
Assessment of Physical Education Impacts on Hue University Students

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Abstract. The assessment result of physical education impacts on students is an important basis for improving the physical education curriculum as well as adjusting the contents related to physical education. Based on a set of standards to evaluate the impacts of physical education on students developed by the research team including 03 standards, 15 criteria and 42 indicators, the article conducts an evaluation of the physical education curriculum, school sports activities and physical fitness of Hue University students. Evaluation results show that the impacts of physical education initially meet the needs of learners at Hue University, however there are still some issues that need to be adjusted and improved to enhance the impact efficiency of physical education on Hue University students.

Keywords: assessment, impact, physical education, Hue University students

Introduction

The impact assessment of physical education on students will help identify what has been achieved, remaining problems, and limitations in the process of implementing physical education at Hue University. This is important work, serving as a basis for building (or modifying) output standards, improving the physical education curriculum or adjusting other components of physical education. Based on the formulated set of standards for assessing the impact of physical education on students, the research team conducted an assessment of the physical education curriculum, school sports activities, and physical fitness of Hue University students to get overall results about the impact of physical education on Hue University students.

Literature Review

The results of general research issues related to the topic show that, although the impact assessment of physical education on students is essential and has an important role, there are currently no research works on the impact of physical education on university students in Vietnam. Conducted studies only focused on evaluating one specific content such as: Assessing physical indicators of Hue University students (Nguyen Gang, 2022); Current physical fitness status of Hue University students (Le Quang Dung, 2018); current status, needs and effectiveness of extracurricular physical training and sports activities (Le Cat Nguyen, 2022; Dang Minh Thang, 2018; Phung Xuan Dung, 2017...); Current status and effectiveness of physical education (Dao Trung Tu, 2022; Vo Dinh Hop, 2021; Do Van Tung, 2015...).

Subject, Objective and Scope of Research

Subject of research: The impact of physical education on Hue University students.

Objective of research: Based on the formulated set of assessment criteria, the research team evaluated the impact of physical education on Hue University students to identify strengths and limitations during the implementation process of the physical education task at Hue University, thereby proposing solutions to improve the effectiveness of physical education impact on Hue University students.

Scope of research: The article limits the scope of research to students of the 2022 and 2023 intake who are studying the physical education program at Hue University in the 2023-2024 school year; Hue University alumni of the 2018 and 2019 admission courses and related parties.

Research Methodology

Methodology of document analysis and synthesis

Research materials for the article are collected from sources: Vietnam National Library, Hue University library, libraries of national sports universities, library of Central China Normal University - China; internet search engines such as: Google, Baidu, CNKI... From the collected documents, we read, analyze and synthesize content related to the issue of evaluating the impact of physical education on students.

Expert methodology

We invited 11 experts (including 01 professor, 03 associate professors, 07 PhDs) who are researchers, educational managers and lecturers in the field of physical education to evaluate the impact of physical education on students based on the set of standards and evidence collected by the research project, and looked for advice from experts on how to solve research questions.

Interview methodology

We conducted interviews with relevant parties including experts, administrators and lecturers who are teaching physical education programs; students; alumni and employers to solve two research issues including: Assessment of the physical education curriculum and evaluation of school sports activities at Hue University. Specifically, interviews were implemented with 30 experts, managers, and lecturers; 600 students; 100 alumni and 10 employers to collect relevant information.

Pedagogical testing method

This method is used to evaluate the impact of physical education on students' physical fitness (965 students). Evaluation results are determined according to the criteria specified in Decision No. 53/2008/QĐ-BGDĐT of the Ministry of Education and Training on the assessment and classification of students' physical fitness. The following tests were used:

- Abdominal flexion in supine position for 30 seconds (number of times).
- Standing long jump (cm).
- 5 minute free run (m)
- 4 x10m shuttle run (s).

Mathematical and statistical method

We use Excel 2013 and SPSS 22.0 software to process and analyze data collected during the process.

Research Findings and Discussion

1. Introduction to physical education curriculum, school sports activities and set of standards to assess impact of physical education on Hue University students

1.1. Introduction to physical education curriculum at Hue University

The physical education program at Hue University has 10 subjects (corresponding to 10 learning modules, including 01 compulsory module and 09 optional modules). Students are recognized to have completed the physical education program when completing 04/10 modules, including 01 compulsory module (Methods of physical training and physical fitness development) and 03 optional ones. Each physical education module includes 30 in-class periods and 60 self-study periods. The modules are arranged for students to study in 04 different semesters (each module has 30 periods, 02 periods per week).

1.2. Introduction to school sports activities

School sports activities at Hue University include organizing and participating in sports tournaments and organizing extracurricular sports training (in the form of free training or sports club).

Hue University student sports tournaments are organized according to the system from the grassroots level to the Hue University level. Every year Hue University organizes student sports tournaments including football and volleyball (annually). Other sport games such as badminton, table tennis, and chess are organized but not regularly. In the last 3 years, Hue University has organized selected student sports teams of football, volleyball, basketball, and martial arts to participate in provincial and national tournaments.

Meanwhile, the organization of extracurricular sports training is carried out at training institutions and the Department of Physical Education (the unit responsible for teaching physical education subjects for Hue University students). However, the training institutions encounter many difficulties when carrying out this activity due to limited facilities and equipment for training and no specialized staff in the field of sports. These difficulties have led to the situation that in addition to sports clubs organized at the Department of Physical Education (which is a common facility for the entire Hue University in terms of physical education and school sports activities), only 02 institutions have established student sports clubs that operate regularly, while students practice spontaneously in other units.

1.3. Introduction to set of standards to assess impact of physical education on Hue University students

1.3.1. Content of set of assessment standards

The set of standards for evaluating the impact of physical education on Hue University students includes the contents presented in Table 1.

Table 1: The set of assessment criteria of the impact of physical education on Hue University students

Standard (Average Score)	Criteria (Average Score)	Indicator (Average Score)
1. Assessment of physical education curriculum(4.56)	1.1. Objectives and output standards (4.49)	1.1.1. The objectives of the training are clearly defined, consistent with the mission and vision of the higher education institution and the objectives of higher education (4.23)
		1.1.2. The learning outcomes of the training are clearly defined, covering the general and specific requirements that learners need to achieve (4.92)
		1.1.3. The learning outcomes of the investment program reflects the requirements of relevant parties, is periodically reviewed, adjusted and publicly announced (4.41)
	1.2. Description of physical education curriculum (4.13)	1.2.1. Detailed outline of modules with full information and updates (4.44)
		1.2.2. Detailed outlines of the modules are publicly announced and easily accessible to relevant parties (4.06)
	1.3. Curriculum structure and content (4.04)	1.3.1. Teaching training is designed based on learning outcomes (4.55)
		1.3.2. The contribution of each module in achieving learning outcomes is clear.
		1.3.3. Teaching training has structure and logical sequence; up-to-date and integrated content (4.24)
	1.4. Approaches to teaching and learning (4.23)	1.4.1. Educational philosophy or educational objectives are clearly stated and communicated to relevant stakeholders (4.66)
		1.4.2. Teaching and learning activities are designed appropriately to achieve learning outcomes (4.45)
1.4.3. Teaching and learning activities promote skills training and enhance learners' lifelong learning abilities (4.44)		

	1.5. Learner's performance assessment (4.30)	1.5.1. The assessment of learners' learning outcomes is designed in accordance with the level of achievement of learning outcomes (4.34).
		1.5.2. Regulations on assessing learning outcomes (including time, methods, criteria, weights, feedback mechanisms and related content) are clear and publicly announced to learners (4.21)
		1.5.3. Diverse methods of assessing learning outcomes, ensuring validity, reliability and fairness (3.83)
		1.5.4. Assessment results are responded to promptly so learners can improve their learning (3.83)
		1.5.5. Learners have easy access to the complaints process about learning outcomes (3.80)
	1.6. Teaching staff and service team (4.78)	1.6.1. The planning of teaching staff and services is carried out to meet the needs of training, scientific research and community activities (3.84)
		1.6.2. The teacher/learner ratio and the workload of the teaching and service team are measured and monitored as a basis for improving the quality of training activities, scientific research and community activities (4.22)
		1.6.3. Criteria for recruitment and selection of teachers and service (including ethics and academic capacity) for appointment and transfer are determined and publicly disseminated (3.82)
		1.6.4. The capacity of the teaching and service team is determined and evaluated (4.52)
		1.6.5. The needs for training and professional development of teachers and staffs are identified and activities are created to meet those needs (4.22).
		1.6.6. Management based on teachers' work results and service (including rewards and recognition) is implemented to create motivation and support for training, scientific research and community activities (3.96).
		1.6.7. Types and quantities of research activities of teachers and services are established, monitored and compared to improve quality (4.22)
	1.7. Facilities and equipment (4.39)	1.7.1. There is a system of classrooms, practice rooms and functional rooms with appropriate equipment to support student activities (3.96)
		1.7.2. Library and appropriate, up-to-date learning resources to support student activities (4.15)
		1.7.3. Training grounds and equipment are appropriate and updated to support students' learning and practice activities (4.52)
		1.7.4. IT system (including online learning infrastructure) is appropriate and updated to support student activities (4.01)
		1.7.5. Environmental, health and safety standards are identified and implemented, taking into account the needs of people with disabilities (4.07)
	1.8. Output results (4.76)	1.8.1. Program completion rate and time are established, monitored and benchmarked to improve quality (4.49)
		1.8.2. Stakeholder satisfaction levels are established, monitored and benchmarked to improve quality (4.46)
		1.8.3. Student learning outcomes and grading (4.71)
2. Assessment of school	2.1. Objectives (4.18)	2.1.1. The objectives of the Hue University's Sports Council are clearly defined, consistent with the mission and vision of the higher education institution, and consistent with the objectives of higher education stipulated in the Law on Higher Education. (4.39)

sports activities (4.62)	2.2. Facilities and equipment (4.39)	2.2.1. Areas serving sports activities (4.72)
		2.2.2. Equipment for sports activities (4.66)
	2.3. Competition system at all levels (3.97)	2.3.1. Tournament system at ministerial and national levels (3.82)
		2.3.2. Tournament system at Hue University and Provincial levels (3.94)
		2.3.3. Tournament system at department, school and college levels (4.34)
	2.4. Activities of student clubs in Hue University (4.46)	2.4.1. Current status of sports clubs at Hue University (4.52)
		2.4.2. Achievements of club at Hue University (3.96)
		2.4.3. Students' need for club-oriented training (4.71)
		2.4.4. Orientation for club development at Hue University (4.15)
	3. Assessment of students' physical fitness (4.65)	3.1. Abdominal muscle strength (4.83)
3.2. Sudden strength (4.52)		3.2.2. Standing long jump (4.66)
3.3. Endurance (4.79)		3.3.1. 5 minute free run (4.44)
3.4. Cleverness and quickness (4.61)		3.4.1. 4x10m Shuttle Run Test (4.34)

1.3.2. Assessment procedure and methodology

Assessment procedure

The assessment process follows the steps below:

Step 1: Establishment of Assessment Council. According to general regulations, the Training Quality Assessment Council of a university must consist of 15 members. However, because the topic is an individual's independent research, in order to evaluate the subject program, the research project invited experts, managers, and lecturers with good expertise and understanding of the training program and have experience in evaluating and certifying the quality of training programs to conduct self-assessment, with 11 members including 01 professor, 03 associate professors and 07 PhDs working in the field of sports and physical education.

Step 2: Identification of assessment purpose. The purpose of evaluating the impact of physical education on Hue University students is to find out the existing advantages and disadvantages of the program to help improve the subject curriculum and serve as a basis for improving the training quality.

Step 3: Pre-assessment information and evidence collection. Those participating in the evaluation use evaluation methods to collect information and find evidence for assessment criteria.

Step 4: Implementation of assessment. Those participating in the assessment rely on specific criteria, indicators and evidence to conduct the assessment.

Assessment method

The assessment scale for each criterion includes the 7 levels below:

1 = Completely unsatisfactory, need to improve immediately: There is no evidence.
 2 = Unsatisfactory, need to improve: There is some evidence but still too sketchy.
 3 = Not yet satisfactory, need minor improvements to achieve: There is evidence but not complete.

4 = Satisfactory with requirements: There is sufficient and clear evidence.

5 = More satisfactory than requirements: Fully demonstrated and clearly explained.

6 = Exemplary: Full evidence, clear and specific demonstration.

7 = Excellence (international level): Abundant and sharp evidence.

2. Impact assessment of physical education on Hue University students

2.1. Impact assessment results of physical education on Hue University students

Impact assessment results of physical education on Hue University students are presented in Table 2.

Table 2: Impact assessment results of physical education on Hue University students of experts and professionals (n=11)

Standard	Criteria	Assessment contents	1	2	3	4	5	6	7	\bar{X}
Standard 1: Assessment of physical education curriculum	1.1	Objectives and output standards	0	1	2	5	3	0	0	3.91
	1.2	Description of physical education curriculum	0	2	2	5	2	0	0	3.64
	1.3	Curriculum structure and content	0	0	2	5	3	1	0	4.27
	1.4	Approach to teaching and learning	0	0	2	5	4	0	0	4.18
	1.5	Learner's performance assessment	0	0	1	6	3	1	0	4.36
	1.6	Teaching staff and service team	0	0	0	7	2	2	0	4.55
	1.7	Facilities and equipment	0	2	1	5	3	0	0	3.82
	1.8	Output result	0	0	1	6	2	2	0	4.45
	General opinion									4.15
Standard 2: Assessment of school sports activities	2.1	Objectives	0	0	0	7	2	2	0	4.55
	2.2	Facilities and equipment	0	2	2	5	2	0	0	3.64
	2.3	Competition system at all levels	0	0	1	6	3	1	0	4.36
	2.4	Activities of student clubs in Hue University	0	1	5	4	1	0	0	3.45
		General opinion								
Standard 3: Assessment of students' physical fitness	3.1	Abdominal muscle strength	0	1	2	5	3	0	0	3.91
	3.2	Sudden strength	0	2	1	5	3	0	0	3.82
	3.3	Endurance	0	3	3	5	0	0	0	3.18
	3.4	Cleverness and quickness	0	2	2	5	2	0	0	3.64
		General opinion								
	General opinion for 3 standards									3.98

2.2. Discussion on impact assessment result of physical education on Hue University students

2.2.1. Discussion on Standard 1 "Assessment of physical education curriculum"

Standard 1 "Assessment of physical education curriculum" has 8 criteria, of which 5 criteria are evaluated by experts and experts as satisfactory (from 4.18 to 4.55), including: criterion 1.3 "Curriculum structure and content", criterion 1.4 "Approach to teaching and learning", criterion 1.5 "Learner's performance assessment", criterion 1.6 "Teaching staff and service team" and criterion 1.8 "Output result". There are 3 criteria rated by experts and specialists as not yet unsatisfactory from 3.64 to 3.91: criterion 1.1 "Objectives and output standards", criterion 1.2 "Description of physical education curriculum" and criterion 1.7 "Facilities and equipment". The overall assessment results of standard 1 are rated by experts and specialists at 4.15.

Based on the evaluation standards, evidence, current situation, and assessments of experts and professionals (Table 2) on the impact of physical education on Hue University students, we have comments on the strengths and limitations of standard 1 as follows:

Strengths:

- The curriculum's objectives are clearly defined, consistent with the mission and vision of the higher education institution, and consistent with the goals of higher education stipulated in the Law on Higher Education.
- Full and informative descriptions and outlines of learning modules.
- The curriculum description and outlines of modules are publicly available and easily accessible to relevant parties.
- The teaching program is designed based on an output-based basis.
- Educational philosophy or educational goals are clearly stated and disseminated to stakeholders.
- Teaching and learning activities are designed appropriately to achieve output standards.
- Teaching and learning activities promote skills training and enhance learners' lifelong learning abilities.
- The assessment of learners' performance is designed in accordance with the level of output achievement.
- The regulations on assessing learners' performance are clear and publicly announced to learners.
- Methods of assessing learning output are diverse, ensuring validity, reliability and fairness.
- Assessment results are promptly responded for learners to improve their learning.
- The planning of teaching staff and services is carried out to meet the needs of training and scientific research.
- The criteria for recruitment and selection of teaching and service staff (including ethics and academic capacity) for appointment and transfer are determined and publicly disseminated.
- The capacity of teaching and service staff is determined and evaluated.
- There is a system of offices, classrooms, practice rooms and functional rooms with appropriate equipment to support learning, practice and research activities.
- The program completion rate and time are established, monitored and benchmarked to improve quality.
- The level of satisfaction of stakeholders is established, monitored and compared to improve quality.

Limitations:

- Output standards have not been specified, leading to program development based on unclear and nonspecific output standards.
- Learning outputs have no evidence of logical connection with output standards of learning modules.
- The output standards and outlines of optional subjects do not include content on physical fitness development for learners.
- The curriculum and outlines description have not been updated regularly, leading to the fact that the program is not clearly understood to meet the needs of learners.
- The ratio of teachers to learners is still too high.
- Facilities and equipment are still limited: training software, covered practice ground, scientific research room for the sports industry, online teaching room...

2.2.2. Discussion on Standard 2 "Assessment of school sports activities"

The Standard 2 "**Assessment of students' physical fitness**" has 4 criteria, of which 2 criteria are rated satisfactory by experts and professionals from 4.36 to 4.55, including criterion 2.1 "Objectives" and criterion 2.3 "Competition system at all levels; there are 2 criteria rated by experts and experts as not yet satisfactory from 3.45 to 3.64, including criterion 2.2 "Facilities and equipment", criterion 2.4 "Activities of student clubs in Hue University". The Standard 2 is assessed by experts and professionals at 4.00.

Based on the evaluation standards, evidence, current situation, and assessments of experts and professionals (Table 2) on the impact of physical education on Hue University students, the researcher has comments on the strengths and limitations of Standard 2 as follows:

Strengths:

- Hue University has properly implemented the goals identified by the Government and the contents required by the Ministry regarding school sports activities.
- Facilities, ground area and equipment initially meet the training needs of students.
- The organization of competitions at all levels by member units and Hue University meets the needs of relevant parties.
- The extracurricular training movements of students at the University of Medicine and Pharmacy, University of Agriculture and Forestry, University of Education have been significantly developed.

Limitations:

- There is a shortage of training grounds and equipment at times when the weather is hot or rainy.
- Extracurricular sports training movements and club activities are limited due to many influencing factors such as the need to work part-time, many other entertainment games, and the need to learn academic subjects of students...
- Hue University does not have appropriate orientation and mechanism to encourage physical education lecturers and students to actively participate in sports clubs and develop extracurricular training movements as well as develop physical training in the form of clubs.

2.2.3. Discussion on Standard 3 "Assessment of students' physical fitness"

The Standard 3 "**Assessment of students' physical fitness**" has 4 criteria, of which 4 criteria are rated by experts and professionals as not yet satisfactory from 3.18 to 3.91 (assessed according to Decision No. 53/2008/QĐ - BGDĐT on evaluating and classifying students' physical strength. As for criterion 3.1 "Abdominal muscle strength", the rate of students meeting the Ministry's physical fitness standards is 70.46%, assessed by experts and professionals as unsatisfactory with the score at 3.91. Regarding the criterion 3.2 "Sudden strength", the percentage of students meeting the Ministry's physical fitness standards is 66.01%, which is evaluated as not yet satisfactory with a score of 3.82; as for the criterion 3.3 "Endurance", the rate of students meeting the Ministry's physical fitness standards is 50.05%, which is assessed by professionals as not yet satisfactory with a score of 3.18. Regarding the criterion 3.4 "cleverness and quickness", the rate of students meeting the Ministry's physical fitness standards is 60%, which experts and professionals rated as not yet satisfactory with the score of 3.64. The Standard 3 is assessed by experts and professionals as not yet satisfactory with the score of 3.64.

Based on the evaluation standards, evidence, current situation, and assessments of experts and professionals (Table 2) on the impact of physical education on Hue University students, the researcher has comments on the strengths and limitations of Standard 3 as follows:

Strengths:

- The physical fitness assessment for students is integrated into a mandatory module in the physical education curriculum at Hue University.

Limitations:

- In comparison to the regulations of the Ministry of Education and Training on physical fitness standards of students, the rate of meeting the physical fitness criteria of Hue University students is still low, from 50.05% (run at own pace for 5 minutes) to 70.46% (lie down on back and do crunches).
- Hue University does not annually evaluate the physical fitness of students according to Decision No. 53/2008/QĐ-BGDĐT on assessing and classifying physical fitness of students.

- Hue University does not have effective solutions for developing physical fitness for students.

The 3 Standards of the impact of physical education on Hue University students are assessed as not yet satisfactory (3.98) by 11 experts and professionals (3.98).

Conclusion

The impact assessment results of physical education on Hue University students through 3 standards show that the physical education program, school sports activities and physical fitness of students at Hue University are close to the satisfactory level (average score of 3.98 for 3 standards). This shows that the impact of physical education on Hue University students initially meets the exercise needs of the majority of learners. However, some issues need to be adjusted and improved:

- Learning output standards need to be adjusted to be more specific, integrated, easily transferable to modules with an emphasis on developing learners' physical fitness.

- Course outlines need to be updated regularly to meet the learning needs of students.

- Facilities and grounds need to be supplemented to create favorable conditions for both intracurricular and extracurricular training for students in all weathers.

- Hue University needs to have appropriate orientations and mechanisms to encourage physical education lecturers and students to actively participate in sports clubs and develop extracurricular sports training movements.

The above issues are a practical basis for Hue University to promptly adjust and improve its physical education curriculum and school sports activities, thereby improving the effectiveness of physical education for Hue University students.

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