Sport Talent Identification of Elementary and Junior High School in Situbondo Regency

Mochamad Purnomo¹,* Donny Ardi Kusuma² Afif Rusdiawan³

¹,²,³ Department of Sport Coaching Education, Universitas Negeri Surabaya, Surabaya, Indonesia
*Corresponding author. Email: mochamadpurnomo@unesa.ac.id

ABSTRACT

One of the critical things in producing high-achieving athletes is identifying the talents and interests of the athletes. SportKompas is an application to find out someone's skills and interests in the sport. This study aimed to determine the sports talents and interests of elementary and junior high school students in the Situbondo Regency. This research is descriptive quantitative research with a survey method. The sample in this study was elementary and junior high school students scattered in the Situbondo district, with 925 students selected randomly. Students are spread out from 52 schools in 17 sub-districts in the Situbondo district. The test instrument used the sportskompas application. The results showed that the recommended sports in the Situbondo district are rugby (21.11%), football (18.59%), fencing (4.97%), golf (4.86%), triathlon (4.65%), volleyball (4.65%), basketball (4.43%), korfball (3.68%). Sports recommendation for the western region in the Situbondo is football, rugby, volleyball, baseball/softball, Tennis, Surfing, swimming, handball, archery. Sports recommendation for the central region is rugby, football, baseball/softball, tennis, table tennis, volleyball, swimming. And sport recommendation for the eastern part is rugby, football, badminton, bike racing, table tennis, volleyball.

Keywords: Situbondo, Talent identification, Sport, Sportkompas.

1. INTRODUCTION

Talent scouting program needs to be carried out because considering that athletes are the main determining factor in achieving achievement, choosing early age athletes is necessary; the process of attaining achievement can be optimally effective if the athletes being trained are selected athletes who have potential under the demands of specifications [1]. In the sport concerned, time and resources are used to process the training of talented athletes more efficiently. The goal of talent scouting is to predict a high degree of likelihood that a prospective athlete will be able and successful to complete a junior training program in the selected sport to measure with certainty in performing the next stage of training [2][3].

Sport talent identification is vital in determining appropriate sports for a person from an early age, and a more critical variable is motivation [4] [5]. Sports talent identification is finding potential participants in sports to become elite athletes later [6]. Talent identification will support the talent development process so that athletes with suitable talent identification can be well developed and realize talent potential [7].

Until now, sports talent identification was based only on expert coach observation, without test and measurement [4]. Sportkompas is a research-based orientation tool for determining talent. One of the modules in sportkompas is I-Like. I-Like is an interactive web application where children can find out which sports they like [8]. I-Like test In the SportKompas, the Sports figure asks questions about the movement preferences of the athlete/child. That way, the children can discover their favorite sports [9][10].

Situbondo Regency is an area that needs to develop its sports potential. It was proven in a regional routine event called Porprov in 2019, Situbondo district only won 33rd rank out of 38 city and district participants in East Java [11]. The obtained medals are minimal, consisting of 4 gold medals, one silver medal, and nine bronze medals with 27 points [11]. Situbondo Regency is located on the eastern tip of the northern part of Java Island with an area of 1,638.50 km² or 163,850 hectares. Situbondo Regency is divided into 17 sub-districts that extend from west to east with a total length of 150 km [12].

From the description above, the researcher wants to provide recommendations for sports development based on sports talent as measured using the sportkompas application for areas in the Stubondo district. To make it easier for researchers to determine recommendations for sports in the Situbondo district, the researchers divided the Situbondo district into three parts: the western, central, and eastern parts of Situbondo.

2. METHODS

This research is descriptive quantitative research with a survey method. The sample in this study was elementary and junior high school students scattered in the Situbondo district, with 925 students selected randomly. Students are spread out from 52 schools in 17 sub-districts in the Situbondo district.

Collecting research data through questionnaires sent via google form and answering several questions on the sportkompas application [13]. With the sportkompas application, each student will know the recommendations of the sports. After the data is collected, the school area data for students will be synchronized with sports recommendation data.

The data analysis used descriptive analysis consisting of the average value and the percentage of sports.
recommendations in the Situbondo district (western region, central region, eastern region).

3. RESULTS AND DISCUSSION

The results of this study are presented in a descriptive form to find out recommendations for sports in each region in the Situbondo district.

Table 1. The division of sub-districts in the Situbondo

| Sub-district | Western Region | Central Region | Eastern Region |
|--------------|----------------|---------------|----------------|
| Banyuglugur  | Panarukan       | Jangkar       |                |
| Besuki       | Panji           | Arjasa        |                |
| Bungatan     | Mangaran        | Asembagus     |                |
| Jatibanteng  | Situbondo       | Banyuputih    |                |
| Kendit       | Kapongan        |               |                |
| Mlandingan   |                |               |                |
| Suboh        |                |               |                |
| Sumbermalang |                |               |                |

From table 1, it can be seen that there are eight sub-districts in the western region of Situbondo district, five sub-districts in the central area of Situbondo district, and four sub-districts in the eastern province of Situbondo district.

In this study, the Situbondo district where the research data was collected was all districts with 17 communities within the Situbondo district. To make it easier for researchers, the 17 sub-districts are divided into three regions, namely the western, central, and eastern regions. For more details, see table 1.

Table 2. Total of school in this research

| Western Region | Total of school | Central Region | Total of school | Eastern Region | Total of school |
|----------------|----------------|---------------|----------------|---------------|----------------|
| Banyuglugur    | 2              | Panarukan     | 5              | Jangkar       | 2              |
| Besuki         | 2              | Panji         | 8              | Arjasa        | 4              |
| Bungatan       | 1              | Mangaran      | 4              | Asembagus     | 4              |
| Jatibanteng    | 1              | Situbondo     | 7              | Banyuputih    | 2              |
| Kendit         | 3              | Kapongan      | 2              |               |                |
| Mlandingan     | 2              |               |                |               |                |
| Suboh          | 2              |               |                |               |                |
| Sumbermalang   | 1              |               |                |               |                |
| **Total**      | **14**         | **26**        | **12**         |               |                |

From table 2 above, it can be seen that in the western sub-district of Situbondo district, there are 14 schools, 26 schools in the central region, and 12 schools in the eastern area.

3.2. Description of Total of Schools

Table 3. The result of the percentage of sports in the Situbondo

| No | Sports             | Total | Percentage (%) |
|----|--------------------|-------|----------------|
| 1  | Fencing            | 46    | 4.97           |
| 2  | Running Athletics  | 17    | 1.84           |
| 3  | Athletics Jump     | 2     | 0.22           |
| 4  | Athletics Throw    | 2     | 0.22           |
| 5  | Bike racing        | 23    | 2.49           |
| 6  | Baseball / Softball| 33    | 3.57           |
| 7  | Basketball         | 41    | 4.43           |
| 8  | Horse riding       | 3     | 0.32           |
| 9  | Handball           | 21    | 2.27           |
| 10 | Badminton          | 26    | 2.81           |
| 11 | Paddle             | 5     | 0.54           |
| 12 | Relay Run          | 1     | 0.11           |
| 13 | Golf               | 45    | 4.86           |

This research was conducted on students as respondents, with 925 students at 52 schools scattered in the Situbondo district. The western region, which consists of 14 schools, has 228 respondents, while the middle area, which consists of 26 schools, has 502 students who are respondents, and the eastern region, which consists of 12 schools, 195 students are respondents.

3.4. Descriptions of the percentage of sports

The results of the portion of marks are obtained from the number of sports recommendations based on the filling of respondents on the sportkompas application. The data is presented in table 3.
The percentage data for sports was obtained from 925 students in Situbondo district as respondents who filled in the questions on the sportkompas application. From these data, it is found that rugby is the most recommended sport with the highest percentage, 20.11% of the total 186 respondents who chose.

Figure 1: Pie chart of sports percentage in Situbondo

3.5. Descriptions of the percentage of sports in each region in Situbondo

After knowing the total percentage of sports in the Situbondo district, the data is synchronized with regional data, divided into three regions: west, center, and east. These data are presented in table 3.

Table 4. Percentage of sports recommendations in each region in the Situbondo

| Region         | School                      | Sports        | Recommended Sports | Percentage % |
|----------------|-----------------------------|---------------|--------------------|--------------|
| Western Region | SMP 1 Banyuglugur           | Rugby         | Football           | 21.43        |
|                | SMP 2 Banyuglugur           | Baseball/Softball | Rugby             | 21.43        |
|                | SMP 1 Besuki                | Football      | Volleyball         | 14.29        |
|                | SMP 3 Besuki                | Football      | Baseball/Softball  | 7.14         |
|                | SMP 1 Bungatan              | Volleyball    | Tennis             | 7.14         |
|                | SMP 1 Jatibanteng           | Archery       | Surfing            | 7.14         |
|                | SMP 1 Kendit                | Handball      | Swimming           | 7.14         |
|                | SMP 2 Kendit                | Rugby         | Handball           | 7.14         |
|                | SMP Satap Tambak Ukir       | Swimming      | Archery            | 7.14         |
|                | SMP 1 Mlandingan            | Rugby         |                    |              |
|                | SMP 2 Mlandingan            | Volleyball    |                    |              |
|                | SMP 1 Suboh                 | Football      |                    |              |
|                | SMP 2 Suboh                 | Tennis        |                    |              |
|                | SMP 1 Sumbermalang          | Surfing       |                    |              |
| Central Region | SMP 1 Panarukan             | Rugby         |                    | 42.31        |
From the table above, it can be seen that in the western region of Situbondo, the most consecutive recommendations are football (21.43%), rugby (21.43%), volleyball (14.29%), baseball/softball (7.14%), tennis (7.14%), Surfing (7.14%), swimming (7.14%), handball (7.14%), archery (7.14%). These results can also be seen in Figure 3.

In the central part, the results obtained consecutively from the large portion of sports are rugby (42.31%), football (34.62%), baseball/softball (7.69%), tennis (3.85%), table tennis (3.85%), volleyball (3.85%), swimming (3.85%). These results can also be seen in Figure 4.

**Figure 2** Pie chart of sports percentage in the western region

**Figure 3** Pie chart of sports percentage in the central region

In the eastern area, there are five recommended sports. The results of the consecutive recommendations from the large portion of sports are rugby (33.33%), football (25.00%),

---

| Eastern Region | SDN 1 Pesanggrahan | Rugby | Rugby | 33.33 |
|----------------|--------------------|-------|-------|-------|
| SMP 1 Jangkar  | Volleyball         | 16.67 |
| SMP 1 Arjuna   | Football           | 25.00 |
| SMP 2 Arjasa   | Badminton          | 8.33  |
| SMP 3 Arjuna   | Football           | 8.33  |
| SMP 4 Arjasa Satap | Table Tennis  | 8.33 |
| SMP 1 Asembagus | Rugby             |       |
| SMP 1 Banyuputih | Rugby            |       |
| SMP 3 Asembagus | Football          |       |
| SMP 4 Asembagus | Badminton         |       |
| SMP 2 Banyuputih | Rugby            |       |
| SMP 3 Banyuputih | Bike Racing       |       |
badminton (16.67%), bike racing (8.33%), table tennis (8.33%), volleyball (8.33%). can also be seen in Figure 5

| Sports         | Percentage |
|----------------|------------|
| Table Tennis   | 8.33%      |
| Badminton      | 16.67%     |
| Bike Racing    | 8.33%      |
| Football       | 33.33%     |
| Rugby          | 33.33%     |

Table Tennis, 8.33
Volleyball, 8.33
Football, 1, 25
Rugby, 33.33
Badminton, 16.67

Figure 4 Pie chart of sports percentage in the eastern region

3.6. Sports Recommendation in Situbondo

Based on the study results, it was found that rugby got the highest percentage, 21.11% of the 186 respondents who chose by sportkompas application. The following sports recommendation is football with 18.59%, fencing 4.97%, golf 4.86%, triathlon 4.65%, volleyball 4.65%, basketball 4.43%, korfball 3.68%, and so on (see table 4 and figure 1).

Talent identification is vital to determine the potential of children from an early age so that they can provide recommendations for appropriate sports to be developed [14]. Bulgaria’s success in winning a medal at the 1976 Olympics is one example of identifying role talent. 80% of Bulgarian medalists were the result of applied talent identification. Likewise, Romania and East Germany at 1972, 1976, and 1980 Olympics. Their success is because they have been implementing talent identification since the 1960s [15].

Screening and identification systems of talents in children are still debated. All are still looking for the right and effective way to find someone’s sports talent [16]. Participation in sports training at a young age is associated with selecting athletes with specific prerequisites and the development of certain anthropometric, motor, and physiological characteristics of a particular sport [17]. Based Muniroglu (2018), genetics, socio-cultural structure, economics, and education is a factor that needs attention in talent identification. Meanwhile, Bompa & Buzzichelli (2015) stated that the factors influencing talent identification were motor capacity, psychological capacity, and biometric anthropometric. However, in this study, researchers used sportkompas as a test instrument to determine sports talent in elementary and junior high school children. Sportkompas is an interactive web application that can provide sports recommendations based on participants’ answers [9]. The ‘I like’ module of the Sportkompas is an App that takes the child on a space excursion through sports planets to identify sports within the child’s sphere of interest, based on ‘exercise preferences’ [17].

3.7. Sports Recommendation in Each Region in Situbondo

The results showed that from 17 sub-districts in Situbondo, which were divided into three western, central and eastern regions, sports recommendation data in the western region were obtained from the largest percentage of football (21.43%), rugby (21.43%), volleyball (14.29%), baseball/softball (7.14%), tennis (7.14%), Surfing (7.14%), swimming (7.14%), handball (7.14%), archery (7.14%). While in the central region, sports recommendation data were obtained from a large percentage of consecutively, namely rugby (42.31%), football (34.62%), baseball/softball (7.69%), tennis (3.85%), table tennis (3.85%), volleyball (3.85%), swimming (3.85%). The eastern region also obtained sports recommendation data in a row from a large percentage, namely rugby (33.33%), football (25.00%), badminton (16.67%), bike racing (8.33%), table tennis (8.33%), volleyball (8.33%).

Situbondo district covers stretches from west to east with a distance of about 150 km [12]. To make it easier, the 17 sub-districts are divided into three regions: the western region consisting of 8 sub-districts and 14 schools, the middle part consisting of 5 sub-districts and 26 schools, and the eastern region composed of 4 sub-districts and 12 schools. The total of all respondents in all schools is 925 students. The percentage of sports recommendations for each student who enters each region is calculated then the highest percentage is looked for as the primary recommendation for sports in that region.

It is hoped that knowing sports talent in each region in Situbondo can help sports coaches to develop sports talents for their athletes. Because according to li et al. (2014), the environment is one factor that determines success in developing sports talent [20].

4. CONCLUSION

The recommended sports in the Situbondo district are rugby, fencing, golf, triathlon, volleyball, basketball, and korfball. But sports recommendations for the western region in the Situbondo are football, rugby, volleyball, baseball/softball, tennis, Surfing, swimming, handball, archery. Sports recommendations for the central region are rugby, football, baseball/softball, tennis, table tennis, volleyball, swimming. And sport recommendations for the eastern part are rugby, football, badminton, bike racing, table tennis, volleyball.

ACKNOWLEDGMENTS

The authors would like to thank the KONI Situbondo Regency for their cooperation and Unesa PNBP, which has supported the funding of this research.

REFERENCES

[1] E. Rini Sukamti, N. Primasoni, and R. Budiarti, “The Effectiveness Test of Artistic Gymnastic Talent Scouting Selection Model-Based Application,” Adv. Heal. Sci. Res., vol. 7, no. Irish 2018, pp. 68–70, 2019, DOI: 10.2991/ich-18.2019.16.

[2] A. E. Siahaan, A. Sinulingga, and Novita, “Sport Talent for Junior School in District Silou Kahean, Simalungun Regency,” Proceeding 1 Unimed Int. Conf. Sport Sci.
[3] J. Baker, S. Cobley, J. Schorer, and N. Wattie, “Talent Identification and Development in Sport,” in *Routledge Handbook of Talent Identification and Development in Sport*, 2018.

[4] C. E. B. Gonçalves, L. M. L. Rama, and A. B. Figueiredo, “Talent identification and specialization in sport: An overview of some unanswered questions,” *Int. J. Sports Physiol. Perform.*, vol. 7, no. 4, pp. 390–393, 2012, doi: 10.1123/ijspp.7.4.390.

[5] M. I. Rahmatullah, K. A. Pulungan, A. Malik, and K. Amrulloh, “The Effectiveness Of Sports Talent Classification Since Early Age,” *Proceeding Int. Conf. Child-Friendly Educ.*, pp. 378–380, 2018.

[6] S. T. Cotterill *et al.*, “Challenges and [Possible] Solutions to Optimizing Talent Identification and Development in Sport,” *HYPOTHESIS AND THEORY*, p. 15, 2020, DOI: 10.3389/fpsyg.2020.00664.

[7] R. T. Williams, M., “Talent identification and development in soccer: An update and contemporary perspectives,” *J. Sports Sci.*, vol. 38, no. 11–12, pp. 657–667, 2000, DOI: 10.1080/02640414.2020.1773075.

[8] “Youth sports talent detection & identification. Why you should have a look at Ghent University's products & services. - Victoria - Ghent University,” https://www.victoris.be/sport-talent-detection-identification/ (accessed Dec. 03, 2020).

[9] “SportKompas I Like - SportaMundi_wiki_en.” https://wiki-en.sportamundi.com/index.php?title=SportKompas_1_Like (accessed Dec. 03, 2020).

[10] J. Pion, V. Segers, and M. Lenoir, “Het Vlaams Sportkompas: een generieke testbatterij voor talentdetectie, -identificatie en -oriëntatie,” vol. 2014, pp. 2–209, 2014, [Online]. Available: https://www.sport.vlaanderen/media/1215/141001_ag23_het-vlaams-sportkompas_artikel.pdf.

[11] “Berikut Ini Klasemen Akhir Perolehan Medali Porprov VI Jatim 2019 | BeritaBojonegoro.com.”

https://beritabojonegoro.com/read/17765-berikut-inal-klasemen-akhir-perolehan-medali-porprov-vi-jatim-2019.html (accessed Dec. 03, 2020).

[12] “Kabupaten Situbondo - Wikipedia bahasa Indonesia, ensiklopedia bebas.” https://id.wikipedia.org/wiki/Kabupaten_Situbondo (accessed Dec. 03, 2020).

[13] I. Oktavianus *et al.*, “Identifikasi Bakat Olahraga Bolabasket Anak Usia 6-10 Tahun Berdasarkan Instrumen I Do Sport Kompas,” *J. Sport. Sainitika*, vol. 6, no. 1, pp. 76–83, 2021.

[14] M. Kilger and M. Börjesson, “Searching for Talent: The Construction of Legitimate Selection in Sports,” *Scand. Sport. Stud. Forum*, vol. 6, pp. 85–105, 2015.

[15] A. Abbott, D. Collins, R. Martindale, and K. Sowerby, “Talent Identification and Development : An Academic Review A report for sportscotland by The University of Edinburgh,” *Sport Scitt.*, no. August, pp. 1–103, 2002.

[16] “Talent detection programs in sport: the questionable use of psychological measures. - Free Online Library.” https://www.thefreelibrary.com/Talent+detection+programs+in+sport%3A+the+questionable+use+of+-a0299990129 (accessed Dec. 04, 2020).

[17] J. Pion, *Sustainable Investment in Sports Talent: The Path to the Podium Through the School and Sports Club*, no. April. HAN University of Applied Sciences Press, 2017.

[18] S. Muniroglu, “An Overview of the Important Points of Talent Selection in Sports,” *Res. Investig. Sport. Med.*, vol. 3, no. 3, 2018, DOI: 10.31031/rism.2018.03.000561.

[19] T. Bompa and C. Buzzichelli, *Periodization Training for Sports-3rd Edition*. 2015.

[20] C. Li, C. K. J. Wang, and D. Y. Pyun, “Talent Development Environmental Factors in Sport: A Review and Taxonomic Classification,” *Quest*, vol. 66, no. 4, pp. 433–447, 2014, DOI: 10.1080/00336297.2014.944715.