

## Research Article

# Perspective SPILSS Models for Analyzing the Development of Paragliding Athletes in Central Java

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**Abstract.**

The purpose of this study was to use the Sports Policy Factors Leading to International Sporting Success (SPILSS 2.0) instrument and the nine pillars of elite sports success approach to survey and assess the success factors of coaching. Athletes from eight districts or cities in Central Java that had paragliding organizations, as well as chairs, secretaries, treasurers, and coaches were included in the survey. Data were analyzed through SPILSS 2.0 reports and quantitative analysis methods. Potential success factors were determined quantitatively using 96 CSFs assigned to a score of 0–1 based on nine pillars. Findings show that Banyumas, Grobogan, the Semarang district, and Karanganyar are the four regions offering the highest numbers of paragliding sports. The districts of Grobogan and Semarang are best in participation, talent identification, and talent development. The results show that many regions have yet to adopt the nine pillars. It is intended that each region would produce paragliding athletes of the highest caliber, honoring Central Java and Indonesia as a country.

**Keywords:** SPILSS models, paragliding, sport policy

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**Published:** 3 July 2024

Publishing services provided by  
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Selection and Peer-review under the responsibility of the IJESAS Conference Committee.

## 1. INTRODUCTION

Sports policies are implemented to find ways and strategies to achieve sporting success. A good policy will maintain the athlete's competitive advantage. Comprehensive and measurable evaluation is needed to produce a good policy [1]. Comprehensive evaluation will determine the accuracy of the target and validity outcome of program implementation [2]. While measurable evaluation is used to ensure the success of the program effectively [3].

In several studies it is stated that a comprehensive study in evaluating sports policies has implemented with effectiveness of sports policies [4]. Analysis and policies in sports

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need to consider evaluation in accordance with the characteristics and specificities of the sports organization or teams [5].

In the concept of fostering elite sports, evaluation of policies that have been carried out is one of the important elements that must be carried out [6]. To be able to obtain a comprehensive evaluation, procedures and instruments are needed that are designed to meet the complexity of sports problems [7]. The evaluation carried out is needed to analyze the success factors of a policy in fostering young athletes, potential athletes to elite athletes [8]. So that a comparative empirical study is needed to complete the analysis of each success factor from several valid references [9]. Thus, the need for an evaluation instrument for sports coaching policies is absolutely necessary as a tool for analyzing sports success [10].

Paragliding as an Olympic sport is a popular sport that is increasingly being liked [9]. One of them is in Central Java, paragliding has been widely enjoyed and popular as a sport that is competed in various events. Until now, based on data from PGPI Central Java provincial management, they have organizations in 24 districts/cities and have produced many junior and senior athletes in each district/city. In terms of paragliding competition in Central Java, many events have been held which are routinely held every year [12]. Paragliding has been competed in regional and national single events, as well as in regional multi-events (Porprov) and National multi-events (PON). [13] Meanwhile, at the international level, paragliding is a mandatory sport for the Asian Games [14] and World Event.

The achievements of the paragliding sport in Central Java in the last 3 years have shown a good increase performance. There are many national athletes who come from Central Java who compete in national events [15]. In addition, it can be shown from Central Java's achievements in the National Championship, one of which was in the 2019 PON qualification round [13]. Stated that Central Java province occupies the 4th position as a province contributing national athletes with 13.5% in 2012 -2019.

The coaching system through the competition system has been going well and has produced many outstanding athlete candidates. In an effort to develop elite athletes at the national and international levels, it is necessary to analyze a study based on benchmark parameters for the success of Central Java province in fostering elite athletes. Study of weaknesses and potential advantages that can be maximized in producing outstanding athletes at the international level.

Weaknesses in sports coaching in Central Java require policy analysis in several aspects including organization, coaching systems, human resources, supporting facilities and infrastructure and the athlete development system that is inherent [16]. Analysis

is needed to find out the direction of the PGPI Central Java provincial management policy in fostering elite sports including sports development strategies or services that contribute to the development of outstanding athletes. The policy is including development programs, sports facilities, coaches, promotions, competitions or tournaments, talent identification, talent development, and support athlete. Where a comprehensive analysis in Central Java and in Indonesia is still very weak [17].

In this study, the aim was to conduct a study to analyze the success factors of coaching using the Sports Policy Factors Leading to International Sporting Success (SPLISS 2.0) instrument with the 9 pillars of elite sports success approach [18]. This analysis is used to obtain the key factors that determine the failure and success of the coaching system that has been comprehensively carried out by PGPI Central Java Management. Word document can be used as a template for journal. This Word document can be used as a template for journal(1). This Word document can be used as a template for journal.(2) This Word document can be used as a template for journal. This Word document can be used as a template for journal. Headings should always be followed by text.(3)

## 2. METHOD

This research uses a quantitative research approach based on the SPLISS 2.0 study. Research participants consisted of directors/chairpersons, secretaries, treasurers and coaches as well as athletes from 24 districts that have paragliding organizations in Central Java. Supporting information comes from KONI Central Java Province, Dinpora Central Java Province and PGPI Central Java Management.

Data collection techniques used Questionnaires & Interviews SPLISS 2.0 to respondents using the 9 Pillars indicator consisting of a maximum of 96 Critical Success Factors (CSF) consisting of sub-factors (product-process inputs). The instrument uses SPLISS Instruments 2.0 [4] using the 9 pillars as indicators as follows: Data analysis techniques using quantitative analysis techniques using SPLISS 2.0 report. Quantitatively identify possible success factors using 96 CSFs allocated to a score of 0-1 based on 9 pillars which from the overall results will be added to the total percentage score for each pillar. The 9 pillars as factors for the success of sports development can be seen in Figure 1 below.

(Source: De Bosscher, V. (2018). A mixed methods approach to compare elite sport policies of nations. A critical reflection on the use of composite indicators in the SPLISS study. *Sport in Society*, 21(2), 331–355. main text should be written using Arial, 11pt, fully justified. Italics can be used for emphasis and bold typeset should be avoided. (4)

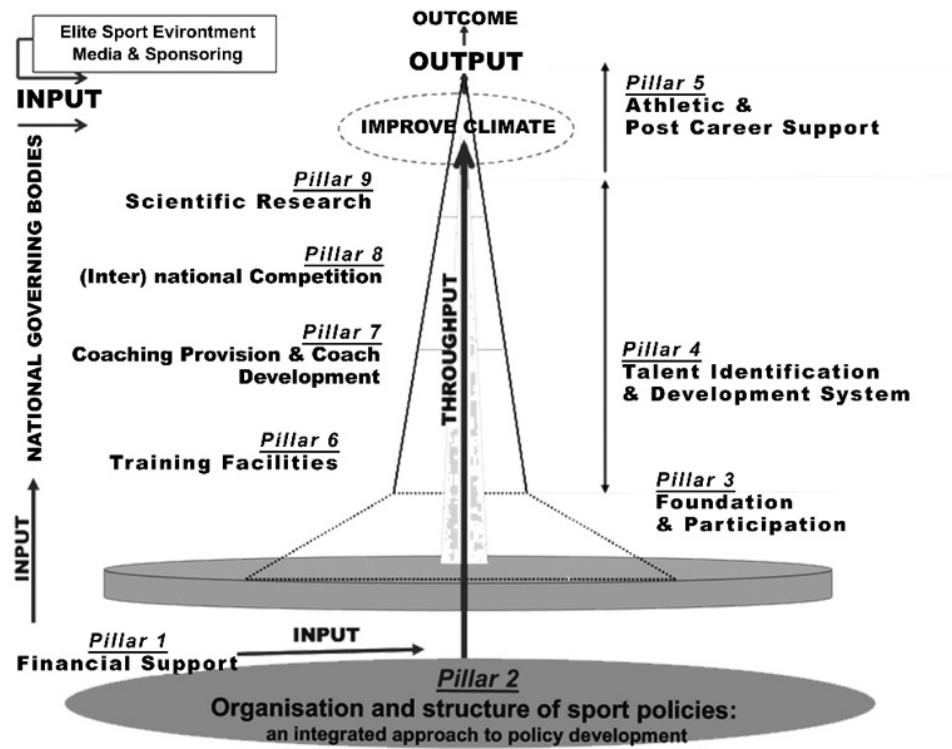


Figure 1: Theoretical model of 9 pillars of sports policy factors influencing international success.

### 3. RESULTS AND DISCUSSIONS

Based on the results of research using interviews and questionnaires that have been conducted, scores obtained from quantitative data using the SPLISS 2.0 instrument are analysed using the SPLISS 2.0 reporting model using a multidimensional model approach to assess the effectiveness of sports policy success. The analysis was carried out by analysing the management strategy based on input, throughput, and output reviews.

From the Table 1, it shows that the dominance of achievements is still achieved by the City of Semarang. It shows that in the male and female categories during 2018–2022, the City of Semarang is far above other districts, which only won the gold medal once each. In terms of output, the other 5 regencies compete strictly under the city of Semarang to win silver and bronze medals. based from the other components, the output is shown by the city of Semarang based on Central Java athletes who became national athletes in international championships. In the 2018-2022 period, the district of Banyumas and Grobogan in paragliding is very dominating compared to other districts. The city of Grobogan and Banyumas is also consistent in conducting high-level performance development in a sustainable manner.

TABLE 1: Demography Participant/Respondent.

No	Element/District	Elite Athlete	Elite Coach	Performance Directors	Total
1	Banyumas	2	1		3
2	Grobogan	2		1	3
4	Kab.Semarang	1			1
3	Karanganyar	1			1
5	Kota Semarang	1			1
6	Purbalingga	1	1	1	3
7	Sukoharjo		1	1	2
8	Wonosobo			1	1
	Total	8	3	4	15

N sample= 15 respondent

We can see from the 9 performance pillars per district based on the top 5 rankings in each pillar and correlated with the output achievements that have been obtained. The following are the results of the 9-pillar SPLISS 2.0 questionnaire data for coaching paragliding in Central Java. In general, Central Java has the strength of a good coaching system at the national level. From 2018 to 2022, Central Java sent its athletes to the national team. This shows that Central Java has a good coaching system

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Districts with low categories for scores have low average scores in the 9 pillars of SPLISS, with a range of 28–47%. This correlates with the number of medals won in the last 7 years. The data shows that regions with strengths on several pillars have the opportunity to gain achievements in the championship. This becomes the basis for improving the existing policy system in each region in the future. Pillar performance and traffic score on SPLISS models can be seen in Table 2 below.

The research results show that the 8 urban districts sampled have average-sufficient in the sports development system found in 4 pillars: 1) financial support, 2) Foundation and participation, 3) Athlete & post career athlete support, 4) Training facilities. Based on research, only the city of Semarang and Banyumas Regency have an average sports

TABLE 2: Pillar Performance and traffic Score on SPLISS Models.

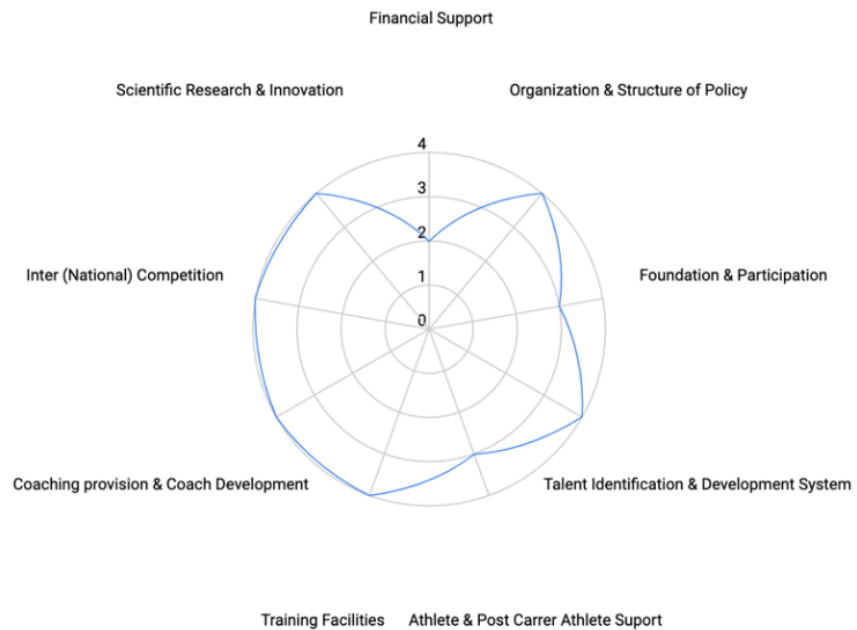
No	Pillar	Skor	Athlete		Coach		Directors		Score	%	Criteria
1	Financial Support	3	2.61	65.16%	2.67	66.67%	2.26	56.50%	2.51	62.78%	Medium
2	Organization & Structure of Policy	4	3.18	79.54%	3.26	81.41%	3.23	80.75%	3.22	80.57%	High
3	Foundation & Participation	3	2.88	71.88%	2.94	73.53%	2.49	62.25%	2.77	69.22%	Medium
4	Talent Identification & Development System	4	2.66	66.61%	3.27	81.84%	3.12	78.00%	3.02	75.48%	High
5	Athlete & Post Career Athlete Support	3	2.69	67.32%	2.75	68.67%	2.86	71.50%	2.77	69.16%	Medium
6	Training Facilities	3	3.07	76.82%	2.91	72.77%	2.97	74.25%	2.98	74.61%	Medium
7	Coaching provision & Coach Development	4	3.58	89.54%	2.73	68.30%	3.04	76.00%	3.12	77.95%	High
8	Inter (National) Competition	4	3.34	83.43%	3.63	90.87%	3.10	77.50%	3.36	83.93%	High
9	Scientific Research & Innovation	4	3.23	80.65%	3.23	80.72%	2.93	73.25%	3.13	78.21%	High

Data research, 2023

development pillar. There are 8 urban districts that have a sports development system with an average score, and as many as 8 urban districts have a sports development score that is still below the average.

In general, it can be concluded that the 9 pillars of sports development based on the SPLISS model are related to the performance of medals in each district. based on the overall 9-pillars, in general the strength of paragliding sports development in Central Java has strengths in organization & structure of policy (80,57%), Talent Identification & Development System (75,48%), coaching provision and coach development (77,95%), inter (national) competition (83,93%), and scientific research & innovation (78,21%). However, based on the results of the interviews, it was stated that on average the district revealed that the medium in the development of paragliding was in the financial support aspect. This can be used as a reference in further research that examines financial support in more detail. The performance of 9 pillars from the best of five district can be seen in the Figure 2 below:

The input component in the SPLISS pillar consists of pillar 1, they are financial support obtained from data on funding assistance from the government and the private sector. Judging from the research data, it shows that financial support by the government is still medium with all districts/cities in the last 5 years obtaining funds for 1 year.



**Figure 2:** The Performance of 9 Pillars from 5 Regency with the Best Sports Development System.

In the policy development component, the regions have relatively the same strength in the medium category. Comparatively, namely coaching development, financial support, and training facilities. Competition in the aspects of trainer development and participation as well as competition in Central Java have the opportunity to be able to compete in winning medals in the future.

**Pillar 1. Financial Support**

The overall number of medals won and the amount of money invested showed a strong linear connection [19]. There is still very little funding available in Central Java for paragliding coaching. The development system for athlete development centres has not been able to reach optimum conditions, and there is insufficient funding to address long-term athlete development needs. The government cannot control budget effectiveness and efficiency as a means of resolving financial constraints. One crucial component of the sports industry is financial support [20]

**Pillar 2. Governance, Organization and Structure of Police: An Integrated Approach**

The fundamental components of sports management are governance and policy frameworks, which control, oversee, and arrange all available resources for the accomplishment of sports policies [21]. Preferences, agreement, and forceful interventions are necessary for governance and policy institutions in order to manage resources as best

they can. The policy framework for paragliding hasn't done a great job of fostering a positive coaching environment [5, 10].

#### Pillar 3. Initiation, Foundation and Participation

The foundation of the paragliding sports coaching system is still quite flimsy, and the weakness lies at the introductory stage. Low engagement in marketing and grassroots initiatives due to poorly planned development centers' development pattern. According to the study, widespread participation has a big impact on elite athletes' success [10]. The development of high performance athletes is correlated with widespread engagement in the foundation and beginning phases[22]. The growth of paragliding foundations and participation is still quite small and restricted to specific regions. Paragliding is still not popular, thus a breakthrough in the province and each region is required to be able to boost participation [23].

In the early stages of sports development, foundation and involvement are crucial components. Participation in sports is cited as a benefit of major sport development and elite sporting events [24].

#### Pillar 4. Talent Identification & Talent Development System

In order to find athletes with genuine potential who can be developed into high-performance athletes through a talent development system [25], policies and systems pertaining to the development of sports talent require comprehensive management of an identification system that includes talent detection, talent orientation, talent scouting, talent transfer, and talent selection [26]. In Central Java, coaches and administrators still have a poor understanding of how to identify and nurture talent in paragliding.

#### Pillar 5. Athletic and post-career support

To guarantee and ensure the athletes' own lives, career support for athletes and post-athletes is required [27]. Athletes have rights to education, health care, and welfare that must be met when they become athletes. According to Gould & Whitley (2009), athletes have a high risk of burning out before attaining their peak performance, thus it's important to balance that risk with giving them the right tools and training.

In order to prevent them from having major problems in their life when they quit being athletes. Guarantees are required for health insurance, welfare insurance, adequate education guarantees, old age insurance, and other forms of support for athletes and post-athletes who require attention [28]. Not every area has paragliding athletes receiving career and post-career support.

#### Pillar 6. Training Facility



Achieving success in the training process for athletes depends in large part on the infrastructure and facilities meeting high standards [29]. In addition to facilitating participation, infrastructure and facilities must be able to produce an environment that is pertinent and of the highest calibre. In order to do this, the infrastructure and facility requirements for training centers at the national and local levels must be accurately mapped. Consequently, it will make it easier to fulfil quality requirements by establishing a system of uniformity for sports facilities and infrastructure [25].

The infrastructure and training programs that are implemented are significantly impacted by the regions' limited resources. Just thirty out of the twenty research samples have sufficient infrastructure and facilities for paragliding competition and training.

#### Pillar 7. Coaching Provision and Coach Development

At every stage and level of sports growth, the amount and quality of human resources—especially trainers—are crucial. People with the necessary aptitude and calibre must nurture and oversee both phases and levels. The training environment's ability to improve training quality will be determined by the quantity and quality of training provided as well as coach development [30].

The paragliding sport must establish a system of certification and standardization for coaches and sports personnel in order to fulfil the requirements of coaching. This includes conducting sports college affiliations with major sports branches in order to raise the calibre standards for graduates of sports coaching education programs and other sports personnel. Coach development and coaching services will be primarily dependent on how the procedures of the accreditation, certification, and standardization systems are put into place [31].

#### Pillar 8. (Inter) National Competition

National and regional competitions are not only necessary as a standard for training athletes, but they also need to be viewed as an indicator and a good thing for the long-term sustainability of sports development and macroeconomic growth [32]. To develop abilities, mental aspects, and sustain performance at the highest level, athletes must train and compete in a suitable ratio [33].

It is necessary to review the synchronization and analysis of competition networks from the perspectives of capitalization, development centers, competition ratios, and development phases [34]. It is envisaged that high performance through high level competition will be supported by the competition network system that is put into place.

#### Pillar 9. Scientific Research

Through research, development, and innovation initiatives, sports research and innovation as a pillar will support a scientific approach in all element of sports development [35]. Sports research offers a wide range of studies, which makes it possible to provide statistically significant findings that may be used to support established theories [36]. This has to do with how much research information, technical innovation, and data can be used to implement talent development [37]. The fundamental component of the scientific research pillar is the system/mechanism designed to gather and distribute scientific data in a methodical manner across a range of disciplines, including sports coaching, medicine, nutrition, psychology, physiology, biomechanics, and talent identification and development [10, 25].

## 4. CONCLUSION

Based on the study's findings, it can be said that the City of Banyumas and Grobogan in Central Java is the one where paragliding sports achievement is most prominent. As the nine pillars of SPLISS 2.0 demonstrate, there are five regions that gradually have evenly dispersed strength. Each of these regions has the capacity to grow and compete with other regions. In general, it can be concluded that the strength components of the 9 pillars in Central Java are the components of Financial Support, Facilities, and competition networks which have strengths in Central Java. In the components of participation, talent ID, and talent development, the strengths are in Banyumas and Grobogan district's. Based on the analysis of this study, it is envisaged that each region would produce paragliding athletes competing at the international level, giving Central Java pride and a sense of national pride. In the conclusion, you should restate the thesis and show how it has been developed through the body of the paper. Briefly summarize the key arguments made in the body, showing how each of them contributes to proving your thesis(12).

## ACKNOWLEDGEMENT

The author would like to express the utmost gratitude to Wahid Hasyim university for their support, which has made this research endeavor possible.

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