CONSTRUCTION CRITERIA FOR ASSESSMENT OF RAIRAM WAI KRU MUAY THAI SKILLS FOR STUDENTS: A CASE STUDY OF THAILAND NATIONAL SPORTS UNIVERSITY, NORTHERN CAMPUS

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Abstract

The purpose of this thesis was to construct the criteria for assessing the skills of Rairam Wai Kru Muay Thai for students at the Thailand National Sports University, Northern Campus. The target group was selected by purposive sampling using thirty voluntary students enrolled in the course Muay Thai Skills and Teaching (PE 032437). The instrument used was a fifteen - skill assessment of the Phrom sitting and standing styles according to the criteria that were constructed by the researcher. Data were analyzed by the package program. The statistics used were mean, standard deviation, reliability, correlation coefficient, and Pearson's correlation coefficient. The results were found that the criteria for assessing the skills of Rairam Wai Kru Muay Thai in terms of sitting style were adequate (IOC = 1.00, r = 0.93, and objectivity = 0.99). In addition, the IOC of standing styles was 1.00, the reliability was 0.94, and the objectivity was 0.97 in which were adequate.

In conclusion, the criteria for assessing the skills of Rairam Wai Kru Muay Thai for students at the National Sports University in the northern campus, which was constructed by the researcher, had a quality in terms of IOC, reliability, and objectivity. The current study suggests that the assessment may probably be applied using for another campus in Thailand National Sports University.

Keywords: Muay Thai, Rairam Wai Kru, Physical Education, Thailand National Sports University

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Introduction

Muay Thai is the national sport of Thailand, it is a martial art that is deeply rooted in Thai culture and tradition. It uses different parts of the body such as fists, feet, knees, and elbows for fighting and competition. This is useful to help one develop physical, mental, emotional, social, and intellectual factors (Phosawat Saengsawang, 2015). Muay Thai was born with the Thai people (Charuay Kaenwongkham, 2003). Muay Thai is a national sport of Thailand, there must be a dance to show respect to teachers knowledgeable in Muay Thai. This dance is performed with a delicate and beautiful style, as used before each match. The Rairam Wai Kru Muay Thai in each school, lineage, and region has a different identity (Office of the National Cultural Commission, 1997). The Thailand National Sports University has given importance and value to Muay Thai, therefore, the content of learning about Thai sports has been included in the educational course, as both Muay Thai Skills and Instructor (PE 032437). The study is found that there are five disciplines of Muay Thai, namely Muay Korat, Muay Lop Buri, Muay Chaiya, Muay Tha Sao, and Muay Palasueksa which have different styles and identities (Muay Thai Palasueksa, 2017). Teachers need to know the student's learning achievement and efficiency, teaching and learning management of teachers, as well as advantages and disadvantages in learning management and learner development, and how to measure and evaluate learners. These are the continuous processes of teaching and learning that are consistent with the learning objectives (Worasak Phianchop, 2018). Currently, a standard of examining for specific Muay Thai students in the Northern campus.

For the above reasons, the researcher has constructed the rubric assessment form of Rairam Wai Kru Muay Thai Skills for students of Thailand National Sports University, Northern Campus, to begin establishing a foundation for measuring Muay Thai standards. The purpose of this experiment was to verify if the rubric was an efficient, valid, reliable, and objective measurement of fifteen sitting skills and fifteen standing skills. It is vital to measure and track learning progress to fix various deficiencies in the practice of Rairam Wai Kru Muay Thai Skills, as well as conserve the national sport of Thailand. The construction of this rubric is designed to help sustain the sports heritage of Muay Thai and to help motivate students to be diligent in practicing to build their proficiency.

From the observation of the Rairam Wai Kru Muay Thai skills test at the Thailand National Sports University of each campus in the North, it was found that most of the instructors used their own form of measurement and self - assessment to test students. Therefore, this causes the scoring criteria to not have a valid standard and demonstrates there is a need for a universal standard for students to ensure fair testing.

For this reason, the researcher created a study to determine a standard to assess the skill of Rairam Wai Kru Muay Thai that is efficient and effective, honest, and reliable. This standard would be used for studying Muay Thai at the Thailand National Sports University in each northern campus.

Objective

To construct the criteria for assessing the skills of Rairam Wai Kru Muay Thai for students at the Thailand National Sports University, Northern Campus.

Methods

1. Provide preliminary discussion between researchers and experts in Muay Thai.
2. It was absolutely agreed that there were no standard criteria for assessing the skills of the Muay Thai movement, including Rairam Wai Kru, within Muay Thai.
3. The researchers created a rubric as a baseline criterion for assessing the skills of Muay Thai.
4. Thirty voluntary students were selected by purposive sampling for their performance.
5. Five experts evaluated the criteria index of item-objective congruence (IOC) and re-tested it for reliability and objectivity with Muay Thai instructors on the Northern campuses of the Thailand National Sports University Thailand (Chiang Mai, Sukhothai, Lampang, and Phetchabun campuses)
6. All campuses were evaluated in terms of reliability and objectivity.

Research Procedures

1. The research instrument used was the criteria for assessing the Rairam Wai Kru Muay Thai skills according to the Muay Thai Palasueksa style. It was divided into fifteen skills of each Phrom sitting and standing styles.

2. The research instruments were proposed to five experts to verify the criteria index of item - objective congruence (IOC).

3. The target group was selected by purposive sampling consisting of thirty voluntary students enrolled in the Muay Thai course. After that, students were assigned to perform the Rairaim Wai Kru Muay Thai skills and then their performances were evaluated by instructors from Thailand National Sports University, Chiang Mai Campus using the provided rubric and the instructor test - retest after two weeks to determine their reliability.

4. Determination of the quality of criteria for assessing the skills for Rairam Wai Kru Muay Thai skills is the objectivity of the assessment from Muay Thai instructors from the northern campuses of Thailand National Sports University (Sukhothai, Lampang, and Phetchabun campuses)

Construction of the Rubric

1. The researcher studied documents concerning measurement and evaluation in physical education and resources on how to construct criteria for assessing the skills, including research related to Muay Thai skills in the form of Rairam Wai Kru Muay Thai (Muay Thai Palasueksa, 2017), in the four directions (forward, back, left, right) and both the fifteen sitting skills and the fifteen standing skills. Then, the researcher applied this knowledge to develop a rubric to guide the assessment.

2. The obtained data were proposed to the thesis advisors to consider and verify the criteria for assessing the skills form of the Rairam Wai Kru Muay Thai Skills for students of the Thailand National Sports University, Northern Campus.

3. The method of Rovinelli and Hambleton (1976) was used to find content validity. The assessment of the Rairam Wai Kru Muay Thai skills was proposed by five experts to consider the content of skills and assessment.

4. The rubric scores were first assessed by a Muay Thai instructor from the Thailand National Sports University Chiang Mai Campus with the test and retest after two weeks apart for the assessment of reliability.

5. The rubric scores were then assessed by Muay Thai instructors from each of the other three northern campuses of Thailand National Sports University (Sukhothai, Lampang, and Petchabun) for assessment of objectivity.

6. The researchers organized a focus group discussion meeting with the Muay Thai instructors of each northern campus, who applied the Rairam Wai Kru Muay Thai Skills assessment to summarize the results of using the assessment criteria for Rairam Wai Kru Muay Thai Skills.

Research Instrument

The rubric assessment of the Rairam Wai Kru Muay Thai skills

The rubric assessment of the Rairam Wai Kru Muay Thai skills was divided into fifteen sitting movement skills and fifteen standing movement skills by performing as followings:

Explanation: The instructors assessed the Rairam Wai Kru Muay Thai skills of each student based on 3 levels, as a maximum score of three points. The levels are described as follows:

Level 1: Students performed correctly with the Muay Thai music style; it was assessed as a score of three points.

Level 2: Students performed not correctly 1 - 2 times; it was assessed as a score of two points.

Level 3: Students performed incorrectly more than 2 times; it was assessed as a score of one point.

Data Analysis

1. Data were analyzed by using Pearson's correlation analysis statistic product - moment correlation coefficient (Pearson, 1948).

2. Data for analysis of the objectivity were used by Pearson's correlation analysis statistic product - moment correlation coefficient. Lampang Campus, Phetchabun Campus, and Sukhothai Campus. Research was gathered from videos recorded by the researcher from the target group of thirty students who were chosen by voluntary selection to determine the objectivity.

3. Data were collected from thirty voluntary students enrolled in PE 032437 (Muay Thai)

Results

Five experts evaluated the index of item-objective congruence for each campus in northern Thailand. Data were analyzed by using the frequency, the IOC results were found that the criteria for fifteen sitting and standing skills were at 1.00.

Data were analyzed using mean, standard deviation, and Pearson product - moment correlation coefficient. The results were found that the criteria of fifteen sitting movement skills was adequate (IOC = 1.00, the reliability = 0.93, and the objectivity = 0.99), and the requirements of fifteen standing movement skills (IOC=1.00, the reliability = 0.94, and the objectivity = 0.97) was adequate enough.

The first to fourth tables are the results of the testing and retesting at the Chiang Mai campus for reliability, followed by the results of testing at the other three Thailand National Sports University in the northern part of Thailand: Lampang, Phetchabun, and Sukhothai campuses for objectivity.

Table 1. The overall reliability correlation coefficient of the Rairam Wai Kru Muay Thai sitting and standing skills of the Chiang Mai campus.

Item	Assessment 1st		Assessment 2nd		r	Level
	$\bar{x}$	*S.D.*	$\bar{x}$	*S.D.*		
Rairam Wai Kru Muay Thai sitting skills	2.84	0.10	2.84	0.14	0.93**	Excellent
Rairam Wai Kru Muay Thai standing skills	2.80	0.56	2.93	0.26	0.94**	Excellent

** $p < .01$

Table 1 shows the total that the rubric assessment criteria for the Rairam Wai Kru Muay Thai sitting skills had a correlation coefficient of 0.93 and standing skills is 0.94 with a statistical significance level of .01.

Table 2. The reliability correlation coefficient of the fifteen Rairam Wai Kru Muay Thai sitting and standing skills.

Muay Thai Instructor of the Chiang Mai campus				
Number	Sitting skills	Assessment 1st 2nd	Standing skills	Assessment 1st 2nd
1	r	0.94**	r	0.89**
2	r	0.83**	r	1.00**
3	r	1.00**	r	0.94**
4	r	0.89**	r	1.00**
5	r	1.00**	r	0.89**
6	r	1.00**	r	1.00**
7	r	0.94**	r	1.00**
8	r	0.94**	r	1.00**
9	r	0.84**	r	1.00**
10	r	0.94**	r	1.00**
11	r	0.93**	r	1.00**
12	r	1.00**	r	0.84**
13	r	1.00**	r	1.00**
14	r	1.00**	r	0.94**
15	r	1.00**	r	0.83**

Table 2 shows that the fifteen Rairam Wai Kru Muay Thai sitting skills had a correlation coefficient between 0.83 - 1.00 and standing skills between 0.83 - 1.00.

Table 3. The overall objectivity of the Rairam Wai Kru Muay Thai sitting skills of Lampang, Phetchabun, and Sukhothai Campuses.

Sitting skills from Three Muay Thai Instructors of the northern campus												
	1st Lampang Campus		2nd Phetchabun Campus		1st Lampang Campus		3rd Sukhothai Campus		2nd Phetchabun Campus		3rd Sukhothai Campus	
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
	2.82	0.13	2.84	0.11	2.82	0.13	2.83	0.11	2.84	0.11	2.83	0.11
r	0.94**				0.92**				0.99**			
Level	Above Average				Above Average				Excellent			

**$p < .01$

Table 3 shows that the Rairam Wai Kru Muay Thai sitting skills of Lampang and Phetchabun had a correlation coefficient of 0.94, as well as Lampang and Sukhothai of 0.92, and Phetchabun and Sukhothai of 0.99 with a statistical significance level of .01.

Table 4. The reliability correlation coefficient of the fifteen Rairam Wai Kru Muay Thai sitting skills of Lampang, Phetchabun, and Sukhothai Campuses.

		Three Muay Thai Instructors		
Number	Sitting skills	Assessment 1st 2nd	Assessment 1st 3rd	Assessment 2nd 3rd
1	r	1.00**	1.00**	1.00**
2	r	0.93**	1.00**	0.93**
3	r	1.00**	1.00**	1.00**
4	r	1.00**	0.87**	0.87**
5	r	0.94**	0.94**	1.00**
6	r	1.00**	1.00**	1.00**
7	r	1.00**	1.00**	1.00**
8	r	0.94**	0.94**	1.00**
9	r	1.00**	1.00**	1.00**
10	r	1.00**	1.00**	1.00**
11	r	0.94**	1.00**	0.94**
12	r	0.95**	0.95**	1.00**
13	r	1.00**	0.93**	0.93**
14	r	1.00**	1.00**	1.00**
15	r	1.00**	1.00**	1.00**

Table 4 shows the fifteen Rairam Wai Kru Muay Thai sitting skills had a correlation coefficient between 0.93 - 1.00 for the first and second instructors, 0.87 - 1.00 for the first and third instructors, and 0.87 - 1.00 for the second and third instructors.

Table 5. The overall objectivity of the Rairam Wai Kru Muay Thai standing skills of Lampang, Phetchabun, and Sukhothai campuses.

	Standing skills from Three Muay Thai Instructors of the northern campus											
	1st Lampang Campus		2nd Phetchabun Campus		1st Lampang Campus		3rd Sukhothai Campus		2nd Phetchabun Campus		3rd Sukhothai Campus	
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
	2.85	0.14	2.84	0.16	2.85	0.14	2.84	0.15	2.84	0.16	2.84	0.15
r	0.88**				0.97**				0.88**			
Level	Above Average				Excellent				Above Average			

**$p < .01$

Table 5 shows the Rairam Wai Kru Muay Thai sitting skills of Lampang and Phetchabun Campuses had a correlation coefficient of 0.88, as well as Lampang and Sukhothai of 0.97, and of Phetchabun and Sukhothai of 0.88 with a statistical significance level of .01

Table 6. The fifteen Rairam Wai Kru Muay Thai standing skills of Lampang, Phetchabun, and Sukhothai campuses.

		Three Muay Thai Instructors		
Number	Standing skills	Assessment 1st 2nd	Assessment 1st 3rd	Assessment 2nd 3rd
1	r	1.00**	1.00**	1.00**
2	r	1.00**	1.00**	1.00**
3	r	0.94**	1.00**	0.94**
4	r	0.93**	1.00**	0.93**
5	r	0.93**	1.00**	0.93**
6	r	0.94**	0.94**	1.00**
7	r	1.00**	0.93**	0.93**
8	r	1.00**	1.00**	1.00**
9	r	0.94**	1.00**	0.94**
10	r	0.93**	1.00**	0.93**
11	r	1.00**	0.94**	0.94**
12	r	1.00**	0.95**	1.00**
13	r	1.00**	0.93**	1.00**
14	r	1.00**	1.00**	1.00**
15	r	1.00**	1.00**	1.00**

Table 6 shows the fifteen Rairam Wai Kru Muay Thai sitting skills had a correlation coefficient between 0.93 - 1.00 for the first and second instructors, 0.93 - 1.00 for the first and third instructors, and 0.93 - 1.00 for the second and third instructors.

Discussion

The results of the criteria for assessing the skills of Rairam Wai Kru Muay Thai for students at the National Sports University on the northern campus which was constructed by the researcher had quality in terms of validity, reliability, and objectivity. The current study suggests that the assessment was concluded for use amongst all northern campuses. In accordance with Nart, Bassam, & Dmour (2013, p. 37) revealed that the researchers utilized descriptive methodology by designing the proposed test battery, which comprises (overhead pass, ball catching, and shooting with forwarding jump) and represents the overall ability of individuals in the game. In order to achieve the objective of the study, selected procedures and techniques have been used to check for the scientific coefficient of the tool based on criterion - referenced tests and measurements, considering some indicators such as validity, reliability, objectivity, and consistent with Alnedral, Zonifa, & Yendrizal (2020, p. 2213), it was found that the validity and reliability of the instrument for advanced - level students were investigated. The instrument's validity and reliability were measured in two ways, namely, via a scoring system and by technical assessment from judges. The product - moment of the Pearson and Wherry - Doolittle methods were adopted in the data analysis.

Conclusion

The results of this study demonstrated that the criteria for assessing the skills of Rairam Wai Kru Muay Thai skills for students of Thailand National Sports University, Northern Campus constructed by Mr. Wirasai Montha had quality in terms of validity, reliability, and objectivity.

These rubric scores are particularly significant because of their contribution to preserving the unique culture of Muay Thai, Thailand’s original and deeply revered national sport. Muay Thai is gaining in popularity around the world. However, there are no current written and scientifically measured forms of assessment for any part of a movement within the sport. It is vital to create a standard of measurement for success in the longevity of the sport and to keep Muay Thai to its heritage.

Furthermore, this research can be used as a guideline for further development of criteria for assessing the skills for similar sports, other physical education courses, and other aspects of Muay Thai in the future.

Recommendations

1. Student satisfaction should be measured after using the Rairam Wai Kru Skills Assessment Form Muay Thai, both sitting and standing.

2. Create a benchmark for Muay Thai, categorizing male and female fighters at the national level to be used internationally.

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