



Implementation Of The Sport Search Method In Talent Scouting For Prospective Athletes In Polewali Mandar Regency

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ABSTRACT

Talent scouting requires an initial description of students' physical characteristics and motor performance to guide access to suitable sports. This study aimed to identify sports recommendations for prospective athletes in Polewali Mandar Regency using Sport Search. A descriptive quantitative survey was conducted among seventh-grade junior high school students. The analysis included 35 students aged 11–14 years with complete measurement and classification records. Ten assessments covered standing height, sitting height, body mass, arm span, tennis-ball throwing and catching, basketball throw, vertical jump, agility running, 40-m sprint, and the multistage fitness test. Data were summarized using frequencies, percentages, means, and sample standard deviations. Mean standing height was 142.31 ± 7.60 cm, body mass was 40.00 ± 9.93 kg, and vertical jump was 37.34 ± 2.74 cm. Diving accounted for 21 students (60.0%) in the Overall Top 10 output, followed by high jump for nine students (25.7%). Within the sport groups, the most frequent recommendations were high jump in athletics (85.7%), taekwondo in combat sports (40.0%), gymnastics in individual sports (48.6%), table tennis in racket/stick sports (68.6%), and volleyball in team/ball sports (42.9%). The findings provide an initial map of sports recommendations for the assessed students. Follow-up assessment of sport-specific skills, interests, maturation, and training opportunities is needed before making athlete selection decisions.

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1. INTRODUCTION

Athlete coaching requires a process that connects the recognition of potential with learning and training opportunities. Initial measurement can help teachers and coaches recognize student characteristics, but coaching decisions also require an understanding of the goals of each stage. Talent detection, identification, development, and selection have different and interconnected emphasises. These distinctions are necessary so that the results of the initial examination are not directly treated as a determinant of future achievement (1).

At school age, general movement skills provide information about how students perform diverse physical tasks. Throwing, catching, jumping, and running skills can be used to construct an initial profile of ability. Systematic reviews show that tests of general movement skills have the potential to aid the identification process, although inter-study findings are inconsistent and their predictive values require longitudinal testing (2). Thus, ability mapping is a first step in expanding coaching options that suit student characteristics.

Sport Search combines anthropometric characteristics with the results of physical and movement ability tests to produce sports recommendations. This device uses ten measurements, namely height, sitting height, weight, arm span, tennis ball catch, basketball throwing, upright jump, agility running, 40-meter sprint, and multistage running (3). The presentation of results in sports groups allows the same profile to be read from



several angles of sports needs. Its use needs to be followed by an explanation of the meaning of output and the limits of its application.

The application of Sport Search in Indonesian schools shows that the results of recommendations can be diverse and not necessarily in accordance with students' interests. Setiadi and Soenyoto found a discrepancy between interests and recommendations in most of the junior high school students they studied (4). The findings show the need to place test results together with information about student choices and access to training. The output of the device can be the material for coaching dialogue, not the only basis for determining the branch that must be pursued.

The need for such mapping is relevant for Polewali Mandar Regency, West Sulawesi. Screening through schools can help connect students with sports teachers, parents, and coaches. At the same time, differences in biological growth and maturity need to be taken into account when comparing students' abilities in adolescence. Adjacent calendar ages do not always indicate the same stages of biological development, so the interpretation of abilities requires an individual context (5).

The problem addressed in this study is the need for a measurable picture of the recommendations of sports branches for grade VII students in Polewali Mandar Regency. We map the results of the Sport Search based on anthropometric profiles and physical abilities and describe the distribution of outputs in each branch group. The contribution of the research lies in the provision of initial information for the development of the assessed student group. The results are placed in a development process that requires continuous monitoring, in accordance with the dynamic talent identification challenge (6).

2. IMPLEMENTATION METHOD

Design and participants

The study used a quantitative descriptive approach with a survey method through tests and measurements. The target population was grade VII junior high school students in Polewali Mandar Regency. Participant selection used gradual sampling. The analysis included 35 students who had a recap of ten measurements and Sport Search outputs. The age range of participants was 11–14 years. The unit of analysis was students, while the branch name in each category was a classification output for the same student.

Measurements were taken to describe characteristics at the time of assessment. The study did not provide an exercise treatment and did not compare intervention groups. Participation considered students' willingness with a 24-hour consideration time. Identities on the data recap were used to match measurement results to device outputs, while article presentations used aggregated data.

Measurement instruments and procedures

Four anthropometric measurements include height, sitting height, weight, and arm span. Height is measured barefoot in an upright standing position. Sitting height is measured in a sitting position with an upright body. Weight is measured using a scale without weighty equipment. Arm span is measured from the tip of the middle finger of one hand to the tip of the middle finger of the other hand when both arms are extended horizontally. Units of length use centimeters and weight in kilograms.

Eye-hand coordination was assessed using a tennis ball catch throw to a target with a diameter of 30 cm with a barrier distance of 2.5 meters from the wall. Participants were given ten opportunities to throw and catch with the same hand and ten opportunities with different hands. Throws that hit the target and were caught correctly were awarded one point, so the maximum score was 20. Basketball throws were carried out in a sitting position with straight legs and backs against the wall. The best distance of the two attempts was recorded in meters.

Vertical jump was measured as the difference between the height of the touch when jumping and the height of the standing achievement, using the best results of the two attempts. Agility was assessed by running back and forth on a five-meter track for five cycles. Sprint was performed on a 40-meter track with a standing start. For both running tests, the best time of the two attempts was recorded in seconds. The lower time indicated faster task completion.

Endurance was assessed using a multi-stage run on a 20-meter trajectory with a predetermined sound rhythm. The test was stopped when participants twice in a row did not reach the line according to the rhythm. Achievement was recorded as a successfully completed pair of levels and shuttles. The pair was maintained as a graded result and was not treated as a decimal number or converted to aerobic capacity without a corresponding equation. Measurements were made using a length measuring device, scales, tennis balls, basketballs, stopwatches, marker cones, and running rhythm devices.

Sport Search results processing and data analysis

The measurement results are entered into Sport Search along with the participant characteristics required by the device. Outputs are grouped into Overall Top 10, Athletics, Combative, Individual, Racquet/Stick, Team/Ball, Water, and Other Sport. The Overall Top 10 analysis uses one branch name listed for each student in that category. In each other group, one output per student is tabulated to illustrate the distribution of recommendations.

The continuous measurement variables were summarized using averages, sample standard deviations, and minimum and maximum values. The distribution of recommendations was presented as a frequency and percentage with a denominator of 35 students in each group. The percentage was calculated from the frequency divided by the number of students, then multiplied by 100 and rounded to one decimal number. The achievement of multistage running was presented as a range of level/shuttle pairs. Because the same students received output in several groups, the frequencies between groups were not summed into the number of different athletes.

3. RESULTS AND DISCUSSION

Anthropometric measurement results and physical ability

A total of 35 students were included in the analysis, consisting of two 11-year-old students, 26 12-year-old students, six 13-year-old students, and one 14-year-old student. The average age was 12.17 ± 0.57 years. The average height reached 142.31 ± 7.60 cm and the arm span was 146.86 ± 7.13 cm. The weight ranged from 28–80 kg with an average of 40.00 ± 9.93 kg. A summary of measurements is shown in Table 1.

Table 1. Anthropometric characteristics and results of students' physical tests

Parameter	Rerata $\pm$ SD	Minimum	Maximum
Age (years)	12.17 ± 0.57	11,00	14,00
Height (cm)	142.31 ± 7.60	130,00	155,00
Sitting height (cm)	$70,94 \pm 4,18$	65,00	78,00
Weight (kg)	$40,00 \pm 9,93$	28,00	80,00
Arm span (cm)	$146,86 \pm 7,13$	135,00	162,00
Tennis ball catch (points)	$9,11 \pm 2,23$	6,00	14,00
Basketball throw (m)	$3,36 \pm 0,63$	2,30	4,40
Vertical jump (cm)	$37,34 \pm 2,74$	29,00	42,00
Agility running (seconds)	$22,28 \pm 2,93$	18,08	30,58
Run 40 meters (sec)	$9,21 \pm 1,36$	6,40	11,47
Lari multistage (level/shuttle)	—	1/5	7/2

Note: n = 35. SD = sample standard deviation. Multistage run achievement is a level/shuttle pair, so it is not counted as a decimal number. Lower run time indicates faster test completion.

In the motion test, the average score of the tennis ball catch was 9.11 ± 2.23 from a maximum of 20 points. The basketball throwing distance reached 3.36 ± 0.63 meters, while the upright jump reached 37.34 ± 2.74 cm. The average agility running time was 22.28 ± 2.93 seconds and the 40-meter dash was 9.21 ± 1.36 seconds. The achievement of multistage running ranged from level 1 shuttle 5 to level 7 shuttle 2. This distribution showed a variation in ability in the group of students who underwent measurements.

Overall Top 10 output distribution

In the Overall Top 10 category, diving was the highest output, with 21 students or 60.0%. High jump was next with nine students or 25.7%. Long & T. Jump and sprint running each included two students or



5.7%, while trampolining included one student or 2.9%. The distribution is shown in Figure 1. These five branch names were recorded in the Overall Top 10 category for the group analyzed.

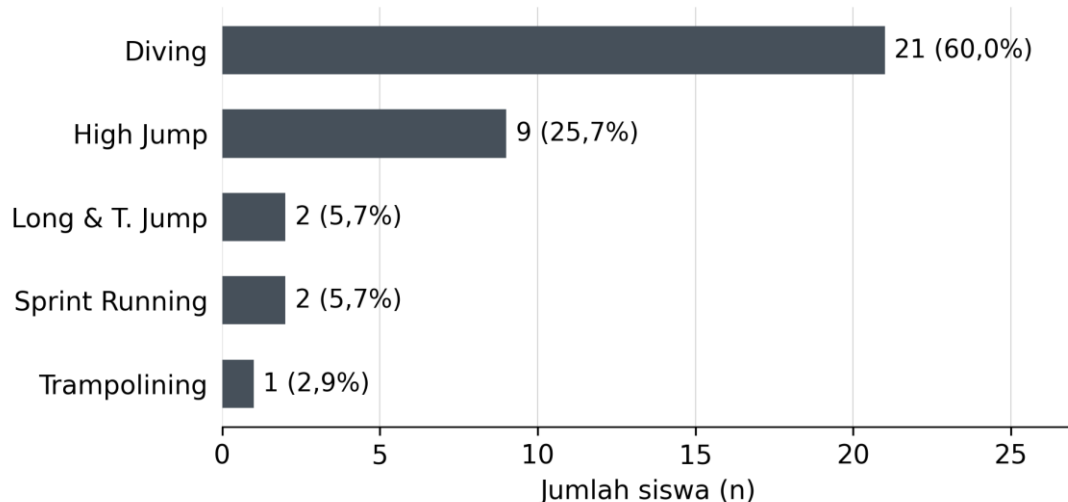


Figure 1. Distribution of outputs in the Overall Top 10 category for 35 students. Each student is counted once. The label at the end of the bar shows the frequency and percentage of the 35 students; the branch name follows the output of the device.

Recommendations by sports group

In the Athletics group, high jump included 30 students (85.7%), sprint running three students (8.6%), and Long & T. Jump two students (5.7%). In the Combative group, taekwondo was the most recommended with 14 students (40.0%), followed by fencing with 11 students (31.4%). Judo and karate-do each included five students (14.3%). Details of all groups are shown in Table 2.

Table 2. Distribution of recommendations by sports group

Groups	Branch recommendations	n	Percentage (%)
Athletics	High Jump	30	85,7
Athletics	Sprint Running	3	8,6
Athletics	Long & T. Jump	2	5,7
Combative	Taekwondo	14	40,0
Combative	Fencing	11	31,4
Combative	Judo	5	14,3
Combative	Karate-do	5	14,3
Individual	Gymnastics	17	48,6
Individual	Trampolining	10	28,6
Individual	Archery	6	17,1
Individual	Cycling	1	2,9
Individual	Powerlifting	1	2,9
Racquet/Stick	Table Tennis	24	68,6
Racquet/Stick	Indoor Cricket	11	31,4
Team/Ball	Volleyball	15	42,9
Team/Ball	Handball	10	28,6
Team/Ball	Australian Football	6	17,1
Team/Ball	Soccer	4	11,4
Water	Diving	35	100,0
Other Sport	Baton Twirling	35	100,0

Note: the denominator of each group is 35 students. The same student receives output on multiple groups. Group and branch names follow the Sport Search output. The percentage amount may differ slightly from 100% due to rounding.

The Individual Group was dominated by gymnastics with 17 students (48.6%), followed by trampolining with ten students (28.6%) and archery with six students (17.1%). Cycling and powerlifting each included one student (2.9%). In Racquet/Stick, table tennis included 24 students (68.6%) and indoor cricket 11 students (31.4%). In Team/Ball, volleyball included 15 students (42.9%), handball ten students (28.6%), Australian football six students (17.1%), and soccer four students (11.4%). Water produced diving for 35 students (100.0%), while Other Sport produced baton twirling for 35 students (100.0%).

The meaning of recommendations for talent coaching

The dominance of diving in the Overall Top 10 showed a tendency for device output for a combination of characteristics of the students tested. The significance of these results differs from the determination that 60.0% of students will definitely succeed in jumping athletes. The study did not test jumping skills, match performance, or exercise progress after measurement. The output provides an initial direction that needs to be examined through branch-specific assessments as well as opportunities to try appropriate exercises.

The diving results were also found to be the dominant recommendation in the application of Sport Search by Setiadi and Soenyoto (4). The similarity of the output names in the two groups of students shows that the results of the device need to be read together with the context of measurement and interest. In this study, interests have not been assessed with their own instruments, so the suitability between the recommendations and the students' choices cannot be determined. Follow-up examinations need to involve students so that coaching decisions take into account their acceptance and readiness to participate in the exercise.

The difference between diving of 60.0% in the Overall Top 10 and 100.0% in Water shows the importance of paying attention to the output category. The second figure only describes the recommendations within the water sports group. The single output in Water and Other Sport does not measure the skill excellence of all students in the branch. Therefore, teachers and coaches need to explain the category they are reading to when presenting the results to students and parents.



Recommendations for high jump, gymnastics, table tennis, and volleyball provide several options for further examination. The tendency in a group has not explained which attributes are the most decisive because this study did not analyze the weight of the algorithm or the relationship of each test to the output of the branches. Thus, the high frequency of high jumps is indirect evidence that height or upright jump is the sole cause of the classification results. The measurement profile is still read as a whole.

Advanced coaching and interpretation limits

Initial mapping needs to be followed by observation of specific skills, learning progress, and exercise responses. A review of racquet sports supports assessments that combine physiological, technical, psychological, and tactical characteristics, although the additional benefits of a multidimensional approach are still influenced by variations in the study design (7). Of relevance to this study is the need to expand the information after initial recommendations have been obtained. Anthropometric measurements and physical tests do not yet cover all skill demands in the recommended branches.

Differences in biological maturity are also taken into consideration in the age range of 11–14 years. Height, strength, and ability to complete physical tasks may change during growth. Maturity has not been measured in this study, so temporary advantages in the test cannot be separated from the individual's developmental process. Coaching approaches that consider maturity need to remain flexible to changing abilities and needs of each student (5).

Initial test results should not be used to permanently restrict students to a single sport. A meta-analysis of talent promotion programs showed that the relationship between age of engagement and junior and senior achievement may differ (8). The findings support caution when linking early success to long-term success. Schools can provide opportunities to try out multiple branches, then monitor skills, interests, and sustainability of participation before narrowing down the direction of coaching.

The practical implication of this study is that it provides a basis for bringing test recommendations together with facilities, trainers, and extracurricular activities. Branches that do not have access to local training require a feasibility assessment before being included in the program. These examinations are a follow-up step, not the results that have been tested in this survey. The involvement of teachers, parents, and coaches can help create realistic practice opportunities for students.

The main limitations of the study are the small group size, assessment in one period, and the absence of specific skills testing and achievement monitoring. The details of the school selection stage and gender composition have not allowed for the analysis of representation or comparison of subgroups. The norms of the device also require an examination of their suitability with the context of Indonesian students. The results of the study are therefore used to describe the group measured and are not interpreted as the prevalence of talent of all adolescents in Polewali Mandar Regency.

Follow-up research needs to link initial recommendations to the results of the sport evaluation after students have had the opportunity to practice. Repeated measurements can show whether the profile changes with growth and experience. Recording of interests, access to training, and skill advancement can reinforce the use of test results in coaching. In this way, identification becomes part of an ongoing development process (6).

4. CONCLUSION

Sport Search produced a variety of sports recommendations in 35 junior high school grade VII students in Polewali Mandar Regency. Diving dominated the Overall Top 10 category with 21 students (60.0%). The most recommendations in other groups included high jump, taekwondo, gymnastics, table tennis, and volleyball. This mapping provided initial information to direct examinations and coaching opportunities for the assessed students.

Recommendations need to be complemented by assessments of specific skills, interests, biological maturity, and access to training. Repeated measurements are needed to assess changes in ability as well as the relationship of recommendations to achievement development. Athlete selection decisions should be made using a combination of such information and preserving students' opportunities for development.



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