academy); c2015. Apr special issue.
4. Nguyen Thi Phuong Loan. Approaches to developing training programs in pedagogical schools (Department of Planning and Management - Corporate Affairs); c2015.
5. Le Phuoc Luong. Orientation and selection of training professions, promoting students' learning motivation through output standards at universities. Education Journal. 2012;279:13-15.

6. Phan Thi To Oanh. Learning motivation of students at Industrial University of Ho Chi Minh City. *Education Journal*, November special issue; c2016. p. 135-139.
7. Nguyen Van Tai, *et al.* Research on some socio-economic factors affecting the modernization and job orientation after graduation of students from Vietnam National University in Ho Chi Minh City, Ho Chi Minh City; c2003.
8. Vo Thi Tam. Factors affecting the learning results of regular students at University of Economics Ho Chi Minh City, Ho Chi Minh City; c2010.
9. Phan Huu Tin, Nguyen Thuy Quynh Loan. Factors affecting the learning attitude of students at Da Lat University. Master's Thesis in Education, University of Sports, Ho Chi Minh City; c2011.
10. Pham Quang Tiep. Some theoretical issues on creating learning motivation for learners. *Education Mag Journalazine*. 2012;292:20-21, 62.
11. Nguyen Van Toan. Current situation of physical education in Vietnam Agricultural Academy " *Journal of Science and Development*. 2014;12(8):1351-1360.
12. Alka Sehgal Cuthbert, Alex Standish. *What Should Schools Teach?*, London, UCL Press; c2021.
13. David Scott CM, Posner Chris Martin, Elsa Guzman. *The Education System in Mexico*, London, UCL Press; c2018.
14. Dilly Fung. *A Connected Curriculum for Higher Education*. London, UCL Press; c2017.
15. Dilly Fung. *Developing the Higher Education Curriculum*, London, UCL Press; c2017.
16. Derek Glover and Rosalind Levacic. *Educational Resource Management*, London, UCL Press; c2020.
17. Gerald Chan. *The Research University in Today's Society*, London, UCL Press; c2017.
18. Harden RM. Learning outcomes and instructional objectives: is there a difference?- *Medical Teacher*. 2002;24(2):151-155.
19. Texas Tech University *Writing and Assessing Course Level Student Learning Outcomes*, handbook.
20. Teresa McConlogue. *Assessment and feedback in higher education*, London, UCL Press; c2020.
21. Vincent CHTong, Alex Standen, Mina Sotiriou. *Shaping Higher Education with Students*, London, UCL Press; c2018.
22. William G Spady. *Outcome - based education: Critical issue and answer*, handbook - The American Association of School Administrators; c1994.