




Development of Pencak Silat Strategy Tactics Analysis Tool Form for Competition Category

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Abstract. The classification of matches in pencak silat is a match played between 2 fighters from different camps, divided into different class categories, and these categories are determined based on the weight and age of the fighter. Determination of victory in the fighting category is based on the strategic tactics used so that strategic tactics using techniques of punches, kicks, drops, sweeps and slashes are the most important concern. Therefore, the purpose of this study is to develop an analytical tool form, as an effort to help trainers analyze tactics and strategies in the fighting category. The research subjects involved 6 validator experts who have national licenses, using the ADDIE development method from 3 pencak silat schools, namely; tapak Suci, SH, Shield of Self, in Malang City by going through a process, (1) Conducting a needs analysis obtained through the Group Discussion Forum (FGD) with pencak silat experts, (2) Making 3 draft product designs according to validator expert suggestions and regulations IPSI 2012, (3) Conducting trials with experts who already have national licenses, (4) Performing data processing, (5) Performing form constancy selection with validator experts, (6) Compiling articles. The results of the analysis of this study resulted in 4 out of 6 experts choosing form number 2, the rest chose 1 and 3. The results of this study mean that the form of the pencak silat tactic analysis tool in the sparring category can be proven accurately so that the form has been validated for the development of the tool form. assist the analysis of martial arts strategy tactics in the sparring category Development research is used as an analytical tool for a trainer or non-trainer in the development of counter-category pencak silat strategy tactics.

Keywords: Forms, Strategy Tactics, Analysis Tools

1 Introduction

National sports systematics are raised based on three elements, namely achievement sports, recreational sports and physical education (1). Achievement sports are committed to achieving good results in international, regional and national scale competitions. One of the achievement sports is pencak silat (2). In pencak silat there are 4 categories including singles, doubles, team and duel. In (3), the sparring category is included in the pencak silat category, which is a match between 2 fighters who are distinguished

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by angles. Both fighters attack and defend each other (4). Like brushing off attacks, dodging, hitting, attacking targets and knocking down opponents. As well as using endurance and ambition to fight, techniques and rules to apply strategic tactics (5).

In pencak silat, tactic is how to win matches by using a series of certain techniques. In pencak silat, tactics are divided into two, namely attack tactics and defensive tactics. Attacking tactics exist in competitive play, with the aim of breaking through opponents and facing opponents to win the game (6). Defensive tactics are strategies applied to opponents whose goal is to stop or avoid the opponent's attacks so they don't lose the game (4).

The calculation of attack points in the fighting category is as follows:

Table 1. Calculation of match category attack points

NO	MARK	EXPLANATION
1	1	Hand punch
2	1 + 1	Block, followed by a fist
3	2	Leg attacks like front kicks, T's and scythes
4	1 + 2	Block, followed by a kick
5	3	Drop technique
6	1 + 3	Block, followed by a drop

Pencak silat received the highest score in the fighting category for throws, sweeps and slashes (7). Strategy is a concept related to the course of a match or pre-match strategy, where in general the strengths and weaknesses of the opponent can be observed, martial arts defense strategies are usually by applying evasive techniques or avoidance techniques (8). The existence of this form makes it easy for coaches to facilitate athlete analysis, so researchers focus on using the form as a tactic and strategy analysis tool in matches so that later it can be used to help coaches develop athlete abilities (9).

2 Method

The development of this research uses the ADDIE method. ADDIE has an Analysis stage, Design (planning stage), Development (development stage), and Implementation (implementation stage) all of these stages will enter the Evaluation stage which is used to prevent errors (10). All stages of ADDIE are not used as a whole because the research is limited to developing a product, there are limited time and funds to be involved in this development research. This research will be in the Development stage (development stage).

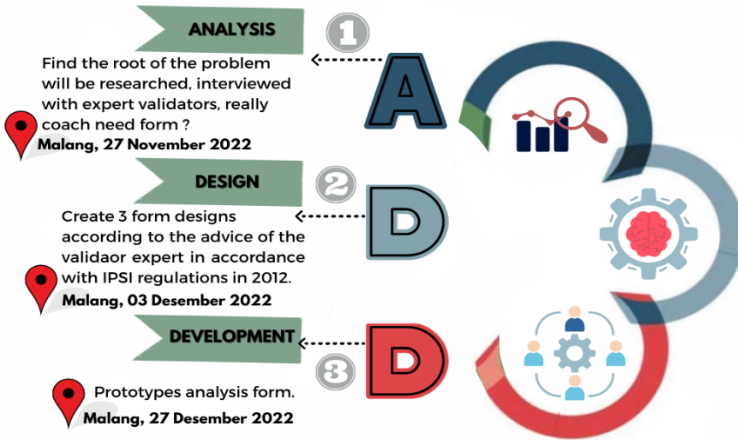


Figure 1. Research method

The recording of the results of the analysis uses a form in the form of a hard copy that has been determined and shows a visual video. Data recorded includes attacks (punches, kicks, drops, sweeps, cuts), frequency, and series of typical attacks. Then the results of the form are recorded via Microsoft Excel. The trial used a qualitative approach by visually showing videos of pencak silat matches, and then filling in by validator experts with attack criteria that had been determined by the researcher, and statements from experts would be used as a basis for improving the form by tabulating the trial results. through Microsoft excel tables. The research flow is depicted in the figure below:

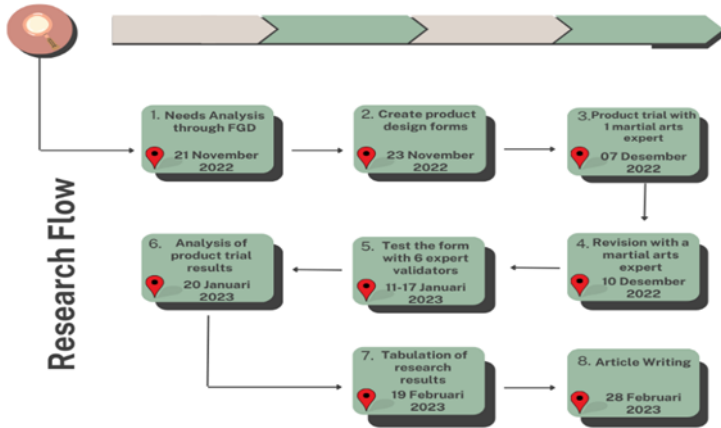


Figure 2. The flow of research on the development of the tactic tactic analysis tool for the combat category of pencak silat

3 Results

3.1 Needs Analysis

The results of the needs analysis show that trainers need a form as a tool for tactic analysis of pencak silat sparring categories.

3.2 Fgd results

The results of the research process include the following elements:

Table 2. Data from Pencak Silat Expert FGD results

No.	Expert name	FGD conclusion
1.	Martial arts expert	a. Determine validator experts who have a minimum East Java license b. Establish a strategy tactic attack in accordance with IPSI 2012 regulations for form trials. c. Create 3 designs which will be selected by the validator expert.

3.3 Product range of form analysis tools

After carrying out the results of the FGD observers made a series of research products which are described as follows:



**FORMULIR ALAT BANTU
ANALISIS TAKTIK
STRATEGI PENCAK SILAT
KATEGORI TANDING**

PESERTA SUDUT BIRU	
JAWA TENGAH	KHOIRUDIN M.
PESERTA SUDUT MERAH	
JAWA TIMUR	MUCH. ILYASTA

TGL/BLN/THN : 22 November 2022
KELAS : A/PA/DEWASA
SKOR :

MERAH			BIRU			
RANGKAIAN SERANGAN	SERANGAN	NILAI	BABAK	NILAI	SERANGAN	RANGKAIAN SERANGAN
	PUKULAN		1		PUKULAN	
	TENDANGAN DEPAN				TENDANGAN DEPAN	
	TENDANGAN T				TENDANGAN T	
	TENDANGAN SABIT				TENDANGAN SABIT	
	JATUHAN (tangkapian luar)				JATUHAN (tangkapian luar)	
	JATUHAN (tangkapian dalam)			JATUHAN (tangkapian dalam)		
	SAPUAN			SAPUAN		
	GUNTINGAN			GUNTINGAN		
	PUKULAN		2		PUKULAN	
	TENDANGAN DEPAN				TENDANGAN DEPAN	
	TENDANGAN T				TENDANGAN T	
	TENDANGAN SABIT				TENDANGAN SABIT	
	JATUHAN (tangkapian luar)				JATUHAN (tangkapian luar)	
	JATUHAN (tangkapian dalam)			JATUHAN (tangkapian dalam)		
	SAPUAN			SAPUAN		
GUNTINGAN			GUNTINGAN			
PUKULAN		3		PUKULAN		
TENDANGAN DEPAN				TENDANGAN DEPAN		
TENDANGAN T				TENDANGAN T		
TENDANGAN SABIT				TENDANGAN SABIT		
JATUHAN (tangkapian luar)				JATUHAN (tangkapian luar)		
JATUHAN (tangkapian dalam)			JATUHAN (tangkapian dalam)			
SAPUAN			SAPUAN			
GUNTINGAN			GUNTINGAN			

Figure 2. Product form analysis tool number 1

This first form was chosen by validator 1 who came from a self-protection college and was licensed by the IPSI National Trainer, according to him, this first form was as easy as the second or third form because the contents of all forms were in accordance with IPSI regulations in 2012, the only difference being the model of the form, and most importantly this form is very helpful for the development of athletes.



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ANALISIS TAKTIK
STRATEGI PENCAK SILAT
KATEGORI TANDING**

PESERTA SUDUT BIRU	
PESERTA SUDUT MERAH	

TGL/BLN/THN :
KELAS :
SKOR :

MERAH				BIRU				
RANGKAIAN SERANGAN KHAS	SERANGAN			BABAK	SERANGAN			RANGKAIAN SERANGAN KHAS
	PUKULAN				PUKULAN			
1	TENDANGAN	DEPAN		1	TENDANGAN	DEPAN		
		T				T		
		SABIT				SABIT		
	JATUHAN	LUAR			JATUHAN	LUAR		
		DALAM				DALAM		
		SAPUAN				SAPUAN		
	SAPUAN	BAWAH			SAPUAN	BAWAH		
		SERKEL				SERKEL		
		GUNTINGAN				GUNTINGAN		
	2	TENDANGAN	DEPAN			2	TENDANGAN	DEPAN
T				T				
SABIT				SABIT				
JATUHAN		LUAR		JATUHAN	LUAR			
		DALAM			DALAM			
		SAPUAN			SAPUAN			
SAPUAN		BAWAH		SAPUAN	BAWAH			
		SERKEL			SERKEL			
		GUNTINGAN			GUNTINGAN			
3		TENDANGAN	DEPAN		3		TENDANGAN	DEPAN
	T			T				
	SABIT			SABIT				
	JATUHAN	LUAR		JATUHAN		LUAR		
		DALAM				DALAM		
		SAPUAN				SAPUAN		
	SAPUAN	BAWAH		SAPUAN		BAWAH		
		SERKEL				SERKEL		
		GUNTINGAN				GUNTINGAN		

Figure 3. Product form analysis tool number 2

This second form was valid according to the 2012 IPSI regulations and was chosen by 4 validators from Tapak Suci and Setia Hati Terate schools. The experts chose the second form because this form has a round column in the middle which will make it easier for the coach to mark when the rounds are moving, and this form is easy to understand because the corners are the same color.



**FORMULIR ALAT BANTU
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TGL/BLN/THN : 22 November 2022
KELAS : A/PA/DEWASA
SKOR :

BABAK	BIRU				MERAH				
	RANGKAIAN SERANGAN KHAS	SERANGAN			FREKUENSI	SERANGAN			RANGKAIAN SERANGAN KHAS
		PUKULAN			PUKULAN				
1	TENDANGAN	DEPAN		1	TENDANGAN	DEPAN			
		T				T			
		SABIT				SABIT			
	JATUHAN	LUAR			JATUHAN	LUAR			
		DALAM				DALAM			
		SAPUAN				SAPUAN			
	SAPUAN	BAWAH			SAPUAN	BAWAH			
		SERKEL				SERKEL			
		BANTINGAN				BANTINGAN			
	2	TENDANGAN	DEPAN			2	TENDANGAN	DEPAN	
T				T					
SABIT				SABIT					
JATUHAN		LUAR		JATUHAN	LUAR				
		DALAM			DALAM				
		SAPUAN			SAPUAN				
SAPUAN		BAWAH		SAPUAN	BAWAH				
		SERKEL			SERKEL				
		BANTINGAN			BANTINGAN				
3		TENDANGAN	DEPAN		3		TENDANGAN	DEPAN	
	T			T					
	SABIT			SABIT					
	JATUHAN	LUAR		JATUHAN		LUAR			
		DALAM				DALAM			
		SAPUAN				SAPUAN			
	SAPUAN	BAWAH		SAPUAN		BAWAH			
		SERKEL				SERKEL			
		BANTINGAN				BANTINGAN			

Figure 4. Product form of analysis tool number 3

According to him, the 6th validator from the Tapak Suci college chose the third form according to the strategic tactics in the 2012 IPSI regulations, the reason for choosing the third one is because the form is easy to use if the round column is at the end and the round change color uses a different color, he said.

Table 2. Questionnaire results data validation form analysis tool.

Validation Ex- pert	1	2	3	4	5	6	
Licence	IPSI- National	IPSI- National	IPSI- National	IPSI- National	IPSI- National	IPSI- National	
Form	1	2	2	2	2	3	
	In your opinion is, it im- portant for a coach to have this form as a tool to analyze his ath- letes?	YES	YES	YES	YES	YES	YES
QUESTION	Does this form make it easier for a coach?	YES	YES	YES	YES	YES	YES
	Is this form useful for the devel- opment of ath- letes?	YES	YES	YES	YES	YES	YES

Does this form affect the athlete's tactics and strategy for the next match?	YES	YES	YES	YES	YES	YES
Is the explanation in this form easy to understand?	YES	YES	YES	YES	YES	YES

In form 1 it produces a valid opinion from 1 out of 6 validators, for form 2 it produces valid opinions 4 out of 6 validators, and the third form produces a valid opinion 1 out of 6 validators, so the development of this form as a whole is valid for use and is in accordance with IPSI 2012 regulations, which has been validated by 6 martial arts experts from various universities, and of the three form models, it was found that the form that is easier to use is form number 2.

Table 3. Typical attack sequences and comments on form

Name	Special Attack Around		Comment Form
	Red Corner	Blue Corner	
Expert validator 1	Attacks are less well targeted and do not have a strong defense.	Front kick backwards catches and sweeps.	This form is very helpful for the development of athletes
Expert validator 2	The block was followed by a direct punch, a front kick and a right kick.	Selfish, front kick, right pair and front kick.	This form is easy to understand because the rounds are in the middle which makes it easy to mark when the rounds change
Expert validator 3	Attack begins with kicks, offensive	Waiting for opponent's attack	This form is new and very good because it

	initial attacks and suppresses the opponent at the end	with catch attitude and playing save point.	can easily help coaches analyze the tactics of their athletes' strategies
Expert validator 4	Using a variety of feints, punching and kicking, is more offensive	Fishing for kicks followed by sweeps.	This form is very good and it just occurred to me now that the importance of using this form is so that coaches can easily analyze their athletes
Expert validator 5	Front left stance, right punch and kick.	Front right stance and drop.	(1). Easy-to-understand forms (2). The corner colors are equalized (3). Columns per round of different colors
Expert validator 6	Pesilat uses the front left and always defends but attacks aggressively	Front right and begins with a punch and then sweeps down	The form makes it easy for match analysis

3.3 Preferences Constancy of Forms Analysis Tool

The results of re-recording the best form, getting 100% results from 6 expert validators still on the first choice and there is no change, then the data shows that this development research has valid data. And the easiest form to use is form number 2.

4 Discussion

Strategic tactics are very important for preparing patterns of attack and defense that aim to win matches, how to train, using mental training (psychological training), tactical training (tactical training), technical training (technical training), and physical training (Physical Training). The results of the research on developing the form for the pencak silat tactic analysis tool in the sparring category with samples of video matches at the POMNAS XVII PADANG championship found that of the 3 models that have been tested it is easier to understand form number 2, because of the 6 validators, 4 experts chose form number 2, while 1 expert chose form number 3, and 1 expert chose form number 1, the results of the analysis showed that there was a difference of opinion between expert 1 and another even though they saw the same sample.

The benchmarks for the value of technical achievement in pencak silat competitions (11) are as follows: 1) Value 1 is a hand attack that enters without hindrance; 2) A score of 1+1 succeeds in defeating the opponent's attack, followed by a counterattack with

the hands; 3) Score 2, namely an attack using the foot without being hindered to the target; 4) Score 1+2 successfully defeats the opponent's attack, then counterattacks with the feet; 5) Score 3 is an attack that successfully defeats the opponent; 6) 1+3 managed to catch the opponent's attack and managed to knock the opponent down (5). In the punch technique, the red corner is 25 votes superior to the blue corner fighter with 5 votes and this shows that the red corner fighter has more control over the punch technique to become his tactics and strategy against the enemy. According to the validator expert 1, the red corner of the attack is not on target, and does not have a strong defense, while the blue corner has a typical attack, front kick backwards, catches and sweeps (12).

The front kick technique is very well mastered by the blue corner fighter with 31 votes, and the red corner masters this technique more or less with 20 votes, and this shows that the blue corner fighter has a strong foundation for his tactics and strategy (13). According to the validator 2, the red corner fighter has a distinctive attack, namely Block followed by a punch and front kick and then a right punch, while the blue corner has almost the same strategic tactics, namely Egos, front kick, right pair and front kick. In strategic tactics, there are kicks that are rarely used by fighters, usually only used by advanced fighters, namely T kicks or side kicks targeting all parts of the body (14). In observation, the validators were superior but the difference was narrow with 5 votes for the red corner athlete and the blue corner athlete only 2 votes, and this shows that the T kick is not fully used and more often used for front kicks. According to validator 3, the red corner fighter has a distinctive attack, namely attacking starting with a follow-up kick, offensive initial attack and pressing the opponent at the end, while the blue corner has a special attack. Waiting for the opponent's attack with a catch attitude and playing a save point (15).

Among the many types of kicks, one of the kicks that is commonly used for strategic tactics by coaches and fighters is the sickle kick (16). In the analysis, red corner and blue corner fighters have a draw value of 7 votes and this shows that both fighters use this kick as their strategic tactic. According to the expert validator 4, the red corner uses a variation of deception, hitting and kicking, which is more offensive, while the blue angle provokes a kick followed by sweeping (17). In addition to punches and kicks, outside falls and falls in techniques like this in a match have great value and can be a strategic tactic that is difficult to chase after points (7) in outer falls, the blue corner fighter is superior to the red corner with a vote of 11:3 and for deep falls, it is not too much different with a 5:2 vote, it is superior to the blue corner from the validators and this shows that the blue corner fighter has more mastery over the take down technique as a strategy tactic that he has. According to the validator expert, 5 fighters from the red corner have a typical attack, namely front left stance, right punch and kick, while from the blue corner, they have a typical attack, right front stance and drop.

No less important in strategic tactics during a match are the downsweep, serkel and clipping of all the techniques in the strategy tactics of these three techniques that have the most points, for the blue corner fighter gets 2 votes for the bottom sweep and 1 vote for the red corner fighter, while for the serkel sweep no one has a vote from the validator and for the blue corner fighter only 3 votes are recorded from experts and the red corner only shows 2 votes from experts, therefore it can be concluded that the blue corner

fighter is more in control 3 techniques that are of greater value in a match than the red corner fighter, According to the validator 6 the red corner fighter uses the front left and always defends but attacks aggressively while the blue corner has a typical front right attack and starts with a punch and then sweeps it down.

This research can be used as a basis for analyzing the strategic tactics used by coaches as an effort to develop their fighters. Suggestions from validator experts because this form is the first time it has been made and so far it has not existed. The validators said that this form really helps coaches to develop strategic tactics for their athletes. There are a few suggestions for the form, namely changing the colors of rounds and corners with the same color so that people who are not used to using the form can more easily understand it, but for others it is good enough. strategy.

5 Conclusion

Based on the research conducted above, it was concluded that the form tested had been developed as a valid tool for tactic analysis of the pencak silat strategy in the sparring category. Of the 3 model forms that have been given, the best results are used form number 2. The resulting analysis reveals differences in views and opinions between coach 1 and the others even though they see the same match.

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