

# PHYSICAL DEVELOPMENT OF FIRST-YEAR STUDENTS WATER RESOURCES UNIVERSITY AFTER 1 YEAR OF STUDY

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## Abstract:

Using regular scientific research methods to assess the physical development of freshmen at the Water Resources University after 1 year of study. Results showed that the level of physical growth that the students achieved ranged from 5.11 to 6.84%. The achieved growth rates were unequal between men and women, the physical growth of students in the second semester tended to be lower than in the first semester.

**Keywords:** Physical development, physical, freshmen, Water Resource University.

## INTRODUCTION

Physical education at schools is an important measure to teach students the ability to self-exercise in long-term, form a habit of exercising sports in their daily life, and trigger their passion and understanding of sports, helps them consider sports as a means to discover and develop their personalities, to improve their physical and mental state, making their cultural and spiritual life much better. However, in the current conditions, as physical education at schools is maintained with only 2 hours of formal classes per week, the physical development of students faces many difficulties.

To have a basis to assess accurately the impact of the physical education program on the physical development of students, we conducted the research: "Physical development of first-year students Water Resources University after 1 year of study".

## RESEARCH METHODS

In the research process, these following methods were used: Methods of analyzing and synthesizing documents; Pedagogical test method and statistical mathematical method.

Research objects: 374 freshmen, Water Resources University, including 232 male and 142 female students.

## RESULTS AND DISCUSSION

Using 06 tests under Decision No. 53/2008 / QĐ-BGDĐT, September 18, 2008, of the Ministry of Education and Training on Promulgation of regulations on assessing and classifying students' physical strength. Specifically include: Dominant hand's squeezing force (kG), Sit-up (times/30s), Long jump from the spot (cm), 30m run with high start (s), Shuttle run 4x10m (s), 5 minutes free run (m) to evaluate the physical state of the Water Resources University' freshmen at 2 different times: September 2017 (when students start their first year of study), January 2018 (the end of 1st semester) and June 2018 (end of the first year of study), as well as to calculate the students' physical growth rate after 1 academic year. The results are presented in Table 1.

Through table 1:

After one semester, first-year students' physical examination results showed relatively even growth in all tests on both male and female students. The achieved growth rate was from 2.92 to 4.07% and the highest growth was in the men's strength outburst, the lowest was achieved in the evaluation of abdominal and back strength in men. Growth rates of test results in women were relatively even, ranging from 3.23% to

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**Swimming is a high-effective sport in students' physical development  
(photo: Swimming class at Bac Ninh Sports University, photo by: upes1)**

**Table 1. Physical development of freshmen at the Water Resources University  
after 1 academic year (n = 374)**

№	Test/ Subject	Beginning of the academic year (1)		End of 1 <sup>st</sup> semester (2)		End of 2 <sup>nd</sup> semester (3)		W <sub>1-2</sub> (%)	W <sub>2-3</sub> (%)	W <sub>1-3</sub> (%)
		$\bar{x}$	$\pm\delta$	$\bar{x}$	$\pm\delta$	$\bar{x}$	$\pm\delta$			
Male		(m <sub>i</sub> = 232)		(m <sub>i</sub> = 232)		(m <sub>i</sub> = 232)				
1	Dominant hand's squeezing force(kG)	43.23	2.83	44.69	3.31	45.89	4.34	3.32	2.65	5.97
2	Sit-up (times/30s)	19.25	1.77	19.82	2.07	20.43	2.08	2.92	3.03	5.95
3	Long jump from the spot (cm)	214	15.9	222.9	20.6	226.9	20.3	4.07	1.78	5.85
4	30m run with high start (s)	5.53	0.63	5.34	0.58	5.21	0.52	3.5	2.46	5.96
5	Shuttle run 4x10m (s)	12.21	1.26	11.78	1.31	11.52	1.37	3.58	2.24	5.82
6	5 minutes free run (m)	972	88.9	1008	98.12	1025.8	98.16	3.64	1.75	5.39
Female		(m <sub>i</sub> = 142)		(m <sub>i</sub> = 142)		(m <sub>i</sub> = 142)		W <sub>1-2</sub> (%)	W <sub>2-3</sub> (%)	W <sub>1-3</sub> (%)
1	Dominant hand's squeezing force (kG)	26.4	2.27			28.1	2.86	3.35	2.89	6.24
2	Sit-up (times/30s)	17.1	2.03	17.7	1.75	18.25	1.72	3.45	3.06	6.51
3	Long jump from the spot (cm)	152.3	20.5	157.3	15.92	162.3	15.95	3.23	3.13	6.36
4	30m run with high start (s)	6.54	0.53	6.32	0.66	6.13	0.68	3.42	3.05	6.47
5	Shuttle run 4x10m (s)	12.85	1.33	12.45	1.23	12.21	1.24	3.16	1.95	5.11
6	5 minutes free run (m)	871	98.07	903	88.5	932.7	88.3	3.61	3.23	6.84



**A golf lesson at Bac Ninh Sports University (Photo by: upes1)**

3.61% in all tests. Comparing with the average growth rate of first-year students in related research shows that the achieved rate of physical growth is relatively low.

The physical growth rate of students in the second semester of the first year: all the results of physical fitness tests for students increased compared to the end of the first semester of study, however, the physical growth rate seemed to be lower than in the first semester. The physical growth rate of students in the second semester reaches from 1.78% to 3.23%, the highest growth rate is achieved in the stamina criterion in women, and the lowest level is achieved in the stamina criterion in men.

When comparing students' physical growth rate after 1 school year, the level of physical growth of students ranged from 5.11 to 6.84%, the highest growth rate belonged to the criterion of evaluating women's stamina while the lowest was the evaluation of the ability to coordinate movement in women.

Thus, it can be seen that the physical growth rate of first-year students is uneven between men and women, and between semesters.

### **CONCLUSION**

Physical development of first-year students Water Resources University after 1 year of

study. Results showed that the level of the students' achieved physical growth rate ranged from 5.11 to 6.84%. They were uneven between male and female students, and the physical growth rates in the second semester were lower than in the first.

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