

## **Analysis of Archery Performance Development at the Kuningan Regency Archery Association**

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### **ABSTRACT**

Archery is a sport of achievement that is relatively new to the people of Kuningan Regency. The people of Kuningan are more familiar with traditional archery, which involves shooting arrows from a sitting position and is displayed annually during the anniversary of Kuningan Regency. Perpani Kuningan Regency has excellent achievements and can compete with other sports. The objective of this research is to describe the coaching of archery sports achievements. This study employs a qualitative descriptive research design using three components: data reduction, data presentation, and drawing conclusions. The research was conducted in Kuningan Regency. The study subjects included the branch administrator, coaches, athletes, and KONI. Data were collected using the data triangulation method. The instruments used were observation, interviews, and document analysis. The results of this study indicate that the coaching implemented by PERPANI Kuningan Regency follows the coaching pyramid model as well as general coaching practices. This is evident from the structured development pathway, which includes the selection of novice athletes, junior athletes, and senior athletes. In addition, athlete nurseries continue through extracurricular activities in several schools and archery clubs in Kuningan Regency. The infrastructure owned by PERPANI Kuningan Regency is very adequate; it includes equipment as well as a dedicated outdoor practice field.

**Keywords:** *analysis, coaching, achievement, archery*

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## **INTRODUCTION**

Archery is a sport that has a history long before human civilization. In Indonesia itself, archery has developed for a long time with the emergence of traditional archery organizations in several regions. PERPANI is the parent organization of archery in Indonesia, which was born on July 12, 1953, in Yogyakarta (Nirmala Susanti et al., 2023; Setyawan et al., 2023; van de Waal et al., 2024; Yachsie et al., 2023). At that time, its establishment received support from Sri Paku Alam VIII, who also served as the chairman of PERPANI from 1953 to 1977. With the formation of the PERPANI parent organization, the first step taken was to become a member of FITA (*Fédération Internationale de Tir à l'Arc*), the international archery federation established in 1931. Indonesia was accepted as a member of *FITA* in 1959 at its congress in Oslo, Norway (Choi & Ok, 2016; Dahrial, 2019; indonesia archery, 2022; Koeswiranto & Purnamasari, 2022).

In the same year, PERPANI held the National Archery Championship for the first time in Surabaya. After the national competition was completed, the sport of archery began to develop throughout the country. Since then, archery in Indonesia has advanced rapidly, although in the first years archery activities were only found in a few cities on the island of Java. Now it can be said that in almost every corner of the country, archery has begun to be known.

With the acceptance of Indonesia as a member of *FITA* in 1959, at that time Indonesia was not only known for the traditional type of archery with the characteristics of shooting with

a seated and instinctive style, but also known for the FITA round type, which is an international round that uses more modern equipment with a standing shooting style. This opened up opportunities for Indonesian archers to take part in international matches.

After the ratification of PERPANI as the parent organization of Indonesian archery, it is expected to serve as a forum for the development of archery achievement sports that are useful in channeling the potential of athletes in a coordinated and programmed manner to achieve athlete achievements in single events and other multi-events.

PERPANI (Persatuan Panahan Nusantara Indonesia, Indonesian National Archery Association) has an important role in the development of archery sports competed in various official events such as POPDA, POPNAS, PORPROV, and PON (Adzalika et al., 2019; Ashraf, 2025; Fella Suffa et al., 2019; Kim et al., 2023; Kusumo & Junaidi, 2023). The classes fostered include National Standards, Recurve, and Compound. Archery is one of the leading branches that contributed gold medals for West Java at PON XX 2021 in Papua. The development of archery coaching in West Java also shows a significant increase, as can be seen from the number of athletes in almost all districts/cities who are able to meet the contingent quota at each event (Agus Maulana et al., 2023; Lee & Cho, 2025; Septian et al., 2017).

The implementation of the 2021 West Java PORPROV XIV Qualifying Round was a selection event as well as an evaluation of athlete development during the Regency Training (Pelatkab) period. To achieve maximum achievements, support is needed from various parties who care about the development of the potential of archery sports, so that West Java can continue to excel at the national level. In Kuningan Regency itself, archery is a relatively new sport and not as popular as other achievement sports, although the tradition of archery through the Saptonan activity has taken place every year.

In line with the vision to improve the achievements of archery athletes, PERPANI Kuningan Regency is required to play an active role with the community in coaching athletes. Cooperation and concern from various elements of society are needed to maintain the sustainability of the development of archery sports in the area. The appointment of Kuningan Regency as the host of the 2021 West Java PORPROV XIV Qualifying Round further strengthens the region's commitment to advancing archery. This trust paid off when a Kuningan athlete won a gold medal through M. Ryan Hidayat at the 2022 PORPROV in Bekasi.

Based on this background, this study formulates a problem regarding how to foster the achievement of archery sports by PERPANI Kuningan Regency. This research aims to analyze the coaching process and is expected to benefit researchers, readers, administrators, coaches, and athletes. The results of the research can provide insights, reference materials, coaching references, guidelines for coaches in compiling training programs, and motivation for athletes to improve their abilities and achievements in the future.

## **METHOD**

This study employed an explanatory research design to test hypotheses about cause-and-effect relationships between variables. The research procedure included identifying the problem source, formulating the problem, reviewing theories and relevant research, testing hypotheses, determining methods, preparing instruments, collecting data, and drawing conclusions.

The research population comprised all subjects related to *PERPANI Kuningan Regency*. The sample consisted of 35 people, including elements from *KONI*, *PERPANI* management, coaches, and representatives of archery clubs. Sampling used purposive techniques for time, effort, and cost efficiency. Informants were selected based on their willingness, direct involvement, and relevant knowledge.

Data collection techniques included:

1. Interviews (structured, semi-structured, or unstructured) to obtain in-depth information.
2. Observation of field conditions and activities related to archery achievement development.
3. Literature study from books, articles, journals, and previous research to support the theoretical foundation and data.

Data analysis followed the Miles and Huberman model:

1. Data reduction through selection, simplification, and categorization of field data.
2. Data presentation in narrative form to identify patterns and relationships.
3. Conclusion drawing to address the research problem.
4. Triangulation across sources, techniques, and time to validate data.

## RESULTS AND DISCUSSION

### General View

PERPANI Kuningan Regency is an organization that oversees archery sports in the Kuningan Regency area which is fully responsible for collecting, fostering achievements, and coordinating all archery activities in Kuningan Regency in order to advance achievements, always trying to advance the sport of archery by holding competitions or matches, in addition to the selection of outstanding player seeds both through extracurricular activities at school and in club-club. PERPANI Kuningan Regency oversees several clubs under its patronage, including: 1) Dipati Ewangga Archery. 2) Sanction. 3) Siliwangi Archery Club. 3) Binaul Ummah. 4) Almultazam. 5) Husnul Khotimah. 6) STKIP Muhammadiyah

It has 1 outdoor field which was inaugurated on September 7, 2019 by the Regent of Kuningan H. Acep Purnama, SH., MH. The PERPANI archery field in Kuningan Regency is not only representative and easily accessible, but can also be used for various classes of matches such as Compound, Recurve and National Standard with a capacity of up to 100 people. In addition to the field and secretariat offices. PERPANI Kuningan Regency also has infrastructure, namely: 1) Barebow's bow has 10 pieces. 2) Standard Face Target 6 pieces. 3) 6 pieces bearing. 4) Arrow 6 Pcs. 5) History of PERPANI Kuningan Regency

Hearing the word archery may be familiar to the people of Kuningan Regency, because archery is one of the heritage of the Kajene kingdom which is still preserved. This archery activity is carried out once a year every anniversary celebration of Kuningan Regency, where the officials are dressed in traditional clothes and then shoot arrows at the target that has been provided by the committee with the start of a "cross-legged" sitting position and usually the implementation of this traditional archery activity is carried out in conjunction with other traditional events, namely saptonan located at the Kertawangunan Field Sindangagung, Kuningan Regency.

Along with the development of the times, national sports have entered, namely archery to Kuningan Regency which is under the auspices of the Indonesian National Sports Committee (KONI). The name of the umbrella organization that is engaged in this sport is the Indonesian Archery Association (PERPANI).



**Fig 1. Traditional Archery of Kuningan Regency**

Source: Researcher 2023

PERPANI Kuningan Regency is chaired by Drs. H. Lili Suherli, M.Si for 2 periods from 2016 until now. He is a former civil servant whose last position was the Head of DPMPSTP (One-Stop Investment and Integrated Services Office) of Kuningan Regency. Born in Kuningan, West Java on October 5, 1959, he is an active organization and sports hobby.

According to Lili Suherli (2023), "archery is a sport that is uniquely calm but dangerous." With his expertise and with high concern for the development of archery achievements, the chairman of PERPANI Kuningan Regency successfully held several match championship events at both the district and provincial levels. Among them are as follows:

**Table 2. Implementation of PERPANI Achievement Development in Kuningan Regency**

NO	ACTIVITY NAME	YEAR	INFORMATION
1	Kuningan Archery Series I	2016	Kertawangun Field
2	Kuningan Archery Series II	2018	Std. Mashud
3	Kuningan Archery Series III	2022	Ministry of Youth and Sports Cup
4	PORPROV Qualifying Round	2022	Std. Mashud
5	Centralized	2022	Std. Mashud

Source: Researcher 2023

In order to improve the achievements of archery sports, PERPANI Kuningan Regency has successfully hosted multiple archery events both at the district and provincial levels, besides that PPERPANI Kuningan Regency has also succeeded in making its history in the XIV Bekasi West Java Provincial Sports Week in 2022 by presenting 1 (one) gold medal in the men's individual compound class.

**Table 3. Results of PERPANI Achievement Development in Kuningan Regency 2016 - 2023**

NO	ACTIVITY NAME	YEAR	RESULT	INFORMATION
1	BK PORPROV	2017	Escape	LakeMalaya
2	PORPROV	2018	-	Bogor
3	Governor's Cup	2018	3 Gold	National Standards
4	BK PORPROV	2021	Escape	Kuningan
5	League 1	2022	IV	Beregu Compound
6	PORPROV	2022	1 Gold	Compound Individu
7	Selector	2023	Escape	Jakarta

Source: Researcher 2023



**Figure 2. Lambang PERPANI**

Source: Researcher 2023

Based on the Articles of Association and Bylaws of PERPANI Chapter III Article 13 points 1 and 2, the symbol of the All Indonesia Archery Association is explained that: 1) The symbol of the PERPANI organization is in the form of a pentagon. 2) The rectangular PERPANI organizational flag has a green base and a width of 2:3 length, with the PERPANI symbol in the middle. 3) PERPANI's wings will continue to fly and grow all the time. PERPANI has become a member of FITA (International Archery Federation). 4) The pentagon of the Pancasila Symbol, then PERPANI is an organization based on Pancasila. Meaning of Color. 5) Yellow: is the color of the Archery target that has the highest value, meaning that the yellow color on the target must always be remembered to shoot and also yellow is a symbol of Glory. 6) Green: is the color of the lawn, and is a symbol of well-being and prosperity. 7) Black: Loyalty and permanence. 8) iscellaneous: The number of feathers on the wings consists of five large feathers and three small feathers, symbolizing that PERPANI was founded in 1953. The inscription PERPANI on the circle, which has a total of seven letters, symbolizes that PERPANI was founded in the seventh month (July) Precisely PERPANI was founded on July 12, 1953.

### **Performance Building Program**

PERPANI has an important position in the framework of archery coaching. Coordination is very necessary to get optimal support from various related parties as users of outstanding athletes. One of the spearheads of the success of sports coaching can be seen from the achievements of athletes in every sports match. Athletes' achievements are not obtained instantly but through a tiered coaching process involving all elements of sports stakeholders in

Kuningan Regency. In a sports coaching, a systematic training program is needed for the achievement of maximum achievements. The training program provided is a guide and development of coaching that will be achieved.

The following are the general programs in the field of achievement development of PERPANI Kuningan Regency: 1) Monitoring the process of the club's training. 2) Record potential athletes. 3) Selecting athletes to be coached by PERPANI. 4) Participating in the Regional, West Java or National Championships. 5) Participating in West Java and National coach training. 6) Melaksanakan try out/try in. 7) Carry out the Training Center process. 8) Monitoring the development of Kuningan athletes in PPLP West Java. 9) Monitoring and aiming for athletes with medal potential outside brass to fill the gap in match numbers

**Table 4. Perpani Achievement Development Program of Kuningan Makro Regency**

DAY	WEDNESDAY	SATURDAY	SUNDAY
COMPONENT	PHYSICAL	TECHNIQUE	PHYSICAL
<b>Week 1</b>	<ul style="list-style-type: none"> <li>➤ Aerobic Endurance                             <ol style="list-style-type: none"> <li>1. 15 Minute Run</li> <li>2. 20 Minute Run</li> <li>3. 30 Minute Run</li> <li>4. 60 Minute Run</li> <li>5. Swimming pool</li> <li>6. Long Run</li> </ol> </li> <li>➤ Muscle Endurance                             <ol style="list-style-type: none"> <li>1. Weight Training</li> <li>2. 3 Sep 20-24 rep</li> </ol> </li> <li>➤ Flexibility                             <ol style="list-style-type: none"> <li>1. Stretching</li> <li>2. PNF</li> </ol> </li> <li>➤ Strength                             <ol style="list-style-type: none"> <li>1. Push Up</li> <li>2. Sit Up</li> <li>3. Pull Up</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>➤ Technique                             <ol style="list-style-type: none"> <li>1. Stand</li> <li>2. Set Up</li> <li>3. Body Center</li> <li>4. Full Drow</li> <li>5. Release</li> <li>6. Accuracy</li> </ol> </li> <li>➤ Tactic                             <ol style="list-style-type: none"> <li>1. Complaint</li> <li>2. Wind Direction</li> </ol> </li> <li>➤ Mental                             <ol style="list-style-type: none"> <li>1. Visualization</li> <li>2. Imagine</li> <li>3. Reinforcement / Motivation</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>➤ Aerobic Endurance                             <ol style="list-style-type: none"> <li>1. 15 Minute Run</li> <li>2. 20 Minute Run</li> <li>3. 30 Minute Run</li> <li>4. 60 Minute Run</li> <li>5. Swimming pool</li> <li>6. Long Run</li> </ol> </li> <li>➤ Muscle Endurance                             <ol style="list-style-type: none"> <li>1. Weight Training</li> <li>2. 3 Set 20-24 Rep</li> </ol> </li> <li>➤ Flexibility                             <ol style="list-style-type: none"> <li>1. Stretching</li> <li>2. PNF</li> </ol> </li> <li>➤ Strength                             <ol style="list-style-type: none"> <li>1. Push Up</li> <li>2. Sit Up</li> <li>3. Pull Up</li> </ol> </li> </ul>
	180 Minutes	180 Minutes	180 Minutes
<b>Week 2</b>	<ul style="list-style-type: none"> <li>➤ Aerobic Endurance                             <ol style="list-style-type: none"> <li>1. 15 Minute Run</li> <li>2. 20 Minute Run</li> <li>3. 30 Minute Run</li> <li>4. 60 Minute Run</li> <li>5. Swimming pool</li> <li>6. Long Run</li> </ol> </li> <li>➤ Muscle Endurance                             <ol style="list-style-type: none"> <li>1. Weight Training</li> <li>2. 3 Sep 20-24 rep</li> </ol> </li> <li>➤ Flexibility                             <ol style="list-style-type: none"> <li>1. Stretching</li> <li>2. PNF</li> </ol> </li> <li>➤ Strength                             <ol style="list-style-type: none"> <li>1. Push Up</li> <li>2. Sit Up</li> <li>3. Pull Up</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>➤ Technical                             <ol style="list-style-type: none"> <li>1. Stand</li> <li>2. Set Up</li> <li>3. Body Center</li> <li>4. Full Drow</li> <li>5. Release</li> <li>6. Accuracy</li> </ol> </li> <li>➤ Tactic                             <ol style="list-style-type: none"> <li>1. Complaint</li> <li>2. Wind Direction</li> </ol> </li> <li>➤ Mental                             <ol style="list-style-type: none"> <li>1. Visualization</li> <li>2. Imagine</li> <li>3. Reinforcement / Motivation</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>➤ Aerobic Endurance                             <ol style="list-style-type: none"> <li>1. 15 Minute Run</li> <li>2. 20 Minute Run</li> <li>3. 30 Minute Run</li> <li>4. 60 Minute Run</li> <li>5. Swimming pool</li> <li>6. Long Run</li> </ol> </li> <li>➤ Muscle Endurance                             <ol style="list-style-type: none"> <li>1. Weight Training</li> <li>2. 3 Set 20-24 Rep</li> </ol> </li> <li>➤ Flexibility                             <ol style="list-style-type: none"> <li>1. Stretching</li> <li>2. PNF</li> </ol> </li> <li>➤ Strength                             <ol style="list-style-type: none"> <li>1. Push Up</li> <li>2. Sit Up</li> <li>3. Pull Up</li> </ol> </li> </ul>
	180 Minutes	180 Minutes	180 Minutes
<b>Week 3</b>	<ul style="list-style-type: none"> <li>➤ Aerobic Endurance                             <ol style="list-style-type: none"> <li>1. 15 Minute Run</li> <li>2. 20 Minute Run</li> <li>3. 30 Minute Run</li> <li>4. 60 Minute Run</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>➤ Technical                             <ol style="list-style-type: none"> <li>1. Stand</li> <li>2. Set Up</li> <li>3. Body Center</li> <li>4. Full Drow</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>➤ Aerobic Endurance                             <ol style="list-style-type: none"> <li>1. 15 Minute Run</li> <li>2. 20 Minute Run</li> <li>3. 30 Minute Run</li> <li>4. 60 Minute Run</li> </ol> </li> </ul>

	5. Swimming pool 6. Long Run	5. Release 6. Accuracy	5. Swimming pool 6. Long Run
	➤ Muscle Endurance 1. Weight Training 2. 3 Sep 20-24 rep	➤ Tactic 1. Complaint 2. Wind Direction	➤ Muscle Endurance 1. Weight Training 2. 3 Set 20-24 Rep
	➤ Flexibility 1. Stretching 2. PNF	➤ Mental 1. Visualization 2. Imagine	➤ Flexibility 1. Stretching 2. PNF
	➤ Strength 1. Push Up 2. Sit Up 3. Pull Up	3. Reinforcement / Motivation	➤ Strength 1. Push Up 2. Sit Up 3. Pull Up
	180 Minutes	180 Minutes	180 Minutes
<b>Week 4</b>	➤ Aerobic Endurance 1. 15 Minute Run 2. 20 Minute Run 3. 30 Minute Run 4. 60 Minute Run 5. Swimming pool 6. Long Run	➤ Technical 1. Stand 2. Set Up 3. Body Center 4. Full Drow 5. Release 6. Accuracy	➤ Aerobic Endurance 1. 15 Minute Run 2. 20 Minute Run 3. 30 Minute Run 4. 60 Minute Run 5. Swimming pool 6. Long Run
	➤ Muscle Endurance 1. Weight Training 2. 3 Sep 20-24 rep	➤ Tactic 1. Complaint 2. Wind Direction	➤ Muscle Endurance 1. Weight Training 2. 3 Set 20-24 Rep
	➤ Flexibility 1. Stretching 2. PNF	➤ Mental 1. Visualization 2. Imagine	➤ Flexibility 1. Stretching 2. PNF
	➤ Strength 1. Push Up 2. Sit Up 3. Pull Up	3. Reinforcement / Motivation	➤ Strength 1. Push Up 2. Sit Up 3. Pull Up
	180 Minutes	180 Minutes	180 Minutes

Ket : The weekly training program is adjusted to the stages that have been made.

Source: Researcher 2023

**Table 5. Physical Fitness Paramater Test**

Test Parameter		Result Target 100%	Perf (%)
<b>Flexibility</b>	Sit & Reach		
<b>Speed</b>	20 M		
<b>Agility</b>	Shuttle Run (5m X 4 / 4m X 5)		
<b>Quickness</b>	Upper	Arm Reaction Test	
	Lower	Foot Reaction Test	
<b>Max. Str.</b>	Upper	Bench Press	
	Lower	Squat	
<b>Power</b>	Upper	Med. Ball T.	
	Lower	Green. Jump	
<b>Power End.</b>	Upper	Claping Push Up	
	Lower	Hurdle Jump	
<b>Strength End.</b>	Upper	Push Up/Pull Up + Sit Up	
	Lower	Wall Sit	
<b>Endurance (Ae)</b>	VO2 max	Blep Test/Balke/Cooper Dll.	

Source : Researcher 2023

The above training program was prepared by the trainer and also the administrator as the Presidential Advisor of PERPANI Kuningan Regency. requires good physical condition including strength and endurance, especially in the upper body muscles. When performing archery techniques, especially when pulling the bowstring, the muscles will experience isotonic contractions, especially in the initial pull.

This the muscles involved in pulling the bow should receive special attention in the sport of archery, because they work extra hard in pulling and holding the weight of the bow string which is quite heavy and takes place repeatedly in a series of archery movements. Therefore, these muscles must have strength and endurance to be able to perform a movement of pulling the bow string that remains consistent and in accordance with the axis of motion. Therefore, regular physical training is needed in archery.

**Match Rules and Conditions**

a. Competition Field

In the rules of the sport, there are always rules about the field, especially in terms of size. The field used for the venue of matches or archery competitions is divided into 2 (two) parts, namely indoor and outdoor. The size of the field of archery matches can be adjusted to the number of matches to be held.

b. Match Number

**Table 6. Archery Match Numbers**

NO	MATCH NUMBER	DISTANCE	INFORMATION
1	National Standards Division	40 meters	Indonesia
2	Divisi Compound	50 meters	International
3	Divisi Recurve	70 Meters	International

Source : Researcher 2023



**Fig 3. Types of Archery Race Bows**

Source : *Researcher 2023*

c. Face Target

1) National Standards Division Target



Distance : 40 Meters  
Target Face : 80 cm (Ring 6)  
Number of Series : 6 Series/Spoils  
Shooting: 6 arrows  
Time : 4 Minutes/series (BK) 2 (EL)  
Number of Sessions : 2 Sessions

2) Face Target Divisi Compound



Distance : 50 Meters  
Target Face : 80 cm (Ring 6)  
Number of Series : 6 Series/Spoils  
Shooting : 6 arrows  
Time : 4 Minutes /series (BK) 2 (EL)  
Number of Sessions : 2 Sessions

3) Face Target Divisi Recurve



Distance : 70 Meters  
Target Face : 122 cm  
Number of Series : 6 Series/Spoils  
Shooting : 6 arrow (BK) 3 (EL)  
Time : 4 Minutes /series (BK) 2 (EL)  
Number of Sessions : 2 Sessions

**Table 6. Race Assessment Scores**

NO	COLOR	VALUE
1	Deep Yellow	10
2	Outer Yellow	9
3	Red In the	8
4	Outer Red	7
5	Deep Blue	6
6	Outer Blue	5
7	Deep Black	4
8	Outer Black	3
9	Deep White	2
10	Outer White	1
11	In the middle of the yellow inside	x
	Off target	Miss

Source : Researcher 2023

1 (one) pad for 1 athlete (Individual) and or 3 athlete players for team/team, by being divided into 3 target face points, namely:

A Bottom Left

B Top Center

C Bottom Right

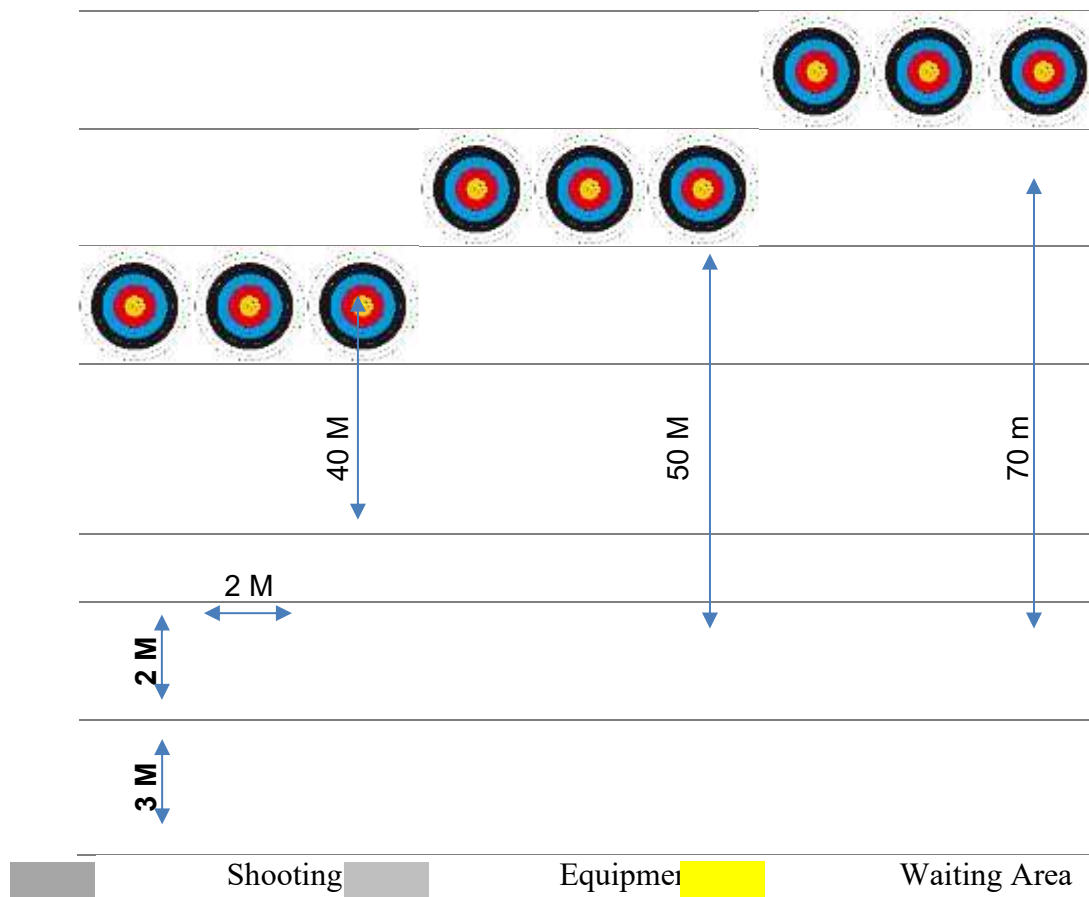
If the participant gets the same amount of tie/value suspension: When determining to enter the elimination round if the total score is the same, the number of points 10 includes x (10 + x) then x is more, if it is still the same, a virtual coin toss will be held. For the determination of the ranking, if the total score is the same, the number of points includes x (10 + x) then more x, if it is still the same, a virtual coin toss will be carried out. During the elimination round, if there is a score of the same (5 – 5) or (140 – 140), a shoot off of 1 arrow will be carried out and only 1 shoot off if the same score will be directly measured to the inner point.

d. General Rules of the Race

Coaches, officials and athletes are considered to have understood the provisions of the National Round as well as the Constitution and Rules and also by laws. Smoking is not allowed in the race field area. Officials or coaches accompanying athletes are not allowed to approach the target, except with permission from the referee to help athletes who need help. When recording scores, athletes are prohibited from touching arrows. It is required to record the score first before pulling out the arrow. Before pulling out the arrow, athletes are required to give a mark on the permit first. Doubtful submissions must be determined and decided by the referee, the referee's decision is final. If there is a writing error on the scoring sheet, it is required to report to the referee for correction/correction with red ink. Protests can be submitted by the team manager, by filling out the form that has been provided with a security deposit of Rp. 1,000,000 (the protest procedure is regulated in the constitution and rules). Athletes and coaches are required to wear shoes and are not allowed to wear denim/jeans. Athletes and coaches are required to wear uniform clothing according to their respective clubs/contingents. Mistakes or mistakes made by the archer will only harm the archer himself. To prevent score manipulation is our collective responsibility to prevent it, in an effort to realize the noble goals of perpani and teach athletes to act honestly. Athletes who manipulate scores will be

disqualified from the race. For the sake of the orderliness of the competition, those who have the right to be in the equipment area and waiting area are only officials/coaches and athletes who are competing. If point "o" above is not heeded, a warning will be given 3 times, if after 3 warnings it is still violated, then the team/club/contingent will be disqualified (including officials and athletes who participate in the championship). Only allowed to participate in 1 Division (Not Allowed Consemenate)

e. Archery Venue

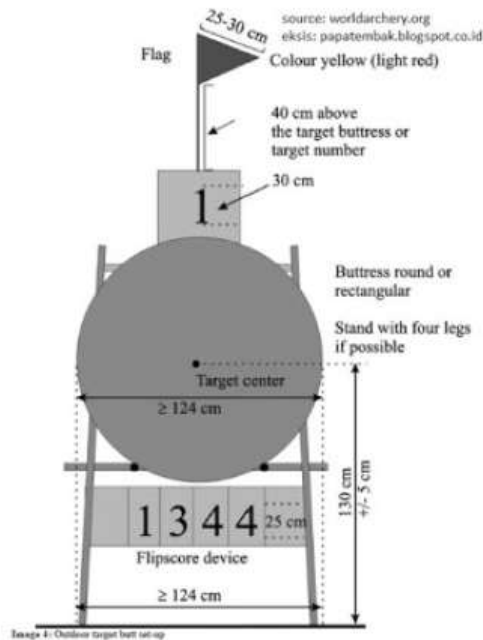


**Figure 4. Layout Setup Venue of Archery**

*Source : Researcher 2023*

Equipment and Equipment

Stand Target. Bearing. Flag Bearing. Digital Score



**Fig 5. Standard Stand Size Outdoor Archery Pads**

Source : Researcher 2023

For outdoor target face matches, there are 4 types:

Diameter 122cm

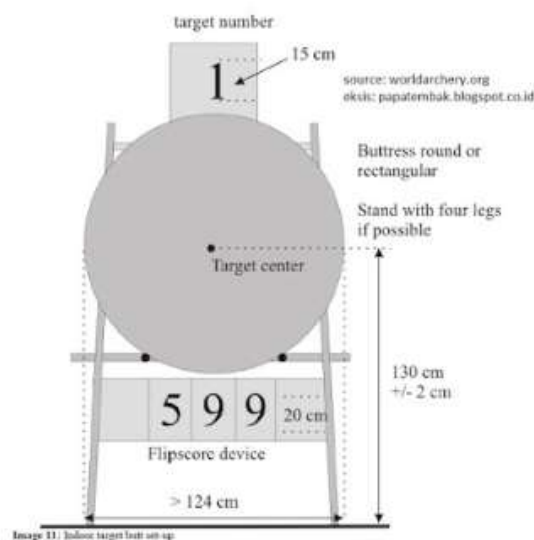
Diameter 80cm

Diameter 80cm-6 rings (original diameter is only 48cm, score from 5 to 10)

Diameter 80cm-5 rings (the original diameter is only 40cm, the score is from 6 to 10)

The target face size of 122cm is used for distances of 90m, 70m, and 60m.

The 80cm target face is used for distances of 50m, 40m, and 30m. with a few exceptions.



**Fig 6. Standard Booth Size Indoor Archery Pads**

Source : Researcher 2023

There are 6 types of target faces for indoor matches: Diameter 60cm, Diameter 60cm, triangular triple face, Diameter 60cm, vertical triple face, Diameter 40cm, Diameter 40cm, triangular triple face, Diameter 40cm, vertical triple face. It should be understood that achievement coaching is a process consisting of several interrelated stages, starting from talent identification, technique development, training, competition preparation, and evaluation. In archery, talent identification is an important thing to do. Talent identification can be done through physical and psychological tests. In this case, athletes who have height, good eye and hand coordination, concentration, and high mental endurance will have an edge in the sport of archery.

Once the talent identification is done, the next stage is technique development. Archery techniques include the technique of aiming, pulling a bow, holding your breath, and releasing arrows. Once the basic techniques are mastered, athletes will follow a more intensive training program, which includes physical exercises to increase strength and endurance, as well as mental exercises to improve concentration and mental endurance.

Furthermore, athletes will prepare themselves to participate in competitions, both locally, nationally, and internationally. Competition preparation includes special exercises to deal with situations and conditions that may occur during competition, such as dealing with pressure and unusual environments. After the competition is over, an evaluation is carried out to evaluate the athletes' performance and the achievement coaching program that has been carried out. This evaluation will be material to evaluate the shortcomings and advantages of the achievement coaching program, so that improvements and improvements can be made to the achievement coaching program in the archery sport.

Archery is a sport that uses accuracy as the main element that every athlete who pursues the branch must have. There are many variations that can be used to practice accuracy in this branch, one of which is by using a hand grip (crossing grip) which aims to train and strengthen the radius of the bowstring pulling when aiming, then continued with a release motion to release the arrow, because when releasing the arrow to the target, it is very necessary to calm and strengthen the fingers of the bowstring pulling so that the speed and flight of the arrow become smooth, Because even the slightest movement error at the time of release will have a big effect on the outcome of the arrow placement on the target. Therefore, technical training must be carried out regularly and intensely to get maximum accuracy.

Archery is a game sport that is included in the sport of structured and measurable achievements. The main factors for the success of archery athletes are power and endurance, besides that technique also plays a very important role in success such as basic techniques in archery including stance position, mounting arrows, pulling bowstrings, release, and advanced movements. Training this technique is very necessary to balance motor habits and the development of the muscular nervous system.

In addition to basic techniques, there are several other factors that can support the success of learning archery, namely speed of decision-making, accuracy in analyzing situations, and calmness in controlling emotions. The strength and endurance components of the arm muscles (balance) in holding the arrow are very important and are the basis of all other physical components. By focusing on these two components, an archer can pull and stretch the bow more forcefully, making the arrow shoot faster.



**Fig 7. Analysis of the Achievement Development of the PERPANI Archery Sports Branch in Kuningan Regency**

Source: Researcher 2023

Overall, achievement coaching in the archery sport of PERPANI Kuningan Regency consists of several stages that are interrelated and require special attention at each stage. In this case, a good and structured achievement coaching program will greatly help improve the achievements of athletes in archery.

## CONCLUSION

The development of archery achievements in Kuningan Regency has aligned with national sports coaching levels, progressing from grassroots (*pembinaan massa*), nurturing (*penyuluhan*), to high-performance (*pembinaan prestasi*) stages. Although PERPANI Kuningan has implemented programs effectively and maintains facilities like the field and secretariat, the coaching process remains constrained by inadequate infrastructure and extensive equipment damage requiring rejuvenation. Enhanced coordination with stakeholders is essential to optimize support for producing elite athletes. For future research, a longitudinal study could evaluate the impact of targeted facility upgrades and multi-stakeholder partnerships on athlete performance metrics over 3–5 years.

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