

## Assessing the current state of flexibility of the males Vovinam team of pupils at FPT School Can Tho.

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**Abstract:** Based on the synthesis and analysis of opinions and knowledge from experts, tests for assessing flexibility were selected for the male Vovinam team of students at FPT School Can Tho. The research identified 09 tests used to evaluate the flexibility of male Vovinam athletes. The initial test results showed that the current state of flexibility among the male athletes is similar, with no dispersion.

**Keywords:** Assessment, current state, flexibility, male Vovinam athletes,...

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### I. INTRODUCTION:

To achieve high performance in competitions: Sports training in general and Vovinam training in particular is a complex and diverse process. Training in Vovinam is not merely about teaching athletes how to punch and kick, but also requires training in physical fitness, tactics, ethics, psychology, and willpower. Flexibility is considered the ability to change direction quickly and accurately. In combat sports, including Vovinam, the movements of martial artists are very diverse and rich, requiring the ability to handle sudden situations in a short amount of time. Developing flexibility (FL) for athletes is essential, especially reflected in specialized technical movements to achieve the highest effectiveness. That is the reason for choosing to study: "Assessing the current state of flexibility of the male Vovinam team of pupils at FPT School Can Tho".

**Research Methods:** During the research process, various methods were used, including document synthesis and analysis, interviews, pedagogical testing, and statistical methods.

### II. RESEARCH RESULTS:

#### 2.1 Determining tests to assess the flexibility of the male Vovinam team of students at FPT School Can Tho.

To determine the selection of tests to assess the current state of flexibility of the male Vovinam team of students at FPT School Can Tho, the research was conducted in the following steps:

- Step 1: Compile interviews and select tests to assess flexibility.
- Step 2: Check the reliability of the tests.

##### 2.1.1 Compilation of tests to assess flexibility.

Through the compilation of several research sources on flexibility both domestically and internationally, and by consulting experts, the study has selected 09 tests used in assessing flexibility, specifically presented in Table 1.

**Table 1. Interview results for selecting tests to assess flexibility skills**

Order Number	Test Content	Votes			Percentage %
		Release	Returned	Agree	
1	T-Run (s).	20	20	20	100%
2	20m Sprint (s).	20	20	20	100%
3	30m XPC (s).	20	20	11	55%
4	Zigzag Run (s).	20	20	20	100%
5	10m Shuttle Run (s)	20	20	14	70%
6	Shuttle Run 4x10m (s)	20	20	20	100%
7	505 Agility Test (s)	20	20	14	70%
8	Lateral Jump Test (s).	20	20	11	55%
9	Run through 3 cones (s).	20	20	14	70%
10	Illinois Agility Test (s).	20	20	20	100%
11	Box Run (s).	20	20	14	70%
12	Hexagon Jump Test (s).	20	20	20	100%

13	AFL Agility Test (s).	20	20	11	55%
14	<b>Cross Jump Test 30s (reps).</b>	20	20	20	<b>100%</b>
15	Buffer Jump 30s (reps)	20	20	11	55%
16	Zigzag Run 10 targets (s)	20	20	11	55%
17	In-and-out movement with ladder 5m	20	20	14	70%
18	Forward 2 steps, backward 1 step with ladder 5m	20	20	14	70%
19	Continuous double-handed punches on lampo 15s	20	20	11	55%
20	<b>Straight punches + roundhouse kick 1 minute</b>	20	20	20	<b>100%</b>
21	Rove punch + straight kick 1 minute	20	20	14	70%
22	<b>Roundhouse kicks 2 targets 2.5m apart</b>	20	20	20	<b>100%</b>
23	Free attack 5 star-shaped targets	20	20	11	55%
24	Free attack 10 circular targets	20	20	11	55%

Thus, through interviews according to the established principles, the selected topic has 09 tests with high consensus in both interviews, with a consensus rate of over 75% as follows:

**\*General flexibility test:**

1. T - Run (s).
2. 20m Sprint (s).
3. Zigzag Run (s).
4. Shuttle run 4x10m (s).
5. Illinois Agility test (s).
6. Hexagonal jump test (s).
7. Cross jump test 30s (s).

**\*Specialized flexibility test:**

8. Straight punches + roundhouse kick 1 minute (reps).
9. Roundhouse kicks 2 targets 2.5m apart 30s (reps).

**2.1.2 Assessing the Reliability of Selected Tests**

**Assessing the reliability of tests:**

A test is used to evaluate the research subject only when it ensures sufficient reliability. Therefore, the tests conducted through interviews above must first undergo reliability testing. Reliability is checked through a retest conducted twice within 7 days. The results of the reliability assessment for the flexibility test and the functional test are presented in Table 2.

**Table 2. Results of Reliability Testing for the Tests**

TEST CHECKUP	TEST NAME	r	P
FLEXIBILITY ABILITY GENERAL AND SPECIALIZED	T-run (s).	0.84	< 0.05
	20m Sprint (s).	0.96	< 0.05
	Zigzag run (s).	0.81	< 0.05
	Shuttle run 4 x 10m (s)	0.88	< 0.05
	Illinois Agility Test (s).	0.86	< 0.05
	Hexagonal jump test (s).	0.96	< 0.05
	Cross jump test 30s (reps).	0.97	< 0.05
	Straight punches + roundhouse kicks 1 minute (reps)	0.97	< 0.05
	Roundhouse kicks 2 targets 2.5m apart 30s (reps)	0.95	< 0.05

Table 2 shows that all 09/09 tests have  $r \geq 0.8$  and  $P < 0.05$ , indicating that the selected tests demonstrate a high level of reliability between the two assessments. This suggests that the tests above exhibit a strong correlation, with full stability and reliability.

**2.2 Assessment of the Flexibility Capability of the Male Vovinam Team at FPT School Can Tho.**

The study utilizes 09 tests to evaluate the flexibility of the male Vovinam athletes at FPT School Can Tho, as presented in Table 3.

**Table 3. Current Status of Flexibility Skills of the Male Vovinam Team at FPT School Can Tho**

TT	Test	Initial phase			
		$\bar{X}$	$\sigma_x$	Cv%	$\epsilon$
1	Shuttle run 4 x 10m (s)	13.21	0.79	6.22	0.05
2	Zigzag run (s)	6.54	0.02	8.48	0.03
3	T-run (s).	11.84	0.55	8.87	0.04
4	20m sprint (s)	3.68	0.15	6.09	0.03
5	Illinois Agility Test (s)	16.89	0.03	7.66	0.02
6	Hexagonal jump test right (s)	14.70	0.62	7.1	0.05
	Hexagonal jump test left (s)	14.74	0.63	1.38	0.05
7	Cross jump test 30s (reps).	22	3.21	5.23	0.04
8	Straight punches + roundhouse kicks 1 minute (reps)	50	5.72	5.72	0.03
9	Roundhouse kicks 2 targets 2.5m apart 30s (reps)	56	6.12	8.63	0.03

The results from Table 3 indicate that the performance of the 14 male athletes in the flexibility tests is consistent and shows no significant variance.

### III. CONCLUSION

Through the research, 09 tests have been identified, including 07 tests assessing general and specialized flexibility, and 02 specialized tests used to evaluate the flexibility of the male Vovinam teams from FPT School High School in Can Tho, which have sufficient reliability with  $r \geq 0.8$  (ranging from 0.81 to 0.97). The current state of flexibility among female Vovinam athletes has been assessed as relatively uniform, with no significant variance; thus, it is adequate for the research to allow for comparisons of mean values or to establish classifications and evaluations of the 09 tests mentioned above.

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