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SOLUTIONS TO IMPROVE STUDENTS' SATISFACTION IN PHYSICAL EDUCATION COURSES

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Abstract:
The purpose of this study was to find out the solutions to improve students' satisfaction in physical education courses at Saigon University. 1378 students participated in physical education courses (such as football, volleyball, table tennis, basketball, and badminton) in the academic year 2021-2022 has been conducted by using questionnaires to survey. Through the steps of the analysis of strengths, weaknesses, opportunities, threats in teaching process, expert consultation, combined with experimental process based on 7 factors, i.e. facilities, lecturers, training program, the implementation, support process, problem responsiveness and expected results. Results had selected and applied 08 solutions to improve the satisfaction level of students at Saigon University after participating in physical education courses. In short, the application of the solutions has contributed to improving the satisfaction level of students after participating in the physical education courses.

Keywords: students' satisfaction, solutions, physical education, Saigon University

1. Introduction

Improving the quality of training and meeting the increasing demands of social development is an important task that determines the existence, success, and competitiveness of current universities in the world (Stukalina, 2012), including Vietnam. One of the factors determining the existence and development of universities today is the satisfaction of potential customers (learners). According to Elliott & Shin (2002), paying attention to student satisfaction not only helps universities change to better meet the

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needs of students, but also helps educational institutions maintain and improve school performance. Stukalina (2010) still believes that understanding the potential factors affecting student satisfaction can provide the University with necessary and useful tools to improve service quality and improve service quality. Good will their position in the system of other universities.

According to Kotler & Fox (1995), the quality of education in schools can be assessed through student satisfaction in the learning process. Thus, assessing the level of satisfaction, as well as solutions to improve student satisfaction, is very necessary and useful in education in general and in physical education in general private. Currently, the work of physical education at universities in Vietnam still faces many difficulties and limitations such as the lack of teaching staff and uneven qualifications, the poor practice ground, and unsatisfactory quality. As a result of the students' demand for participation in the test, the training program is not learner-oriented, and the use of physical education methods to improve learners' activeness is still limited (Thai, 2017; Nam, 2015; Son et al., 2014). Therefore, the lessons were strictly and strictly implemented. However, the satisfaction of students in the physical education class is not high, the learning outcomes of students, especially female students, are still quite low. This was a difficulty that required the management as well as the teaching staff of the faculty to find solutions soon to improve the results of training and learning in physical education courses.

2. Methodology

2.1. Participants

1,440 students (including 720 students in the experimental group and 720 students in the control group), in which experimental group randomly selected 3 classes in each physical education courses (6 groups of sports: track & and field, football, basketball, table tennis, badminton, and volleyball) and applied 08 solutions above in the learning process. While the control group was also randomly selected as above but did not apply the solutions.

To ensure that the experimental process is similar, both the experimental and control groups must have the same training time (such as morning or afternoon). Thus, it stipulated that the track & field, volleyball, football, and table tennis would be selected in the morning, while the basketball and badminton courses will be selected. choose in the afternoon to limit the impact of hot weather during the study.

2.2. Design

It was an experimental study based on surveys that used the questionnaire system to collect the necessary variables. All variables were defined in classification and information which could be marked the chosen answers by self-assessment and 5-level rating as Likert scale (from “Very non-satisfaction” to “Very satisfaction”) to identify and detect students’ satisfaction level. This scale was newly built to suit the characteristics of Saigon University students, physical education work and other related issues. Therefore, the less point respondent had, the less satisfied students were. Table 1 showed the structure of the scale.

Table 1: Structure of the scale

Content	Factors	Encode	Rating scale
Students' satisfaction	Facilities	FA1-FA5	Likert scale with 5 levels from "very dissatisfied" to "very satisfied"
	Lecturers	L1-L6	
	Training program	TP1-TP5	
	The implementation	TH1-TH4	
	Support process	S1-S5	
	Problem responsiveness	P1-P5	
	Expected results	E1-E5	

2.3. Statistical analysis

Descriptive statistics (Descriptive Statistic) are used to statistics the characteristics of the research object group, as well as to evaluate the selection rate from the opinions of experts. The SWOT analysis method is to help find out the strengths, weaknesses, opportunities and threats to improve student satisfaction after participating in the PE modules at Saigon University. Independent Sample t-test was used to evaluate the difference in student satisfaction between the two experimental and control groups after applying the solutions.

Data are presented as percentage, percentage, mean±standard deviation (X±SD). The statistics were evaluated as statistically significant difference at the threshold $p<0.05$. To store, calculate and process the above-mentioned algorithms is the Microsoft Excel program version 2016 and the program SPSS (Statistical Package for the Social Science) version 20 for Windows.

3. Results and discussions

3.1. Characteristics of participant

In order to assess the general fitness level of students that affects the satisfaction level after experimenting with solutions at Saigon University, the study conducted an assessment on all 06 groups of sports classes (track & field, football, volleyball, basketball, table tennis, and badminton), each group of conditional subjects has 06 classes, with 03 classes selected for the solution experimental group and 03 classes selected for the control group. Thus, with a maximum of 40 students in a class, the total number of students participating in the assessment (both male and female) is 1440. However, due to a different and subjective reason (busy with housework, overlapping school hours, missing school a lot, etc.), the total number of students participating in the overall fitness level assessment was 1378 people. The characteristics of participant was shown in Table 2.

Table 2: Characteristics of participants

Contents	Male (n=371)	Female (n=1007)
Age (years)	19.19±0.83	19.09±0.77
Height (cm)	171.44±5.25	157.93±5.23
Weight (kg)	63.35±9.06	49.56±7.21

3.2. SWOT analysis to find solutions

The research has designed the matrix according to 4 strategies that can be applied to provide suitable solutions, which are: (1) S-O: strategy to maximize strengths from opportunities, (2) W-O: use opportunities to overcome weaknesses, (3) S-T: use strengths to minimize threats and (4) W-T: minimize weaknesses and threats. The results were indicated in Table 3.

- About the factor "Facilities"

Solution 1: Mobilize socialization resources to upgrade the yard as well as maintain training equipment (W3-O1).

Solution 2: Plan regular yard maintenance, maintain or replace appropriate training equipment to improve student satisfaction (S3-O3).

- About the factor "Lecturers"

Solution 3: Organize seminars, conferences to evaluate and improve the quality of training programs suitable to the characteristics of students to reduce negative psychology in students (W6-T2, S2-O2).

Solution 4: Strengthening the inspection and evaluation work together with highlighting the work responsibilities of each lecturer (S2).

Table 3: SWOT analysis results

Strengths (S)	S1: All students in training disciplines must participate in the PE courses. S2: Lecturers in the subject of physical education are all highly qualified, long-term and dedicated to the profession. S3: A place to practice right at the playground, convenient for students to combine with other specialized classes. S4: Received support and interest from the School Board of Directors and other relevant departments. S5: The content of the PE modules is scientific, logical, and highly feasible. S6: Organize a variety of elective sports for students to practice. S7: Able to actively change the approach, method and form of teaching organization to suit the specific characteristics of each subject.
Weaknesses (W)	W1: Student satisfaction in terms of responsiveness, service and organization is still limited. W2: The play ground has been degraded and needs regular maintenance. W3: Damaged or damaged learning aids need to be replaced frequently and kept away from the practice area. W4: Multiple courses are conducted on the same field at the same time of practice. W5: Registration is still difficult and does not meet the learning needs of students. W6: The subject program does not clearly show the contents and exercises suitable for the group of female students, which has a high percentage in the physical education modules. W7: Lack of support from academic advisors in faculties, related service staff. W8: The quality of training in each sport is not uniform, leading to inconsistent student satisfaction

Opportunities	O1: The policy of socialization, mobilizing external resources to upgrade facilities. O2: Raise the importance of PE modules to students. O3: Improve training quality and help develop physical qualities in students O4: Selection for clubs and school teams of passionate and excellent students to compete with other schools. O5: The training environment is clean, cool and safe.
Threats (T)	T1: The ability to serve and respond is lacking in specific and timely solutions during students' learning of the PE modules. T2: Psychological fear of participating in PE courses in female students. T3: The number of students participating in the study is on a downward trend in the training majors. T4: There is no specific policy on financial support for students.

Thus, after analyzing the SWOT model, based on 7 factors (in terms of facilities, lecturers, training program, the implementation, support process, problem responsiveness and expected results) research to select 17 solutions as follows:

- About the factor "The implementation"

Solution 5: Add content, organizational form, type of movement, and exercise equipment suitable for female students to help them participate more in the learning process of PE (W6-O3).

Solution 6: Coordinate with the assistants of the Faculty of Education in propagating the role and importance of the subject of PE (W7-O2).

Solution 7: Minimize the number of classes at the same time for safety (W4).

Solution 8: Reduce the number of students in a class from 25-30 students for better teaching organization (S1-O3).

- About the factor "Training program"

Solution 9: Enhance exercises associated with movement games to improve satisfaction and motivate students to participate in extracurricular clubs. (S7-O4).

Solution 10: Open a training program for students majoring in physical education or joint training with other fields such as management and psychology to increase the number of students (S4-T3).

- About the factor "Support process"

Solution 11: Academic advisors and service staff need to have a specific plan to support students quickly and clearly in each physical education module (W1).

Solution 12: Arrange and arrange a place to put exercise equipment near the training ground so that it does not take much time for students to prepare (W3).

- About the factor " Problem responsiveness "

Solution 13: Further enhance the role of the connection between lecturers and students to meet the different needs of physical development and health in each physical education module (S2-O3).

Solution 14: Digitize learning materials and reference books related to PE modules to help students conveniently use them during the learning process (S5).

- About the factor "Expected results"

Solution 15: Improve communication and education about the role, meaning and importance of PE modules in order to stimulate students' participation in extracurricular activities (O4).

Solution 16: Improve self-discipline and positivity in students to improve motor skills, practice behavior and practice in groups (S7-O2).

Solution 17: Flexible use of teaching methods and appropriate classroom organization to create a dynamic and fun training environment (S2-O5).

3.3. Expert interview results

The study consulted lecturers in the Faculty of National Education and Public Safety and Physical Education to focus on scientists, experts and lecturers who are doing the work. carry out physical education work at the school as well as at some other universities in Hochiminh City to evaluate, select or eliminate possible solutions, and offer other solutions if any. Solutions with a percentage of 85% or more rated by experts at "Agree" will be aggregated into solutions to improve student satisfaction.

Table 4: Results of expert interviews (n=40)

Solutions	**Evaluation**		
	Disagree	**Not sure**	**Agree**
Facilities			
+ Solutions 1	12 (30%)	18 (45%)	10 (25%)
+ Solutions 2	0 (0%)	2 (5%)	38 (95%)
Lecturers			
+ Solutions 3	0 (0%)	5 (12.5%)	35 (87.5%)
+ Solutions 4	4 (10%)	28 (70%)	8 (20%)
Training program			
+ Solutions 5	0 (0%)	0 (0%)	40 (100%)
+ Solutions 6	10 (25%)	22 (55%)	8 (20%)
+ Solutions 7	1 (2.5%)	4 (10%)	35 (87.5%)
+ Solutions 8	3 (7.5%)	14 (35%)	23 (57.5%)
The implementation			
+ Solutions 9	0 (0%)	2 (5%)	38 (95%)
+ Solutions 10	22 (55%)	12 (30%)	8 (20%)
Support process			
+ Solutions 11	11 (27.5%)	18 (45%)	11 (27.5%)
+ Solutions 12	0 (0%)	3 (7.5%)	37 (92.5%)
Problem responsiveness			
+ Solutions 13	6 (15%)	16 (40%)	18 (45%)
+ Solutions 14	1 (2.5%)	3 (7.5%)	36 (90%)
Expected results			
+ Solutions 15	12 (30%)	18 (45%)	10 (25%)
+ Solutions 16	13 (32.5%)	19 (47.5%)	8 (20%)
+ Solutions 17	0 (0%)	2 (5%)	38 (95%)

Note: 32(80): 32 times (80% percentage).

The data collected from the Table 4 shows that, there are 08 solutions (2, 3, 5, 7, 9, 12, 14, 17) that are above 85% of the assessment from experts, so the thesis has chosen. These 08 solutions can be applied to improve student satisfaction.

3.4. The reliability of the scale

The reliability of the observed variables was evaluated by the Cronbach Alpha coefficient, the results are described in Table 5. The results of the reliability test by the Cronbach Alpha index (CA) in the scale reached 0.893>0.6. According to Tho & Trang (2007), the reliability of the scale is assessed by the method of internal consistency through the CA coefficient. Using Cronbach's Alpha method of reliability coefficients to eliminate unsuitable variables because of the possibility of creating dummy factors. Besides, the variable-total correlation coefficient in all criteria is greater than 0.3. This proves the solutions selected in the thesis are appropriate.

Table 5: The reliability of the scale (n=40)

Content	Feasibility level	Total variable correlation	Cronbach's Alpha (n=8)
Solutions 1	4.15±0.74	0.791	0.893
Solutions 2	4.1±0.78	0.717	
Solutions 3	4.25±0.74	0.830	
Solutions 4	4.23±0.77	0.834	
Solutions 5	4.05±0.81	0.648	
Solutions 6	4.2±0.82	0.808	
Solutions 7	4.25±0.71	0.376	
Solutions 8	4.28±0.72	0.380	

Note: The solutions from 1-8 in the Table are the solutions selected by the experts from the questionnaires with the rate of over 85% (corresponding to solutions 2, 3, 5, 7, 9, 12, 14, 17, respectively).

Through the practical basis and assurance conditions, as well as meeting the requirements when developing solutions, it also conducted SWOT analysis, interviewing experts and the reliability, results have been developed 08 solutions to improve the satisfaction of students when participating in the PE courses at Saigon University.

Solution 1: Plan regular yard maintenance, maintain or replace appropriate training equipment to improve student satisfaction.

Solution 2: Organization seminars and seminars to evaluate and improve the quality of training programs suitable to the characteristics of students to reduce negative psychology in students.

Solution 3: Add content, organizational form, type of movement, and exercise equipment suitable for female students to help them participate more in the learning process. practice PE.

Solution 4: Minimize the number of classes at the same time to ensure safety.

Solution 5: Strengthening exercises associated with movement games to improve satisfaction, and at the same time create motivation for students to participate in extracurricular clubs.

Solution 6: Arrange and arrange a place to put exercise equipment near the training ground so that it does not take much time for students.
Solution 7: Digitize learning materials and reference books related to the subject to help students conveniently use during the learning process.
Solution 8: Flexible use of teaching methods, appropriate classroom organization forms to create a dynamic and fun training environment.

3.5. Assessing the satisfaction of students after experimenting with solutions

Table 6: Differences in satisfaction between the experimental and control groups after applying the solutions

Factors	Group	Levene	Sig.	x±SD	t	df	p
FA	Control	0.019	.891	3.78±0.75	-9.55	1376	.000
	Experimental			4.16±0.74			
L	Control	2.778	.096	4.12±0.66	-8.59	1376	.000
	Experimental			4.4±0.53			
TH	Control	119.5	.000	3.67±0.92	-22.88	1349	.000
	Experimental			4.74±0.8			
TP	Control	35.42	.000	4.22±0.82	-7.94	1352.6	.000
	Experimental			4.55±0.73			
S	Control	119.4	.000	3.78±0.72	-7.82	1279.3	.000
	Experimental			4.14±0.97			
P	Control	83.04	.000	3.58±0.63	-13.36	1289.3	.000
	Experimental			4.1±0.83			
E	Control	6.914	.009	4.17±0.71	-2.99	1360.6	.003
	Experimental			4.28±0.65			
Total	Control	34.32	.000	3.92±0.51	-16.43	1330.9	.000
	Experimental			4.33±0.42			

Note: Facilities - FA, Lecturers - L, Training program - TP, The implementation - TH, Support process -S, Problem responsiveness - P and Expected results - E.

The results from Table 6 show that, by the algorithm of testing the mean difference with the case of qualitative variables with two values (Independent Sample t-test), there is a statistically significant difference in the experimental group (4.33±0.42) compared with the control group (3.92±0.51, t=-16.43, p=0.00<0.05) on the satisfaction level of Saigon University students after participating in the PE courses.

Besides, results also showed that there was a statistically significant difference in all 7 factors (facilities, lecturers, training program, the implementation, support process, problem responsiveness and expected results) to assess the level of student satisfaction between the two research groups, in which students in the experimental group have a higher rating than students in the control group. It showed that the applied solutions had improved the satisfaction of students after participating in the PE courses at Saigon University.

4. Conclusion

Through the practical basis and assurance conditions, as well as meeting the requirements when developing solutions, the study also conducted SWOT analysis, interviewing experts, and assessing the quality of the solution, results have been developed and applied 08 solutions and the application of the solutions has contributed to improving the satisfaction level of students after participating in the physical education courses.

Authors' contributions

Nguyen Do Minh Son (Corresponding author) drafted, wrote down, and revised the manuscript while the other author Huynh Trong Khai took a control in revising and editing the manuscript after all. Both authors have approved the latest paper of this manuscript. We both agreed with the order of the presentation.

Competing interest statement

Both authors declare that they have no competing interests.

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References

Elliott, K. M., & Shin, D. (2002). Student satisfaction: an alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management*, 24(2), 197-209. doi: 10.1080/1360080022000013518.

Kotler, P., & Fox, K. F. A. (1995). *Strategic Marketing for Educational Institutions* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Nam, P. Q. (2015). *Factors affecting student satisfaction with facilities and equipment at Hochiminh City University of Sports*. Master thesis at Hochiminh City University of Sports.

Son, H. T., Anh, N. T. H., & Phuong, L. T. (2014). *Survey on the actual needs, motivations and difficulties of students when participating in extracurricular sports activities at Saigon University*. University study of Saigon University, code: CS2013-56.

Stukalina, Y. (2010). The management of the integrated educational environment resources: the factors to be considered. *European Journal of Education*, 4, 345–361. doi: 10.1111/j.1465-3435.2010.01433.x.

Stukalina, Y. (2012). Addressing service quality issues in higher education: the educational environment evaluation from the students' perspective. *Technological*

and Economic Development: Baltic Journal of Sustainability, 18(1), 84-98. doi: 10.3846/20294913.20 12.658099.

Thai, L. M. (2017). *Research on student satisfaction of Information Technology University through studying physical education at Hochiminh City University of Sports*. Master thesis at Hochiminh City University of Sports.

Tho, N. D. & Trang, N. T. M. (2007). *Maketting research*. Hochiminh City: Hochiminh National University Publishing House.