

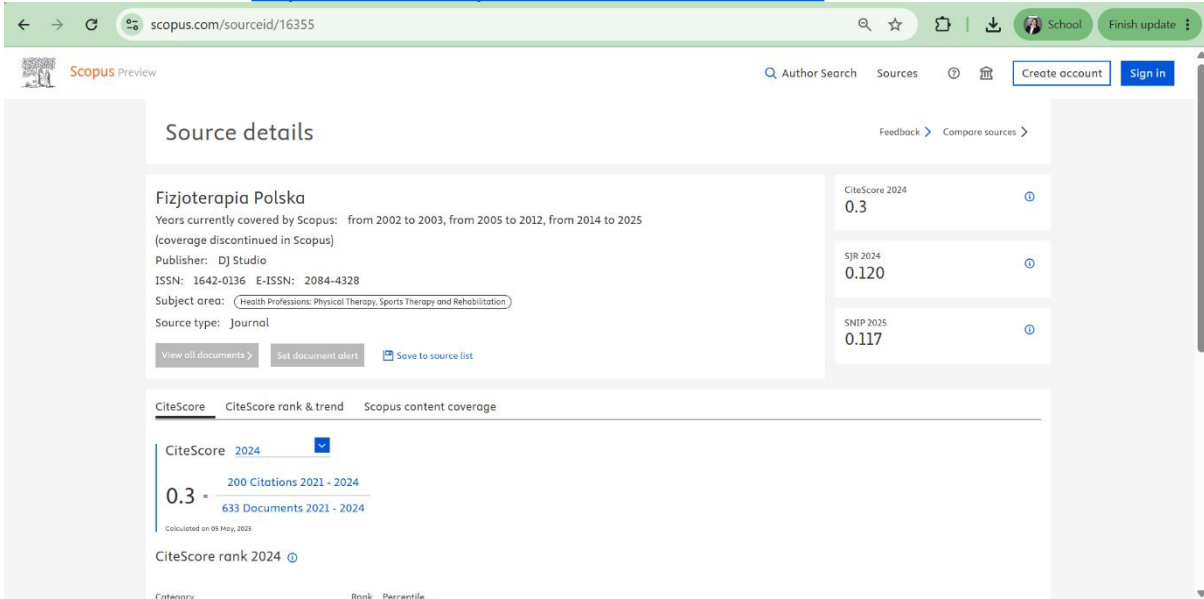
BUKTI KORESPONDENSI

ARTIKEL JURNAL INTERNASIONAL

Judul : Development of Talent Scouting for Judo Sports Aged 10–13 Years
Jurnal : Fizjoterapia Polska, 2025; 25(3); 156-172
Penulis : Danarstuti Utami, Yustinus Sukarmin, Widiyanto, Agus Pribadi, Priska Dyana Kristi, Victor Novianto, Amran, Reza Adityas Trisnadi, Rafid Abiyyu Tridita

NO	PERIHAL	TANGGAL
1	Bukti submit manuscript	10 Maret 2025
2	Konfirmasi Salinan manuscript telat diterima oleh jurnal	11 Maret 2025
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5	Bukti konfirmasi manuscript telah dibaca dan dikoreksi, serta setuju untuk dipublikasikan dengan positive feedback dari reviewer dan akan dipublikasikan	24 April 2025
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The screenshot shows the Scopus 'Source details' page for 'Fizjoterapia Polska'. The page includes a header with navigation links like 'Author Search', 'Sources', 'Create account', and 'Sign in'. The main content area displays the journal's name, its years of coverage (2002-2003, 2005-2012, 2014-2025), publisher (DJ Studio), ISSN (1642-0136), and E-ISSN (2084-4328). It also lists the subject area as 'Health Professions: Physical Therapy, Sports Therapy and Rehabilitation' and the source type as 'Journal'. On the right, a sidebar shows CiteScore 2024 (0.3), SJR 2024 (0.120), and SNIP 2025 (0.117). Below this, a 'CiteScore' section shows a CiteScore of 0.3 for 2024, based on 200 citations and 633 documents from 2021 to 2024. The page also features tabs for 'CiteScore rank & trend' and 'Scopus content coverage'.

Source details

Fizjoterapia Polska

Years currently covered by Scopus: from 2002 to 2003, from 2005 to 2012, from 2014 to 2025 (coverage discontinued in Scopus)

Publisher: DJ Studio

ISSN: 1642-0136 E-ISSN: 2084-4328

Subject area: Health Professions: Physical Therapy, Sports Therapy and Rehabilitation

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CiteScore 2024

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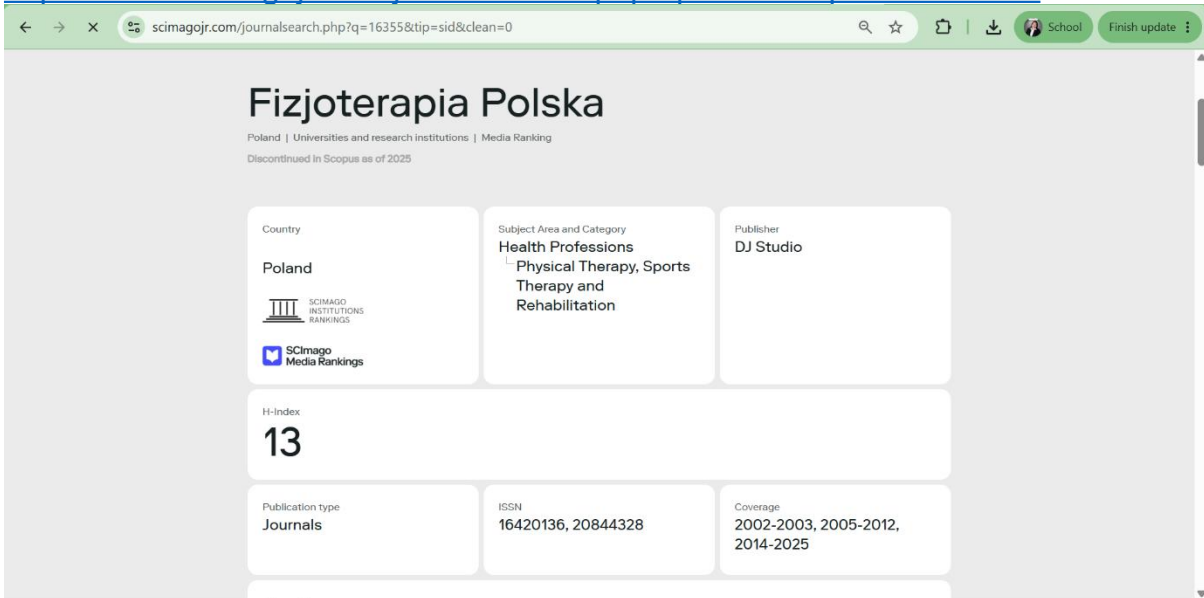
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CiteScore rank 2024

Category Rank Percentile

URL H-Index Journal:

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The screenshot shows the Scimago Journal Search results for 'Fizjoterapia Polska'. The page features a header with navigation links like 'School' and 'Finish update'. The main content area displays the journal's name, its location (Poland), and its status as 'Discontinued in Scopus as of 2025'. Below this, a grid of information boxes provides details about the journal: Country (Poland), Subject Area and Category (Health Professions, Physical Therapy, Sports Therapy and Rehabilitation), Publisher (DJ Studio), H-index (13), Publication type (Journals), ISSN (16420136, 20844328), and Coverage (2002-2003, 2005-2012, 2014-2025). The page also includes logos for Scimago Institutions Rankings and Scimago Media Rankings.

Fizjoterapia Polska

Poland | Universities and research institutions | Media Ranking

Discontinued in Scopus as of 2025

Country

Poland

Subject Area and Category

Health Professions

Physical Therapy, Sports Therapy and Rehabilitation

Publisher

DJ Studio

H-index

13

Publication type

Journals

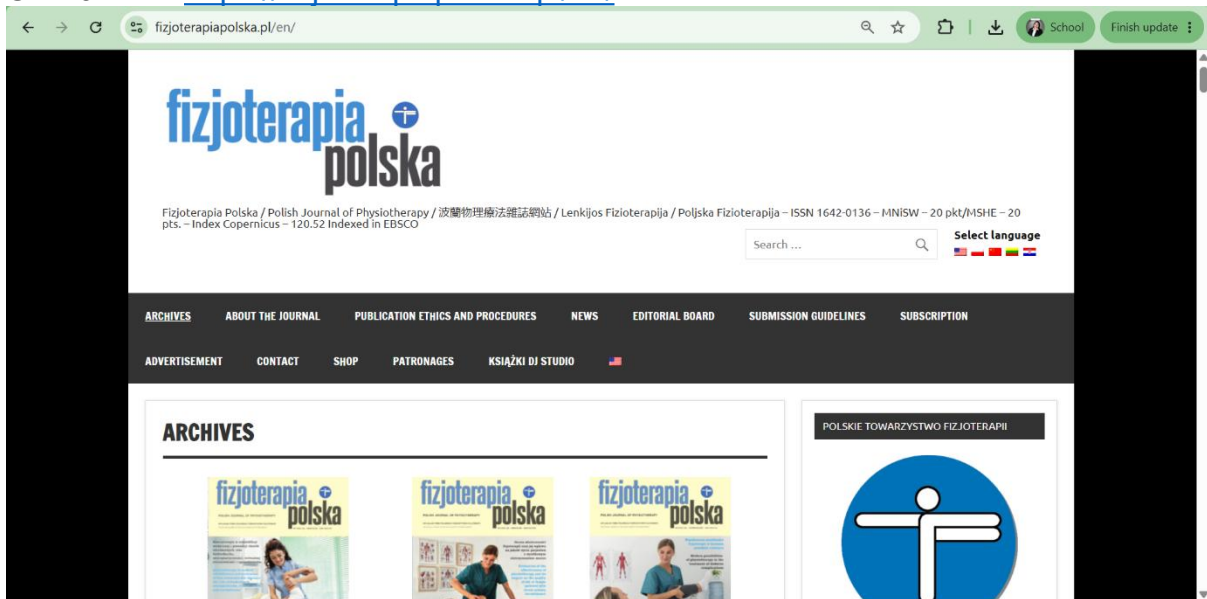
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16420136, 20844328

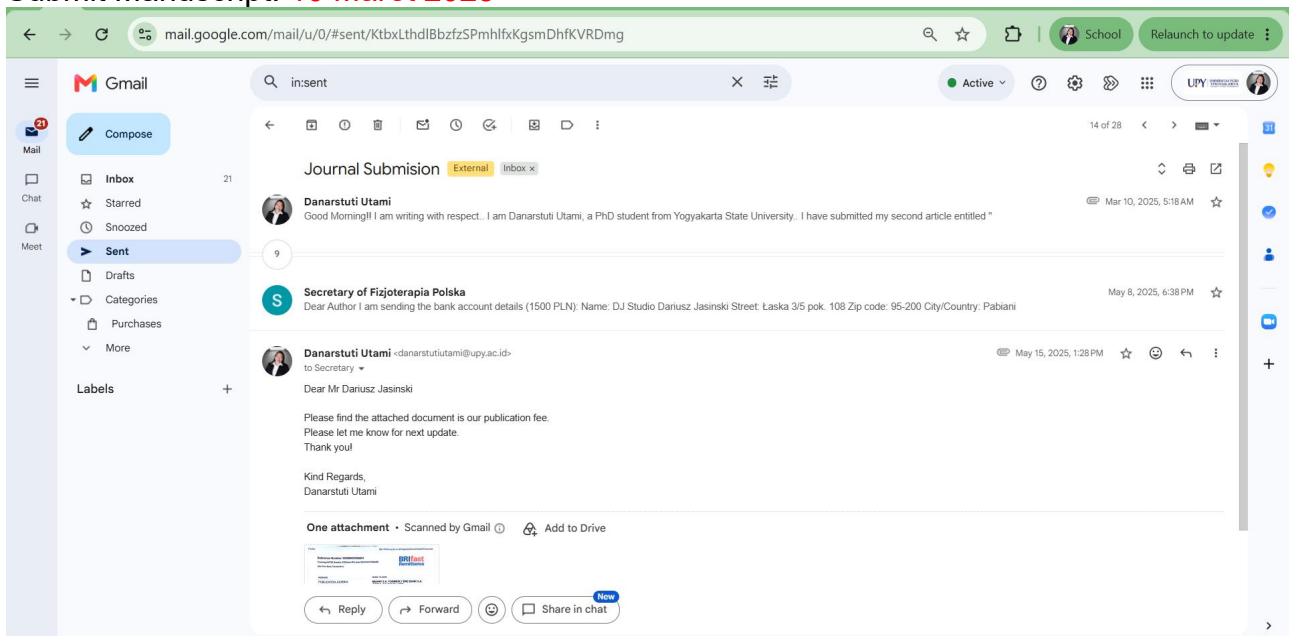
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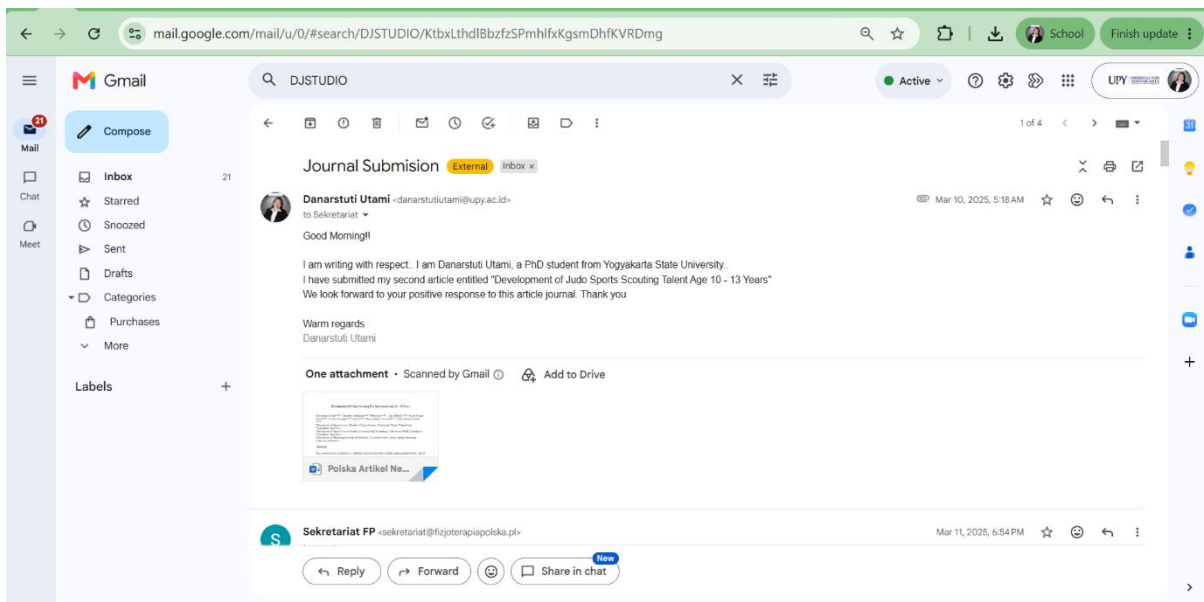
2002-2003, 2005-2012, 2014-2025

URL Jurnal: <https://fizjoterapiapolska.pl/en/>



Submit Manuscript: **10 Maret 2025**





Good Morning!!

I am writing with respect.. I am Danarstuti Utami, a PhD student from Yogyakarta State University.. I have submitted my second article entitled "Development of Judo Sports Scouting Talent Age 10 - 13 Years"

We look forward to your positive response to this article journal. Thank you.

Warm regards

Danarstuti Utami

Manuscript Disubmit: 10 Maret 2025

Development Of Talent Scouting For Judo Sports Age 10 - 13 Years

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Abstract

This research aims to produce a valid and reliable judo talent identification guidebook that can be used to measure the talent of judo athletes. This type of research uses research and development methods. On a small scale, this research used samples from the Wira Mataram judo club, while for large scale testing it was carried out on Talented Athletes Development (PAB) BPO DIY and PJSI Bantul Regency. All samples used in product trials were judo athletes aged 10 – 13 years. The data analysis technique uses a giftedness formula by calculating the mean (M) and standard deviation (SD) from test results which are classified into five norms based on normal distribution of symptoms, namely very talented, talented, moderately talented, less talented and not talented. The data obtained from each type of test is processed and converted into a giftedness formula. The results of this research obtained 17 (seventeen) judo sports talent identification test items, including: anthropometric test, there were 4 (four) items consisting of: height, fat, body weight, sitting height, then for biomotor, 8 (eight) were obtained. Test items consisting of strength tests include: wall sit, push up, back up, sit up, agility test: side step test, flexibility test: sit and reach, balance test: dynamic balance test, endurance test: havard step test, and the branch test/skill test obtained 5 (five) items consisting of: *ushiro ukemi* sitting position, *yoko ukemi* lying position, *yoko ukemi* squatting and standing position, *mae ukemi* kneeling position, *jugeri/mae mawari ukemi*. The total results of the effectiveness test value, this test was declared valid with the number 0.86 and showed a reliability value with the number 0.9.

Keywords: Judo, Talent Identification, Ages 10-13 years

Introduction

Efforts to improve sports achievements must continue to develop athletes as early as possible through talent searches and monitoring, breeding, education, and training based on science and technology, and improving the quality of sports organizations both centrally and regionally (Bartlett & Bussey, 2013). Coaching is structured and programmed, beginning with the parent organization of the sports branch at both the central and regional levels (Hums & MacLean, 2018). Coaching also involves empowering sports organizations, developing national and regional sports coaching centers, and organizing competitions in a tiered and sustainable manner (Søvik, 2017).

The sports development system cannot be implemented immediately, it must adhere to established procedures and designs, sports development cannot be achieved through minimal planning, it requires totality and commitment to develop sports logically, analytically, and systematically (Andrew et al., 2019). To achieve peak performance, a continuous and gradual training regimen is required (Kellmann et al., 2018). For this reason, talent searches are required through talent guidance, and they must be considered in Indonesia's sports achievement development system, particularly in the sport of judo, so that the method of identifying potential sports talents, which begins at a young age, aims to assist children in determining their athletic potential.

In preparation for the 2000 Sydney Olympics, Australia held a movement known as The National Talent Identification and Development Program for the Sydney Olympic Games. This movement has two main programs: Sport Search and Talent Search. The Australian Sports Commission developed this talent scouting program in response to the country's previous decline in gold medal wins at several Olympics. Efforts to foster these achievements through an IPTEK approach include identifying talented athletes (Smith, 2005).

Talent must be identified at an early age so that it can be properly nurtured to produce quality players/athletes. (Pruna et al., 2018). Identifying and directing talented individuals to relevant sports is critical for athletic success (Kaynar, 2019). Peak achievement in a sport can only be achieved by those who are talented and have been able to meet the requirements of a sport since a young age, as well as those who can follow systematic training over time (Afif, 2017). Detecting and identifying athletes is critical for the athlete development process, including the initial selection of scouts and subsequent stages of the program (Jacob et al., 2018).

Achievements in the sport of judo in Indonesia are currently experiencing fluctuations. The achievements obtained differ greatly from those of the 1980s, when Indonesia consistently ranked

first. Aside from the achievements of Indonesian sports, what needs to be observed at this time is how to develop sports in Indonesia so that the achievements of the 1980s are realized again (Rohman & Effendi, 2019) . So that judo achievements can be achieved optimally, "well-established" planning is needed which cannot be separated from the coaching pattern carried out. Almost every country has a pyramid concept in its development system. The pyramid concept of achievement development includes three stages, namely: (1) multilateral stage, (2) specialization stage, and (3) peak achievement stage. The multilateral stage is to develop basic movement patterns, the specialization stage is adaptation to the specifics of the sport, and the peak stage of achievement is physical, technical, tactical and mental maturation (Bompa Tudor & Haff, 1994). For this reason, a massing, breeding and development process is needed which is carried out continuously, gradually and sustainably.

Besides the development of sports is also influenced by the coaching system. If the coaching system implemented runs well, sports development will also be better. The sports development system is based on (1) physical education and national organizations, which include educational programs in schools, recreation and sports clubs and organizational structures in government and (2) the sports training system (Lutan, 2000).

The coaching program for talented Judo athletes can be implemented through programmed, regular, and measurable training that incorporates various disciplines and technologies. Sports coaches in high-competition environments must undoubtedly work hard to develop talented athletes (Gill, 2014). Talented athletes must be carefully chosen in order to perform optimally.

In general, sports coaching and development from an early age, namely the period from approximately 6 years to 14 years of age (6 to 14 years), is part of national policy. Training periodization can be divided into multilateral (ages 6-14 years) and specialization (ages 15 years and above). The multilateral training period can be further classified into two groups, namely the initial period ranging from 6-10 years of age and the formation period ranging from 11-14 years of age. The explanation in the following image:

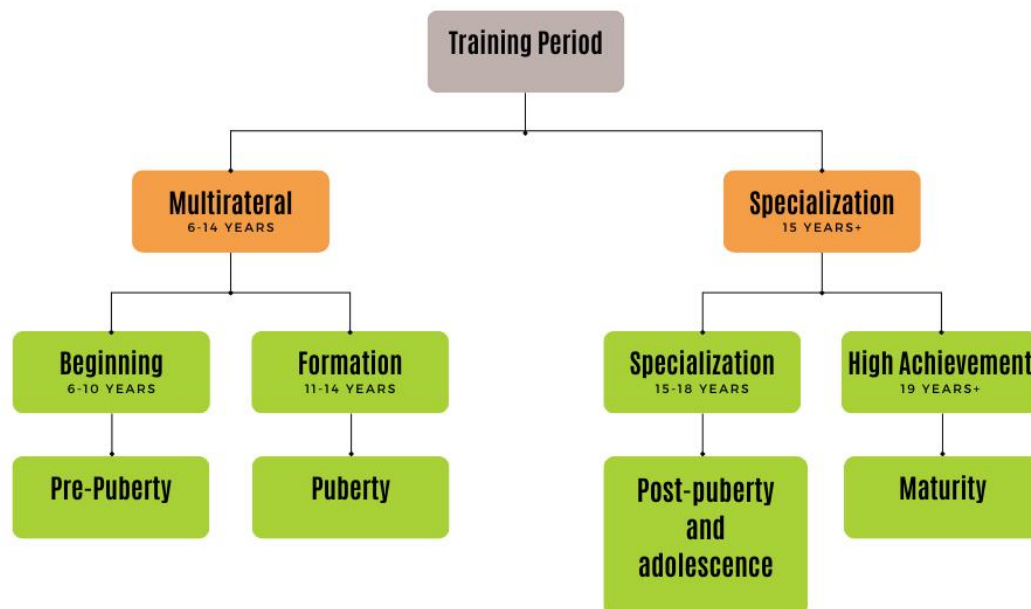


Figure 1. Exercise Periodization
(source: APORI, 2014: 2)

Until now, there are very few instructions or guidelines regarding measuring instruments for identifying judo talent aged 10-13 years, so the author in this case is very interested in compiling a guidebook instrument for talent. Judo identification marks for children aged 10 to 13 are guidelines used to determine the identity of a judo athlete for valid and reliable assessment. To determine and assess judo talent, measurements must be taken. These measurements must be appropriate for the needs and characteristics of judo athletes aged 10-13 years. This study will focus on developing an

instrument for identifying judo sports talent aged 10-13 years that, to the author's knowledge, has never been studied before.

Materials and Methods

Design

This study employs research and development methods commonly used in the production of specific products and tests their effectiveness. Research is used to produce certain products, specifically needs analysis and testing the effectiveness of the product so that it can function in the larger community.

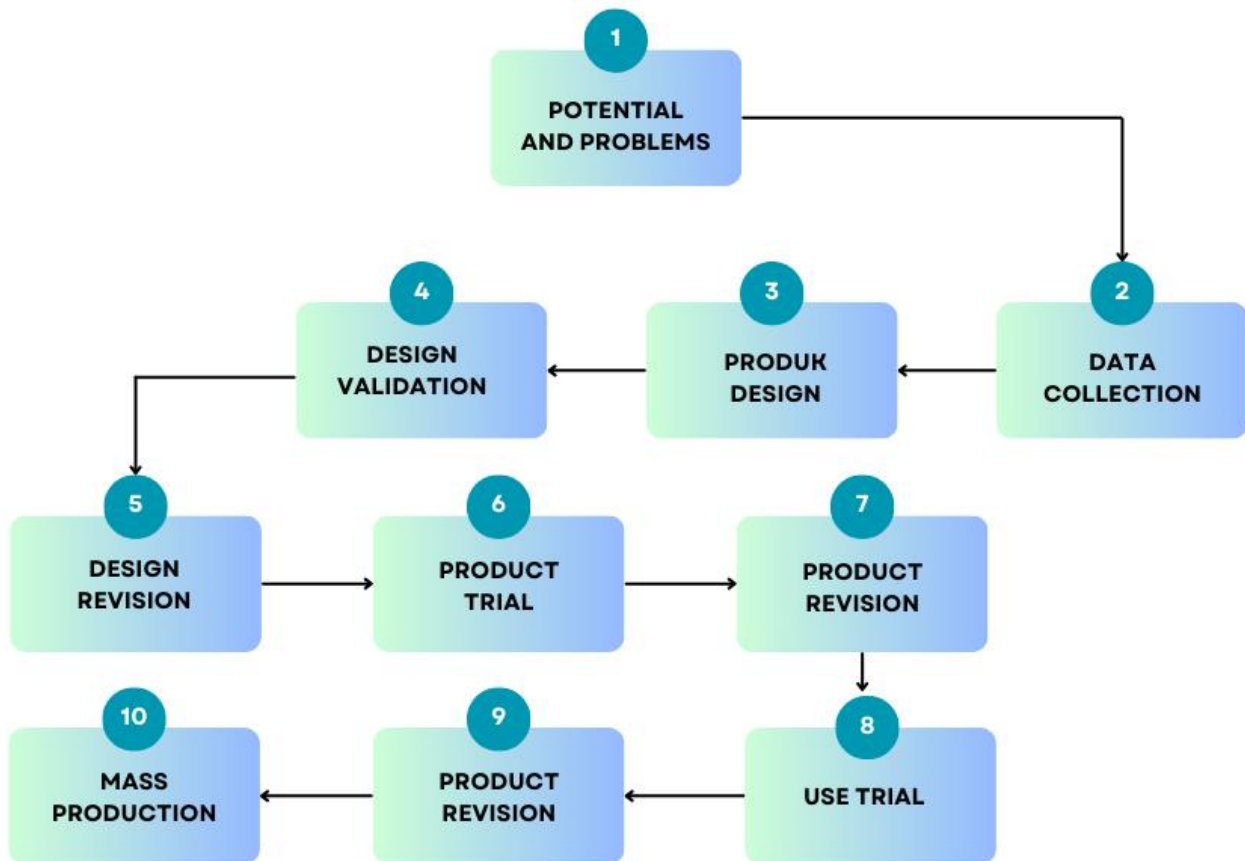


Figure 2. The steps for using the Research & Development Method are as follows

Sample

The sample size for this study was 45 athletes. The sample yielded two sets of data. Wira Mataram Judo Club collected small-scale data from up to 15 athletes aged 10 to 13 years. The Talented Athlete Development (PAB) program of BPO DIY and the All Indonesia Judo Association (PJSI) of the Bantul DIY district collected large-scale data on up to 30 athletes aged 10-13 years.

Variables

The variables in this study are anthropometric test variables, biomotor abilities, and judo technique ability tests. The data analysis in this study focused on the formula for identifying judo sports talent aged 10 to 13. The scale score is calculated by determining the mean (M) and standard deviation (SD) of talent identification test data, which are then divided into five (five) norms based on the normal distribution of symptoms: very talented, talented, quite talented, less talented, and not talented. A talent identification assessment instrument is considered good if it is valid and reliable. After processing the data and determining the mean (M) and standard deviation (SD), the data is interpreted by categorizing it into five categories: very talented, talented, quite talented, less talented, and not talented, using the following formula:

Table 1. Special Interest and Talent Category for Judo Sports

NO	CATEGORY	FORMULA
1	VERY TALENTED	On $M + (1.5 \times SD) > UP$
2	TALENTED	On $M + (0.5 \times SD) S/DM + (1.5 \times SD)$
3	QUITE TALENTED	On $M - (0.5 \times SD) S/DM + (0.5 \times SD)$
4	LESS TALENTED	On $M - (1.5 \times SD) S/DM - (0.5 \times SD)$
5	NOT TALENTED	Down $< M - (1.5 \times SD)$
Information: M = Mean, SD = Standard Deviation, S/D = Up to...		

(source : Siswantoyo et al., 2016)

Because in this research there are several tests where the lower the score the better, the formula formulation above is reversed to:

Table 2. Judo Sports Talent Identification Formula

NO	CATEGORY	FORMULA
1	VERY TALENTED	On $M - (1.5 \times SD) < DOWN$
2	TALENTED	On $M - (0.5 \times SD) S/DM - (1.5 \times SD)$
3	QUITE TALENTED	On $M + (0.5 \times SD) S/DM - (0.5 \times SD)$
4	LESS TALENTED	On $M + (1.5 \times SD) S/DM + (0.5 \times SD)$
5	NOT TALENTED	Down $> M + (1.5 \times SD)$
Information: M = Mean, SD = Standard Deviation, S/D = Up to...		

Then the next step is to analyze the data by calculating the total score scale obtained per test item to draw onclussions regarding the norms for the gifted category in identifying talent for judo aged 10-13 years from the research conducted.

Instruments

Based on the author's field observations, the following judo talent identification instruments are required for 10-13 year olds: (1) Anthropometric Test, (2) Biomotor Components, and (3) Judo Technical/Division Skills Test. The goal of this study is to develop talent identification guidelines and valid assessment tools for judo sports. Talent for 10-13 year olds is valid and reliable, with value norms that are consistent with the judo talent identification test for 10-13 year olds. The developed instrument is expected to be used as a tool to assess judo sports talent for children aged 10 to 13, thereby aiding in the development of judo sports and the search for judo sports talent.

Table 3 . New Paradigm of Talent Identification for Judo Ages 10-13 Years

Judo Talent Identification At the moment	Judo Talent Identification New Paradigm
➤ There has been no research on identifying talent for judo aged 10 -13 years	➤ There has been research on identifying talent for judo aged 10 – 13 years
➤ There is no appropriate test instrument to measure judo talent aged 10 -13 years	➤ An appropriate test instrument has been found to measure judo talent aged 10 -13 years with test norms
➤ There is no guidebook regarding the procedures for carrying out the judo talent identification test for ages 10 – 13 years	➤ There is already a guidebook regarding the procedures for carrying out the judo talent identification test for ages 10 – 13 years
➤ At the start of the training program, athletes aged 10 -13 years have not yet had a talent identification test	➤ At the start of the training program, athletes aged 10 -13 years are expected to be able to take a talent identification test

Based on the theoretical basis and framework of thought above, and considering the importance of talent identification, an assessment instrument for judo sport talent identification aged 10-13 years is very necessary. Having this assessment instrument will make it easier for trainers to monitor success in implementing training programs for peak performance.

Results

As a result of observations from information available in the field, every talent search for Judo athletes at regional level still uses a system that cannot be "justified" in terms of sports science, therefore determining the product design of test items that are in accordance with the characteristics of this judo sport goes through several stage. The stages are as follows:

1. Selecting judo talent identification test items that approach the needs and characteristics of judo sports include:

a. Anthropometric tests include:

Table 4. Anthropometric tests

No.	Types of anthropometric tests
1.	Height
2.	Shoulder width
3.	Chest width
4.	Hip width
5.	Fat (tricep, subscapular)
6.	Sitting height
7.	Body weight
8.	Hand span

b. Biomotor include:

Table 5. Biomotor

No.	Biomotor Component	Test Type
1.	Cardiovascular Test	Namely a 4.8 km fast walking test and multistage (multistage fitness test)
2.	General movement ability test	1) standing board jump 2) softball throw 3) zig-zag run 4) tennis ball throwing 5) basketball throwing 6) madicine ball put 7) 50 meter sprint
3.	Motor educability test	1) One Foot_Touch Head 2) Side Learning Rest 3) Grapevine 4) One-Knee Balance 5) Stork Stand 6) Double Heel Click 7) Cross-Leg

		Squat
		8) Full Left Turn
		9) One Knee-Head to Floor
		10) Hop Backward
		11) Forward Hand Kick
		12) Full Squat-Arm Circle
		13) Half-Turn Jump-Left Foot
		14) Three Dips
		15) Side Kick
		16) Kneel, Jump to Feet
		17) Russian Dance
		18) Full Right Turn, The Top
		19) Single Squat Balance
		20) Jump Foot.
4.	Strength measurement test	1) push up 2) sit up 3) pull up 4) back up 5) wall sit
5.	Muscle strength measurement test	1) handgrip dynamometer 2) pull and push dynamometer 3) back dynamometer 4) leg dynamometer 5) one-repetition maximum (1- rm) (with bench press, leg press, and arm curl),
6.	Agility measurement	1) side step test 2) shuttle run test
7.	Flexibility measurement	1) sit 2) reach test
8.	Speed measurement	using 6 second sprint test, 50 yard (45.73m) sprint test
9.	Reaction	1) the nelson hand

	speed measurement	reaction test 2) the nelson foot reaction test
10.	Explosive power measurement	margaria kalamen test
11.	Balance measurement	1) dynamic balance test 2) the stork stands test
12.	Physical fitness/heart lung endurance test	1) running 2,4 km 2) havard step test 3) running 12 menit

c. Test judo/division technique ability, include:

Table 6. Test judo/division technique ability

No.	Test Component	Test Type
1.	Basic techniquesfalling techniques (<i>ukemi waza</i>)	1) <i>yoko ukemi</i> side fall in sitting position 2) <i>yoko ukemi</i> side fall in squatting and standing position 3) <i>ushiro ukemi</i> back fall in sitting position 4) <i>ushiro ukemi</i> back fall in standing squat position 5) <i>mae ukemi</i> front fall on kneeling 6) <i>mae ukemi</i> fall front squat standing 7) <i>mae mawari</i> <i>ukemi/jugeri</i> kneeling and standing
2.	Basic grip in judo (<i>kumikata</i>)	Pulling and pushing

Some of the tests listed above are relevant to talent identification in the sport of judo, and field observations yielded the following percentage results:

Table 7. Talet Identification

No.	Test Type	Percentage (%)
1	Height	100
2	Shoulder width	35.71
3	Chest width	32.71
4	Hip width	32.14
5	Fat (tricep, subscapular)	85.71
6	Sitting height	89.28
7	Body weight	100
8	Hand span	28.57
9	Fast walking test 4.8 km	28.57
10	Multistage (multistage fitness test)	46.42
11	Standing board jump	46.42
12	Softball throw	25
13	Zig-zag run	39.28
14	Tennis ball throw	28.57
15	Basketball throw	32.14
16	Medicine ball put	25
17	50 meter sprint	48.85
18	One foot touch head	42.85
19	Side learning rest	46.42
20	Grapevine	46.42
21	One-knee balance	39.28
22	Stork stand	46.42
23	Double heel click	35.71
24	Cross-leg squat	42.85
25	Full left turn	39.28
26	One knee-head to floor	42.85
27	Hop backward	39.28
28	Forward hand kick	28.57
29	Full squat-arm circle	35.71
30	Half-turn jump-left foot	39.28
31	Three dips	28.57
32	Side kick	25
33	Kneel	25
34	Jump to Feet	25
35	Russian dance	25
36	Full right turn	28.57
37	The top	32.14
38	Single squat balance	35.71
39	Jump foot	28.57
40	Push up	96.42
41	Sit up	96.42
42	Pull up	42.85

43	Back up	78.57
44	Wall sit	92.85
45	Handgrip dynamometer	42.85
46	Pull and push dynamometer	39.28
47	Back dynamometer	35.71
48	Leg dynamometer	46.42
49	One-repetition maximum (1-RM) bench press	35.71
50	Leg press	39.28
51	Arm curl	35.71
52	Side step test	89.28
53	Shuttle run test (lari bolak-balik)	46.42
54	Sit and reach test	85.71
55	6 second sprint test	28.57
56	50 yard sprint test (45.73m)	25
57	The Nelson hand reaction test	25
58	The Nelson foot reaction test	25
59	Margaria kalamen test	25
60	Dynamic balance test	75
61	The Stork stands test	28.57
62	2.4 km run	42.85
63	Up and down the bench (Harvard step test)	92.85
64	12 minute run	32.14
65	<i>Yoko ukemi</i> side falls in sitting position	100
66	<i>Yoko ukemi</i> side falls in squatting and standing position	96.42
67	<i>Ushiro ukemi</i> back falls in sitting position	100
68	<i>Ushiro ukemi</i> back falls in squatting standing position	46.42
69	<i>Mae ukemi</i> front falls in kneeling position	92.85
70	<i>Mae ukemi</i> front falls in squatting standing	42.85
71	<i>Mae mawari ukemi/jugeri</i> kneeling and standing	71.42

72	<i>Kumikata</i> pulling and pushing	46.42
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- The next stage is product design, which involves selecting several questions with a percentage greater than 50% and sorting them from beginning to end to assess the identification of judo sports talent aged 10 to 13 years. The end result consists of 17 test items that have been adjusted for the sport of judo, including:

Table 8. Test Items

No. Test Items above 50%	
1.	Height
2.	Fat
3.	Body weight
4.	Sitting height
5.	Wall sit
6.	Push up
7.	Back up
8.	Sit up
9.	Side step test
10.	Sit and reach
11.	Dynamic balance test
12.	Havard step test
13.	<i>Ushiro ukemi</i> sitting position
14.	<i>Yoko ukemi</i> posisi lying positions
15.	<i>Yoko ukemi</i> squatting and standing positions
16.	<i>Mae ukemi</i> kneeling position
17.	<i>Jugeri/mae mawari ukemi</i>

- Then prepare a draft guide for implementing test procedures, with the recommended sequence for implementing the first stage of tests being the anthropometric test. This test has a very important role in the sport of Judo, namely covering height, fat, weight, sitting height, the second stage test is the physical ability test (biomotor) including wall sits, push ups, back ups, sit ups, side step test, sit and reach your toes (sit and reach) with a meter box, dynamic balance test, and bench up and down test (Havard step test). It should be noted that the up and down bench test (Havard step test) is carried out last in the second stage of the test. Furthermore, the test of technical ability/skills in judo includes a branch test, namely falling techniques (*ukemi waza*) including back falls (*Ushiro Ukemi*) in a sitting position, side falls (*Yoko Ukemi*) in a lying position, squatting and standing, front falls (*Mae Ukemi*) in a kneeling position and Jugeri/rolling forward (*mae mawari ukemi*) from a kneeling and standing position. The special talent identification test for judo is explained in the following picture:

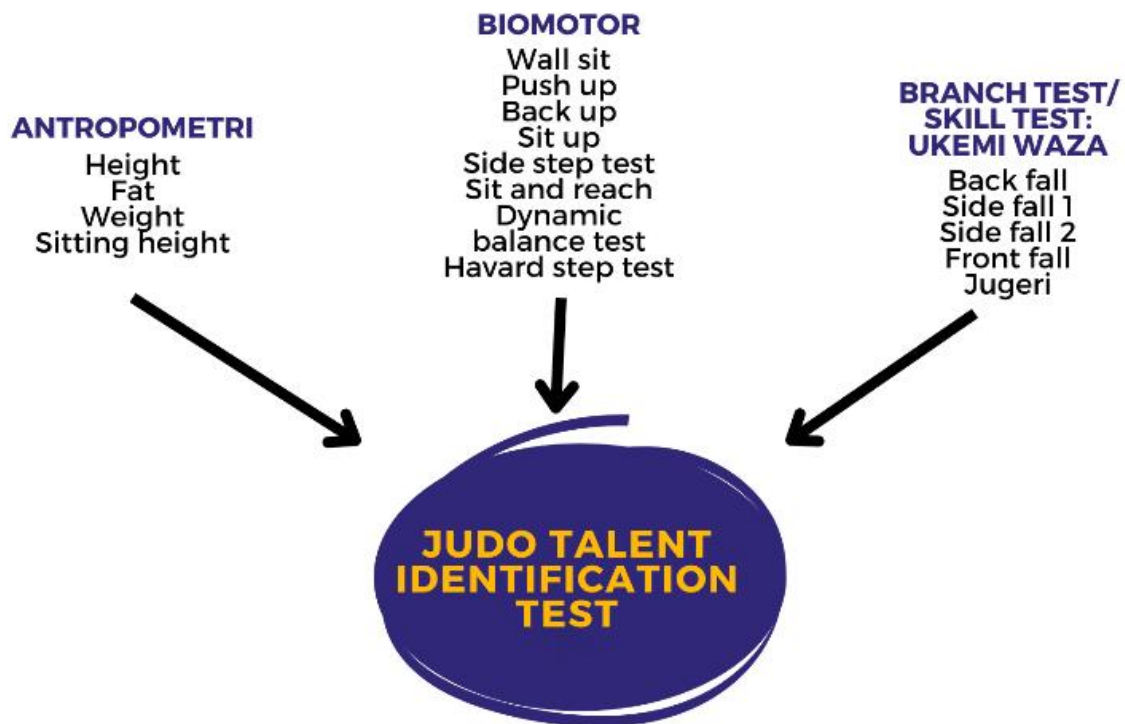


Figure 3. Judo Talent Identification Test Items

4. The next stage is to develop an assessment and evaluation flow, in the identification flow of scouting special sports interests and talents from start to finish, the category of talent level is found, briefly explained in the following picture:

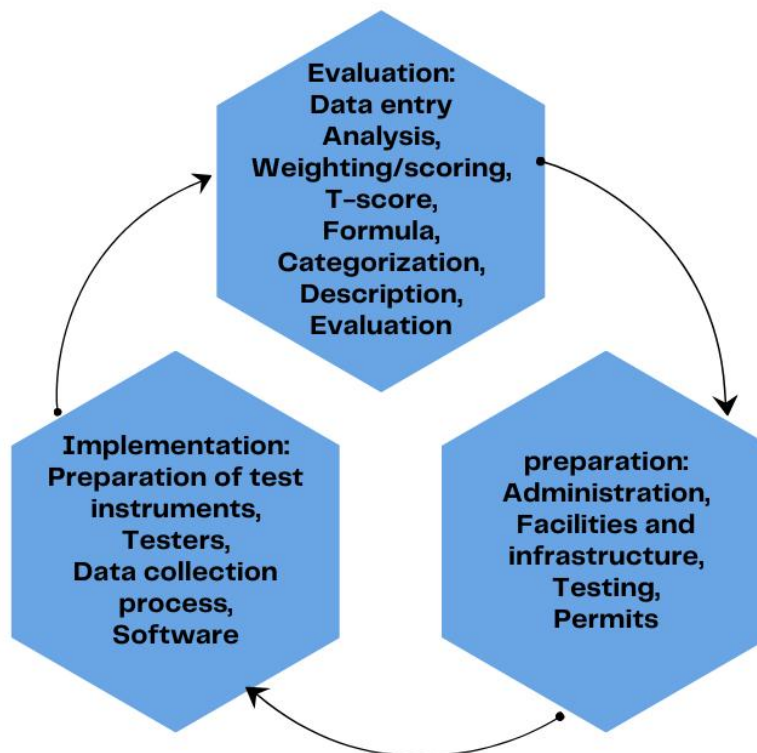


Figure 4. Flow of Implementation and Data Analysis
(Reference: Siswantoyo, 2014: 8. APORI)

The small-scale trial is a follow-up to this research to determine the extent to which this talent

identification guide can be applied. The subjects of this small-scale trial were athletes aged 10-13 years from the Wira Mataram Judo Club. Based on the results of the small-scale trial assessment of the product being developed, it shows that the total score of 93 (39%) samples stated that it was suitable, while the score of 147 (61%) of the other samples stated that it was very suitable, it can be concluded that the results of the development of the judo sports talent identification instrument aged 10 -13 years can be said to be easy for testers to understand and implement with several suggestions and comments. The percentage results from the assessment above can be seen in the following diagram:

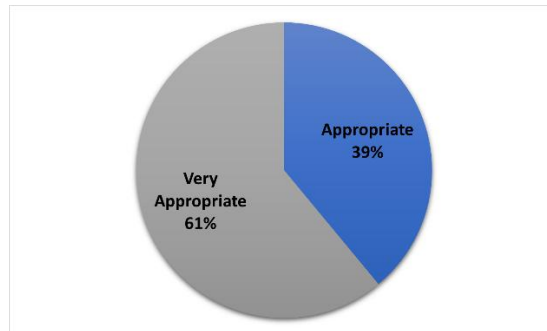


Figure 5. Small Scale Trial Results Percentage Diagram

The next stage is based on the results of small-scale trials, then product revisions are carried out before large-scale trials are carried out. The improvements made include aspects suggested by users when using the product. Based on comments and suggestions from users regarding the judo sports talent identification instrument aged 10-13 years, a revision was carried out again to improve the product in the form of a guidebook. The revisions to the product are explained in the following table:

Table 9. Small Scale Product Revision

No	Before Revision	After Revision
1	The size of the writing in the guidebook is too small and difficult to read	The size of the writing in the guidebook has been enlarged and is easy to read
2	There is no picture of the test implementation flow yet	There is already a picture of the test implementation flow
3	There is no picture of the test sequence yet	There is already a picture of the test sequence
4	The book cover does not include photos of children aged 10-13 years who received gold medals	The book cover includes a photo of a child aged 10-13 years who received a gold medal

Then, based on several suggestions and input from users of the talent identification manual for judo sports aged 10-13 years, the product design was revised again to proceed to the next stage, namely the large-scale trial stage. Large-scale trials were carried out at the Talented Athletes Development (PAB) BPO DIY program and the All-Indonesian Judo Association (PJSI) Bantul Regency, Yogyakarta.

This large-scale trial is a follow-up to the product revision of the small-scale trial. From the results of the large-scale trials, suggestions and comments were then obtained to revise the product before carrying out an effectiveness test. Based on the results of the large-scale trial assessment of the product being developed, it shows that the total score of 130 (27%) samples stated that it was suitable, while the score of 350 (73%) of the other samples stated that it was very suitable, it can be concluded that the results of the development of the judo sports talent identification instrument aged 10 – 13 years can be said to be easy for testers to understand and implement with several

suggestions and comments. The percentage results from the assessment above can be seen in the following diagram:

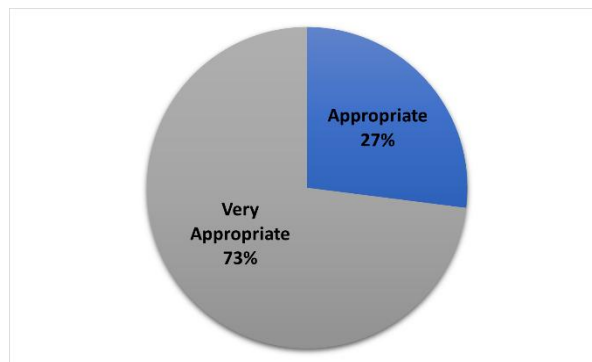


Figure 6. Large Scale Trial Results Percentage Diagram

The improvements made include aspects suggested by users when using the product. Based on comments and suggestions from users regarding the judo sports talent identification instrument aged 10 – 13 years. The revisions to the product are explained in the following table:

Table 10. Large Scale Product Revision

No	Before Revision	After Revision
1	There is no way to assess the judo sports talent identification instrument for ages 10 - 13 years	There is already a method for assessing judo sports talent identification instruments aged 10 – 13 years
2	The photos in the manual are not in color	The photos in the guidebook are in color
3	The manual is not yet concise/too thick	The manual is concise/not too thick

The next stage, after product revision from large-scale results, continued with product effectiveness testing in the form of a talent identification guidebook for judo sports aged 10-13 years. This was carried out by testing the validity of the test instrument using a test-retest test, namely data from two observations using the same instrument.

The results of testing the validity of this talent identification test instrument include:

Table 11. Results of Instrument Validity Testing

No.	Items Test	Calculated r
1.	Height	1,000
2.	Fat	1,000
3.	Body weight	1,000
4.	Sitting height	1,000
5.	Wall sit	0,955
6.	Push up	0,965
7.	Back up	0,904
8.	Sit up	0,921
9.	Side step test	0,766
10.	Sit and reach	0,960
11.	Dynamic balance test	0,860
12.	Havard step test	0,816
13.	Ushiro ukemi sitting position	0,809

14.	<i>Yoko ukemi</i> posisi lying positions	0,630
15.	<i>Yoko ukemi</i> squatting and standing positions	0,731
16.	<i>Mae ukemi</i> kneeling position	0,829
17.	<i>Jugeri/mae</i> <i>mawari ukemi</i>	0,843

The results of the research hypothesis testing are compared to the r-value. The r-table value for N = 50 with a 5% significance level is 0.279. Based on the results, it is clear that the validity test of the talent identification test instrument yields $r_{count} > r_{table}$. Based on these findings, it can be concluded that all types of judo sport talent identification test questions for ages 10-13 are valid.

Based on the results of reliability testing of the judo sports talent identification test instrument aged 10 - 13 years, is known:

Table 12. Reliability test

No.	Items Test	Coefficient alpha
1.	Height	1,000
2.	Fat	1,000
3.	Body weight	1,000
4.	Sitting height	1,000
5.	Wall sit	0,997
6.	Push up	0,978
7.	Back up	0,942
8.	Sit up	0,958
9.	Side step test	0,867
10.	Sit and reach	0,977
11.	Dynamic balance test	0,925
12.	Havard step test	0,897
13.	<i>Ushiro ukemi</i> sitting position	0,891
14.	<i>Yoko ukemi</i> posisi lying positions	0,769
15.	<i>Yoko ukemi</i> squatting and standing positions	0,844
16.	<i>Mae ukemi</i> kneeling position	0,906
17.	<i>Jugeri/mae</i> <i>mawari ukemi</i>	0,914

The reliability test of all judo talent identification test instruments for ages 10-13 yielded a coefficient of more than 0.5. These findings suggest that the judo talent identification test instrument for ages 10-13 is reliable and worthy of continued mass production.

After conducting small-scale and large-scale tests and receiving results indicating that all judo talent identification test instruments for ages 10-13 are suitable for use, the next stage is the effectiveness test. This stage involves an analysis of data from the judo talent identification test results for ages 10 to 13, which have been declared valid and reliable.

The results of the effectiveness test data obtained mean (M) and standard deviation (SD) values for each test item so that they can be used to calculate norms and standards for assessing the judo sports talent identification test aged 10-13 years, as follows:

1. Height

The results of height data analysis obtained an average data value (Mean) of 146.32 and a standard deviation (SD) of 6.96. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results of calculating height norms and standards were obtained as follows:

Table 13. Standard Body Height Value (centimeters)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	156.7 cm > Above
4	TALENTED	149.7 cm to 156.7 cm
3	QUITE TALENTED	142.8 cm S/D 149.7 cm
2	LESS TALENTED	135.8 cm to 142.8 cm
1	NOT TALENTED	< 135.8 cm
S/D = Up to..		

2. Fat (trisept, subskapula)

The results of fat data analysis obtained an average data value (Mean) of 10 and a standard deviation (SD) of 2.51. After the calculation is complete, the next step is to determine the norm classification by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports aged 10 – 13 years. The results of calculating fat norms and standards were obtained as follows:

Table 14. Standard Fat Value (millimeters)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	6.2 mm > Above
4	TALENTED	8.7 mm to 6.2 mm
3	QUITE TALENTED	11.2mm to 8.7mm
2	LESS TALENTED	13.7 mm to 11.2 mm
1	NOT TALENTED	< 13.7 mm
S/D = Up to..		

3. Weight

The results of the analysis of body weight data obtained an average data value (Mean) of 37.73 and a standard deviation (SD) of 8.37. After the calculation is complete, the next step is to determine the norm classification by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports aged 10 – 13 years. The results of calculating body weight norms and standards were obtained as follows:

Table 15. Standard Body Weight Value (kilograms)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	50.28 kg > Above
4	TALENTED	41.91 kg to 50.28 kg
3	QUITE TALENTED	33.54 kg to 41.91 kg
2	LESS TALENTED	25.17 kg to 33.54 kg
1	NOT TALENTED	< 25.17 kg
S/D = Up to..		

4. Sitting height

The results of the analysis of sitting height data obtained an average data value (Mean) of 75.06 and a standard deviation (SD) of 3.60. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for sitting height are as follows:

MARK	CATEGORY	RESULTS
5	VERY TALENTED	80.4 cm > Above
4	TALENTED	76.8 cm to 80.4 cm
3	QUITE TALENTED	73.2 cm to 76.8 cm
2	LESS TALENTED	69.6 cm to 73.2 cm
1	NOT TALENTED	< 69.6 cm
S/D = Up to..		

Table 16. Standard Sitting Height Value (centimeters)

5. Wall sit

The results of wall sit data analysis obtained an average data value (Mean) of 94.04 and a standard deviation (SD) of 23.52. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating wall sit norms and standards are as follows:

Table 17. Standard Wall Sit Value (seconds)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	129.32 seconds > Up
4	TALENTED	105.8 seconds to 129.32 seconds
3	QUITE TALENTED	82.28 seconds to 105.8 seconds
2	LESS TALENTED	58.78 seconds to 82.28 seconds
1	NOT TALENTED	< 58.78 seconds
S/D = Up to..		

6. Push Up

The results of the push up data analysis obtained an average data value (Mean) of 42.16 and a standard deviation (SD) of 10.30. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained for calculating push up norms and standards are as follows:

Table 18. Standard Push Up Value (times)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	58 times > Up
4	TALENTED	47 times to 58 times
3	QUITE TALENTED	37 times to 47 times
2	LESS TALENTED	27 times to 37 times
1	NOT TALENTED	< 27 times
S/D = Up to..		

7. Back Up

The results of the push up data analysis obtained an average data value (Mean) of 92.68 and a

standard deviation (SD) of 13.96. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating back up norms and standards are as follows:

Table 19. Standard Back Up Value (times)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	114 times > Up
4	TALENTED	100 times to 114 times
3	QUITE TALENTED	86 times to 100 times
2	LESS TALENTED	72 times to 86 times
1	NOT TALENTED	< 72 times
S/D = Up to..		

8. Sit Up

The results of sit up data analysis obtained an average data value (Mean) of 42.24 and a standard deviation (SD) of 10.68. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for sit ups are as follows:

Tabel 20. Standard Sit Up Value (times)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	58 times > Up
4	TALENTED	48 times to 58 times
3	QUITE TALENTED	37 times to 48 times
2	LESS TALENTED	26 times to 37 times
1	NOT TALENTED	< 26 times
S/D = Up to..		

9. Side Step Test

The results of the side step test data analysis obtained an average data value (Mean) of 8.75 and a rough standard deviation (s) of 0.76. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards of the side step test are as follows:

Table 21. Side Step Test Value Standards (points)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	9.8 points > Above
4	TALENTED	9.1 points to 9.8 points
3	QUITE TALENTED	8.3 points to 9.1 points
2	LESS TALENTED	7.6 points to 8.3 points
1	NOT TALENTED	< 7.6 points
S/D = Up to..		

10. Sit and Reach

The results of the sit and reach data analysis obtained an average data value (Mean) of 40.64 and a rough standard deviation (s) of 4.75. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results of calculating sit and reach norms and standards are as follows:

Table 22. Standard sit and reach value (cm)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	47.76 cm > Above
4	TALENTED	43.01 cm to 47.76 cm
3	QUITE TALENTED	38.26 cm i S/D 43.01 cm
2	LESS TALENTED	33.51 cm S/D 38.26 cm
1	NOT TALENTED	< 33.51 cm
S/D = Up to..		

11. Dynamic Balance Test

The results of the dynamic balance test data analysis obtained an average data value (Mean) of 70.8 and a rough standard deviation (s) of 22.32. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating norms and standards for the dynamic balance test are as follows:

Table 23. Standard Dynamic Balance Test Value (cm)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	100 points > Above
4	TALENTED	85 points to 100 points
3	QUITE TALENTED	60 points to 85 points
2	LESS TALENTED	40 points to 60 points
1	NOT TALENTED	< 40 points
S/D = Up to..		

12. Harvard Step Test

The results of the Harvard step test data analysis obtained an average data value (Mean) of 106.36 and a rough standard deviation (s) of 21.26. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards of the Harvard step test are as follows:

Table 24. Harvard Step Test Value Standards

MARK	CATEGORY	RESULTS
5	VERY TALENTED	119 > Up
4	TALENTED	105 to 119
3	QUITE TALENTED	90 to 105
2	LESS TALENTED	75 to 90
1	NOT TALENTED	< 75
S/D = Up to..		

13. Back fall (*ushiro ukemi*) sitting position

The results of the branch test analysis using a rubik for assessing the performance of falling technique skills (*ukemi waza*) in the test participants were obtained proportionally and in accordance with the judo sport branch which was carried out by considering the competency of the test participants in performing the falling technique (*ukemi waza*).

Determination of competency standards in assessing the performance of basic judo technical skills is carried out through interpretation into assessment norms. The results of the data analysis of Ushiro Ukemi's sitting position obtained an average data value (Mean) of 10.48 and a standard deviation (SD) of 1.16.

After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *ushiro ukemi* sitting position are as follows:

Table 25. Standard Value *Ushiro Ukemi* sitting position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	11 to 12
3	QUITE TALENTED	10 to 11
2	LESS TALENTED	9 to 10
1	NOT TALENTED	Down < 9
S/D = Up to..		

14. Side fall (*yoko ukemi*) lying position

The results of data analysis of Yoko Ukemi's lying position obtained an average data value (Mean) of 10.66 and a standard deviation (SD) of 1.02. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *Yoko Ukemi's* lying position are as follows:

Table 26. Standard value of *yoko ukemi* lying position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	11 to 12
3	QUITE TALENTED	10 to 11
2	LESS TALENTED	9 to 10
1	NOT TALENTED	Down < 9
S/D = Up to..		

15. Side falls (*yoko ukemi*) squatting and standing positions

The results of *Yoko Ukemi's* data analysis in squatting and standing positions obtained an average data value (Mean) of 9.6 and a standard deviation (SD) of 1.35. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *Yoko Ukemi* squatting and standing positions are as follows:

Table 27. Standard Value of *Yoko Ukemi* squatting and standing position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	10 to 12
3	QUITE TALENTED	9 to 10
2	LESS TALENTED	8 to 9
1	NOT TALENTED	Down < 8
S/D = Up to..		

16. Front fall (*mae ukemi*) kneeling position

The results of data analysis for *mae ukemi* kneeling position obtained an average data value (Mean) of 9.82 and a standard deviation (SD) of 1.20. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *mae ukemi* kneeling position are as follows:

Table 28. Standard Value *mae ukemi* kneeling position

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	10 to 12
3	QUITE TALENTED	9 to 10
2	LESS TALENTED	8 to 9
1	NOT TALENTED	Down < 8

(score) S/D = Up to..

17. *Jugeri* / rolling forward (*mae mawari ukemi*) kneeling and standing positions

The results of the data analysis for *Mae Mawari Ukemi* in kneeling and standing positions

obtained an average data value (Mean) of 9.4 and a standard deviation (SD) of 1.24. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *Mae Mawari Ukemi* kneeling and standing positions are as follows:

Table 29. Standard Value *jugeri/mae mawari ukemi* kneeling and standing position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	11 > Up
4	TALENTED	10 to 12
3	QUITE TALENTED	9 to 10
2	LESS TALENTED	8 to 9
1	NOT TALENTED	Down < 8
S/D = Up to..		

Discussion

Based on the assumption that research on sports talent in the context of judo is still limited, one approach to overcoming the challenges of developing sports talent is to identify the concept of sports talent that takes into account the specificities of each sport (Baker et al., 2017; De Bosscher et al., 2015; Vaeyens et al., 2008). This article aims to create test items that can be used to identify judo talent. Judo talent is identified early in children aged 10 to 13 years (Pruna et al., 2018). Furthermore, it should be noted that coaches' perceptions as sources of information have been used to understand talent in a variety of sports (Jokuschies et al., 2017), including judo (Roberts et al., 2020).

According to the findings of this study, there are 17 items that can be used as a guide in determining judo talent. Height is a crucial factor in developing anthropometric test norms for identifying judo talent (Bulhões-Correia et al., 2022; Marques et al., 2019; Norjali et al., 2017). Taller height can provide advantages in terms of attack range and distance control in judo (Kons et al., 2018). As a result, a thorough understanding of how height influences judo performance is critical in the athlete selection and development process. Height measurements reveal an athlete's body proportions, which can influence the most appropriate weight category and competition strategy (Reale et al., 2020).

Body fat percentage provides valuable information about an athlete's body composition, which has a direct impact on performance (Lukaski & Raymond-Pope, 2021). Judo athletes with an ideal body composition, defined as a balanced proportion of body fat (Marini et al., 2020), perform better because they can move faster, more efficiently, and have enough energy for intense matches. As a result, measuring and monitoring body fat is an important part of a judo athlete's training and development program, allowing coaches to adjust diet and training plans to achieve peak physical condition.

Weight measurement is critical because judo is a sport in which athletes are classified by weight class, so having an appropriate weight is essential for competing effectively in the correct category (Krumer, 2017). By understanding and managing weight effectively, coaches can recommend the necessary diet (Calvo Rico et al., 2018).

Sitting height measurements reveal information about an athlete's upper body proportions, which can influence balance and playing technique (Toselli & Campa, 2018). A sitting height that is proportionate to total body height is also necessary to maintain an appropriate center of gravity, thereby improving the athlete's ability to control their own and their opponents' movements.

The wall sit test is an effective tool for assessing judo athletes' strength and endurance potential, allowing coaches to design appropriate training programs to improve their performance (Umaran et al., 2023). The push-up test clearly indicates an athlete's upper body muscle strength and endurance capacity, allowing coaches to assess their overall physical condition (Santos-Junior & Franchini, 2021). The next test is the back-up test, which measures the strength of the back muscles, which are critical for judo technique stability and control. The sit-up test assesses the abdominal muscles' strength and endurance, which are critical for core stability and body control in various judo techniques. In judo, strong abdominal muscles are essential because they help maintain body

balance, allow for quick changes of direction, and provide support when performing throws and locks (Broussal-Derval, 2020).

Agility tests assess an athlete's ability to move quickly and efficiently while changing directions quickly and precisely (Mackala et al., 2019). Agility tests based on research findings that can be used to identify judo athletes, specifically the side step test, in which athletes are asked to move from side to side as quickly as possible in a set amount of time. Flexibility tests are important in judo because they allow athletes to perform techniques with an optimal range of motion, such as throws and locks (Akoto et al., 2020; Andreato et al., 2017).

Balance tests, such as the dynamic balance test, are valuable assessments of an athlete's ability to maintain body balance while moving (Osipov et al., 2018). Dynamic balance tests provide a clear picture of athletes' ability to maintain control of their bodies in situations requiring quick adjustments and coordination.

The Harvard Step Test is a cardiovascular endurance test used to determine judo athletes' aerobic capacity (Krishnan & Revathy, 2022). Cardiovascular endurance is critical in judo because athletes frequently face matches with periods of intense activity followed by brief recovery times.

Furthermore, in judo, a skill test or branch test is used to assess athletes' technical skills and special abilities in various aspects of the sport (Drid et al., 2012). Based on the findings of this study, several items can be used to assess the abilities of judo athletes. Among them, *ushiro ukemi* sitting position, *yoko ukemi* lying position, *yoko ukemi* squatting and standing position, *mae ukemi* kneeling position, *judgeri/mae mawari ukemi*.

Conclusion

According to the research, the test items that can be used to identify judo talent from an early age of 10-13 years are: (1) height, (2) fat, (3) weight, (4) sitting height, strength test (5) wall sit, (6) push up, (7) back up, (8) sit up, Agility (9) side step test, flexibility test (10) sit and reach, balance test (11) dynamic balance test, endurance test (12) havard step test, skill test/branch (13) *ushiro ukemi* sitting position, (14) *yoko ukemi* lying position, (15) *yoko ukemi* squatting and standing position, (16) *mae ukemi* kneeling position, (17) *jugeri/mae mawari ukemi*.

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Conflict of interest

All authors declare that there is no potential conflict of interest associated with this research, or publication of this manuscript.

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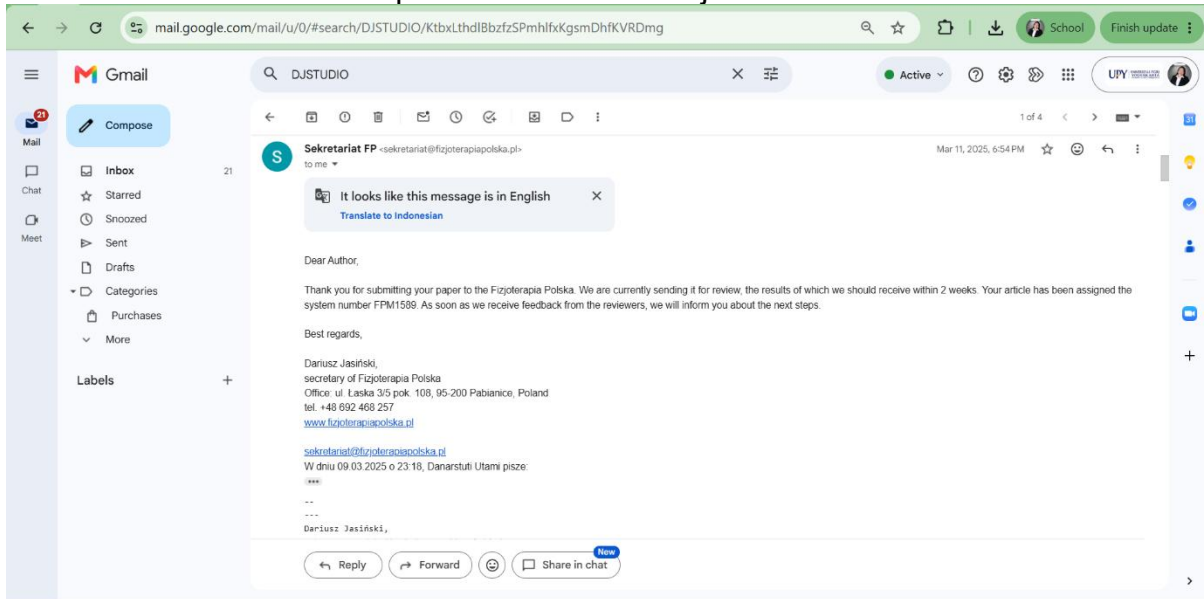
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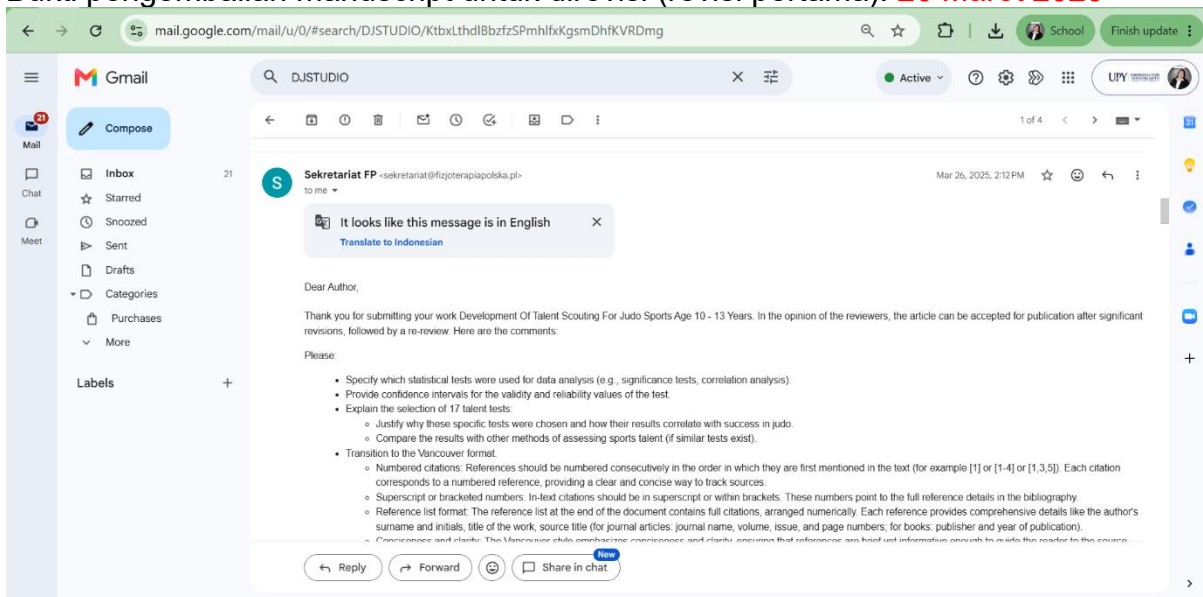
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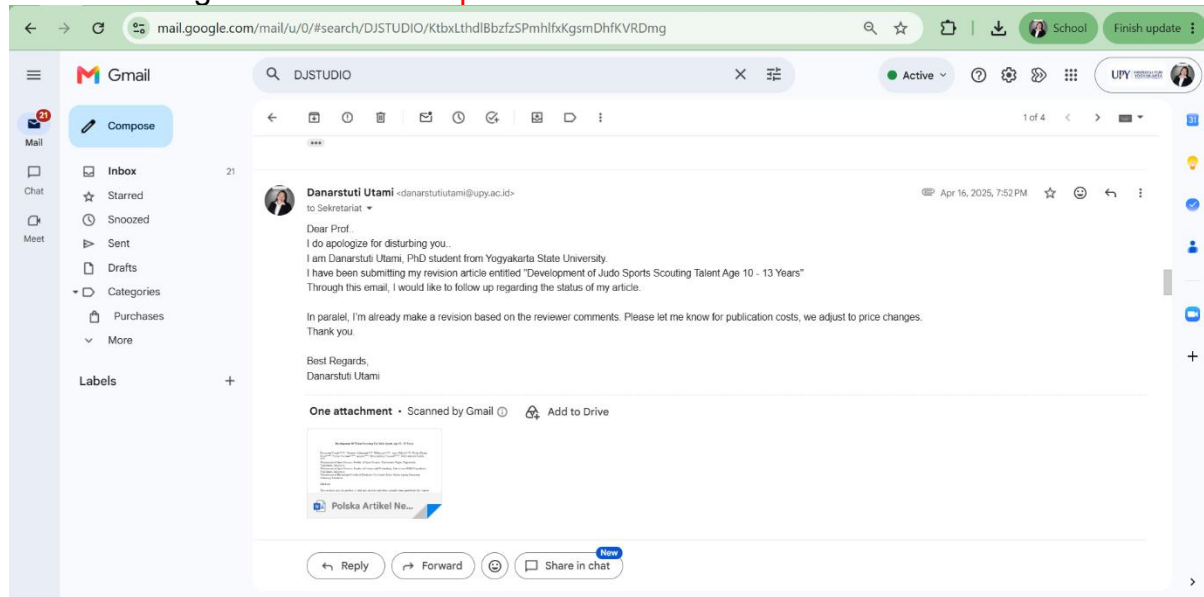
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Development Of Talent Scouting For Judo Sports Age 10 - 13 Years

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Abstract

This research aims to produce a valid and reliable judo talent identification guidebook that can be used to measure the talent of judo athletes. This type of research uses research and development methods. On a small scale, this research used samples from the Wira Mataram judo club, while for large scale testing it was carried out on Talented Athletes Development (PAB) BPO DIY and PJSI Bantul Regency. All samples used in product trials were judo athletes aged 10 – 13 years. The data analysis technique uses a giftedness formula by calculating the mean (M) and standard deviation (SD) from test results which are classified into five norms based on normal distribution of symptoms, namely very talented, talented, moderately talented, less talented and not talented. The data obtained from each type of test is processed and converted into a giftedness formula. The results of this research obtained 17 (seventeen) judo sports talent identification test items, including: anthropometric test, there were 4 (four) items consisting of: height, fat, body weight, sitting height, then for biomotor, 8 (eight) were obtained. Test items consisting of strength tests include: wall sit, push up, back up, sit up, agility test: side step test, flexibility test: sit and reach, balance test: dynamic balance test, endurance test: havard step test, and the branch test/skill test obtained 5 (five) items consisting of: *ushiro ukemi* sitting position, *yoko ukemi* lying position, *yoko ukemi* squatting and standing position, *mae ukemi* kneeling position, *jugeri/mae mawari ukemi*. The total results of the effectiveness test value, this test was declared valid with the number 0.86 and showed a reliability value with the number 0.9.

Keywords: Judo, Talent Identification, Ages 10-13 years

Introduction

From talent searches and monitoring to breeding, education, and training grounded on science and technology, efforts to raise sports accomplishments must keep developing players as early as feasible, so enhancing the quality of sports organisations both centrally and locally. (1). Coaching is structured and programmed, beginning with the parent organization of the sports branch at both the central and regional levels (2) . Coaching also involves empowering sports organizations, developing national and regional sports coaching centers, and organizing competitions in a tiered and sustainable manner (3).

The sports development system cannot be implemented immediately, it must adhere to established procedures and designs, sports development cannot be achieved through minimal planning, it requires totality and commitment to develop sports logically, analytically, and systematically (4) . To achieve peak performance, a continuous and gradual training regimen is required (5) . Therefore, talent searches under talent guidance must be taken into account in Indonesia's sports achievement development system, especially in the sport of judo, so enabling the method of identifying potential sports talents, which starts early age, to help children in determining their athletic potential.

In preparation for the 2000 Sydney Olympics, Australia held a movement known as The National Talent Identification and Development Program for the Sydney Olympic Games. This movement has two main programs: Sport Search and Talent Search. The Australian Sports Commission developed this talent scouting program in response to the country's previous decline in gold medal wins at several Olympics. Efforts to foster these achievements through an IPTEK approach include identifying talented athletes (6).

Talent must be identified at an early age so that it can be properly nurtured to produce quality players/athletes. (7). Identifying and directing talented individuals to relevant sports is critical for athletic success (8). Peak achievement in a sport can only be achieved by those who are talented and have been able to meet the requirements of a sport since a young age, as well as those who can follow systematic training over time (9). Detecting and identifying athletes is critical for the athlete development process, including the initial selection of scouts and subsequent stages of the program (10).

Achievements in the sport of judo in Indonesia are currently experiencing fluctuations. The achievements obtained differ greatly from those of the 1980s, when Indonesia consistently ranked first. Aside from the achievements of Indonesian sports, what needs to be observed at this time is how to develop sports in Indonesia so that the achievements of the 1980s are realized again (11). So that judo achievements can be achieved optimally, "well-established" planning is needed which cannot be separated from the coaching pattern carried out. Almost every country has a pyramid concept in its development system. The pyramid concept of achievement development includes three stages, namely: (1) multilateral stage, (2) specialization stage, and (3) peak achievement stage. The multilateral stage is to develop basic movement patterns, the specialization stage is adaptation to the specifics of the sport, and the peak stage of achievement is physical, technical, tactical and mental maturation (12). For this reason, a massing, breeding and development process is needed which is carried out continuously, gradually and sustainably.

Besides the development of sports is also influenced by the coaching system. If the coaching system implemented runs well, sports development will also be better. The sports development system is based on (1) physical education and national organizations, which include educational programs in schools, recreation and sports clubs and organizational structures in government and (2) the sports training system (13).

Talented Judo athletes' coaching program may be carried out with planned, consistent, quantifiable training combining several disciplines and technology. In highly competitive settings, sports coaches have to surely put in great effort to produce outstanding athletes (14). Talented sportsmen have to be carefully selected if they are to perform at best.

In general, sports coaching and development from an early age, namely the period from approximately 6 years to 14 years of age (6 to 14 years), is part of national policy. Training

periodization can be divided into multilateral (ages 6-14 years) and specialization (ages 15 years and above). The multilateral training period can be further classified into two groups, namely the initial period ranging from 6-10 years of age and the formation period ranging from 11-14 years of age. The explanation in the following image:

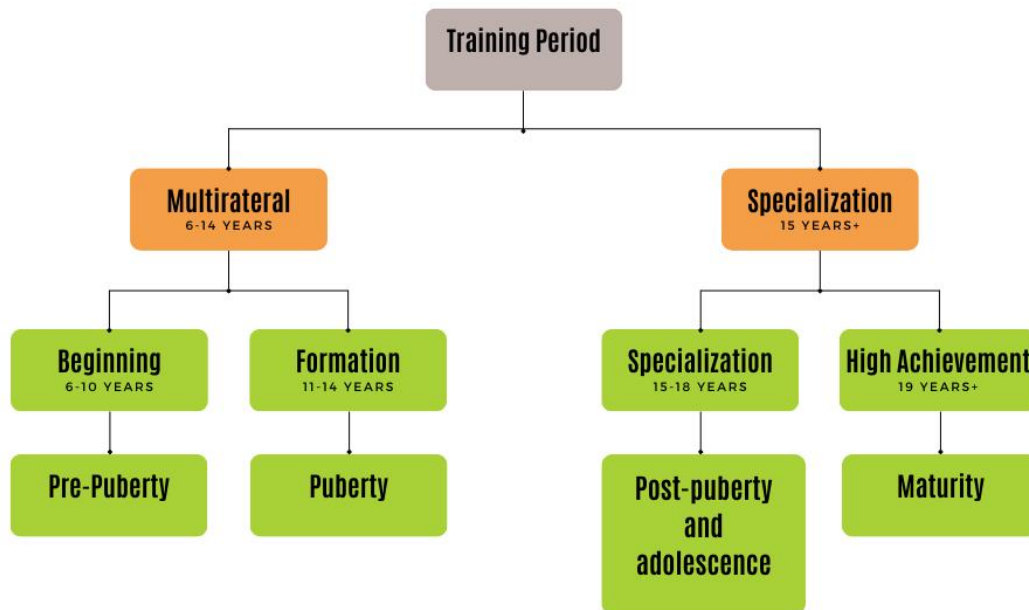


Figure 1. Exercise Periodization
(source: APORI, 2014: 2)

Until now, there are very few instructions or guidelines regarding measuring instruments for identifying judo talent aged 10-13 years, so the author in this case is very interested in compiling a guidebook instrument for talent. Judo identification marks for children aged 10 to 13 are guidelines used to determine the identity of a judo athlete for valid and reliable assessment. Measurements have to be done in order to identify and evaluate judo ability. These tests have to be fit for the demands and traits of judo athletes between the ages of 10 and 13. This paper will concentrate on creating a tool for spotting judo athletic talent between the ages of 10 and 13 that, from what the author knows, has never been investigated previously.

Materials and Methods

Design

This study employs research and development methods commonly used in the production of specific products and tests their effectiveness. Research is used to produce certain products, specifically needs analysis and testing the effectiveness of the product so that it can function in the larger community.

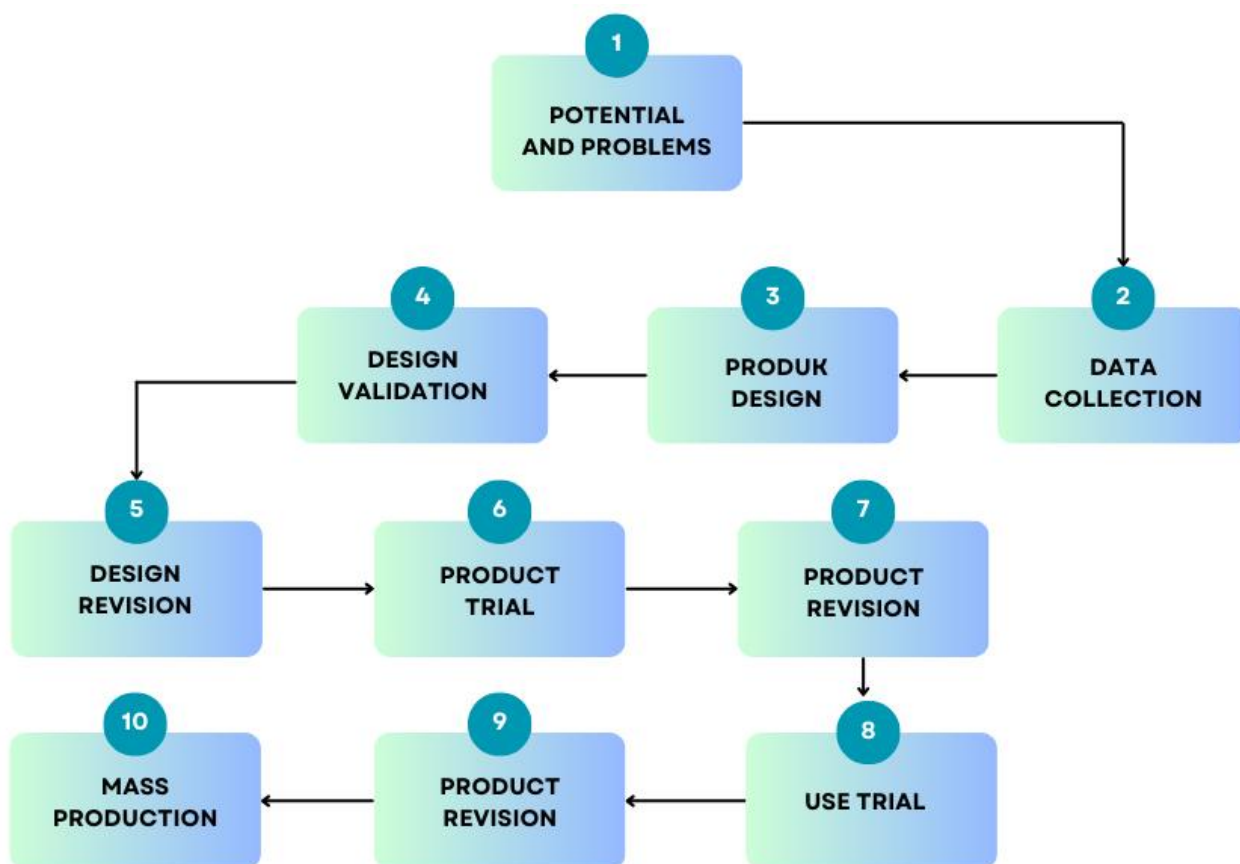


Figure 2. The steps for using the Research & Development Method are as follows

Sample

The sample size for this study was 45 athletes. The sample yielded two sets of data. Validity and reliability testing was carried out on samples other than those used during the instrument development stage. Wira Mataram Judo Club collected small-scale data from up to 15 athletes aged 10 to 13 years. The Talented Athlete Development (PAB) program of BPO DIY and the All Indonesia Judo Association (PJSI) of the Bantul DIY district collected large-scale data on up to 30 athletes aged 10-13 years. Thus, testing is done independently to ensure that the instrument is valid and consistent when applied to a larger population.

The study's sample included boys and girls aged 10 to 13 years old, so the findings can be applied to both genders' physical condition and potential judo talent. Boys and girls were included due to differences in physical and motor development between the ages of 10 and 13 years, ensuring that the test results are representative and fair to both genders.

Purposive sampling was used in this study to select participants based on specific criteria related to the research objectives. The sample selection criteria include: (1) athletes aged 10 to 13, (2) active registration in a participating judo club, and (3) current participation in an early age athlete development program. This technique was chosen to ensure that the subjects studied had characteristics that were consistent with the development of the judo sports talent instrument.

Variables

The variables in this study are anthropometric test variables, biomotor abilities, and judo technique ability tests. The data analysis in this study focused on the formula for identifying judo sports talent aged 10 to 13. This study's data analysis used descriptive statistics to group test results into talent level categories, such as very talented, talented, quite talented, less talented, and not talented. Additionally, validity and reliability tests were conducted to ensure that the test instruments used were accurate and consistent. After processing the data and determining the mean (M) and standard deviation (SD), the data is interpreted by categorizing it into five categories: very talented, talented, quite talented, less talented, and not talented, using the following formula:

Table 1. Special Interest and Talent Category for Judo Sports

NO	CATEGORY	FORMULA
1	VERY TALENTED	On $M + (1.5 \times SD) > UP$
2	TALENTED	On $M + (0.5 \times SD) S/DM + (1.5 \times SD)$
3	QUITE TALENTED	On $M - (0.5 \times SD) S/DM + (0.5 \times SD)$
4	LESS TALENTED	On $M - (0.5 \times SD) S/DM - (0.5 \times SD)$
5	NOT TALENTED	Down $< M - (1.5 \times SD)$
Information: M = Mean. SD = Standard Deviation, S/D = Up to...		

(source : (15))

Because in this research there are several tests where the lower the score the better, the formula formulation above is reversed to:

Table 2. Judo Sports Talent Identification Formula

NO	CATEGORY	FORMULA
1	VERY TALENTED	On $M - (1.5 \times SD) < DOWN$
2	TALENTED	On $M - (0.5 \times SD) S/DM - (1.5 \times SD)$
3	QUITE TALENTED	On $M + (0.5 \times SD) S/DM - (0.5 \times SD)$
4	LESS TALENTED	On $M + (0.5 \times SD) S/DM + (0.5 \times SD)$
5	NOT TALENTED	Down $> M + (1.5 \times SD)$
Information: M = Mean. SD = Standard Deviation, S/D = Up to...		

Then the next step is to analyze the data by calculating the total score scale obtained per test item to draw onclusions regarding the norms for the gifted category in identifying talent for judo aged 10-13 years from the research conducted.

Instruments

The author's field observations indicate that for 10–13 year olds the following judo talent identification tools are needed: (1) Anthropometric Test, (2) Biomotor Components, and (3) Judo Technical/Division Skills Test. This work aims to provide accurate evaluation instruments and talent identification rules for judo sports. Talent for 10-13 year olds is valid and reliable, with value norms that are consistent with the judo talent identification test for 10-13 year olds. The developed instrument is expected to be used as a tool to assess judo sports talent for children aged 10 to 13, thereby aiding in the development of judo sports and the search for judo sports talent.

Tabel 3 . New Paradigm of Talent Identification for Judo Ages 10-13 Years

Judo Talent Identification at the moment	Judo Talent Identification New Paradigm
• There has been no research on identifying talent for judo aged 10-13 years	• There has been research on identifying talent for judo aged 10-13 years
• There is no appropriate test instrument to measure judo talent aged 10-13 years	• An appropriate test instrument has been found to measure judo talent aged 10-13 years with test norms
• There is no guidebook regarding the procedures for carrying out the judo talent identification test for ages 10-13 years	• There is already a guidebook regarding the procedures for carrying out the judo talent identification test for ages 10-13 years
• At the start of the training program, athletes aged 10-13 years have not yet had a talent identification test	• At the start of the training program, athletes aged 10-13 years are expected to be able to take a talent identification test

Based on the theoretical basis and framework of thought above, and considering the importance of talent identification, an assessment instrument for judo sport talent identification aged 10-13 years is very necessary. Having this assessment instrument will make it easier for trainers to monitor success in implementing training programs for peak performance.

Results

As a result of observations from information available in the field, every talent search for Judo athletes at regional level still uses a system that cannot be "justified" in terms of sports science, therefore determining the product design of test items that are in accordance with the characteristics of this judo sport goes through several stage. The stages are as follows:

5. Selecting judo talent identification test items that approach the needs and characteristics of judo sports include:

d. Anthropometric tests include:

Table 4. Anthropometric tests

No.	Types of anthropometric tests
1.	Height
2.	Shoulder width
3.	Chest width
4.	Hip width
5.	Fat (tricep, subscapular)
6.	Sitting height
7.	Body weight
8.	Hand span

e. Biomotor include:

Table 5. Biomotor

No.	Biomotor Component	Test Type
1.	Cardiovascular Test	Namely a 4.8 km fast walking test and multistage (multistage fitness test)
2.	General movement ability test	8) standing board jump 9) softball throws 10) zig-zag run 11) tennis ball throwing 12) basketball throwing 13) madicine ball put 14) 50 meter sprint
3.	Motor educability test	21)One Foot_Touch Head 22)Side Learning Rest 23)Grapevine 24)One-Knee Balance 25)Stork Stand 26)Double Heel Click 27)Cross-Leg Squat 28)Full Left Turn 29)One Knee-Head to Floor 30)Hop Backward 31)Forward Hand Kick 32)Full Squat-Arm Circle 33)Half-Turn Jump-Left Foot 34)Three Dips 35)Side Kick 36)Kneel, Jump to Feet 37)Russian Dance 38)Full Right Turn, The Top 39)Single Squat Balance 40)Jump Foot.
4.	Strength measurement test	6) push up 7) sit up 8) pull up 9) back up 10) wall sit
5.	Muscle strength measurement test	6) handgrip dynamometer 7) pull and push dynamometer 8) back dynamometer 9) leg dynamometer

		10) one-repetition maximum (1-rm) (with bench press, leg press, and arm curl),
6.	Agility measurement	3) side step test 4) shuttle run test
7.	Flexibility measurement	3) sit 4) reach test
8.	Speed measurement	using 6 second sprint test, 50 yard (45.73m) sprint test
9.	Reaction speed measurement	3) the nelson hand reaction test 4) the nelson foot reaction test
10.	Explosive power measurement	margaria kalamen test
11.	Balance measurement	3) dynamic balance test 4) the stork stands test
12.	Physical fitness/heart lung endurance test	4) running 2,4 km 5) havard step test 6) running 12 menit

f. Test judo/division technique ability, include:

Table 6. Test judo/division technique ability

No.	Test Component	Test Type
1.	Basic techniques falling techniques (<i>ukemi waza</i>)	8) <i>yoko ukemi</i> side fall in sitting position 9) <i>yoko ukemi</i> side fall in squatting and standing position 10) <i>ushiro ukemi</i> back fall in sitting position 11) <i>ushiro ukemi</i> back fall in standing squat position 12) <i>mae ukemi</i> front fall on kneeling 13) <i>mae ukemi</i> fall front squat standing 14) <i>mae mawari ukemi/jugeri</i> kneeling and standing
2.	Basic grip in judo (<i>kumikata</i>)	Pulling and pushing

Some of the tests listed above are relevant to talent identification in the sport of judo, and field observations yielded the following percentage results:

Table 7. Talet Identification

No.	Test Type	Percentage (%)
1	Height	100
2	Shoulder width	35.71
3	Chest width	32.71
4	Hip width	32.14
5	Fat (tricep, subscapular)	85.71
6	Sitting height	89.28
7	Body weight	100
8	Hand span	28.57
9	Fast walking test 4.8 km	28.57
10	Multistage (multistage fitness test)	46.42
11	Standing board jump	46.42
12	Softball throws	25
13	Zig-zag run	39.28
14	Tennis ball throw	28.57
15	Basketball throws	32.14
16	Medicine ball put	25
17	50 meter sprint	48.85
18	One foot touch head	42.85
19	Side learning rest	46.42
20	Grapevine	46.42
21	One-knee balance	39.28
22	Stork stand	46.42
23	Double heel clicks	35.71
24	Cross-leg squat	42.85
25	Full left turn	39.28
26	One knee-head to floor	42.85

27	Hop backward	39.28
28	Forward hand kick	28.57
29	Full squat-arm circle	35.71
30	Half-turn jump-left foot	39.28
31	Three dips	28.57
32	Side kick	25
33	Kneel	25
34	Jump to Feet	25
35	Russian dance	25
36	Full right turn	28.57
37	The top	32.14
38	Single squat balance	35.71
39	Jump foot	28.57
40	Push up	96.42
41	Sit up	96.42
42	Pull up	42.85
43	Back up	78.57
44	Wall sit	92.85
45	Handgrip dynamometer	42.85
46	Pull and push dynamometer	39.28
47	Back dynamometer	35.71
48	Leg dynamometer	46.42
49	One-repetition maximum (1-RM) bench press	35.71
50	Leg press	39.28
51	Arm curl	35.71
52	Side step test	89.28
53	Shuttle run test (lari bolak-balik)	46.42
54	Sit and reach test	85.71
55	6 second sprint test	28.57
56	50 yard sprint test (45.73m)	25
57	The Nelson hand reaction test	25
58	The Nelson foot reaction test	25
59	Margaria kalamen test	25
60	Dynamic balance test	75
61	The Stork stands test	28.57
62	2.4 km run	42.85
63	Up and down the bench (Harvard step test)	92.85
64	12 minute run	32.14
65	<i>Yoko ukemi</i> side falls in sitting position	100
66	<i>Yoko ukemi</i> side falls in squatting and standing position	96.42
67	<i>Ushiro ukemi</i> back falls in sitting position	100
68	<i>Ushiro ukemi</i> back falls in squatting standing position	46.42
69	<i>Mae ukemi</i> front falls in kneeling position	92.85
70	<i>Mae ukemi</i> front falls in squatting standing	42.85
71	<i>Mae mawari ukemi/jugeri</i> kneeling and standing	71.42
72	<i>Kumikata</i> pulling and pushing	46.42

6. Product design comes next; this entails choosing numerous questions with a percentage higher than 50% and organising them from top to bottom to evaluate judo sports skill aged 10 to 13 years. There are 17 test elements total that have been modified for the judo sport:

Table 8. Test Items

No.	Test Items above 50%
1.	Height
2.	Fat
3.	Body weight
4.	Sitting height
5.	Wall sit
6.	Push up
7.	Back up
8.	Sit up

9.	Side step test
10.	Sit and reach
11.	Dynamic balance test
12.	Havard step test
13.	<i>Ushiro ukemi</i> sitting position
14.	<i>Yoko ukemi</i> posisi lying positions
15.	<i>Yoko ukemi</i> squatting and standing positions
16.	<i>Mae ukemi</i> kneeling position
17.	<i>Jugeri/mae mawari ukemi</i>

These 17 exams were selected to reflect three main elements that are quite crucial for judo success: The possibility for an optimal physique in judo is evaluated using anthropometric traits like height, weight, body fat, sitting height. Basic physical condition aspects (strength, endurance, flexibility, agility, and balance): to improve technical ability and movement efficiency during competition. Basic judo technical skills (*ukemi* and *jugeri*) are essential for technique safety and effectiveness. The test selection also takes into account the characteristics of children aged 10 to 13 years old, who are in the motor growth phase and require a comprehensive approach that includes both physical and technical aspects.

7. Then prepare a draft guide for implementing test procedures, with the recommended sequence for implementing the first stage of tests being the anthropometric test. This test has a very important role in the sport of Judo, namely covering height, fat, weight, sitting height, the second stage test is the physical ability test (biomotor) including wall sits, push ups, back ups, sit ups, side step test, sit and reach your toes (sit and reach) with a meter box, dynamic balance test, and bench up and down test (Havard step test). It should be noted that the up and down bench test (Havard step test) is carried out last in the second stage of the test. Furthermore, the test of technical ability/skills in judo includes a branch test, namely falling techniques (*ukemi waza*) including back falls (*Ushiro Ukemi*) in a sitting position, side falls (*Yoko Ukemi*) in a lying position, squatting and standing, front falls (*Mae Ukemi*) in a kneeling position and *Jugeri*/rolling forward (*mae mawari ukemi*) from a kneeling and standing position. The special talent identification test for judo is explained in the following picture:

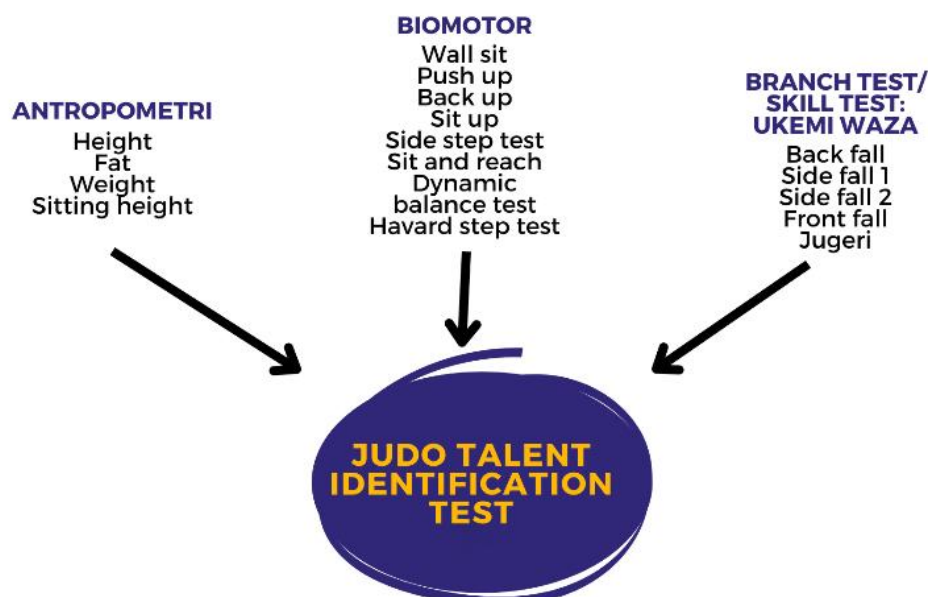


Figure 3. Judo Talent Identification Test Items

8. The next stage is to develop an assessment and evaluation flow, in the identification flow of scouting special sports interests and talents from start to finish, the category of talent level is found, briefly explained in the following picture:

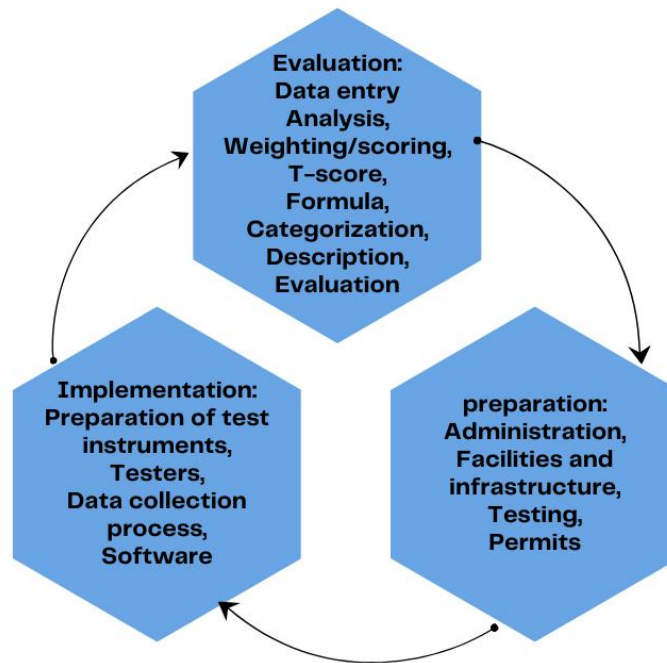


Figure 4. Flow of Implementation and Data Analysis
(Reference: (15))

The small-scale trial is a follow-up to this research to determine the extent to which this talent identification guide can be applied. The subjects of this small-scale trial were athletes aged 10-13 years from the Wira Mataram Judo Club. Based on the results of the small-scale trial assessment of the product being developed, it shows that the total score of 93 (39%) samples stated that it was suitable, while the score of 147 (61%) of the other samples stated that it was very suitable, it can be concluded that the results of the development of the judo sports talent identification instrument aged 10 -13 years can be said to be easy for testers to understand and implement with several suggestions and comments. The percentage results from the assessment above can be seen in the following diagram:

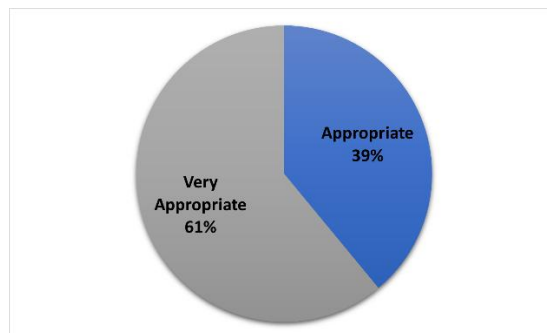


Figure 5. Small Scale Trial Results Percentage Diagram

The next stage is based on the results of small-scale trials, then product revisions are carried out before large-scale trials are carried out. The improvements made include aspects suggested by users when using the product. Based on comments and suggestions from users regarding the judo sports talent identification instrument aged 10-13 years, a revision was carried out again to improve the product in the form of a guidebook. The revisions to the product are explained in the following table:

Table 9. Small Scale Product Revision

No	Before Revision	After Revision
1	The size of the writing in the guidebook is too small and difficult to read	The size of the writing in the guidebook has been enlarged and is easy to read
2	There is no picture of the test implementation flow yet	There is already a picture of the test implementation flow

3	There is no picture of the test sequence yet	There is already a picture of the test sequence
4	The book cover does not include photos of children aged 10-13 years who received gold medals	The book cover includes a photos of a child aged 10-13 years who received gold medal

Then, based on several suggestions and input from users of the talent identification manual for judo sports aged 10-13 years, the product design was revised again to proceed to the next stage, namely the large-scale trial stage. Large-scale trials were carried out at the Talented Athletes Development (PAB) BPO DIY program and the All-Indonesian Judo Association (PJSI) Bantul Regency, Yogyakarta.

This large-scale trial is a follow-up to the product revision of the small-scale trial. From the results of the large-scale trials, suggestions and comments were then obtained to revise the product before carrying out an effectiveness test. Based on the results of the large-scale trial assessment of the product being developed, it shows that the total score of 130 (27%) samples stated that it was suitable, while the score of 350 (73%) of the other samples stated that it was very suitable, it can be concluded that the results of the development of the judo sports talent identification instrument aged 10 – 13 years can be said to be easy for testers to understand and implement with several suggestions and comments. The percentage results from the assessment above can be seen in the following diagram:

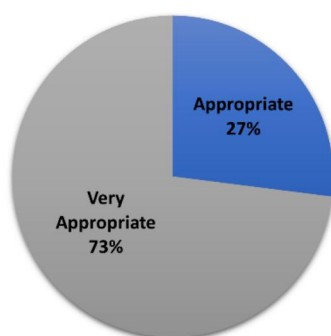


Figure 6. Large Scale Trial Results Percentage Diagram

The improvements made include aspects suggested by users when using the product. Based on comments and suggestions from users regarding the judo sports talent identification instrument aged 10 – 13 years. The revisions to the product are explained in the following table:

Table 10. Large Scale Product Revision

No	Before Revision	After Revision
1	There is no way to assess the judo sports talent identification instrument for ages 10-13 years	There is already a method for assessing judo sports talent identification instrument ages 10-13 years
2	The photos in the manual are not in color	The photos in the guidebook are in color
3	The manual is not yet concise/too thick	The manual is concise/not too thick

The next stage, after product revision from large-scale results, continued with product effectiveness testing in the form of a talent identification guidebook for judo sports aged 10-13 years. This was carried out by testing the validity of the test instrument using a test-retest test, namely data from two observations using the same instrument.

The results of testing the validity of this talent identification test instrument include:

Table 11. Results of Instrument Validity Testing

No.	Items Test	Calculated r
1.	Height	1
2.	Fat	1
3.	Body weight	1
4.	Sitting height	1

5.	Wall sit	0,955
6.	Push up	0,965
7.	Back up	0,904
8.	Sit up	0,921
9.	Side step test	0,766
10.	Sit and reach	0,960
11.	Dynamic balance test	0,860
12.	Havard step test	0,816
13.	<i>Ushiro ukemi</i> sitting position	0,809
14.	<i>Yoko ukemi</i> posisi lying positions	0,630
15.	<i>Yoko ukemi</i> squatting and standing positions	0,731
16.	<i>Mae ukemi</i> kneeling position	0,829
17.	<i>Juger/mae mawari ukemi</i>	0,843

The results of the research hypothesis testing are compared to the r-value. The r-table value for N = 50 with a 5% significance level is 0.279. Based on the results, it is clear that the validity test of the talent identification test instrument yields $r_{count} > r_{table}$. Based on these findings, it can be concluded that all types of judo sport talent identification test questions for ages 10-13 are valid.

Based on the results of reliability testing of the judo sports talent identification test instrument aged 10 - 13 years, is known:

Table 12. Reliability test

No.	Items Test	Coefficient alpha
1.	Height	1
2.	Fat	1
3.	Body weight	1
4.	Sitting height	1
5.	Wall sit	0,997
6.	Push up	0,978
7.	Back up	0,942
8.	Sit up	0,958
9.	Side step test	0,867
10.	Sit and reach	0,977
11.	Dynamic balance test	0,925
12.	Havard step test	0,897
13.	<i>Ushiro ukemi</i> sitting position	0,891
14.	<i>Yoko ukemi</i> posisi lying positions	0,769
15.	<i>Yoko ukemi</i> squatting and standing positions	0,844
16.	<i>Mae ukemi</i> kneeling position	0,906
17.	<i>Juger/mae mawari ukemi</i>	0,914

The reliability test of all judo talent identification test instruments for ages 10-13 yielded a coefficient of more than 0.5. These findings suggest that the judo talent identification test instrument for ages 10-13 is reliable and worthy of continued mass production.

After conducting small-scale and large-scale tests and receiving results indicating that all judo talent identification test instruments for ages 10-13 are suitable for use, the next stage is the effectiveness test. This stage involves an analysis of data from the judo talent identification test results for ages 10 to 13, which have been declared valid and reliable.

The results of the effectiveness test data obtained mean (M) and standard deviation (SD) values for each test item so that they can be used to calculate norms and standards for assessing the judo sports talent identification test aged 10-13 years, as follows:

18. Height

The results of height data analysis obtained an average data value (Mean) of 146.32 and a standard deviation (SD) of 6.96. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results of calculating height norms and standards were obtained as follows:

Table 13. Standard Body Height Value (centimeters)

MARK	CATEGORY	RESULTS
1	VERY TALENTED	156.7 cm > Above
2	TALENTED	149.7 cm to 156.7 cm
3	QUITE TALENTED	142.8 cm to 149.7 cm
4	LESS TALENTED	135.8 cm to 142.8 cm
5	NOT TALENTED	<135.8 cm
S/D = Up to...		

19. Fat (trisept, subscapula)

The results of fat data analysis obtained an average data value (Mean) of 10 and a standard deviation (SD) of 2.51. After the calculation is complete, the next step is to determine the norm classification by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports aged 10 – 13 years. The results of calculating fat norms and standards were obtained as follows:

Table 14. Standard Fat Value (millimeters)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	6.2 mm > Above
4	TALENTED	8.7 mm to 6.2 mm
3	QUITE TALENTED	11.2 mm to 8.7 mm
2	LESS TALENTED	13.7 mm to 11.2 mm
1	NOT TALENTED	< 13.7 mm
S/D = Up to...		

20. Weight

The results of the analysis of body weight data obtained an average data value (Mean) of 37.73 and a standard deviation (SD) of 8.37. After the calculation is complete, the next step is to determine the norm classification by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports aged 10 – 13 years. The results of calculating body weight norms and standards were obtained as follows:

Table 15. Standard Body Weight Value (kilograms)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	50.28 kg > Above
4	TALENTED	41.91 kg to 50.28 kg
3	QUITE TALENTED	33.54 kg to 41.91 kg
2	LESS TALENTED	25.17 kg to 33.54 kg
1	NOT TALENTED	< 25.17 kg
S/D = Up to...		

21. Sitting height

The results of the analysis of sitting height data obtained an average data value (Mean) of 75.06 and a standard deviation (SD) of 3.60. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for sitting height are as follows:

Table 16. Standard Sitting Height Value (centimeters)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	80.4 cm > Above
4	TALENTED	76.8 cm to 80.4 cm
3	QUITE TALENTED	73.2 cm to 76.8 cm
2	LESS TALENTED	69.6 cm to 73.2 cm
1	NOT TALENTED	< 69.6 cm
S/D = Up to...		

22. Wall sit

The results of wall sit data analysis obtained an average data value (Mean) of 94.04 and a standard deviation (SD) of 23.52. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating wall sit norms and standards are as follows:

Table 17. Standard Wall Sit Value (seconds)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	129.32 seconds > Up
4	TALENTED	105.8 seconds to 129.32 seconds
3	QUITE TALENTED	82.28 seconds to 105.8 seconds
2	LESS TALENTED	58.78 seconds to 82.28 seconds
1	NOT TALENTED	< 58.78 seconds
S/D = Up to...		

23. Push Up

The results of the push up data analysis obtained an average data value (Mean) of 42.16 and a standard deviation (SD) of 10.30. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained for calculating push up norms and standards are as follows:

Table 18. Standard Push Up Value (times)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	58 times > Up
4	TALENTED	47 times to 58 times
3	QUITE TALENTED	37 times to 47 times
2	LESS TALENTED	27 times to 37 times
1	NOT TALENTED	< 27 times
S/D = Up to...		

24. Back Up

The results of the push up data analysis obtained an average data value (Mean) of 92.68 and a standard deviation (SD) of 13.96. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating back up norms and standards are as follows:

Table 19. Standard Back Up Value (times)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	114 times > Up
4	TALENTED	100 times to 114 times
3	QUITE TALENTED	86 times to 100 times
2	LESS TALENTED	72 times to 86 times
1	NOT TALENTED	<72 times
S/D = Up to...		

25. Sit Up

The results of sit up data analysis obtained an average data value (Mean) of 42.24 and a standard deviation (SD) of 10.68. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for sit ups are as follows:

Tabel 20. Standard Sit Up Value (times)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	58 times > Up
4	TALENTED	48 times to 58 times
3	QUITE TALENTED	37 times to 48 times
2	LESS TALENTED	26 times to 37 times
1	NOT TALENTED	< 26 times
S/D = Up to...		

26. Side Step Test

The results of the side step test data analysis obtained an average data value (Mean) of 8.75 and a rough standard deviation (s) of 0.76. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards of the side step test are as follows:

Table 21. Side Step Test Value Standards (points)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	9.8 points > Above
4	TALENTED	9.1 points to 9.8 points
3	QUITE TALENTED	8.3 points to 9.1 points
2	LESS TALENTED	7.6 points to 8.3 points
1	NOT TALENTED	< 7.6 points
S/D = Up to...		

27. Sit and Reach

The results of the sit and reach data analysis obtained an average data value (Mean) of 40.64 and a rough standard deviation (s) of 4.75. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results of calculating sit and reach norms and standards are as follows:

Table 22. Standard sit and reach value (cm)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	47.76 cm > Above
4	TALENTED	43.01 cm to 47.76 cm
3	QUITE TALENTED	38.26 cm to 43.01 cm
2	LESS TALENTED	33.51 cm to 38.26 cm
1	NOT TALENTED	< 33.51 cm
S/D = Up to...		

28. Dynamic Balance Test

The results of the dynamic balance test data analysis obtained an average data value (Mean) of 70.8 and a rough standard deviation (s) of 22.32. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating norms and standards for the dynamic balance test are as follows:

Table 23. Standard Dynamic Balance Test Value (points)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	100 points > Above
4	TALENTED	85 points to 100 points
3	QUITE TALENTED	60 points to 85 points
2	LESS TALENTED	40 points to 60 points
1	NOT TALENTED	< 40 points
S/D = Up to...		

29. Harvard Step Test

The results of the Harvard step test data analysis obtained an average data value (Mean) of

106.36 and a rough standard deviation (s) of 21.26. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards of the Harvard step test are as follows:

Table 24. Harvard Step Test Value Standards

MARK	CATEGORY	RESULTS
5	VERY TALENTED	119 > Up
4	TALENTED	105 to 119
3	QUITE TALENTED	90 to 105
2	LESS TALENTED	75 to 90
1	NOT TALENTED	< 75
S/D = Up to...		

30. Back fall (*ushiro ukemi*) sitting position

The results of the branch test analysis using a rubik for assessing the performance of falling technique skills (*ukemi waza*) in the test participants were obtained proportionally and in accordance with the judo sport branch which was carried out by considering the competency of the test participants in performing the falling technique (*ukemi waza*).

Determination of competency standards in assessing the performance of basic judo technical skills is carried out through interpretation into assessment norms. The results of the data analysis of Ushiro Ukemi's sitting position obtained an average data value (Mean) of 10.48 and a standard deviation (SD) of 1.16.

After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *ushiro ukemi* sitting position are as follows:

Table 25. Standard Value *Ushiro Ukemi* sitting position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	11 to 12
3	QUITE TALENTED	10 to 11
2	LESS TALENTED	9 to 10
1	NOT TALENTED	Down < 9
S/D = Up to...		

31. Side fall (*yoko ukemi*) lying position

The results of data analysis of Yoko Ukemi's lying position obtained an average data value (Mean) of 10.66 and a standard deviation (SD) of 1.02. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The following are the findings of computing the norms and standards for Yoko Ukemi's laying posture:

Table 26. Standard value of *yoko ukemi* lying position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	11 to 12
3	QUITE TALENTED	10 to 11
2	LESS TALENTED	9 to 10
1	NOT TALENTED	Down < 9
S/D = Up to...		

32. Side falls (*yoko ukemi*) squatting and standing positions

The results of *Yoko Ukemi's* data analysis in squatting and standing positions obtained an average data value (Mean) of 9.6 and a standard deviation (SD) of 1.35. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from

calculating the norms and standards for *Yoko Ukemi* squatting and standing positions are as follows:

Table 27. Standard Value of *Yoko Ukemi* squatting and standing position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	10 to 12
3	QUITE TALENTED	9 to 10
2	LESS TALENTED	8 to 9
1	NOT TALENTED	Down < 8
S/D = Up to...		

33. Front fall (*mae ukemi*) kneeling position

The results of data analysis for *mae ukemi* kneeling position obtained an average data value (Mean) of 9.82 and a standard deviation (SD) of 1.20. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *mae ukemi* kneeling position are as follows:

Table 28. Standard Value *mae ukemi* kneeling position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	10 to 12
3	QUITE TALENTED	9 to 10
2	LESS TALENTED	8 to 9
1	NOT TALENTED	Down < 8
S/D = Up to...		

34. *Jugeri* / rolling forward (*mae mawari ukemi*) kneeling and standing positions

The results of the data analysis for *Mae Mawari Ukemi* in kneeling and standing positions obtained an average data value (Mean) of 9.4 and a standard deviation (SD) of 1.24. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *Mae Mawari Ukemi* kneeling and standing positions are as follows:

Table 29. Standard Value *jugeri/mae mawari ukemi* kneeling and standing position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	11 > Up
4	TALENTED	10 to 11
3	QUITE TALENTED	9 to 10
2	LESS TALENTED	8 to 9
1	NOT TALENTED	Down < 8
S/D = Up to...		

Discussion

Based on the assumption that research on sports talent in the context of judo is still limited, one approach to overcoming the challenges of developing sports talent is to identify the concept of sports talent that takes into account the specificities of each sport (16–18). The purpose of this essay is to design exam questions capable of spotting judo potential. Early in youngsters between the ages of 10 and 13, judo skill is found (7). Moreover, it should be mentioned that skill in many sports including judo (20) has been understood using the opinions of trainers as sources of knowledge. By means of the aptitude test findings, coaches and physiotherapists may collaborate to

design a training program that efficiently combines the prevention of injuries with the development of technical ability. While coaches focus on improving certain judo abilities depending on test results, physiotherapists provide remedial therapies for found physical shortcomings include muscular imbalances, flexibility limitations, or postural control. This cooperation allows for a more thorough and customised style to instruction.

Based on the results of this study, judo talent may be determined using 17 objects acting as a guide. Development of anthropometric test criteria for judo talent depends critically on height (21–23). In judo (24), taller height can offer benefits in terms of attack range and distance management. Therefore, the athlete selection and development process depends much on a complete awareness of how height affects judo performance. Measurements of height expose an athlete's body type, which might affect the most suitable weight class and competitive approach (25). Comparison of the results of this study with the Talent Identification and Development (TID) method and the Eurofit Test Battery states that height and jumping are required in elite women's volleyball, but motor coordination is a key factor in recognizing talent in girls aged 6–14 years (26).

Body fat percentage provides valuable information about an athlete's body composition, which has a direct impact on performance (27). Judo athletes with an ideal body composition, defined as a balanced proportion of body fat (28), perform better because they can move faster, more efficiently, and have enough energy for intense matches. As a result, measuring and monitoring body fat is an important part of a judo athlete's training and development program, allowing coaches to adjust diet and training plans to achieve peak physical condition.

Weight measurement is critical because judo is a sport in which athletes are classified by weight class, so having an appropriate weight is essential for competing effectively in the correct category (29). Effective weight management helps coaches to suggest the required diet (30).

Measurements of sitting height expose details about an athlete's upper body dimensions, which might affect balance and playing style (31). Maintaining an acceptable centre of gravity depends on a sitting height commensurate with total body height, therefore enhancing the athlete's capacity to regulate their own and their opponent's movements.

The wall sit test is an effective tool for assessing judo athletes' strength and endurance potential, allowing coaches to design appropriate training programs to improve their performance (32). The push-up test clearly indicates an athlete's upper body muscle strength and endurance capacity, allowing coaches to assess their overall physical condition (33). Push-up test an athlete's upper body strength, which reflects their ability to grip, control an opponent, and execute throwing techniques with stability. Meanwhile, the back-up test measures back muscle strength, which is critical for maintaining postural stability, core strength, and performing explosive movements common in judo throw techniques. Both types of strength contribute significantly to technique efficiency and injury prevention in young judo athletes.

The back-up test comes next and gauges the strength of the back muscles, which are vital for control and stability of the judo style. Crucially for core stability and body control in many judo techniques, the sit-up test evaluates the strength and endurance of the abdominal muscles. Strong abdominal muscles are crucial in judo as they support throws and locks, enable rapid changes of direction, and help to keep body balance (34). Extremely low core muscular strength test results should raise concerns in a program for preventative strengthening. Low test results in a clinical environment should be accompanied with mobilisation and strengthening exercises to lower the risk of overuse injuries and muscle strains during judo's throwing phase. Low strength or mobility test results might point to functional dysfunction, which calls for specific movement therapy to improve performance and prevent injury.

Tests of agility evaluate an athlete's speed and efficiency in shifting directions fast and accurately (35). Research-based agility tests more especially, the side step test ask athletes to move from side to side as swiftly as possible in a designated period of time. These tests help to identify judo players. Flexibility tests are important in judo because they allow athletes to perform techniques with an optimal range of motion, such as throws and locks (36,37). A significantly below-average test may indicate excessive muscle tension and a limited range of motion, increasing

the risk of injury. Particularly in the hamstring, lower back, and hip muscles which are crucial in judo technical motions low flexibility raises the risk of injury. Development of remedial training programs and avoidance of injuries depend on early identification of poor flexibility scores.

Dynamic balance tests and other balance tests are excellent evaluations of an athlete's capacity to keep bodily equilibrium while moving (38). Dynamic balancing tests show athletes' capacity to keep control of their bodies under circumstances needing fast coordination and corrections. Bad fall-related ankle, knee, or even brain injuries are more likely depending on poor test findings. Results of the balance test show postural stability and neuromuscular control; they might also show a risk of damage from dynamic instability. These results can let physiotherapists create rehabilitative and preventative programs catered to the demands of young judo athletes.

Used to ascertain judo athletes' aerobic capacity (39), the Harvard Step Test is a cardiovascular endurance test. In judo, cardiovascular endurance is essential as competitors sometimes confront matches with periods of intensive effort followed by short rests.

Moreover, in judo, competitors' technical talents and particular abilities in several spheres of the sport are evaluated using a skill test or branch test (40). The results of this study allow one to evaluate the skills of judo athletes using different objects. Among them are mae ukemi kneeling position, judgeri/mae mawari ukemi, yoko ukemi laying position, yoko ukemi squatting and standing position, ushiro ukemi sitting position. Sports physiotherapists can monitor an athlete's physical adaption development and customise an injury prevention strategy for every single person using the findings of physical tests. Early identification of functional deficits made possible by regular monitoring helps training programs to be catered to the particular requirements of the growing athlete.

Conclusion

According to the research, the test items that can be used to identify judo talent from an early age of 10-13 years are: (1) height, (2) fat, (3) weight, (4) sitting height, strength test (5) wall sit, (6) push up, (7) back up, (8) sit up, Agility (9) side step test, flexibility test (10) sit and reach, balance test (11) dynamic balance test, endurance test (12) havard step test, skill test/branch (13) *ushiro ukemi* sitting position, (14) *yoko ukemi* lying position, (15) *yoko ukemi* squatting and standing position, (16) *mae ukemi* kneeling position, (17) *jugeri/mae mawari ukemi*.

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Conflict of interest

All authors declare that there is no potential conflict of interest associated with this research, or publication of this manuscript.

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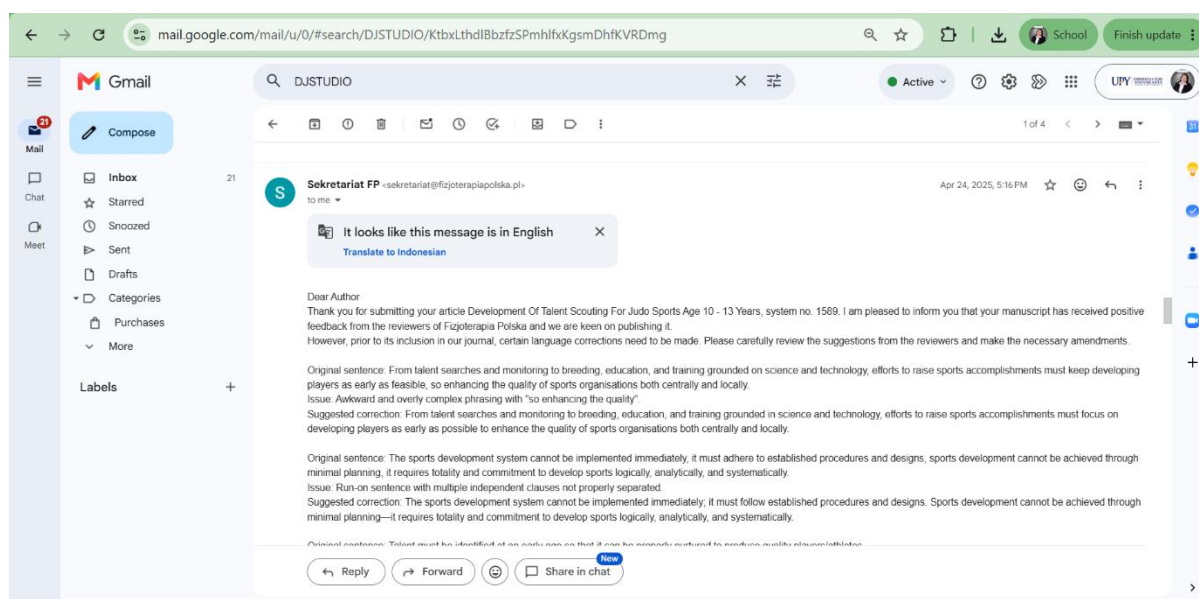
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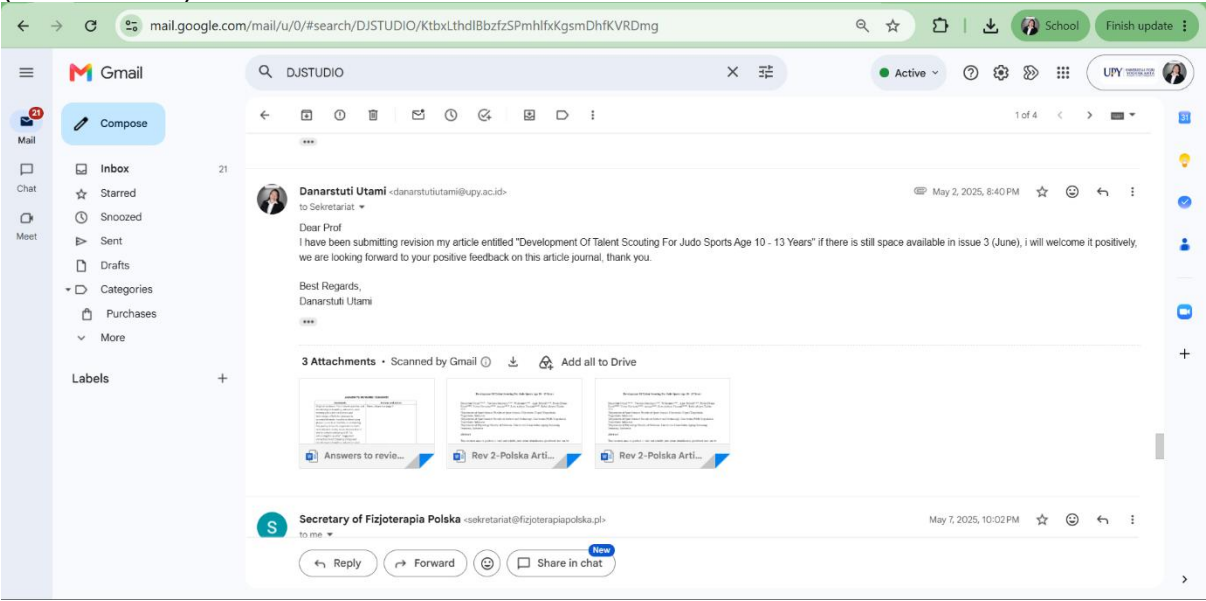
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ANSWERS TO REVIEWERS' COMMENTS

Comments	Answer and action
Original sentence: From talent searches and monitoring to breeding, education, and training grounded on science and technology, efforts to raise sports accomplishments must keep developing players as early as feasible, so enhancing the quality of sports organisations both centrally and locally. Issue: Awkward and overly complex phrasing with "so enhancing the quality". Suggested correction: From talent searches and monitoring to breeding, education, and training grounded in science and technology, efforts to raise sports accomplishments must focus on developing players as early as possible to enhance the quality of sports organisations both centrally and locally.	Done, please see page 2
Original sentence: The sports development system cannot be implemented immediately, it must adhere to established procedures and designs, sports development cannot be achieved through minimal planning, it requires totality and commitment to develop sports logically, analytically, and systematically. Issue: Run-on sentence with multiple independent clauses not properly separated. Suggested correction: The sports development system cannot be implemented	Done, please see page 2

immediately; it must follow established procedures and designs. Sports development cannot be achieved through minimal planning—it requires totality and commitment to develop sports logically, analytically, and systematically.	
Original sentence: Talent must be identified at an early age so that it can be properly nurtured to produce quality players/athletes. Issue: Slash ("/") between “players/athletes” is not appropriate in formal academic writing. Suggested correction: Talent must be identified at an early age so that it can be properly nurtured to produce quality players and athletes.	Done, please see page 2
Original sentence: Peak achievement in a sport can only be achieved by those who are talented and have been able to meet the requirements of a sport since a young age, as well as those who can follow systematic training over time. Issue: Repetition of “achieve” and “achievement” in the same sentence. Suggested correction: Success in a sport can only be attained by those who are talented, meet the sport's requirements from a young age, and consistently follow systematic training over time.	Done, please see page 2
Original sentence: So that judo achievements can be achieved optimally, "well-established" planning is needed which cannot be separated from the coaching pattern carried out. Issue: Repetition of “achievements can be achieved” and use of quotation marks for emphasis. Suggested correction: To optimize judo performance, well-established planning is needed and must be closely aligned with the implemented coaching pattern.	Done, please see page 3
Original sentence: Until now, there are very few instructions or guidelines regarding measuring instruments for identifying judo talent aged 10-13 years, so the author in this case is very interested in compiling a guidebook instrument for talent. Issue: Wordy and awkward phrasing "the author in this case is very interested in". Suggested correction: Currently, there are very few guidelines for measuring instruments to identify judo talent aged 10–13, prompting the author to develop a guidebook instrument.	Done, please see page 4
Original sentence: Judo identification marks	Done, please see page 4

for children aged 10 to 13 are guidelines used to determine the identity of a judo athlete for valid and reliable assessment. Issue: Confusing and unclear phrase “determine the identity of a judo athlete”. Suggested correction: Judo identification guidelines for children aged 10 to 13 are used to assess the potential of a judo athlete through valid and reliable measures.	
Original sentence: Research is used to produce certain products, specifically needs analysis and testing the effectiveness of the product so that it can function in the larger community. Issue: Awkward and unclear phrasing in “specifically needs analysis and testing the effectiveness”. Suggested correction: The research aims to develop specific products, focusing on needs analysis and testing their effectiveness to ensure they are applicable in the wider community.	Done, please see page 4-5
Original sentence: The Talented Athlete Development (PAB) program of BPO DIY and the All Indonesia Judo Association (PJSI) of the Bantul DIY district collected large-scale data on up to 30 athletes aged 10-13 years. Issue: Slight inconsistency in tense and number "collected... on up to 30 athletes". Suggested correction: The Talented Athlete Development (PAB) program of BPO DIY and the All Indonesia Judo Association (PJSI) of the Bantul DIY district collected large-scale data from 30 athletes aged 10–13 years.	Done, please see page 5
Original sentence: This technique was chosen to ensure that the subjects studied had characteristics that were consistent with the development of the judo sports talent instrument. Issue: Redundant phrasing “subjects studied had characteristics”. Suggested correction: This technique was chosen to ensure that the selected subjects matched the characteristics needed for developing the judo talent instrument.	Done, please see page 6
Original sentence: The data analysis in this study focused on the formula for identifying judo sports talent aged 10 to 13. Issue: Awkward and vague phrasing of “focused on the formula for identifying”. Suggested correction: The data analysis in this study focused on developing a formula to identify judo sports talent in individuals aged 10 to	Done, please see page 6

13.	
Original sentence: Because in this research there are several tests where the lower the score the better, the formula formulation above is reversed to: Issue: Unnatural structure and redundancy in “the formula formulation above is reversed to”. Suggested correction: Because some tests in this study consider lower scores to be better, the formula above has been adjusted accordingly.	Done, please see page 6
Original sentence: The author's field observations indicate that for 10–13 year olds the following judo talent identification tools are needed... Issue: Slightly informal tone in academic context with “the following judo talent identification tools are needed”. Suggested correction: Field observations indicate that the following tools are required for identifying judo talent in children aged 10 to 13.	Done, please see page 7
Original sentence: Talent for 10-13 year olds is valid and reliable, with value norms that are consistent with the judo talent identification test for 10-13 year olds. Issue: Repetition and unclear subject structure. Suggested correction: The developed instrument for 10–13-year-olds is valid and reliable, with normative values consistent with the judo talent identification test.	Done, please see page 7
Original sentence: As a result of observations from information available in the field, every talent search for Judo athletes at regional level still uses a system that cannot be "justified" in terms of sports science... Issue: Inappropriate use of quotation marks around “justified”. Suggested correction: Field observations show that talent searches for judo athletes at the regional level still rely on systems that are not scientifically justified.	Done, please see page 8
Original sentence: There are 17 test elements total that have been modified for the judo sport: Issue: Slight grammatical awkwardness in “17 test elements total”. Suggested correction: A total of 17 test elements have been adapted for judo.	Done, please see page 11
Original sentence: These 17 exams were selected to reflect three main elements that are quite crucial for judo success... Issue: Redundant phrase “quite crucial”. Suggested correction: These 17 exams were selected to	Done, please see page 11

reflect three main elements that are crucial for success in judo.	
Original sentence: The test selection also takes into account the characteristics of children aged 10 to 13 years old, who are in the motor growth phase... Issue: Redundant phrasing “aged 10 to 13 years old”. Suggested correction: The test selection also considers the characteristics of children aged 10 to 13, who are in the motor growth phase...	Done, please see page 11
Original sentence: The small-scale trial is a follow-up to this research to determine the extent to which this talent identification guide can be applied. Issue: Slightly awkward and vague phrasing “the extent to which... can be applied”. Suggested correction: The small-scale trial was conducted to evaluate the practical applicability of the talent identification guide.	Done, please see page 13
Original sentence: The book cover includes a photos of a child aged 10-13 years who received gold medal Issue: Grammatical error – article and plural confusion. Suggested correction: The book cover includes a photo of a child aged 10–13 who received a gold medal.	Done, please see page 14
Original sentence: Based on comments and suggestions from users regarding the judo sports talent identification instrument aged 10 – 13 years. Issue: Sentence fragment. Suggested correction: Based on comments and suggestions from users regarding the judo sports talent identification instrument for ages 10–13, the product was revised accordingly.	Done, please see page 15
Original sentence: The reliability test of all judo talent identification test instruments for ages 10-13 yielded a coefficient of more than 0.5. Issue: Potential misrepresentation of standards; reliability above 0.5 is generally low in academic standards. Suggested correction: The reliability coefficients for all judo talent identification test instruments for ages 10–13 exceeded 0.5, indicating moderate to high consistency depending on the item.	Done, please see page 16
Original sentence: Based on the assumption that research on sports talent in the context of judo is still limited, one approach to overcoming the challenges of developing	Done, please see page 24

sports talent is to identify the concept of sports talent that takes into account the specificities of each sport. Issue: Wordy and redundant phrasing. Suggested correction: Given the limited research on judo talent, one approach to improving talent development is to define sport-specific talent concepts.	
Original sentence: Early in youngsters between the ages of 10 and 13, judo skill is found. Issue: Unnatural and awkward sentence structure. Suggested correction: Judo skills can be identified early in children aged 10 to 13.	Done, please see page 24
Original sentence: While coaches focus on improving certain judo abilities depending on test results, physiotherapists provide remedial therapies for found physical shortcomings include muscular imbalances, flexibility limitations, or postural control. Issue: Incorrect verb form “include” instead of “including.” Suggested correction: While coaches focus on improving specific judo skills based on test results, physiotherapists provide remedial therapies addressing physical shortcomings, including muscular imbalances, flexibility limitations, and postural control.	Done, please see page 24
Original sentence: Judo athletes with an ideal body composition, defined as a balanced proportion of body fat, perform better because they can move faster, more efficiently, and have enough energy for intense matches. Issue: Ambiguity in “balanced proportion of body fat.” Suggested correction: Judo athletes with optimal body composition, characterized by low and healthy levels of body fat, perform better due to improved speed, efficiency, and endurance during matches.	Done, please see page 24
Original sentence: The back-up test comes next and gauges the strength of the back muscles, which are vital for control and stability of the judo style. Issue: Vague and awkward phrasing “control and stability of the judo style.” Suggested correction: The back-up test evaluates back muscle strength, which is essential for body control and postural stability in judo techniques.	Done, please see page 25
Original sentence: Extremely low core muscular strength test results should raise	Done, please see page 25

concerns in a program for preventative strengthening. Issue: Unnatural phrasing “program for preventative strengthening.” Suggested correction: Extremely low core strength test results should prompt the implementation of a preventative strengthening program.	
Original sentence: Research-based agility tests more especially, the side step test ask athletes to move from side to side as swiftly as possible in a designated period of time. Issue: Subject-verb agreement error and missing commas. Suggested correction: Research-based agility tests, especially the side step test, require athletes to move from side to side as quickly as possible within a set time.	Done, please see page 26
Original sentence: Flexibility tests are important in judo because they allow athletes to perform techniques with an optimal range of motion, such as throws and locks. Issue: Redundancy with “are important... because they allow athletes.” Suggested correction: Flexibility tests help assess an athlete’s ability to perform judo techniques requiring a full range of motion, such as throws and locks.	Done, please see page 26
Original sentence: Bad fall-related ankle, knee, or even brain injuries are more likely depending on poor test findings. Issue: Awkward phrasing “depending on poor test findings.” Suggested correction: Poor test results indicate a higher risk of fall-related injuries, including to the ankle, knee, or head.	Done, please see page 26
Original sentence: These results can let physiotherapists create rehabilitative and preventative programs catered to the demands of young judo athletes. Issue: Informal phrase “let physiotherapists” and awkward “catered to”. Suggested correction: These results enable physiotherapists to design rehabilitative and preventative programs tailored to the needs of young judo athletes.	Done, please see page 26
Original sentence: The results of this study allow one to evaluate the skills of judo athletes using different objects. Issue: Misuse of the word “objects” in context. Suggested correction: The results of this study allow for evaluating judo athletes' skills using various test items.	Done, please see page 26

Original sentence: According to the research, the test items that can be used to identify judo talent from an early age of 10-13 years are... Issue: Redundant phrase “from an early age of 10–13 years.” Suggested correction: According to the research, the test items for identifying judo talent in children aged 10 to 13 are...	Done, please see page 27
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Development Of Talent Scouting For Judo Sports Age 10 - 13 Years

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Abstract

This research aims to produce a valid and reliable judo talent identification guidebook that can be used to measure the talent of judo athletes. This type of research uses research and development methods. On a small scale, this research used samples from the Wira Mataram judo club, while for large scale testing it was carried out on Talented Athletes Development (PAB) BPO DIY and PJSI Bantul Regency. All samples used in product trials were judo athletes aged 10 – 13 years. The data analysis technique uses a giftedness formula by calculating the mean (M) and standard deviation (SD) from test results which are classified into five norms based on normal distribution of symptoms, namely very talented, talented, moderately talented, less talented and not talented. The data obtained from each type of test is processed and converted into a giftedness formula. The results of this research obtained 17 (seventeen) judo sports talent identification test items, including: anthropometric test, there were 4 (four) items consisting of: height, fat, body weight, sitting height, then for biomotor, 8 (eight) were obtained. Test items consisting of strength tests include: wall sit, push up, back up, sit up, agility test: side step test, flexibility test: sit and reach, balance test: dynamic balance test, endurance test: havard step test, and the branch test/skill test obtained 5 (five) items consisting of: *ushiro ukemi* sitting position, *yoko ukemi* lying position, *yoko ukemi* squatting and standing position, *mae ukemi* kneeling position, *juger/mae mawari ukemi*. The total results of the effectiveness test value, this test was declared valid with the number 0.86 and showed a reliability value with the number 0.9.

Keywords: Judo, Talent Identification, Ages 10-13 years

Introduction

From talent searches and monitoring to breeding, education, and training grounded in science and technology, efforts to raise sports accomplishments must focus on developing players as early as possible to enhance the quality of sports organisations both centrally and locally (1). Coaching is structured and programmed, beginning with the parent organization of the sports branch at both the central and regional levels (2) . Coaching also involves empowering sports organizations, developing national and regional sports coaching centers, and organizing competitions in a tiered and sustainable manner (3).

The sports development system cannot be implemented immediately; it must follow established procedures and designs. Sports development cannot be achieved through minimal planning—it requires totality and commitment to develop sports logically, analytically, and systematically (4). To achieve peak performance, a continuous and gradual training regimen is required (5). Therefore, talent searches under talent guidance must be taken into account in Indonesia's sports achievement development system, especially in the sport of judo, so enabling the method of identifying potential sports talents, which starts early age, to help children in determining their athletic potential.

In preparation for the 2000 Sydney Olympics, Australia held a movement known as The National Talent Identification and Development Program for the Sydney Olympic Games. This movement has two main programs: Sport Search and Talent Search. The Australian Sports Commission developed this talent scouting program in response to the country's previous decline in gold medal wins at several Olympics. Efforts to foster these achievements through an IPTEK approach include identifying talented athletes (6).

Talent must be identified at an early age so that it can be properly nurtured to produce quality players and athletes (7). Identifying and directing talented individuals to relevant sports is critical for athletic success (8). Success in a sport can only be attained by those who are talented, meet the sport's requirements from a young age, and consistently follow systematic training over time (9). Detecting and identifying athletes is critical for the athlete development process, including the initial selection of scouts and subsequent stages of the program(10).

Achievements in the sport of judo in Indonesia are currently experiencing fluctuations. The achievements obtained differ greatly from those of the 1980s, when Indonesia consistently ranked first. Aside from the achievements of Indonesian sports, what needs to be observed at this time is how to develop sports in Indonesia so that the achievements of the 1980s are realized again (11). To optimize judo performance, well-established planning is needed and must be closely aligned with the implemented coaching pattern. Almost every country has a pyramid concept in its development system. The pyramid concept of achievement development includes three stages, namely: (1) multilateral stage, (2) specialization stage, and (3) peak achievement stage. The multilateral stage is to develop basic movement patterns, the specialization stage is adaptation to the specifics of the sport, and the peak stage of achievement is physical, technical, tactical and mental maturation (12). For this reason, a massing, breeding and development process is needed which is carried out continuously, gradually and sustainably.

Besides the development of sports is also influenced by the coaching system. If the coaching system implemented runs well, sports development will also be better. The sports development system is based on (1) physical education and national organizations, which include educational programs in schools, recreation and sports clubs and organizational structures in government and (2) the sports training system (13).

Talented Judo athletes' coaching program may be carried out with planned, consistent, quantifiable training combining several disciplines and technology. In highly competitive settings, sports coaches have to surely put in great effort to produce outstanding athletes (14). Talented sportsmen have to be carefully selected if they are to perform at best.

In general, sports coaching and development from an early age, namely the period from approximately 6 years to 14 years of age (6 to 14 years), is part of national policy. Training periodization can be divided into multilateral (ages 6-14 years) and specialization (ages 15 years and above). The multilateral training period can be further classified into two groups, namely the initial period ranging from 6-10 years of age and the formation period ranging from 11-14 years of age. The explanation in the following image:

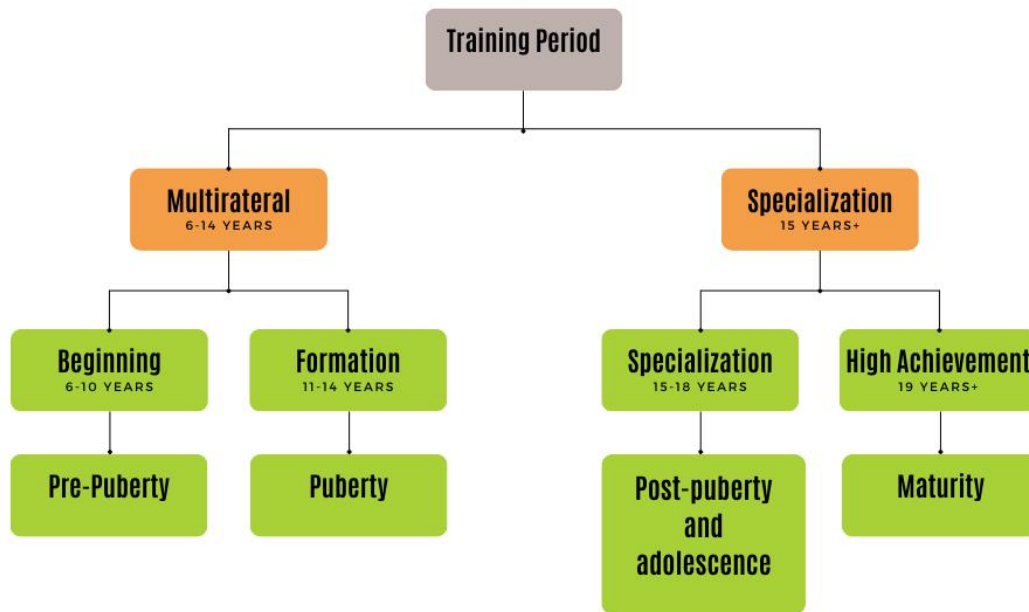


Figure 1. Exercise Periodization
(source: APORI, 2014: 2)

Currently, there are very few guidelines for measuring instruments to identify judo talent aged 10–13, prompting the author to develop a guidebook instrument. Judo identification guidelines for children aged 10 to 13 are used to assess the potential of a judo athlete through valid and reliable measures. Measurements have to be done in order to identify and evaluate judo ability. These tests have to be fit for the demands and traits of judo athletes between the ages of 10 and 13. This paper will concentrate on creating a tool for spotting judo athletic talent between the ages of 10 and 13 that, from what the author knows, has never been investigated previously.

Materials and Methods

Design

This study employs research and development methods commonly used in the production of specific products and tests their effectiveness. The research aims to develop specific products, focusing on needs analysis and testing their effectiveness to ensure they are applicable in the wider community.

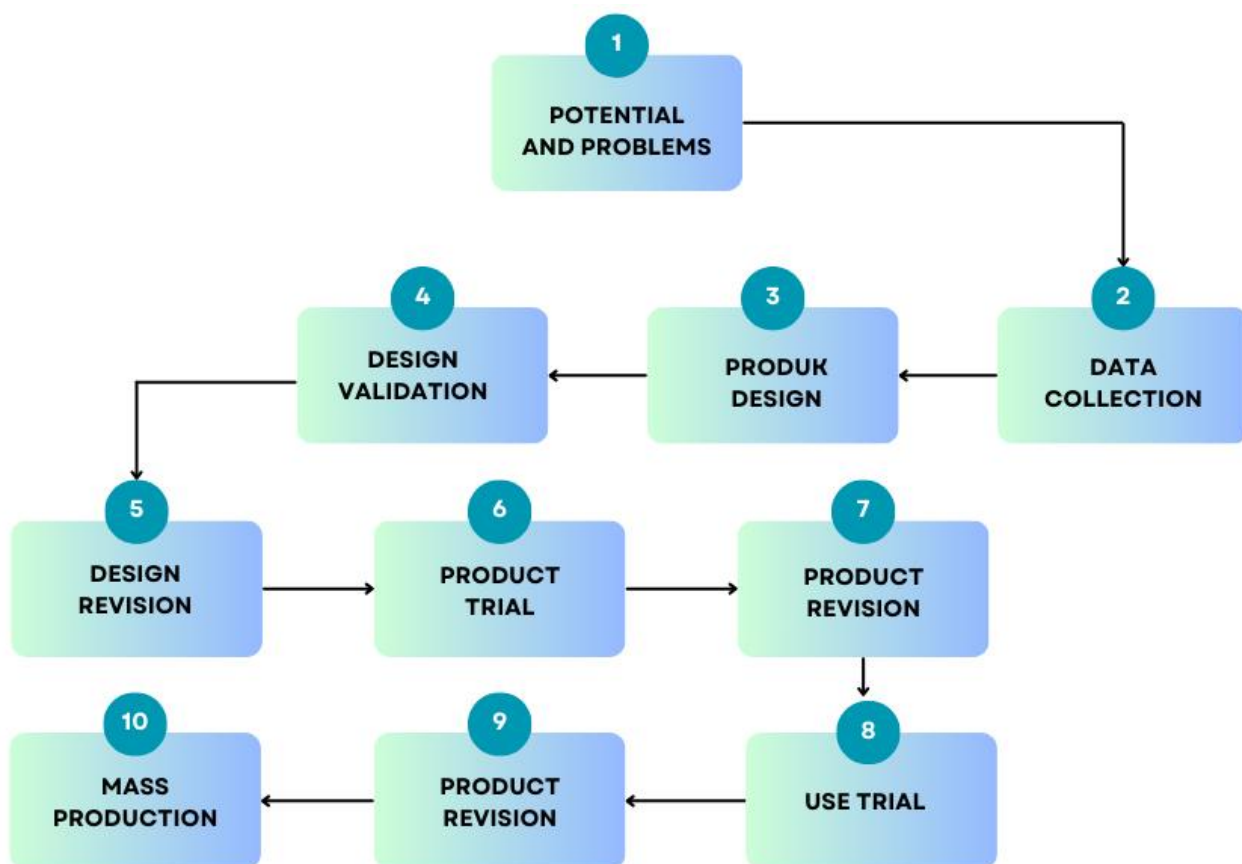


Figure 2. The steps for using the Research & Development Method are as follows

Sample

The sample size for this study was 45 athletes. The sample yielded two sets of data. Validity and reliability testing was carried out on samples other than those used during the instrument development stage. Wira Mataram Judo Club collected small-scale data from up to 15 athletes aged 10 to 13 years. The Talented Athlete Development (PAB) program of BPO DIY and the All Indonesia Judo Association (PJSI) of the Bantul DIY district collected large-scale data from 30 athletes aged 10–13 years. Thus, testing is done independently to ensure that the instrument is valid and consistent when applied to a larger population.

The study's sample included boys and girls aged 10 to 13 years old, so the findings can be applied to both genders' physical condition and potential judo talent. Boys and girls were included due to differences in physical and motor development between the ages of 10 and 13 years, ensuring that the test results are representative and fair to both genders.

Purposive sampling was used in this study to select participants based on specific criteria related to the research objectives. The sample selection criteria include: (1) athletes aged 10 to 13, (2) active registration in a participating judo club, and (3) current participation in an early age athlete development program. This technique was chosen to ensure that the selected subjects matched the characteristics needed for developing the judo talent instrument.

Variables

The variables in this study are anthropometric test variables, biomotor abilities, and judo technique ability tests. The data analysis in this study focused on developing a formula to identify judo sports talent in individuals aged 10 to 13. This study's data analysis used descriptive statistics to group test results into talent level categories, such as very talented, talented, quite talented, less talented, and not talented. Additionally, validity and reliability tests were conducted to ensure that the test instruments used were accurate and consistent. After processing the data and determining the mean (M) and standard deviation (SD), the data is interpreted by categorizing it into five categories: very talented, talented, quite talented, less talented, and not talented, using the following formula:

Table 1. Special Interest and Talent Category for Judo Sports

NO	CATEGORY	FORMULA
1	VERY TALENTED	On $M + (1.5 \times SD) > UP$
2	TALENTED	On $M + (0.5 \times SD) S/DM + (1.5 \times SD)$
3	QUITE TALENTED	On $M - (0.5 \times SD) S/DM + (0.5 \times SD)$
4	LESS TALENTED	On $M - (0.5 \times SD) S/DM - (0.5 \times SD)$
5	NOT TALENTED	Down $< M - (1.5 \times SD)$
Information: M = Mean. SD = Standard Deviation, S/D = Up to...		

(source : (15))

Because some tests in this study consider lower scores to be better, the formula above has been adjusted accordingly.

Table 2. Judo Sports Talent Identification Formula

NO	CATEGORY	FORMULA
1	VERY TALENTED	On $M - (1.5 \times SD) < DOWN$
2	TALENTED	On $M - (0.5 \times SD) S/DM - (1.5 \times SD)$
3	QUITE TALENTED	On $M + (0.5 \times SD) S/DM - (0.5 \times SD)$
4	LESS TALENTED	On $M + (0.5 \times SD) S/DM + (0.5 \times SD)$
5	NOT TALENTED	Down $> M + (1.5 \times SD)$
Information: M = Mean. SD = Standard Deviation, S/D = Up to...		

Then the next step is to analyze the data by calculating the total score scale obtained per test item to draw onclusions regarding the norms for the gifted category in identifying talent for judo aged 10-13 years from the research conducted.

Instruments

Field observations indicate that the following tools are required for identifying judo talent in children aged 10 to 13: (1) Anthropometric Test, (2) Biomotor Components, and (3) Judo Technical/Division Skills Test. This work aims to provide accurate evaluation instruments and talent identification rules for judo sports. The developed instrument for 10–13-year-olds is valid and reliable, with normative values consistent with the judo talent identification test. The developed instrument is expected to be used as a tool to assess judo sports talent for children aged 10 to 13, thereby aiding in the development of judo sports and the search for judo sports talent.

Tabel 3 . New Paradigm of Talent Identification for Judo Ages 10-13 Years

Judo Talent Identification at the moment	Judo Talent Identification New Paradigm
• There has been no research on identifying talent for judo aged 10-13 years	• There has been research on identifying talent for judo aged 10-13 years
• There is no appropriate test instrument to measure judo talent aged 10-13 years	• An appropriate test instrument has been found to measure judo talent aged 10-13 years with test norms
• There is no guidebook regarding the procedures for carrying out the judo talent identification test for ages 10-13 years	• There is already a guidebook regarding the procedures for carrying out the judo talent identification test for ages 10-13 years
• At the start of the training program, athletes aged 10-13 years have not yet had a talent identification test	• At the start of the training program, athletes aged 10-13 years are expected to be able to take a talent identification test

Based on the theoretical basis and framework of thought above, and considering the importance of talent identification, an assessment instrument for judo sport talent identification aged 10-13 years is very necessary. Having this assessment instrument will make it easier for trainers to monitor success in implementing training programs for peak performance.

Results

Field observations show that talent searches for judo athletes at the regional level still rely on systems that are not scientifically justified. Therefore, determining the product design of test items that are in accordance with the characteristics of this judo sport goes through several stage. The stages are as follows:

9. Selecting judo talent identification test items that approach the needs and characteristics of judo sports include:

g. Anthropometric tests include:

Table 4. Anthropometric tests

No.	Types of anthropometric tests
1.	Height
2.	Shoulder width
3.	Chest width
4.	Hip width
5.	Fat (tricep, subscapular)
6.	Sitting height
7.	Body weight
8.	Hand span

h. Biomotor include:

Table 5. Biomotor

No.	Biomotor Component	Test Type
1.	Cardiovascular Test	Namely a 4.8 km fast walking test and multistage (multistage fitness test)
2.	General movement ability test	15) standing board jump 16) softball throws 17) zig-zag run 18) tennis ball throwing 19) basketball throwing 20) madicine ball put 21) 50 meter sprint
3.	Motor educability test	41)One Foot_Touch Head 42)Side Learning Rest 43)Grapevine 44)One-Knee Balance 45)Stork Stand 46)Double Heel Click 47)Cross-Leg Squat 48)Full Left Turn 49)One Knee-Head to Floor 50)Hop Backward 51)Forward Hand Kick 52)Full Squat-Arm Circle 53)Half-Turn Jump-Left Foot 54)Three Dips 55)Side Kick 56)Kneel, Jump to Feet 57)Russian Dance 58)Full Right Turn, The Top 59)Single Squat Balance 60)Jump Foot.
4.	Strength measurement test	11) push up 12) sit up 13) pull up 14) back up 15) wall sit
5.	Muscle strength measurement test	11)handgrip dynamometer 12)pull and push dynamometer 13)back dynamometer 14)leg dynamometer

		15)one-repetition maximum (1-rm) (with bench press, leg press, and arm curl),
6.	Agility measurement	5) side step test 6) shuttle run test
7.	Flexibility measurement	5) sit 6) reach test
8.	Speed measurement	using 6 second sprint test, 50 yard (45.73m) sprint test
9.	Reaction speed measurement	5) the nelson hand reaction test 6) the nelson foot reaction test
10.	Explosive power measurement	margaria kalamen test
11.	Balance measurement	5) dynamic balance test 6) the stork stands test
12.	Physical fitness/heart lung endurance test	7) running 2,4 km 8) havard step test 9) running 12 menit

i. Test judo/division technique ability, include:

Table 6. Test judo/division technique ability

No.	Test Component	Test Type
1.	Basic techniquesfalling techniques (<i>ukemi waza</i>)	15) <i>yoko ukemi</i> side fall in sitting position 16) <i>yoko ukemi</i> side fall in squatting and standing position 17) <i>ushiro ukemi</i> back fall in sitting position 18) <i>ushiro ukemi</i> back fall in standing squat position 19) <i>mae ukemi</i> front fall on kneeling 20) <i>mae ukemi</i> fall front squat standing 21) <i>mae mawari ukemi/jugeri</i> kneeling and standing
2.	Basic grip in judo (<i>kumikata</i>)	Pulling and pushing

Some of the tests listed above are relevant to talent identification in the sport of judo, and field observations yielded the following percentage results:

Table 7. Talet Identification

No.	Test Type	Percentage (%)
1	Height	100
2	Shoulder width	35.71
3	Chest width	32.71
4	Hip width	32.14
5	Fat (tricep, subscapular)	85.71
6	Sitting height	89.28
7	Body weight	100
8	Hand span	28.57
9	Fast walking test 4.8 km	28.57
10	Multistage (multistage fitness test)	46.42
11	Standing board jump	46.42
12	Softball throws	25
13	Zig-zag run	39.28
14	Tennis ball throw	28.57
15	Basketball throws	32.14
16	Medicine ball put	25
17	50 meter sprint	48.85
18	One foot touch head	42.85
19	Side learning rest	46.42
20	Grapevine	46.42
21	One-knee balance	39.28
22	Stork stand	46.42
23	Double heel clicks	35.71
24	Cross-leg squat	42.85
25	Full left turn	39.28
26	One knee-head to floor	42.85

27	Hop backward	39.28
28	Forward hand kick	28.57
29	Full squat-arm circle	35.71
30	Half-turn jump-left foot	39.28
31	Three dips	28.57
32	Side kick	25
33	Kneel	25
34	Jump to Feet	25
35	Russian dance	25
36	Full right turn	28.57
37	The top	32.14
38	Single squat balance	35.71
39	Jump foot	28.57
40	Push up	96.42
41	Sit up	96.42
42	Pull up	42.85
43	Back up	78.57
44	Wall sit	92.85
45	Handgrip dynamometer	42.85
46	Pull and push dynamometer	39.28
47	Back dynamometer	35.71
48	Leg dynamometer	46.42
49	One-repetition maximum (1-RM) bench press	35.71
50	Leg press	39.28
51	Arm curl	35.71
52	Side step test	89.28
53	Shuttle run test (lari bolak-balik)	46.42
54	Sit and reach test	85.71
55	6 second sprint test	28.57
56	50 yard sprint test (45.73m)	25
57	The Nelson hand reaction test	25
58	The Nelson foot reaction test	25
59	Margaria kalamen test	25
60	Dynamic balance test	75
61	The Stork stands test	28.57
62	2.4 km run	42.85
63	Up and down the bench (Harvard step test)	92.85
64	12 minute run	32.14
65	<i>Yoko ukemi</i> side falls in sitting position	100
66	<i>Yoko ukemi</i> side falls in squatting and standing position	96.42
67	<i>Ushiro ukemi</i> back falls in sitting position	100
68	<i>Ushiro ukemi</i> back falls in squatting standing position	46.42
69	<i>Mae ukemi</i> front falls in kneeling position	92.85
70	<i>Mae ukemi</i> front falls in squatting standing	42.85
71	<i>Mae mawari ukemi/jugeri</i> kneeling and standing	71.42
72	<i>Kumikata</i> pulling and pushing	46.42

10. Product design comes next; this entails choosing numerous questions with a percentage higher than 50% and organising them from top to bottom to evaluate judo sports skill aged 10 to 13 years. A total of 17 test elements have been adapted for judo:

Table 8. Test Items

No.	Test Items above 50%
1.	Height
2.	Fat
3.	Body weight
4.	Sitting height
5.	Wall sit
6.	Push up
7.	Back up
8.	Sit up

9.	Side step test
10.	Sit and reach
11.	Dynamic balance test
12.	Havard step test
13.	<i>Ushiro ukemi</i> sitting position
14.	<i>Yoko ukemi</i> posisi lying positions
15.	<i>Yoko ukemi</i> squatting and standing positions
16.	<i>Mae ukemi</i> kneeling position
17.	<i>Juger/mae mawari ukemi</i>

These 17 exams were selected to reflect three main elements that are crucial for success in judo: The possibility for an optimal physique in judo is evaluated using anthropometric traits like height, weight, body fat, sitting height. Basic physical condition aspects (strength, endurance, flexibility, agility, and balance): to improve technical ability and movement efficiency during competition. Basic judo technical skills (*ukemi* and *juger*) are essential for technique safety and effectiveness. The test selection also considers the characteristics of children aged 10 to 13, who are in the motor growth phase and require a comprehensive approach that includes both physical and technical aspects.

11. Then prepare a draft guide for implementing test procedures, with the recommended sequence for implementing the first stage of tests being the anthropometric test. This test has a very important role in the sport of Judo, namely covering height, fat, weight, sitting height, the second stage test is the physical ability test (biomotor) including wall sits, push ups, back ups, sit ups, side step test, sit and reach your toes (sit and reach) with a meter box, dynamic balance test, and bench up and down test (Havard step test). It should be noted that the up and down bench test (Havard step test) is carried out last in the second stage of the test. Furthermore, the test of technical ability/skills in judo includes a branch test, namely falling techniques (*ukemi waza*) including back falls (*Ushiro Ukemi*) in a sitting position, side falls (*Yoko Ukemi*) in a lying position, squatting and standing, front falls (*Mae Ukemi*) in a kneeling position and *Juger*/rolling forward (*mae mawari ukemi*) from a kneeling and standing position. The special talent identification test for judo is explained in the following picture:

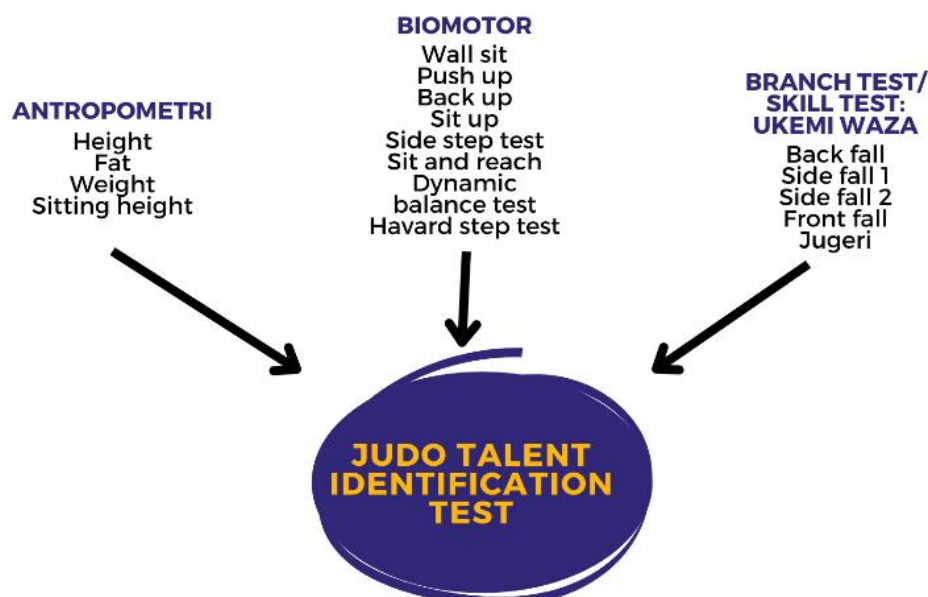


Figure 3. Judo Talent Identification Test Items

12. The next stage is to develop an assessment and evaluation flow, in the identification flow of scouting special sports interests and talents from start to finish, the category of talent level is found, briefly explained in the following picture:

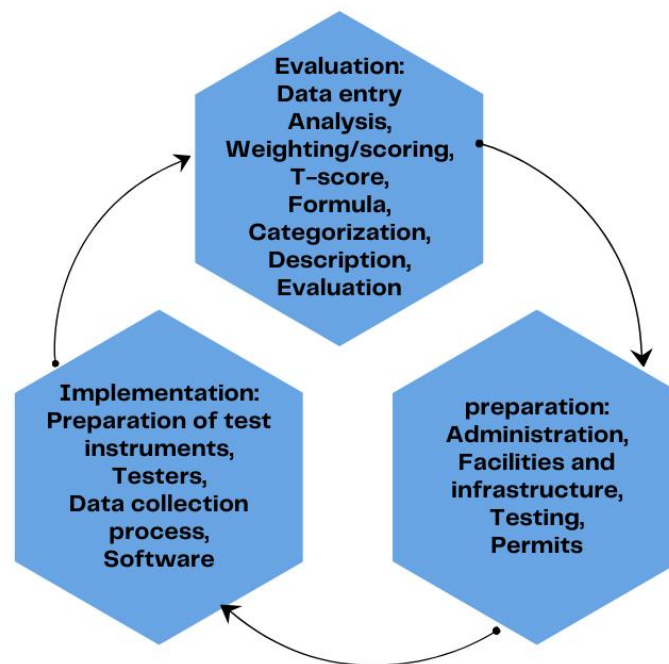


Figure 4. Flow of Implementation and Data Analysis
(Reference: (15))

The small-scale trial was conducted to evaluate the practical applicability of the talent identification guide. The subjects of this small-scale trial were athletes aged 10-13 years from the Wira Mataram Judo Club. Based on the results of the small-scale trial assessment of the product being developed, it shows that the total score of 93 (39%) samples stated that it was suitable, while the score of 147 (61%) of the other samples stated that it was very suitable, it can be concluded that the results of the development of the judo sports talent identification instrument aged 10 -13 years can be said to be easy for testers to understand and implement with several suggestions and comments. The percentage results from the assessment above can be seen in the following diagram:

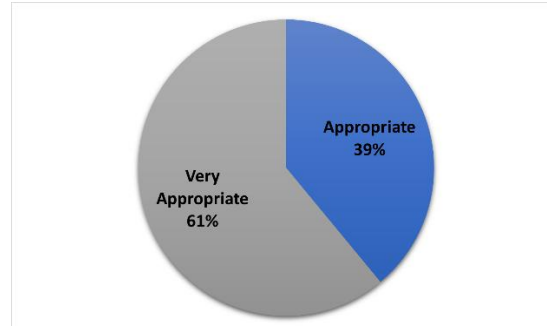


Figure 5. Small Scale Trial Results Percentage Diagram

The next stage is based on the results of small-scale trials, then product revisions are carried out before large-scale trials are carried out. The improvements made include aspects suggested by users when using the product. Based on comments and suggestions from users regarding the judo sports talent identification instrument aged 10-13 years, a revision was carried out again to improve the product in the form of a guidebook. The revisions to the product are explained in the following table:

Table 9. Small Scale Product Revision

No	Before Revision	After Revision
1	The size of the writing in the guidebook is too small and difficult to read	The size of the writing in the guidebook has been enlarged and is easy to read
2	There is no picture of the test implementation flow yet	There is already a picture of the test implementation flow
3	There is no picture of the test	There is already a picture of the test

	sequence yet	sequence
4	The book cover does not include photos of children aged 10-13 years who received gold medals	The book cover includes a photo of a child aged 10–13 who received a gold medal.

Then, based on several suggestions and input from users of the talent identification manual for judo sports aged 10-13 years, the product design was revised again to proceed to the next stage, namely the large-scale trial stage. Large-scale trials were carried out at the Talented Athletes Development (PAB) BPO DIY program and the All-Indonesian Judo Association (PJSI) Bantul Regency, Yogyakarta.

This large-scale trial is a follow-up to the product revision of the small-scale trial. From the results of the large-scale trials, suggestions and comments were then obtained to revise the product before carrying out an effectiveness test. Based on the results of the large-scale trial assessment of the product being developed, it shows that the total score of 130 (27%) samples stated that it was suitable, while the score of 350 (73%) of the other samples stated that it was very suitable, it can be concluded that the results of the development of the judo sports talent identification instrument aged 10 – 13 years can be said to be easy for testers to understand and implement with several suggestions and comments. The percentage results from the assessment above can be seen in the following diagram:

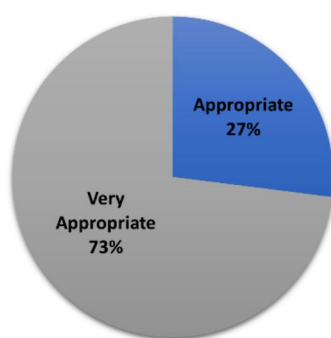


Figure 6. Large Scale Trial Results Percentage Diagram

The improvements made include aspects suggested by users when using the product. Based on comments and suggestions from users regarding the judo sports talent identification instrument for ages 10–13, the product was revised accordingly. The revisions to the product are explained in the following table:

Table 10. Large Scale Product Revision

No	Before Revision	After Revision
1	There is no way to assess the judo sports talent identification instrument for ages 10-13 years	There is already a method for assessing judo sports talent identification instrument ages 10-13 years
2	The photos in the manual are not in color	The photos in the guidebook are in color
3	The manual is not yet concise/too thick	The manual is concise/not too thick

The next stage, after product revision from large-scale results, continued with product effectiveness testing in the form of a talent identification guidebook for judo sports aged 10-13 years. This was carried out by testing the validity of the test instrument using a test-retest test, namely data from two observations using the same instrument.

The results of testing the validity of this talent identification test instrument include:

Table 11. Results of Instrument Validity Testing

No.	Items Test	Calculated r
1.	Height	1
2.	Fat	1
3.	Body weight	1
4.	Sitting height	1

5.	Wall sit	0,955
6.	Push up	0,965
7.	Back up	0,904
8.	Sit up	0,921
9.	Side step test	0,766
10.	Sit and reach	0,960
11.	Dynamic balance test	0,860
12.	Havard step test	0,816
13.	<i>Ushiro ukemi</i> sitting position	0,809
14.	<i>Yoko ukemi</i> posisi lying positions	0,630
15.	<i>Yoko ukemi</i> squatting and standing positions	0,731
16.	<i>Mae ukemi</i> kneeling position	0,829
17.	<i>Juger/mae mawari ukemi</i>	0,843

The results of the research hypothesis testing are compared to the r-value. The r-table value for N = 50 with a 5% significance level is 0.279. Based on the results, it is clear that the validity test of the talent identification test instrument yields $r_{count} > r_{table}$. Based on these findings, it can be concluded that all types of judo sport talent identification test questions for ages 10-13 are valid.

Based on the results of reliability testing of the judo sports talent identification test instrument aged 10 - 13 years, is known:

Table 12. Reliability test

No.	Items Test	Coefficient alpha
1.	Height	1
2.	Fat	1
3.	Body weight	1
4.	Sitting height	1
5.	Wall sit	0,997
6.	Push up	0,978
7.	Back up	0,942
8.	Sit up	0,958
9.	Side step test	0,867
10.	Sit and reach	0,977
11.	Dynamic balance test	0,925
12.	Havard step test	0,897
13.	<i>Ushiro ukemi</i> sitting position	0,891
14.	<i>Yoko ukemi</i> posisi lying positions	0,769
15.	<i>Yoko ukemi</i> squatting and standing positions	0,844
16.	<i>Mae ukemi</i> kneeling position	0,906
17.	<i>Juger/mae mawari ukemi</i>	0,914

The reliability coefficients for all judo talent identification test instruments for ages 10–13 exceeded 0.5, indicating moderate to high consistency depending on the item. These findings suggest that the judo talent identification test instrument for ages 10-13 is reliable and worthy of continued mass production.

After conducting small-scale and large-scale tests and receiving results indicating that all judo talent identification test instruments for ages 10-13 are suitable for use, the next stage is the effectiveness test. This stage involves an analysis of data from the judo talent identification test results for ages 10 to 13, which have been declared valid and reliable.

The results of the effectiveness test data obtained mean (M) and standard deviation (SD) values for each test item so that they can be used to calculate norms and standards for assessing the judo sports talent identification test aged 10-13 years, as follows:

35. Height

The results of height data analysis obtained an average data value (Mean) of 146.32 and a standard deviation (SD) of 6.96. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results of calculating height norms and standards were obtained as follows:

Table 13. Standard Body Height Value (centimeters)

MARK	CATEGORY	RESULTS
1	VERY TALENTED	156.7 cm > Above
2	TALENTED	149.7 cm to 156.7 cm
3	QUITE TALENTED	142.8 cm to 149.7 cm
4	LESS TALENTED	135.8 cm to 142.8 cm
5	NOT TALENTED	<135.8 cm
S/D = Up to...		

36. Fat (trisept, subscapula)

The results of fat data analysis obtained an average data value (Mean) of 10 and a standard deviation (SD) of 2.51. After the calculation is complete, the next step is to determine the norm classification by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports aged 10 – 13 years. The results of calculating fat norms and standards were obtained as follows:

Table 14. Standard Fat Value (millimeters)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	6.2 mm > Above
4	TALENTED	8.7 mm to 6.2 mm
3	QUITE TALENTED	11.2 mm to 8.7 mm
2	LESS TALENTED	13.7 mm to 11.2 mm
1	NOT TALENTED	< 13.7 mm
S/D = Up to...		

37. Weight

The results of the analysis of body weight data obtained an average data value (Mean) of 37.73 and a standard deviation (SD) of 8.37. After the calculation is complete, the next step is to determine the norm classification by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports aged 10 – 13 years. The results of calculating body weight norms and standards were obtained as follows:

Table 15. Standard Body Weight Value (kilograms)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	50.28 kg > Above
4	TALENTED	41.91 kg to 50.28 kg
3	QUITE TALENTED	33.54 kg to 41.91 kg
2	LESS TALENTED	25.17 kg to 33.54 kg
1	NOT TALENTED	< 25.17 kg
S/D = Up to...		

38. Sitting height

The results of the analysis of sitting height data obtained an average data value (Mean) of 75.06 and a standard deviation (SD) of 3.60. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for sitting height are as follows:

Table 16. Standard Sitting Height Value (centimeters)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	80.4 cm > Above
4	TALENTED	76.8 cm to 80.4 cm
3	QUITE TALENTED	73.2 cm to 76.8 cm
2	LESS TALENTED	69.6 cm to 73.2 cm
1	NOT TALENTED	< 69.6 cm
S/D = Up to...		

39. Wall sit

The results of wall sit data analysis obtained an average data value (Mean) of 94.04 and a

standard deviation (SD) of 23.52. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating wall sit norms and standards are as follows:

Table 17. Standard Wall Sit Value (seconds)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	129.32 seconds > Up
4	TALENTED	105.8 seconds to 129.32 seconds
3	QUITE TALENTED	82.28 seconds to 105.8 seconds
2	LESS TALENTED	58.78 seconds to 82.28 seconds
1	NOT TALENTED	< 58.78 seconds
S/D = Up to...		

40. Push Up

The results of the push up data analysis obtained an average data value (Mean) of 42.16 and a standard deviation (SD) of 10.30. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained for calculating push up norms and standards are as follows:

Table 18. Standard Push Up Value (times)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	58 times > Up
4	TALENTED	47 times to 58 times
3	QUITE TALENTED	37 times to 47 times
2	LESS TALENTED	27 times to 37 times
1	NOT TALENTED	< 27 times
S/D = Up to...		

41. Back Up

The results of the push up data analysis obtained an average data value (Mean) of 92.68 and a standard deviation (SD) of 13.96. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating back up norms and standards are as follows:

Table 19. Standard Back Up Value (times)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	114 times > Up
4	TALENTED	100 times to 114 times
3	QUITE TALENTED	86 times to 100 times
2	LESS TALENTED	72 times to 86 times
1	NOT TALENTED	<72 times
S/D = Up to...		

42. Sit Up

The results of sit up data analysis obtained an average data value (Mean) of 42.24 and a standard deviation (SD) of 10.68. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for sit ups are as follows:

Tabel 20. Standard Sit Up Value (times)

MARK	CATEGORY	RESULTS
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5	VERY TALENTED	58 times > Up
4	TALENTED	48 times to 58 times
3	QUITE TALENTED	37 times to 48 times
2	LESS TALENTED	26 times to 37 times
1	NOT TALENTED	< 26 times
S/D = Up to...		

43. Side Step Test

The results of the side step test data analysis obtained an average data value (Mean) of 8.75 and a rough standard deviation (s) of 0.76. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards of the side step test are as follows:

Table 21. Side Step Test Value Standards (points)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	9.8 points > Above
4	TALENTED	9.1 points to 9.8 points
3	QUITE TALENTED	8.3 points to 9.1 points
2	LESS TALENTED	7.6 points to 8.3 points
1	NOT TALENTED	< 7.6 points
S/D = Up to...		

44. Sit and Reach

The results of the sit and reach data analysis obtained an average data value (Mean) of 40.64 and a rough standard deviation (s) of 4.75. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results of calculating sit and reach norms and standards are as follows:

Table 22. Standard sit and reach value (cm)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	47.76 cm > Above
4	TALENTED	43.01 cm to 47.76 cm
3	QUITE TALENTED	38.26 cm to 43.01 cm
2	LESS TALENTED	33.51 cm to 38.26 cm
1	NOT TALENTED	< 33.51 cm
S/D = Up to...		

45. Dynamic Balance Test

The results of the dynamic balance test data analysis obtained an average data value (Mean) of 70.8 and a rough standard deviation (s) of 22.32. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating norms and standards for the dynamic balance test are as follows:

Table 23. Standard Dynamic Balance Test Value (points)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	100 points > Above
4	TALENTED	85 points to 100 points
3	QUITE TALENTED	60 points to 85 points
2	LESS TALENTED	40 points to 60 points
1	NOT TALENTED	< 40 points
S/D = Up to...		

46. Harvard Step Test

The results of the Harvard step test data analysis obtained an average data value (Mean) of 106.36 and a rough standard deviation (s) of 21.26. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special

Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards of the Harvard step test are as follows:

Table 24. Harvard Step Test Value Standards

MARK	CATEGORY	RESULTS
5	VERY TALENTED	119 > Up
4	TALENTED	105 to 119
3	QUITE TALENTED	90 to 105
2	LESS TALENTED	75 to 90
1	NOT TALENTED	< 75
S/D = Up to...		

47. Back fall (*ushiro ukemi*) sitting position

The results of the branch test analysis using a rubik for assessing the performance of falling technique skills (*ukemi waza*) in the test participants were obtained proportionally and in accordance with the judo sport branch which was carried out by considering the competency of the test participants in performing the falling technique (*ukemi waza*).

Determination of competency standards in assessing the performance of basic judo technical skills is carried out through interpretation into assessment norms. The results of the data analysis of Ushiro Ukemi's sitting position obtained an average data value (Mean) of 10.48 and a standard deviation (SD) of 1.16.

After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *ushiro ukemi* sitting position are as follows:

Table 25. Standard Value *Ushiro Ukemi* sitting position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	11 to 12
3	QUITE TALENTED	10 to 11
2	LESS TALENTED	9 to 10
1	NOT TALENTED	Down < 9
S/D = Up to...		

48. Side fall (*yoko ukemi*) lying position

The results of data analysis of Yoko Ukemi's lying position obtained an average data value (Mean) of 10.66 and a standard deviation (SD) of 1.02. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The following are the findings of computing the norms and standards for Yoko Ukemi's laying posture:

Table 26. Standard value of *yoko ukemi* lying position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	11 to 12
3	QUITE TALENTED	10 to 11
2	LESS TALENTED	9 to 10
1	NOT TALENTED	Down < 9
S/D = Up to...		

49. Side falls (*yoko ukemi*) squatting and standing positions

The results of *Yoko Ukemi's* data analysis in squatting and standing positions obtained an average data value (Mean) of 9.6 and a standard deviation (SD) of 1.35. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *Yoko Ukemi* squatting and standing positions are as follows:

Table 27. Standard Value of *Yoko Ukemi* squatting and standing position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	10 to 12
3	QUITE TALENTED	9 to 10
2	LESS TALENTED	8 to 9
1	NOT TALENTED	Down < 8
S/D = Up to...		

50. Front fall (*mae ukemi*) kneeling position

The results of data analysis for *mae ukemi* kneeling position obtained an average data value (Mean) of 9.82 and a standard deviation (SD) of 1.20. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *mae ukemi* kneeling position are as follows:

Table 28. Standard Value *mae ukemi* kneeling position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	10 to 12
3	QUITE TALENTED	9 to 10
2	LESS TALENTED	8 to 9
1	NOT TALENTED	Down < 8
S/D = Up to...		

51. *Jugeri* / rolling forward (*mae mawari ukemi*) kneeling and standing positions

The results of the data analysis for *Mae Mawari Ukemi* in kneeling and standing positions obtained an average data value (Mean) of 9.4 and a standard deviation (SD) of 1.24. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *Mae Mawari Ukemi* kneeling and standing positions are as follows:

Table 29. Standard Value *jugeri/mae mawari ukemi* kneeling and standing position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	11 > Up
4	TALENTED	10 to 11
3	QUITE TALENTED	9 to 10
2	LESS TALENTED	8 to 9
1	NOT TALENTED	Down < 8
S/D = Up to...		

Discussion

Given the limited research on judo talent, one approach to improving talent development is to define sport-specific talent concepts (16–18). The purpose of this essay is to design exam questions capable of spotting judo potential. Judo skills can be identified early in children aged 10 to 13 (7). Moreover, it should be mentioned that skill in many sports including judo (20) has been understood using the opinions of trainers as sources of knowledge. By means of the aptitude test findings, coaches and physiotherapists may collaborate to design a training program that efficiently combines the prevention of injuries with the development of technical ability. While coaches focus on improving specific judo skills based on test results, physiotherapists provide remedial therapies

addressing physical shortcomings, including muscular imbalances, flexibility limitations, and postural control. This cooperation allows for a more thorough and customised style to instruction.

Based on the results of this study, judo talent may be determined using 17 objects acting as a guide. Development of anthropometric test criteria for judo talent depends critically on height (21–23). In judo (24), taller height can offer benefits in terms of attack range and distance management. Therefore, the athlete selection and development process depends much on a complete awareness of how height affects judo performance. Measurements of height expose an athlete's body type, which might affect the most suitable weight class and competitive approach (25). Comparison of the results of this study with the Talent Identification and Development (TID) method and the Eurofit Test Battery states that height and jumping are required in elite women's volleyball, but motor coordination is a key factor in recognizing talent in girls aged 6–14 years (26).

Body fat percentage provides valuable information about an athlete's body composition, which has a direct impact on performance (27). Judo athletes with optimal body composition, characterized by low and healthy levels of body fat, perform better due to improved speed, efficiency, and endurance during matches (28). As a result, measuring and monitoring body fat is an important part of a judo athlete's training and development program, allowing coaches to adjust diet and training plans to achieve peak physical condition.

Weight measurement is critical because judo is a sport in which athletes are classified by weight class, so having an appropriate weight is essential for competing effectively in the correct category (29). Effective weight management helps coaches to suggest the required diet (30).

Measurements of sitting height expose details about an athlete's upper body dimensions, which might affect balance and playing style (31). Maintaining an acceptable centre of gravity depends on a sitting height commensurate with total body height, therefore enhancing the athlete's capacity to regulate their own and their opponent's movements.

The wall sit test is an effective tool for assessing judo athletes' strength and endurance potential, allowing coaches to design appropriate training programs to improve their performance (32). The push-up test clearly indicates an athlete's upper body muscle strength and endurance capacity, allowing coaches to assess their overall physical condition (33). Push-up test an athlete's upper body strength, which reflects their ability to grip, control an opponent, and execute throwing techniques with stability. Meanwhile, the back-up test measures back muscle strength, which is critical for maintaining postural stability, core strength, and performing explosive movements common in judo throw techniques. Both types of strength contribute significantly to technique efficiency and injury prevention in young judo athletes.

The back-up test evaluates back muscle strength, which is essential for body control and postural stability in judo techniques. Crucially for core stability and body control in many judo techniques, the sit-up test evaluates the strength and endurance of the abdominal muscles. Strong abdominal muscles are crucial in judo as they support throws and locks, enable rapid changes of direction, and help to keep body balance (34). Extremely low core strength test results should prompt the implementation of a preventative strengthening program. Low test results in a clinical environment should be accompanied with mobilisation and strengthening exercises to lower the risk of overuse injuries and muscle strains during judo's throwing phase. Low strength or mobility test results might point to functional dysfunction, which calls for specific movement therapy to improve performance and prevent injury.

Tests of agility evaluate an athlete's speed and efficiency in shifting directions fast and accurately (35). Research-based agility tests, especially the side step test, require athletes to move from side to side as quickly as possible within a set time. These tests help to identify judo players. Flexibility tests help assess an athlete's ability to perform judo techniques requiring a full range of motion, such as throws and locks (36,37). A significantly below-average test may indicate excessive muscle tension and a limited range of motion, increasing the risk of injury. Particularly in the hamstring, lower back, and hip muscles which are crucial in judo technical motions low flexibility raises the risk of injury. Development of remedial training programs and avoidance of injuries depend on early identification of poor flexibility scores.

Dynamic balance tests and other balance tests are excellent evaluations of an athlete's capacity to keep bodily equilibrium while moving (38). Dynamic balancing tests show athletes' capacity to keep control of their bodies under circumstances needing fast coordination and corrections. Poor test results indicate a higher risk of fall-related injuries, including to the ankle, knee, or head. Results of the balance test show postural stability and neuromuscular control; they might also show a risk of damage from dynamic instability. These results enable physiotherapists to design rehabilitative and preventative programs tailored to the needs of young judo athletes.

Used to ascertain judo athletes' aerobic capacity (39), the Harvard Step Test is a cardiovascular endurance test. In judo, cardiovascular endurance is essential as competitors sometimes confront matches with periods of intensive effort followed by short rests.

Moreover, in judo, competitors' technical talents and particular abilities in several spheres of the sport are evaluated using a skill test or branch test (40). The results of this study allow for evaluating judo athletes' skills using various test items. Among them are *mae ukemi* kneeling position, *judgeri/mae mawari ukemi*, *yoko ukemi* laying position, *yoko ukemi* squatting and standing position, *ushiro ukemi* sitting position. Sports physiotherapists can monitor an athlete's physical adaption development and customise an injury prevention strategy for every single person using the findings of physical tests. Early identification of functional deficits made possible by regular monitoring helps training programs to be catered to the particular requirements of the growing athlete.

Conclusion

According to the research, the test items for identifying judo talent in children aged 10 to 13 are: (1) height, (2) fat, (3) weight, (4) sitting height, strength test (5) wall sit, (6) push up, (7) back up, (8) sit up, Agility (9) side step test, flexibility test (10) sit and reach, balance test (11) dynamic balance test, endurance test (12) havard step test, skill test/branch (13) *ushiro ukemi* sitting position, (14) *yoko ukemi* lying position, (15) *yoko ukemi* squatting and standing position, (16) *mae ukemi* kneeling position, (17) *jugeri/mae mawari ukemi*.

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Conflict of interest

All authors declare that there is no potential conflict of interest associated with this research, or publication of this manuscript.

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Development Of Talent Scouting For Judo Sports Age 10 - 13 Years

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Abstract

This research aims to produce a valid and reliable judo talent identification guidebook that can be used to measure the talent of judo athletes. This type of research uses research and development methods. On a small scale, this research used samples from the Wira Mataram judo club, while for large scale testing it was carried out on Talented Athletes Development (PAB) BPO DIY and PJSI Bantul Regency. All samples used in product trials were judo athletes aged 10 – 13 years. The data analysis technique uses a giftedness formula by calculating the mean (M) and standard deviation (SD) from test results which are classified into five norms based on normal distribution of symptoms, namely very talented, talented, moderately talented, less talented and not talented. The data obtained from each type of test is processed and converted into a giftedness formula. The results of this research obtained 17 (seventeen) judo sports talent identification test items, including:

anthropometric test, there were 4 (four) items consisting of: height, fat, body weight, sitting height, then for biomotor, 8 (eight) were obtained. Test items consisting of strength tests include: wall sit, push up, back up, sit up, agility test: side step test, flexibility test: sit and reach, balance test: dynamic balance test, endurance test: havard step test, and the branch test/skill test obtained 5 (five) items consisting of: *ushiro ukemi* sitting position, *yoko ukemi* lying position, *yoko ukemi* squatting and standing position, *mae ukemi* kneeling position, *jugeri/mae mawari ukemi*. The total results of the effectiveness test value, this test was declared valid with the number 0.86 and showed a reliability value with the number 0.9.

Keywords: Judo, Talent Identification, Ages 10-13 years

Introduction

From talent searches and monitoring to breeding, education, and training grounded in science and technology, efforts to raise sports accomplishments must focus on developing players as early as possible to enhance the quality of sports organisations both centrally and locally (1). Coaching is structured and programmed, beginning with the parent organization of the sports branch at both the central and regional levels (2). Coaching also involves empowering sports organizations, developing national and regional sports coaching centers, and organizing competitions in a tiered and sustainable manner (3).

The sports development system cannot be implemented immediately; it must follow established procedures and designs. Sports development cannot be achieved through minimal planning—it requires totality and commitment to develop sports logically, analytically, and systematically (4). To achieve peak performance, a continuous and gradual training regimen is required (5). Therefore, talent searches under talent guidance must be taken into account in Indonesia's sports achievement development system, especially in the sport of judo, so enabling the method of identifying potential sports talents, which starts early age, to help children in determining their athletic potential.

In preparation for the 2000 Sydney Olympics, Australia held a movement known as The National Talent Identification and Development Program for the Sydney Olympic Games. This movement has two main programs: Sport Search and Talent Search. The Australian Sports Commission developed this talent scouting program in response to the country's previous decline in gold medal wins at several Olympics. Efforts to foster these achievements through an IPTEK approach include identifying talented athletes (6).

Talent must be identified at an early age so that it can be properly nurtured to produce quality players and athletes (7). Identifying and directing talented individuals to relevant sports is critical for athletic success (8). Success in a sport can only be attained by those who are talented, meet the sport's requirements from a young age, and consistently follow systematic training over time (9). Detecting and identifying athletes is critical for the athlete development process, including the initial selection of scouts and subsequent stages of the program (10).

Achievements in the sport of judo in Indonesia are currently experiencing fluctuations. The achievements obtained differ greatly from those of the 1980s, when Indonesia consistently ranked first. Aside from the achievements of Indonesian sports, what needs to be observed at this time is how to develop sports in Indonesia so that the achievements of the 1980s are realized again (11). To optimize judo performance, well-established planning is needed and must be closely aligned with the implemented coaching pattern. Almost every country has a pyramid concept in its development system. The pyramid concept of achievement development includes three stages, namely: (1) multilateral stage, (2) specialization stage, and (3) peak achievement stage. The multilateral stage is to develop basic movement patterns, the specialization stage is adaptation to the specifics of the sport, and the peak stage of achievement is physical, technical, tactical and mental maturation (12). For this reason, a massing, breeding and development process is needed which is carried out continuously, gradually and sustainably.

Besides the development of sports is also influenced by the coaching system. If the coaching system implemented runs well, sports development will also be better. The sports development system is based on (1) physical education and national organizations, which include educational

programs in schools, recreation and sports clubs and organizational structures in government and (2) the sports training system (13).

Talented Judo athletes' coaching program may be carried out with planned, consistent, quantifiable training combining several disciplines and technology. In highly competitive settings, sports coaches have to surely put in great effort to produce outstanding athletes (14). Talented sportsmen have to be carefully selected if they are to perform at best.

In general, sports coaching and development from an early age, namely the period from approximately 6 years to 14 years of age (6 to 14 years), is part of national policy. Training periodization can be divided into multilateral (ages 6-14 years) and specialization (ages 15 years and above). The multilateral training period can be further classified into two groups, namely the initial period ranging from 6-10 years of age and the formation period ranging from 11-14 years of age. The explanation in the following image:

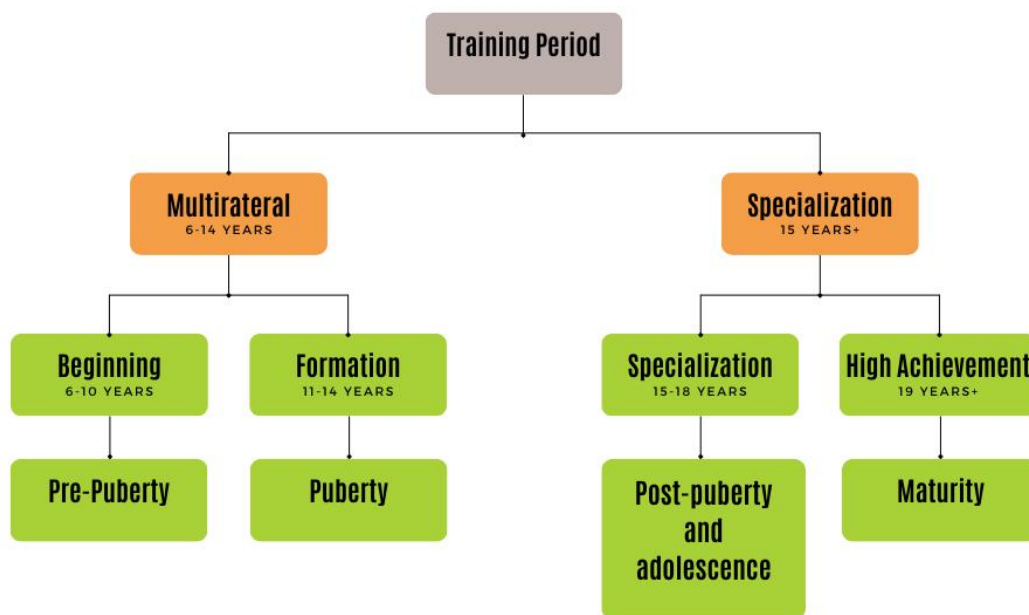


Figure 1. Exercise Periodization
(source: APORI, 2014: 2)

Currently, there are very few guidelines for measuring instruments to identify judo talent aged 10–13, prompting the author to develop a guidebook instrument. Judo identification guidelines for children aged 10 to 13 are used to assess the potential of a judo athlete through valid and reliable measures. Measurements have to be done in order to identify and evaluate judo ability. These tests have to be fit for the demands and traits of judo athletes between the ages of 10 and 13. This paper will concentrate on creating a tool for spotting judo athletic talent between the ages of 10 and 13 that, from what the author knows, has never been investigated previously.

Materials and Methods

Design

This study employs research and development methods commonly used in the production of specific products and tests their effectiveness. The research aims to develop specific products, focusing on needs analysis and testing their effectiveness to ensure they are applicable in the wider community.

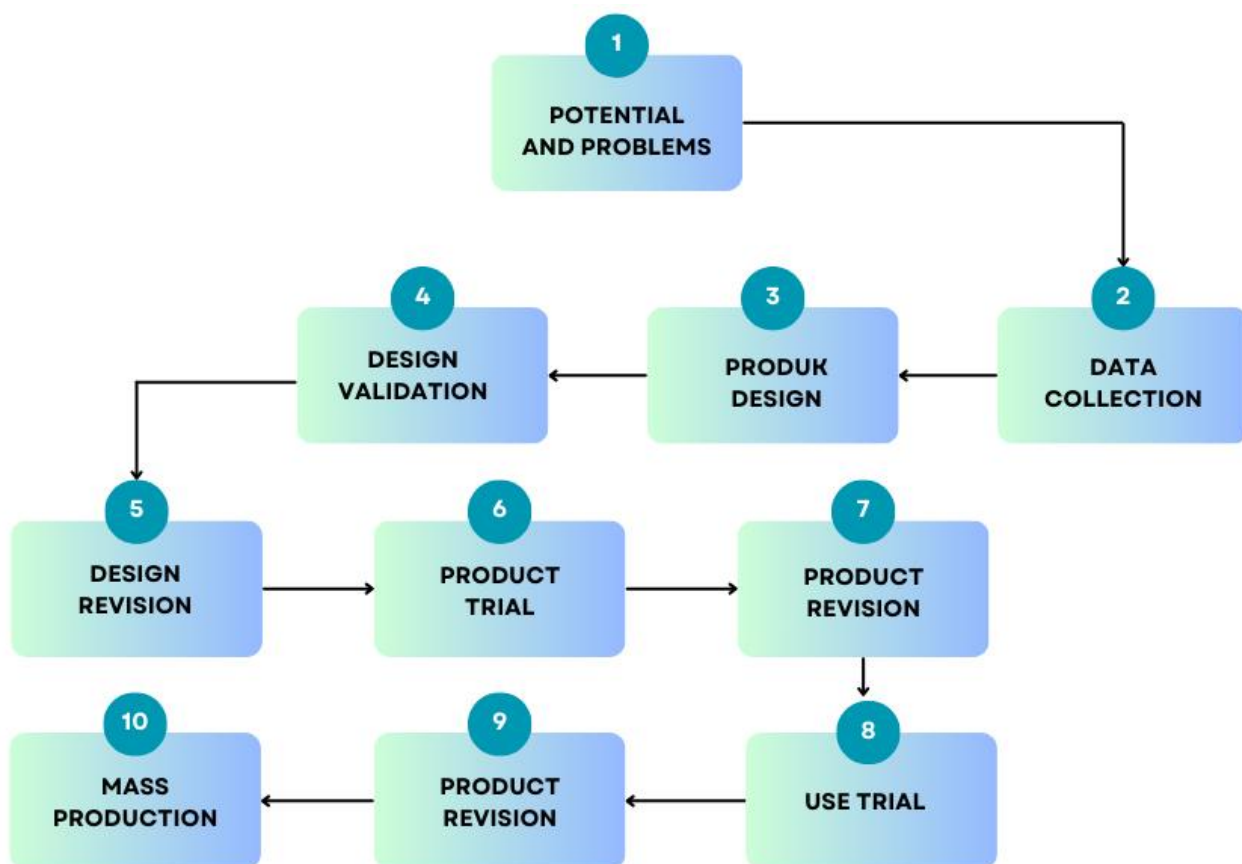


Figure 2. The steps for using the Research & Development Method are as follows

Sample

The sample size for this study was 45 athletes. The sample yielded two sets of data. Validity and reliability testing was carried out on samples other than those used during the instrument development stage. Wira Mataram Judo Club collected small-scale data from up to 15 athletes aged 10 to 13 years. The Talented Athlete Development (PAB) program of BPO DIY and the All Indonesia Judo Association (PJSI) of the Bantul DIY district collected large-scale data from 30 athletes aged 10–13 years. Thus, testing is done independently to ensure that the instrument is valid and consistent when applied to a larger population.

The study's sample included boys and girls aged 10 to 13 years old, so the findings can be applied to both genders' physical condition and potential judo talent. Boys and girls were included due to differences in physical and motor development between the ages of 10 and 13 years, ensuring that the test results are representative and fair to both genders.

Purposive sampling was used in this study to select participants based on specific criteria related to the research objectives. The sample selection criteria include: (1) athletes aged 10 to 13, (2) active registration in a participating judo club, and (3) current participation in an early age athlete development program. This technique was chosen to ensure that the selected subjects matched the characteristics needed for developing the judo talent instrument.

Variables

The variables in this study are anthropometric test variables, biomotor abilities, and judo technique ability tests. The data analysis in this study focused on developing a formula to identify judo sports talent in individuals aged 10 to 13. This study's data analysis used descriptive statistics to group test results into talent level categories, such as very talented, talented, quite talented, less talented, and not talented. Additionally, validity and reliability tests were conducted to ensure that the test instruments used were accurate and consistent. After processing the data and determining the mean (M) and standard deviation (SD), the data is interpreted by categorizing it into five categories: very talented, talented, quite talented, less talented, and not talented, using the following formula:

Table 1. Special Interest and Talent Category for Judo Sports

NO	CATEGORY	FORMULA
1	VERY TALENTED	On $M + (1.5 \times SD) > UP$
2	TALENTED	On $M + (0.5 \times SD) S/DM + (1.5 \times SD)$
3	QUITE TALENTED	On $M - (0.5 \times SD) S/DM + (0.5 \times SD)$
4	LESS TALENTED	On $M - (0.5 \times SD) S/DM - (0.5 \times SD)$
5	NOT TALENTED	Down $< M - (1.5 \times SD)$

Information: M = Mean. SD = Standard Deviation, S/D = Up to...

(source : (15))

Because some tests in this study consider lower scores to be better, the formula above has been adjusted accordingly.

Table 2. Judo Sports Talent Identification Formula

NO	CATEGORY	FORMULA
1	VERY TALENTED	On $M - (1.5 \times SD) < DOWN$
2	TALENTED	On $M - (0.5 \times SD) S/DM - (1.5 \times SD)$
3	QUITE TALENTED	On $M + (0.5 \times SD) S/DM - (0.5 \times SD)$
4	LESS TALENTED	On $M + (0.5 \times SD) S/DM + (0.5 \times SD)$
5	NOT TALENTED	Down $> M + (1.5 \times SD)$

Information: M = Mean. SD = Standard Deviation, S/D = Up to...

Then the next step is to analyze the data by calculating the total score scale obtained per test item to draw onclusions regarding the norms for the gifted category in identifying talent for judo aged 10-13 years from the research conducted.

Instruments

Field observations indicate that the following tools are required for identifying judo talent in children aged 10 to 13: (1) Anthropometric Test, (2) Biomotor Components, and (3) Judo Technical/Division Skills Test. This work aims to provide accurate evaluation instruments and talent identification rules for judo sports. The developed instrument for 10–13-year-olds is valid and reliable, with normative values consistent with the judo talent identification test. The developed instrument is expected to be used as a tool to assess judo sports talent for children aged 10 to 13, thereby aiding in the development of judo sports and the search for judo sports talent.

Tabel 3 . New Paradigm of Talent Identification for Judo Ages 10-13 Years

Judo Talent Identification at the moment	Judo Talent Identification New Paradigm
There has been no research on identifying talent for judo aged 10-13 years	There has been research on identifying talent for judo aged 10-13 years
There is no appropriate test instrument to measure judo talent aged 10-13 years	An appropriate test instrument has been found to measure judo talent aged 10-13 years with test norms
There is no guidebook regarding the procedures for carrying out the judo talent identification test for ages 10-13 years	There is already a guidebook regarding the procedures for carrying out the judo talent identification test for ages 10-13 years
At the start of the training program, athletes aged 10-13 years have not yet had a talent identification test	At the start of the training program, athletes aged 10-13 years are expected to be able to take a talent identification test

Based on the theoretical basis and framework of thought above, and considering the importance of talent identification, an assessment instrument for judo sport talent identification aged 10-13 years is very necessary. Having this assessment instrument will make it easier for trainers to monitor success in implementing training programs for peak performance.

Results

Field observations show that talent searches for judo athletes at the regional level still rely on systems that are not scientifically justified. Therefore, determining the product design of test items that are in accordance with the characteristics of this judo sport goes through several stage. The stages are as follows:

13. Selecting judo talent identification test items that approach the needs and characteristics of judo sports include:

- j. Anthropometric tests include:

Table 4. Anthropometric tests

No.	Types of anthropometric tests
1.	Height
2.	Shoulder width
3.	Chest width
4.	Hip width
5.	Fat (tricep, subscapular)
6.	Sitting height
7.	Body weight
8.	Hand span

- k. Biomotor include:

Table 5. Biomotor

No.	Biomotor Component	Test Type
1.	Cardiovascular Test	Namely a 4.8 km fast walking test and multistage (multistage fitness test)
2.	General movement ability test	22) standing board jump 23) softball throws 24) zig-zag run 25) tennis ball throwing 26) basketball throwing 27) madicine ball put 28) 50 meter sprint
3.	Motor educability test	61)One Foot_Touch Head 62)Side Learning Rest 63)Grapevine 64)One-Knee Balance 65)Stork Stand 66)Double Heel Click 67)Cross-Leg Squat 68)Full Left Turn 69)One Knee-Head to Floor 70)Hop Backward 71)Forward Hand Kick 72)Full Squat-Arm Circle 73)Half-Turn Jump-Left Foot 74)Three Dips 75)Side Kick 76)Kneel, Jump to Feet 77)Russian Dance 78)Full Right Turn, The Top 79)Single Squat Balance 80)Jump Foot.
4.	Strength measurement test	16) push up 17) sit up 18) pull up 19) back up 20) wall sit
5.	Muscle strength measurement test	16)handgrip dynamometer 17)pull and push dynamometer

		18)back dynamometer 19)leg dynamometer 20)one-repetition maximum (1-rm) (with bench press, leg press, and arm curl),
6.	Agility measurement	7) side step test 8) shuttle run test
7.	Flexibility measurement	7) sit 8) reach test
8.	Speed measurement	using 6 second sprint test, 50 yard (45.73m) sprint test
9.	Reaction speed measurement	7) the nelson hand reaction test 8) the nelson foot reaction test
10.	Explosive power measurement	margaria kalamen test
11.	Balance measurement	7) dynamic balance test 8) the stork stands test
12.	Physical fitness/heart lung endurance test	10)running 2,4 km 11)havard step test 12)running 12 menit

1. Test judo/division technique ability, include:

Table 6. Test judo/division technique ability

No.	Test Component	Test Type
1.	Basic techniquesfalling techniques (<i>ukemi waza</i>)	22) <i>yoko ukemi</i> side fall in sitting position 23) <i>yoko ukemi</i> side fall in squatting and standing position 24) <i>ushiro ukemi</i> back fall in sitting position 25) <i>ushiro ukemi</i> back fall in standing squat position 26) <i>mae ukemi</i> front fall on kneeling 27) <i>mae ukemi</i> fall front squat standing 28) <i>mae mawari ukemi/jugeri</i> kneeling and standing
2.	Basic grip in judo (<i>kumikata</i>)	Pulling and pushing

Some of the tests listed above are relevant to talent identification in the sport of judo, and field observations yielded the following percentage results:

Table 7. Talet Identification

No.	Test Type	Percentage (%)
1	Height	100
2	Shoulder width	35.71
3	Chest width	32.71
4	Hip width	32.14
5	Fat (tricep, subscapular)	85.71
6	Sitting height	89.28
7	Body weight	100
8	Hand span	28.57
9	Fast walking test 4.8 km	28.57
10	Multistage (multistage fitness test)	46.42
11	Standing board jump	46.42
12	Softball throws	25
13	Zig-zag run	39.28
14	Tennis ball throw	28.57
15	Basketball throws	32.14
16	Medicine ball put	25
17	50 meter sprint	48.85
18	One foot touch head	42.85
19	Side learning rest	46.42
20	Grapevine	46.42
21	One-knee balance	39.28
22	Stork stand	46.42
23	Double heel clicks	35.71

24	Cross-leg squat	42.85
25	Full left turn	39.28
26	One knee-head to floor	42.85
27	Hop backward	39.28
28	Forward hand kick	28.57
29	Full squat-arm circle	35.71
30	Half-turn jump-left foot	39.28
31	Three dips	28.57
32	Side kick	25
33	Kneel	25
34	Jump to Feet	25
35	Russian dance	25
36	Full right turn	28.57
37	The top	32.14
38	Single squat balance	35.71
39	Jump foot	28.57
40	Push up	96.42
41	Sit up	96.42
42	Pull up	42.85
43	Back up	78.57
44	Wall sit	92.85
45	Handgrip dynamometer	42.85
46	Pull and push dynamometer	39.28
47	Back dynamometer	35.71
48	Leg dynamometer	46.42
49	One-repetition maximum (1-RM) bench press	35.71
50	Leg press	39.28
51	Arm curl	35.71
52	Side step test	89.28
53	Shuttle run test (lari bolak-balik)	46.42
54	Sit and reach test	85.71
55	6 second sprint test	28.57
56	50 yard sprint test (45.73m)	25
57	The Nelson hand reaction test	25
58	The Nelson foot reaction test	25
59	Margaria kalamen test	25
60	Dynamic balance test	75
61	The Stork stands test	28.57
62	2.4 km run	42.85
63	Up and down the bench (Harvard step test)	92.85
64	12 minute run	32.14
65	<i>Yoko ukemi</i> side falls in sitting position	100
66	<i>Yoko ukemi</i> side falls in squatting and standing position	96.42
67	<i>Ushiro ukemi</i> back falls in sitting position	100
68	<i>Ushiro ukemi</i> back falls in squatting standing position	46.42
69	<i>Mae ukemi</i> front falls in kneeling position	92.85
70	<i>Mae ukemi</i> front falls in squatting standing	42.85
71	<i>Mae mawari ukemi/jugeri</i> kneeling and standing	71.42
72	<i>Kumikata</i> pulling and pushing	46.42

14. Product design comes next; this entails choosing numerous questions with a percentage higher than 50% and organising them from top to bottom to evaluate judo sports skill aged 10 to 13 years. A total of 17 test elements have been adapted for judo.

Table 8. Test Items

No.	Test Items above 50%
1.	Height
2.	Fat

3.	Body weight
4.	Sitting height
5.	Wall sit
6.	Push up
7.	Back up
8.	Sit up
9.	Side step test
10.	Sit and reach
11.	Dynamic balance test
12.	Havard step test
13.	<i>Ushiro ukemi</i> sitting position
14.	<i>Yoko ukemi</i> posisi lying positions
15.	<i>Yoko ukemi</i> squatting and standing positions
16.	<i>Mae ukemi</i> kneeling position
17.	<i>Jugeri/mae mawari ukemi</i>

These 17 exams were selected to reflect three main elements that are crucial for success in judo: The possibility for an optimal physique in judo is evaluated using anthropometric traits like height, weight, body fat, sitting height. Basic physical condition aspects (strength, endurance, flexibility, agility, and balance): to improve technical ability and movement efficiency during competition. Basic judo technical skills (*ukemi* and *jugeri*) are essential for technique safety and effectiveness. The test selection also considers the characteristics of children aged 10 to 13, who are in the motor growth phase and require a comprehensive approach that includes both physical and technical aspects.

15. Then prepare a draft guide for implementing test procedures, with the recommended sequence for implementing the first stage of tests being the anthropometric test. This test has a very important role in the sport of Judo, namely covering height, fat, weight, sitting height, the second stage test is the physical ability test (biomotor) including wall sits, push ups, back ups, sit ups, side step test, sit and reach your toes (sit and reach) with a meter box, dynamic balance test, and bench up and down test (Havard step test). It should be noted that the up and down bench test (Havard step test) is carried out last in the second stage of the test. Furthermore, the test of technical ability/skills in judo includes a branch test, namely falling techniques (*ukemi waza*) including back falls (*Ushiro Ukemi*) in a sitting position, side falls (*Yoko Ukemi*) in a lying position, squatting and standing, front falls (*Mae Ukemi*) in a kneeling position and *Jugeri*/rolling forward (*mae mawari ukemi*) from a kneeling and standing position. The special talent identification test for judo is explained in the following picture:

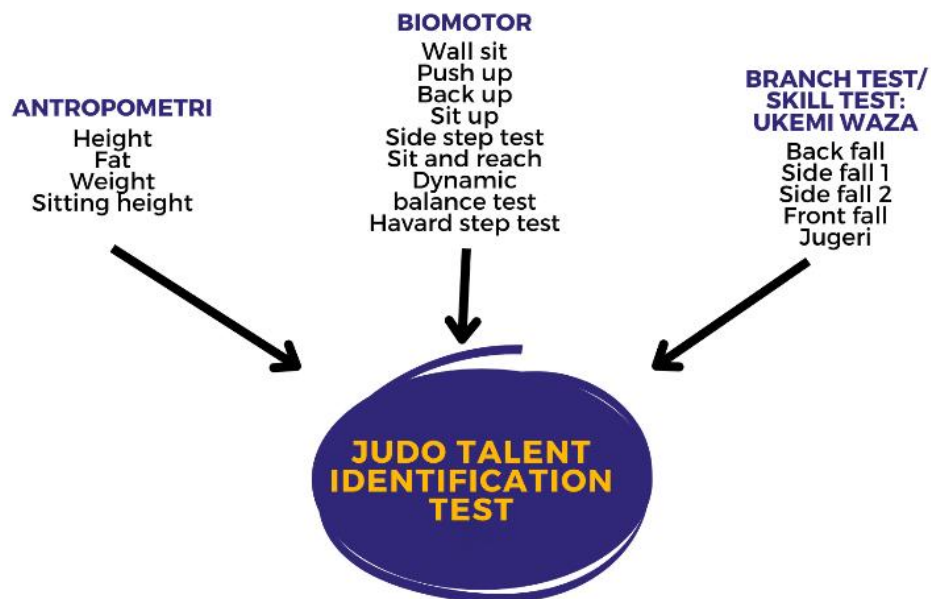


Figure 3. Judo Talent Identification Test Items

16. The next stage is to develop an assessment and evaluation flow, in the identification flow of scouting special sports interests and talents from start to finish, the category of talent level is found, briefly explained in the following picture:

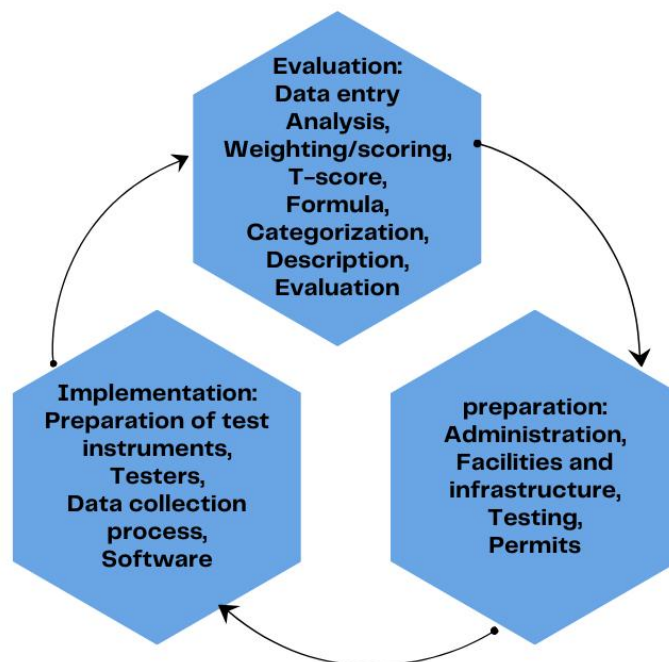


Figure 4. Flow of Implementation and Data Analysis
(Reference: (15))

The small-scale trial was conducted to evaluate the practical applicability of the talent identification guide. The subjects of this small-scale trial were athletes aged 10-13 years from the Wira Mataram Judo Club. Based on the results of the small-scale trial assessment of the product being developed, it shows that the total score of 93 (39%) samples stated that it was suitable, while the score of 147 (61%) of the other samples stated that it was very suitable, it can be concluded that the results of the development of the judo sports talent identification instrument aged 10 -13 years can be said to be easy for testers to understand and implement with several suggestions and comments.

The percentage results from the assessment above can be seen in the following diagram:

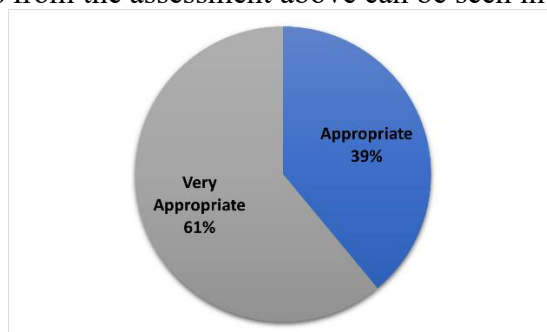


Figure 5. Small Scale Trial Results Percentage Diagram

The next stage is based on the results of small-scale trials, then product revisions are carried out before large-scale trials are carried out. The improvements made include aspects suggested by users when using the product. Based on comments and suggestions from users regarding the judo sports talent identification instrument aged 10-13 years, a revision was carried out again to improve the product in the form of a guidebook. The revisions to the product are explained in the following table:

Table 9. Small Scale Product Revision

No	Before Revision	After Revision
1	The size of the writing in the guidebook is too small and difficult to read	The size of the writing in the guidebook has been enlarged and is easy to read
2	There is no picture of the test implementation flow yet	There is already a picture of the test implementation flow
3	There is no picture of the test sequence yet	There is already a picture of the test sequence
4	The book cover does not include photos of children aged 10-13 years who received gold medals	The book cover includes a photo of a child aged 10–13 who received a gold medal.

Then, based on several suggestions and input from users of the talent identification manual for judo sports aged 10-13 years, the product design was revised again to proceed to the next stage, namely the large-scale trial stage. Large-scale trials were carried out at the Talented Athletes Development (PAB) BPO DIY program and the All-Indonesian Judo Association (PJSI) Bantul Regency, Yogyakarta.

This large-scale trial is a follow-up to the product revision of the small-scale trial. From the results of the large-scale trials, suggestions and comments were then obtained to revise the product before carrying out an effectiveness test. Based on the results of the large-scale trial assessment of the product being developed, it shows that the total score of 130 (27%) samples stated that it was suitable, while the score of 350 (73%) of the other samples stated that it was very suitable, it can be concluded that the results of the development of the judo sports talent identification instrument aged 10 – 13 years can be said to be easy for testers to understand and implement with several suggestions and comments. The percentage results from the assessment above can be seen in the following diagram:

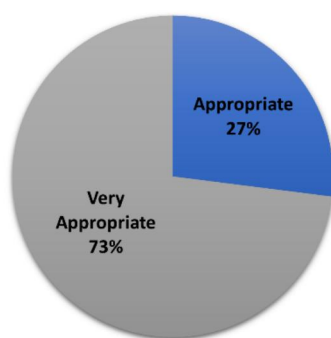


Figure 6. Large Scale Trial Results Percentage Diagram

The improvements made include aspects suggested by users when using the product. Based on comments and suggestions from users regarding the judo sports talent identification instrument for ages 10–13, the product was revised accordingly. The revisions to the product are explained in the following table:

Table 10. Large Scale Product Revision

No	Before Revision	After Revision
1	There is no way to assess the judo sports talent identification instrument for ages 10-13 years	There is already a method for assessing judo sports talent identification instrument ages 10-13 years
2	The photos in the manual are not in color	The photos in the guidebook are in color
3	The manual is not yet concise/too thick	The manual is concise/not too thick

The next stage, after product revision from large-scale results, continued with product effectiveness testing in the form of a talent identification guidebook for judo sports aged 10-13 years. This was carried out by testing the validity of the test instrument using a test-retest test, namely data from two observations using the same instrument.

The results of testing the validity of this talent identification test instrument include:

Table 11. Results of Instrument Validity Testing

No.	Items Test	Calculated r
1.	Height	1
2.	Fat	1
3.	Body weight	1
4.	Sitting height	1
5.	Wall sit	0,955
6.	Push up	0,965
7.	Back up	0,904
8.	Sit up	0,921
9.	Side step test	0,766
10.	Sit and reach	0,960
11.	Dynamic balance test	0,860
12.	Havard step test	0,816
13.	<i>Ushiro ukemi</i> sitting position	0,809
14.	<i>Yoko ukemi</i> posisi lying positions	0,630
15.	<i>Yoko ukemi</i> squatting and standing positions	0,731
16.	<i>Mae ukemi</i> kneeling position	0,829
17.	<i>Juger/mae mawari ukemi</i>	0,843

The results of the research hypothesis testing are compared to the r-value. The r-table value for $N = 50$ with a 5% significance level is 0.279. Based on the results, it is clear that the validity test of the talent identification test instrument yields $r_{count} > r_{table}$. Based on these findings, it can be concluded that all types of judo sport talent

identification test questions for ages 10-13 are valid.

Based on the results of reliability testing of the judo sports talent identification test instrument aged 10 - 13 years, is known:

Table 12. Reliability test

No.	Items Test	Coefficient alpha
1.	Height	1
2.	Fat	1
3.	Body weight	1
4.	Sitting height	1
5.	Wall sit	0,997
6.	Push up	0,978
7.	Back up	0,942
8.	Sit up	0,958
9.	Side step test	0,867
10.	Sit and reach	0,977
11.	Dynamic balance test	0,925
12.	Havard step test	0,897
13.	<i>Ushiro ukemi</i> sitting position	0,891
14.	<i>Yoko ukemi</i> posisi lying positions	0,769
15.	<i>Yoko ukemi</i> squatting and standing positions	0,844
16.	<i>Mae ukemi</i> kneeling position	0,906
17.	<i>Jugeri/mae mawari ukemi</i>	0,914

The reliability coefficients for all judo talent identification test instruments for ages 10–13 exceeded 0.5, indicating moderate to high consistency depending on the item. These findings suggest that the judo talent identification test instrument for ages 10-13 is reliable and worthy of continued mass production.

After conducting small-scale and large-scale tests and receiving results indicating that all judo talent identification test instruments for ages 10-13 are suitable for use, the next stage is the effectiveness test. This stage involves an analysis of data from the judo talent identification test results for ages 10 to 13, which have been declared valid and reliable.

The results of the effectiveness test data obtained mean (M) and standard deviation (SD) values for each test item so that they can be used to calculate norms and standards for assessing the judo sports talent identification test aged 10-13 years, as follows:

52. Height

The results of height data analysis obtained an average data value (Mean) of 146.32 and a standard deviation (SD) of 6.96. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results of calculating height norms and standards were obtained as follows:

Table 13. Standard Body Height Value (centimeters)

MARK	CATEGORY	RESULTS
1	VERY TALENTED	156.7 cm > Above
2	TALENTED	149.7 cm to 156.7 cm
3	QUITE TALENTED	142.8 cm to 149.7 cm
4	LESS TALENTED	135.8 cm to 142.8 cm
5	NOT TALENTED	<135.8 cm
S/D = Up to...		

53. Fat (trisept, subscapula)

The results of fat data analysis obtained an average data value (Mean) of 10 and a standard deviation (SD) of 2.51. After the calculation is complete, the next step is to

determine the norm classification by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports aged 10 – 13 years. The results of calculating fat norms and standards were obtained as follows:

Table 14. Standard Fat Value (millimeters)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	6.2 mm > Above
4	TALENTED	8.7 mm to 6.2 mm
3	QUITE TALENTED	11.2 mm to 8.7 mm
2	LESS TALENTED	13.7 mm to 11.2 mm
1	NOT TALENTED	< 13.7 mm

S/D = Up to...

54. Weight

The results of the analysis of body weight data obtained an average data value (Mean) of 37.73 and a standard deviation (SD) of 8.37. After the calculation is complete, the next step is to determine the norm classification by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports aged 10 – 13 years. The results of calculating body weight norms and standards were obtained as follows:

Table 15. Standard Body Weight Value (kilograms)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	50.28 kg > Above
4	TALENTED	41.91 kg to 50.28 kg
3	QUITE TALENTED	33.54 kg to 41.91 kg
2	LESS TALENTED	25.17 kg to 33.54 kg
1	NOT TALENTED	< 25.17 kg

S/D = Up to...

55. Sitting height

The results of the analysis of sitting height data obtained an average data value (Mean) of 75.06 and a standard deviation (SD) of 3.60. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for sitting height are as follows:

Table 16. Standard Sitting Height Value (centimeters)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	80.4 cm > Above
4	TALENTED	76.8 cm to 80.4 cm
3	QUITE TALENTED	73.2 cm to 76.8 cm
2	LESS TALENTED	69.6 cm to 73.2 cm
1	NOT TALENTED	< 69.6 cm

S/D = Up to...

56. Wall sit

The results of wall sit data analysis obtained an average data value (Mean) of 94.04 and a standard deviation (SD) of 23.52. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating wall sit norms and standards are as follows:

Table 17. Standard Wall Sit Value (seconds)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	129.32 seconds > Up
4	TALENTED	105.8 seconds to 129.32 seconds
3	QUITE TALENTED	82.28 seconds to 105.8 seconds
2	LESS TALENTED	58.78 seconds to 82.28 seconds
1	NOT TALENTED	< 58.78 seconds

S/D = Up to...

57. Push Up

The results of the push up data analysis obtained an average data value (Mean) of 42.16 and a standard deviation (SD) of 10.30. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained for calculating push up norms and standards are as follows:

Table 18. Standard Push Up Value (times)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	58 times > Up
4	TALENTED	47 times to 58 times
3	QUITE TALENTED	37 times to 47 times
2	LESS TALENTED	27 times to 37 times
1	NOT TALENTED	< 27 times

S/D = Up to...

58. Back Up

The results of the push up data analysis obtained an average data value (Mean) of 92.68 and a standard deviation (SD) of 13.96. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating back up norms and standards are as follows:

Table 19. Standard Back Up Value (times)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	114 times > Up
4	TALENTED	100 times to 114 times
3	QUITE TALENTED	86 times to 100 times
2	LESS TALENTED	72 times to 86 times
1	NOT TALENTED	<72 times

S/D = Up to...

59. Sit Up

The results of sit up data analysis obtained an average data value (Mean) of 42.24 and a standard deviation (SD) of 10.68. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for sit ups are as follows:

Tabel 20. Standard Sit Up Value (times)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	58 times > Up
4	TALENTED	48 times to 58 times
3	QUITE TALENTED	37 times to 48 times
2	LESS TALENTED	26 times to 37 times
1	NOT TALENTED	< 26 times

S/D = Up to...

60. Side Step Test

The results of the side step test data analysis obtained an average data value (Mean) of 8.75 and a rough standard deviation (s) of 0.76. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards of the side step test are as follows:

Table 21. Side Step Test Value Standards (points)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	9.8 points > Above
4	TALENTED	9.1 points to 9.8 points
3	QUITE TALENTED	8.3 points to 9.1 points
2	LESS TALENTED	7.6 points to 8.3 points
1	NOT TALENTED	< 7.6 points
S/D = Up to...		

61. Sit and Reach

The results of the sit and reach data analysis obtained an average data value (Mean) of 40.64 and a rough standard deviation (s) of 4.75. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results of calculating sit and reach norms and standards are as follows:

Table 22. Standard sit and reach value (cm)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	47.76 cm > Above
4	TALENTED	43.01 cm to 47.76 cm
3	QUITE TALENTED	38.26 cm to 43.01 cm
2	LESS TALENTED	33.51 cm to 38.26 cm
1	NOT TALENTED	< 33.51 cm
S/D = Up to...		

62. Dynamic Balance Test

The results of the dynamic balance test data analysis obtained an average data value (Mean) of 70.8 and a rough standard deviation (s) of 22.32. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating norms and standards for the dynamic balance test are as follows:

Table 23. Standard Dynamic Balance Test Value (points)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	100 points > Above
4	TALENTED	85 points to 100 points
3	QUITE TALENTED	60 points to 85 points
2	LESS TALENTED	40 points to 60 points
1	NOT TALENTED	< 40 points
S/D = Up to...		

63. Harvard Step Test

The results of the Harvard step test data analysis obtained an average data value (Mean) of 106.36 and a rough standard deviation (s) of 21.26. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards of the Harvard step test are as follows:

Table 24. Harvard Step Test Value Standards

MARK	CATEGORY	RESULTS
5	VERY TALENTED	119 > Up
4	TALENTED	105 to 119
3	QUITE TALENTED	90 to 105
2	LESS TALENTED	75 to 90
1	NOT TALENTED	< 75
S/D = Up to...		

64. Back fall (*ushiro ukemi*) sitting position

The results of the branch test analysis using a rubik for assessing the performance of falling technique skills (*ukemi waza*) in the test participants were obtained proportionally and in accordance with the judo sport branch which was carried out by considering the competency of the test participants in performing the falling technique (*ukemi waza*).

Determination of competency standards in assessing the performance of basic judo technical skills is carried out through interpretation into assessment norms. The results of the data analysis of Ushiro Ukemi's sitting position obtained an average data value (Mean) of 10.48 and a standard deviation (SD) of 1.16.

After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *ushiro ukemi* sitting position are as follows:

Table 25. Standard Value *Ushiro Ukemi* sitting position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	11 to 12
3	QUITE TALENTED	10 to 11
2	LESS TALENTED	9 to 10
1	NOT TALENTED	Down < 9

S/D = Up to...

65. Side fall (*yoko ukemi*) lying position

The results of data analysis of Yoko Ukemi's lying position obtained an average data value (Mean) of 10.66 and a standard deviation (SD) of 1.02. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The following are the findings of computing the norms and standards for Yoko Ukemi's laying posture:

Table 26. Standard value of *yoko ukemi* lying position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	11 to 12
3	QUITE TALENTED	10 to 11
2	LESS TALENTED	9 to 10
1	NOT TALENTED	Down < 9

S/D = Up to...

66. Side falls (*yoko ukemi*) squatting and standing positions

The results of *Yoko Ukemi's* data analysis in squatting and standing positions obtained an average data value (Mean) of 9.6 and a standard deviation (SD) of 1.35. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *Yoko Ukemi* squatting and standing positions are as follows:

Table 27. Standard Value of *Yoko Ukemi* squatting and standing position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	10 to 12
3	QUITE TALENTED	9 to 10
2	LESS TALENTED	8 to 9
1	NOT TALENTED	Down < 8

S/D = Up to...

67. Front fall (*mae ukemi*) kneeling position

The results of data analysis for *mae ukemi* kneeling position obtained an average data value (Mean) of 9.82 and a standard deviation (SD) of 1.20. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *mae ukemi* kneeling position are as follows:

Table 28. Standard Value *mae ukemi* kneeling position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	12 > Up
4	TALENTED	10 to 12
3	QUITE TALENTED	9 to 10
2	LESS TALENTED	8 to 9
1	NOT TALENTED	Down < 8
S/D = Up to...		

68. *Jugeri* / rolling forward (*mae mawari ukemi*) kneeling and standing positions

The results of the data analysis for *Mae Mawari Ukemi* in kneeling and standing positions obtained an average data value (Mean) of 9.4 and a standard deviation (SD) of 1.24. After the calculation is complete, the next step is to determine the classification of norms by formulating the calculation of norms for the Special Interest and Talent category for Judo Sports. The results obtained from calculating the norms and standards for *Mae Mawari Ukemi* kneeling and standing positions are as follows:

Table 29. Standard Value *jugeri/mae mawari ukemi* kneeling and standing position (score)

MARK	CATEGORY	RESULTS
5	VERY TALENTED	11 > Up
4	TALENTED	10 to 11
3	QUITE TALENTED	9 to 10
2	LESS TALENTED	8 to 9
1	NOT TALENTED	Down < 8
S/D = Up to...		

Discussion

Given the limited research on judo talent, one approach to improving talent development is to define sport-specific talent concepts (16–18). The purpose of this essay is to design exam questions capable of spotting judo potential. Judo skills can be identified early in children aged 10 to 13 (7). Moreover, it should be mentioned that skill in many sports including judo (20) has been understood using the opinions of trainers as sources of knowledge. By means of the aptitude test findings, coaches and physiotherapists may collaborate to design a training program that efficiently combines the prevention of injuries with the development of technical ability. While coaches focus on improving specific judo skills based on test results, physiotherapists provide remedial therapies addressing physical shortcomings, including muscular imbalances, flexibility limitations, and postural control. This cooperation allows for a more thorough and customised style to instruction.

Based on the results of this study, judo talent may be determined using 17 objects acting as a guide. Development of anthropometric test criteria for judo talent depends critically on height (21–23). In judo (24), taller height can offer benefits in terms of attack range and distance management. Therefore, the athlete selection and development process depends much on a complete awareness of how height affects judo performance. Measurements of height expose an athlete's body type, which might affect the most suitable weight class and competitive approach (25). Comparison of the

results of this study with the Talent Identification and Development (TID) method and the Eurofit Test Battery states that height and jumping are required in elite women's volleyball, but motor coordination is a key factor in recognizing talent in girls aged 6–14 years (26).

Body fat percentage provides valuable information about an athlete's body composition, which has a direct impact on performance (27). Judo athletes with optimal body composition, characterized by low and healthy levels of body fat, perform better due to improved speed, efficiency, and endurance during matches (28). As a result, measuring and monitoring body fat is an important part of a judo athlete's training and development program, allowing coaches to adjust diet and training plans to achieve peak physical condition.

Weight measurement is critical because judo is a sport in which athletes are classified by weight class, so having an appropriate weight is essential for competing effectively in the correct category (29). Effective weight management helps coaches to suggest the required diet (30).

Measurements of sitting height expose details about an athlete's upper body dimensions, which might affect balance and playing style (31). Maintaining an acceptable centre of gravity depends on a sitting height commensurate with total body height, therefore enhancing the athlete's capacity to regulate their own and their opponent's movements.

The wall sit test is an effective tool for assessing judo athletes' strength and endurance potential, allowing coaches to design appropriate training programs to improve their performance (32). The push-up test clearly indicates an athlete's upper body muscle strength and endurance capacity, allowing coaches to assess their overall physical condition (33). Push-up test an athlete's upper body strength, which reflects their ability to grip, control an opponent, and execute throwing techniques with stability. Meanwhile, the back-up test measures back muscle strength, which is critical for maintaining postural stability, core strength, and performing explosive movements common in judo throw techniques. Both types of strength contribute significantly to technique efficiency and injury prevention in young judo athletes.

The back-up test evaluates back muscle strength, which is essential for body control and postural stability in judo techniques. Crucially for core stability and body control in many judo techniques, the sit-up test evaluates the strength and endurance of the abdominal muscles. Strong abdominal muscles are crucial in judo as they support throws and locks, enable rapid changes of direction, and help to keep body balance (34). Extremely low core strength test results should prompt the implementation of a preventative strengthening program. Low test results in a clinical environment should be accompanied with mobilisation and strengthening exercises to lower the risk of overuse injuries and muscle strains during judo's throwing phase. Low strength or mobility test results might point to functional dysfunction, which calls for specific movement therapy to improve performance and prevent injury.

Tests of agility evaluate an athlete's speed and efficiency in shifting directions fast and accurately (35). Research-based agility tests, especially the side step test, require athletes to move from side to side as quickly as possible within a set time. These tests help to identify judo players. Flexibility tests help assess an athlete's ability to perform judo techniques requiring a full range of motion, such as throws and locks (36,37). A significantly below-average test may indicate excessive muscle tension and a limited range of motion, increasing the risk of injury. Particularly in the hamstring, lower back, and hip muscles which are crucial in judo technical motions low flexibility raises the risk of injury. Development of remedial training programs and avoidance of injuries depend on early identification of poor flexibility scores.

Dynamic balance tests and other balance tests are excellent evaluations of an athlete's capacity to keep bodily equilibrium while moving (38). Dynamic balancing tests show athletes' capacity to keep control of their bodies under circumstances needing fast coordination and corrections. **Poor test results indicate a higher risk of fall-related injuries, including to the ankle, knee, or head.** Results of the balance test show postural stability and neuromuscular control; they might also show a risk of damage from dynamic instability. **These results enable physiotherapists to design rehabilitative and preventative programs tailored to the needs of young judo athletes.**

Used to ascertain judo athletes' aerobic capacity (39), the Harvard Step Test is a cardiovascular endurance test. In judo, cardiovascular endurance is essential as competitors sometimes confront matches with periods of intensive effort followed by short rests.

Moreover, in judo, competitors' technical talents and particular abilities in several spheres of the sport are evaluated using a skill test or branch test (40). **The results of this study allow for evaluating judo athletes' skills using various test items.** Among them are mae ukemi kneeling position, judgeri/mae mawari ukemi, yoko ukemi laying position, yoko ukemi squatting and standing position, ushiro ukemi sitting position. Sports physiotherapists can monitor an athlete's physical adaption development and customise an injury prevention strategy for every single person using the findings of physical tests. Early identification of functional deficits made possible by regular monitoring helps training programs to be catered to the particular requirements of the growing athlete.

Conclusion

According to the research, the test items for identifying judo talent in children aged 10 to 13 are: (1) height, (2) fat, (3) weight, (4) sitting height, strength test (5) wall sit, (6) push up, (7) back up, (8) sit up, Agility (9) side step test, flexibility test (10) sit and reach, balance test (11) dynamic balance test, endurance test (12) havard step test, skill test/branch (13) *ushiro ukemi* sitting position, (14) *yoko ukemi* lying position, (15) *yoko ukemi* squatting and standing position, (16) *mae ukemi* kneeling position, (17) *juger/mae mawari ukemi*.

Acknowledgments

This research is supported by Yogyakarta State University (Indonesia), and Yogyakarta PGRI University (Indonesia)

Conflict of interest

All authors declare that there is no potential conflict of interest associated with this research, or publication of this manuscript.

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Danarstuti Utami

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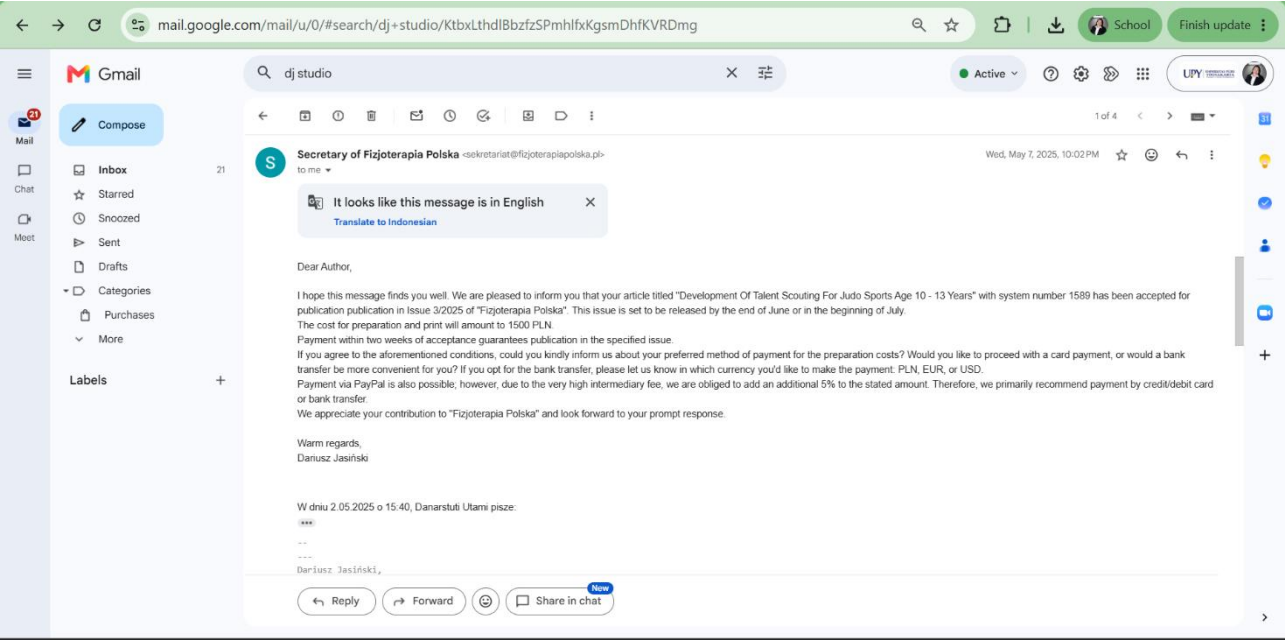
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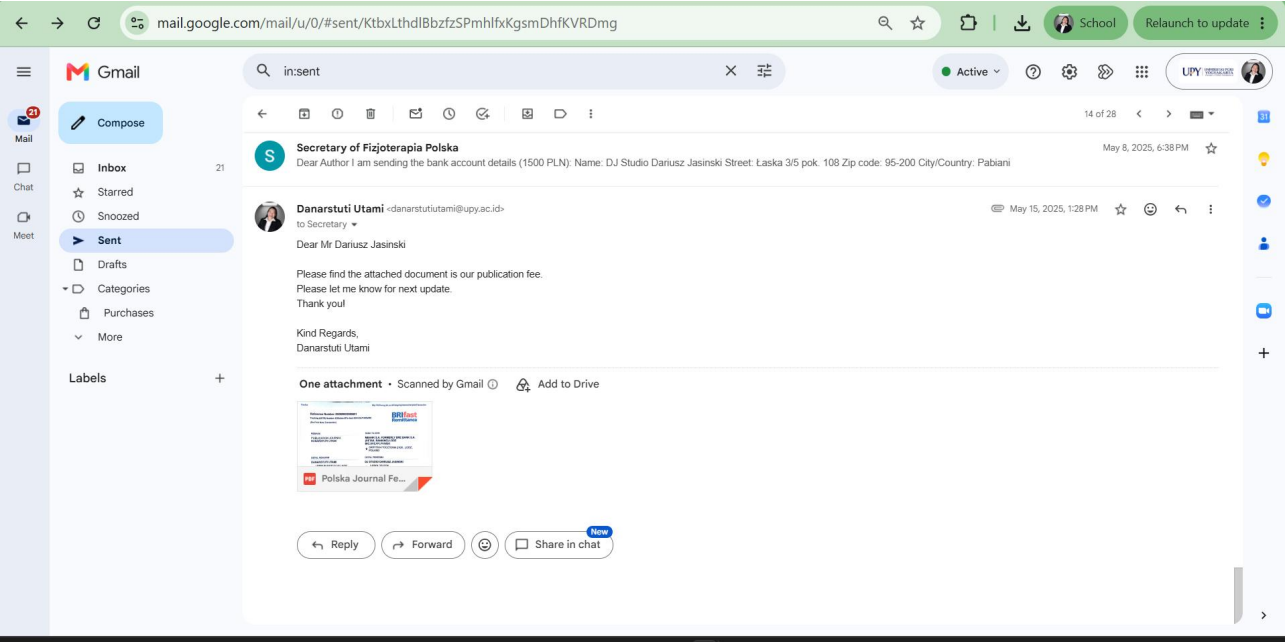
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DEVELOPMENT OF TALENT SCOUTING FOR JUDO SPORTS AGED 10-13 YEARS
Danarstuti Utami, Yustinus Sukarmin, Widiyanto, Agus Priyadi, Priska Dyana Kristi, Victor Novianto, Amran, Reza Adityas Trisnadi, Rafid Abiyyu Tridita |
Danarstuti Utami, Yustinus Sukarmin, Widiyanto, Agus Priyadi, Priska Dyana Kristi, Victor Novianto, Amran, Reza Adityas Trisnadi, Rafid Abiyyu Tridita
Danarstuti Utami et al. – Development of Talent Scouting for Judo Sports Aged 10–13 Years – Fizjoterapia Polska 2025; 25(3); 156-172
DOI: <https://doi.org/10.56984/8ZG7D19E2NY>
Abstract
This study aims to develop a valid and reliable guidebook for identifying judo talent, which can be used to assess the potential of young judo athletes. The research employs a research and development methodology. On a small scale, the

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8/20/26, 1:32 PM

Universitas PGRI Yogyakarta Mail - Journal Submission



Danarstuti Utami <danarstutiutami@upy.ac.id>

Journal Submission

12 messages

Danarstuti Utami <danarstutiutami@upy.ac.id>
To: Sekretariat FP <sekretariat@fizjoterapiapolska.pl>

Mon, Mar 10, 2025 at 5:18 AM

Good Morning!!

I am writing with respect.. I am Danarstuti Utami, a PhD student from Yogyakarta State University..
I have submitted my second article entitled "Development of Judo Sports Scouting Talent Age 10 - 13 Years"
We look forward to your positive response to this article journal. Thank you

Warm regards
Danarstuti Utami

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Sekretariat FP <sekretariat@fizjoterapiapolska.pl>
To: Danarstuti Utami <danarstutiutami@upy.ac.id>

Tue, Mar 11, 2025 at 6:54 PM

Dear Author,

Thank you for submitting your paper to the Fizjoterapia Polska. We are currently sending it for review, the results of which we should receive within 2 weeks. Your article has been assigned the system number FPM1589. As soon as we receive feedback from the reviewers, we will inform you about the next steps.

Best regards,

Dariusz Jasiński,
secretary of Fizjoterapia Polska
Office: ul. Łaska 3/5 pok. 108, 95-200 Pabianice, Poland
tel. +48 692 468 257
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W dniu 09.03.2025 o 23:18, Danarstuti Utami pisze:
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Sekretariat FP <sekretariat@fizjoterapiapolska.pl>
To: Danarstuti Utami <danarstutiutami@upy.ac.id>

Wed, Mar 26, 2025 at 2:12 PM

Dear Author,

Thank you for submitting your work Development Of Talent Scouting For Judo Sports Age 10 - 13 Years. In the opinion of the reviewers, the article can be accepted for publication after significant revisions, followed by a re-review. Here are the comments:

Please:

- Specify which statistical tests were used for data analysis (e.g., significance tests, correlation analysis).
- Provide confidence intervals for the validity and reliability values of the test.
- Explain the selection of 17 talent tests:
 - Justify why these specific tests were chosen and how their results correlate with success in judo.
 - Compare the results with other methods of assessing sports talent (if similar tests exist).
- Transition to the Vancouver format.
 - Numbered citations: References should be numbered consecutively in the order in which they are first mentioned in the text (for example [1] or [1-4] or [1,3,5]). Each citation corresponds to a numbered reference, providing a clear and concise way to track sources.
 - Superscript or bracketed numbers: In-text citations should be in superscript or within brackets. These numbers point to the full reference details in the bibliography.
 - Reference list format: The reference list at the end of the document contains full citations, arranged numerically. Each reference provides comprehensive details like the author's surname and initials, title of the work, source title (for journal articles: journal name, volume, issue, and page numbers; for books: publisher and year of publication).
 - Conciseness and clarity: The Vancouver style emphasizes conciseness and clarity, ensuring that references are brief yet informative enough to guide the reader to the source material.
 - Titles of journals: Often, journal titles are abbreviated according to the style used in the Index Medicus.
 - Author names: Up to six authors can be listed; if there are more than six, the first six are listed followed by 'et al.'
- Reliability scores of 1.000 for several tests appear questionable – verify if there was a calculation error or if the test was "overfitted" on a small sample.
- Clarify whether the test was validated on a sample different from the one used for its development.
- Specify whether the sample was selected randomly or intentionally (if intentional, explain the selection criteria).

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- Indicate whether only boys were studied or if girls were included as well – if only boys, this should be explicitly stated and justified.

To align the article with our target audience (clinical and sports physiotherapists), please include:

- A brief discussion on which physical tests may indicate an increased risk of injury.
- A connection between test results and injury prevention – e.g., does poor flexibility in the "sit and reach" test increase the risk of injury in judo?
- Information on how strength tests (e.g., push-ups, back-ups) translate into the ability to perform judo techniques.
- Whether balance test results can help assess an athlete's stability and injury susceptibility.
- How sports physiotherapists can use these tests to monitor athletes' progress and adjust preventive programs.
- Expand the discussion on the impact of test results on the training process:
 - How can coaches and physiotherapists collaborate based on talent test results?
 - Can deficiencies in strength or mobility tests indicate a need for individualized movement therapy?

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If any of the following elements: Similarity, Paraphrasing, Inclusions, or AI exceed 30%, the article is automatically rejected.

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- Article up to 18,000 characters with spaces – 700 PLN (about 170 USD, depending on the current exchange rate from PLN to USD)
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We do not accept articles exceeding 60,000 characters with spaces for publication.

The character count with spaces includes all elements included in the article (title, authors, affiliations, abstract, main text, table content, acknowledgment, bibliography).

Kind regards,
Dariusz Jasiński

W dniu 09.03.2025 o 23:18, Danarstuti Utami pisze:

Good Morning!!
[Quoted text hidden]

--

Dariusz Jasiński,
sekretarz redakcji Fizjoterapii Polskiej
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Danarstuti Utami <danarstutiutami@upy.ac.id>
To: Sekretariat FP <sekretariat@fizjoterapiapolska.pl>

Wed, Apr 16, 2025 at 7:52 PM

Dear Prof..
I do apologize for disturbing you..
I am Danarstuti Utami, PhD student from Yogyakarta State University.
I have been submitting my revision article entitled "Development of Judo Sports Scouting Talent Age 10 - 13 Years"
Through this email, I would like to follow up regarding the status of my article.

In paralel, I'm already make a revision based on the reviewer comments. Please let me know for publication costs, we adjust to price changes.
Thank you.

Best Regards,
Danarstuti Utami

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Sekretariat FP <sekretariat@fizjoterapiapolska.pl>
To: Danarstuti Utami <danarstutiutami@upy.ac.id>

Thu, Apr 24, 2025 at 5:16 PM

Dear Author

Thank you for submitting your article Development Of Talent Scouting For Judo Sports Age 10 - 13 Years, system no. 1589. I am pleased to inform you that your manuscript has received positive feedback from the reviewers of Fizjoterapia Polska and we are keen on publishing it.

However, prior to its inclusion in our journal, certain language corrections need to be made. Please carefully review the suggestions from the reviewers and make the necessary amendments.

Original sentence: From talent searches and monitoring to breeding, education, and training grounded on science and technology, efforts to raise sports accomplishments must keep developing players as early as feasible, so enhancing the quality of sports organisations both centrally and locally.

Issue: Awkward and overly complex phrasing with "so enhancing the quality".

Suggested correction: From talent searches and monitoring to breeding, education, and training grounded in science and technology, efforts to raise sports accomplishments must focus on developing players as early as possible to enhance the quality of sports organisations both centrally and locally.

Original sentence: The sports development system cannot be implemented immediately, it must adhere to established procedures and designs, sports development cannot be achieved through minimal planning, it requires totality and commitment to develop sports logically, analytically, and systematically.

Issue: Run-on sentence with multiple independent clauses not properly separated.

Suggested correction: The sports development system cannot be implemented immediately; it must follow established procedures and designs. Sports development cannot be achieved through minimal planning—it requires totality and commitment to develop sports logically, analytically, and systematically.

Original sentence: Talent must be identified at an early age so that it can be properly nurtured to produce quality players/athletes.

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Issue: Slash ("/") between "players/athletes" is not appropriate in formal academic writing.

Suggested correction: Talent must be identified at an early age so that it can be properly nurtured to produce quality players and athletes.

Original sentence: Peak achievement in a sport can only be achieved by those who are talented and have been able to meet the requirements of a sport since a young age, as well as those who can follow systematic training over time.

Issue: Repetition of "achieve" and "achievement" in the same sentence.

Suggested correction: Success in a sport can only be attained by those who are talented, meet the sport's requirements from a young age, and consistently follow systematic training over time.

Original sentence: So that judo achievements can be achieved optimally, "well-established" planning is needed which cannot be separated from the coaching pattern carried out.

Issue: Repetition of "achievements can be achieved" and use of quotation marks for emphasis.

Suggested correction: To optimize judo performance, well-established planning is needed and must be closely aligned with the implemented coaching pattern.

Original sentence: Until now, there are very few instructions or guidelines regarding measuring instruments for identifying judo talent aged 10-13 years, so the author in this case is very interested in compiling a guidebook instrument for talent.

Issue: Wordy and awkward phrasing "the author in this case is very interested in".

Suggested correction: Currently, there are very few guidelines for measuring instruments to identify judo talent aged 10-13, prompting the author to develop a guidebook instrument.

Original sentence: Judo identification marks for children aged 10 to 13 are guidelines used to determine the identity of a judo athlete for valid and reliable assessment.

Issue: Confusing and unclear phrase "determine the identity of a judo athlete".

Suggested correction: Judo identification guidelines for children aged 10 to 13 are used to assess the potential of a judo athlete through valid and reliable measures.

Original sentence: Research is used to produce certain products, specifically needs analysis and testing the effectiveness of the product so that it can function in the larger community.

Issue: Awkward and unclear phrasing in "specifically needs analysis and testing the effectiveness".

Suggested correction: The research aims to develop specific products, focusing on needs analysis and testing their effectiveness to ensure they are applicable in the wider community.

Original sentence: The Talented Athlete Development (PAB) program of BPO DIY and the All Indonesia Judo Association (PJSI) of the Bantul DIY district collected large-scale data on up to 30 athletes aged 10-13 years.

Issue: Slight inconsistency in tense and number "collected... on up to 30 athletes".

Suggested correction: The Talented Athlete Development (PAB) program of BPO DIY and the All Indonesia Judo Association (PJSI) of the Bantul DIY district collected large-scale data from 30 athletes aged 10-13 years.

Original sentence: This technique was chosen to ensure that the subjects studied had characteristics that were consistent with the development of the judo sports talent instrument.

Issue: Redundant phrasing "subjects studied had characteristics".

Suggested correction: This technique was chosen to ensure that the selected subjects matched the characteristics needed for developing the judo talent instrument.

Original sentence: The data analysis in this study focused on the formula for identifying judo sports talent aged 10 to 13.

Issue: Awkward and vague phrasing of "focused on the formula for identifying".

Suggested correction: The data analysis in this study focused on developing a formula to identify judo sports talent in individuals aged 10 to 13.

Original sentence: Because in this research there are several tests where the lower the score the better, the formula formulation above is reversed to:

Issue: Unnatural structure and redundancy in "the formula formulation above is reversed to".

Suggested correction: Because some tests in this study consider lower scores to be better, the formula above has been adjusted accordingly.

Original sentence: The author's field observations indicate that for 10-13 year olds the following judo talent identification tools are needed...

Issue: Slightly informal tone in academic context with "the following judo talent identification tools are needed".

Suggested correction: Field observations indicate that the following tools are required for identifying judo talent in children aged 10 to 13.

Original sentence: Talent for 10-13 year olds is valid and reliable, with value norms that are consistent with the judo talent identification test for 10-13 year olds.

Issue: Repetition and unclear subject structure.

Suggested correction: The developed instrument for 10-13-year-olds is valid and reliable, with normative values consistent with the judo talent identification test.

Original sentence: As a result of observations from information available in the field, every talent search for Judo athletes at regional level still uses a system that cannot be "justified" in terms of sports science...

Issue: Inappropriate use of quotation marks around "justified".

Suggested correction: Field observations show that talent searches for judo athletes at the regional level still rely on systems that are not scientifically justified.

Original sentence: There are 17 test elements total that have been modified for the judo sport:

Issue: Slight grammatical awkwardness in "17 test elements total".

Suggested correction: A total of 17 test elements have been adapted for judo.

Original sentence: These 17 exams were selected to reflect three main elements that are quite crucial for judo success...

Issue: Redundant phrase "quite crucial".

Suggested correction: These 17 exams were selected to reflect three main elements that are crucial for success in judo.

Original sentence: The test selection also takes into account the characteristics of children aged 10 to 13 years old, who are in the motor growth phase...

Issue: Redundant phrasing "aged 10 to 13 years old".

Suggested correction: The test selection also considers the characteristics of children aged 10 to 13, who are in the motor growth phase...

Original sentence: The small-scale trial is a follow-up to this research to determine the extent to which this talent identification guide can be applied.

Issue: Slightly awkward and vague phrasing "the extent to which... can be applied".

Suggested correction: The small-scale trial was conducted to evaluate the practical applicability of the talent identification guide.

Original sentence: The book cover includes a photos of a child aged 10-13 years who received gold medal

Issue: Grammatical error - article and plural confusion.

Suggested correction: The book cover includes a photo of a child aged 10-13 who received a gold medal.

Original sentence: Based on comments and suggestions from users regarding the judo sports talent identification instrument aged 10 - 13 years.

Issue: Sentence fragment.

Suggested correction: Based on comments and suggestions from users regarding the judo sports talent identification instrument for ages 10-13, the product was revised accordingly.

Original sentence: The reliability test of all judo talent identification test instruments for ages 10-13 yielded a coefficient of more than 0.5.

Issue: Potential misrepresentation of standards, reliability above 0.5 is generally low in academic standards.

Suggested correction: The reliability coefficients for all judo talent identification test instruments for ages 10-13 exceeded 0.5, indicating moderate to high consistency depending on the item.

Original sentence: Based on the assumption that research on sports talent in the context of judo is still limited, one approach to overcoming the challenges of developing sports talent is to identify the concept of sports talent that takes into account the specificities of each sport.

Issue: Wordy and redundant phrasing.

Suggested correction: Given the limited research on judo talent, one approach to improving talent development is to define sport-specific talent concepts.

Original sentence: Early in youngsters between the ages of 10 and 13, judo skill is found.

Issue: Unnatural and awkward sentence structure.

Suggested correction: Judo skills can be identified early in children aged 10 to 13.

Original sentence: While coaches focus on improving certain judo abilities depending on test results, physiotherapists provide remedial therapies for found physical shortcomings include muscular imbalances, flexibility limitations, or postural control.

Issue: Incorrect verb form "include" instead of "including".

Suggested correction: While coaches focus on improving specific judo skills based on test results, physiotherapists provide remedial therapies addressing physical shortcomings, including muscular imbalances, flexibility limitations, and postural control.

8/20/26, 1:32 PM

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Original sentence: Judo athletes with an ideal body composition, defined as a balanced proportion of body fat, perform better because they can move faster, more efficiently, and have enough energy for intense matches.
Issue: Ambiguity in "balanced proportion of body fat."
Suggested correction: Judo athletes with optimal body composition, characterized by low and healthy levels of body fat, perform better due to improved speed, efficiency, and endurance during matches.

Original sentence: The back-up test comes next and gauges the strength of the back muscles, which are vital for control and stability of the judo style.
Issue: Vague and awkward phrasing "control and stability of the judo style."
Suggested correction: The back-up test evaluates back muscle strength, which is essential for body control and postural stability in judo techniques.

Original sentence: Extremely low core muscular strength test results should raise concerns in a program for preventative strengthening.
Issue: Unnatural phrasing "program for preventative strengthening."
Suggested correction: Extremely low core strength test results should prompt the implementation of a preventative strengthening program.

Original sentence: Research-based agility tests more especially, the side step test ask athletes to move from side to side as swiftly as possible in a designated period of time.
Issue: Subject-verb agreement error and missing commas.
Suggested correction: Research-based agility tests, especially the side step test, require athletes to move from side to side as quickly as possible within a set time.

Original sentence: Flexibility tests are important in judo because they allow athletes to perform techniques with an optimal range of motion, such as throws and locks.
Issue: Redundancy with "are important..." because they allow athletes."
Suggested correction: Flexibility tests help assess an athlete's ability to perform judo techniques requiring a full range of motion, such as throws and locks.

Original sentence: Bad fall-related ankle, knee, or even brain injuries are more likely depending on poor test findings.
Issue: Awkward phrasing "depending on poor test findings."
Suggested correction: Poor test results indicate a higher risk of fall-related injuries, including to the ankle, knee, or head.

Original sentence: These results can let physiotherapists create rehabilitative and preventative programs catered to the demands of young judo athletes.
Issue: Informal phrase "let physiotherapists" and awkward "catered to".
Suggested correction: These results enable physiotherapists to design rehabilitative and preventative programs tailored to the needs of young judo athletes.

Original sentence: The results of this study allow one to evaluate the skills of judo athletes using different objects.
Issue: Misuse of the word "objects" in context.
Suggested correction: The results of this study allow for evaluating judo athletes' skills using various test items.

Original sentence: According to the research, the test items that can be used to identify judo talent from an early age of 10-13 years are...
Issue: Redundant phrase "from an early age of 10-13 years."
Suggested correction: According to the research, the test items for identifying judo talent in children aged 10 to 13 are...

There is still space available in issue 3/25 (June/July) as of today; however, further processing is always determined by the order in which revisions are submitted. If the corrections are submitted more than 10 days from now, space in this issue may no longer be available, and the article will be published in the next one (August).

We look forward to receiving the revised version of your manuscript and thank you for choosing Fizjoterapia Polska as the platform to share your work.

Kind regards,

Dariusz Jasiński

W dniu 16.04.2025 o 14:52, Danarstuti Utami pisze:
[Quoted text hidden]

Danarstuti Utami <danarstutiutami@upy.ac.id>
To: Sekretariat FP <sekretariat@fizjoterapiapolska.pl>

Fri, May 2, 2025 at 8:40 PM

Dear Prof
I have been submitting revision my article entitled "Development Of Talent Scouting For Judo Sports Age 10 - 13 Years" if there is still space available in issue 3 (June), i will welcome it positively, we are looking forward to your positive feedback on this article journal, thank you.

Best Regards,
Danarstuti Utami
[Quoted text hidden]

3 attachments

 **Answers to reviewer's-comment.docx**
22K

 **Rev 2-Polska Artikel-Clear.docx**
469K

 **Rev 2-Polska Artikel-Edit.docx**
470K

Secretary of Fizjoterapia Polska <sekretariat@fizjoterapiapolska.pl>
To: Danarstuti Utami <danarstutiutami@upy.ac.id>

Wed, May 7, 2025 at 10:02 PM

Dear Author,

I hope this message finds you well. We are pleased to inform you that your article titled "Development Of Talent Scouting For Judo Sports Age 10 - 13 Years" with system number 1589 has been accepted for publication in Issue 3/2025 of "Fizjoterapia Polska". This issue is set to be released by the end of June or in the beginning of July.

The cost for preparation and print will amount to 1500 PLN.

Payment within two weeks of acceptance guarantees publication in the specified issue.

If you agree to the aforementioned conditions, could you kindly inform us about your preferred method of payment for the preparation costs? Would you like to proceed with a card payment, or would a bank transfer be more convenient for you? If you opt for the bank transfer, please let us know in which currency you'd like to make the payment: PLN, EUR, or USD.

Payment via PayPal is also possible; however, due to the very high intermediary fee, we are obliged to add an additional 5% to the stated amount. Therefore, we primarily recommend payment by credit/debit card or bank transfer.

We appreciate your contribution to "Fizjoterapia Polska" and look forward to your prompt response.

Warm regards,

<https://mail.google.com/mail/u/0/?ik=495d2960fc&view=pt&search=all&permthid=thread-a:r1523507370546409142&simpl=msg-a:r151854991660...> 4/6

8/20/26, 1:32 PM

Universitas PGRI Yogyakarta Mail - Journal Submission

Dariusz Jasiński

W dniu 2.05.2025 o 15:40, Danarstuti Utami pisze:
[Quoted text hidden]

--
Dariusz Jasiński,
sekretarz redakcji Fizjoterapii Polskiej
Biuro: ul. Łaska 3/5 pok. 108, 95-200 Pabianice
tel. 692 468 257
[Quoted text hidden]

Danarstuti Utami <danarstutiutami@upy.ac.id>
To: Secretary of Fizjoterapia Polska <sekretariat@fizjoterapiapolska.pl>

Thu, May 8, 2025



Danarstuti Utami <danarstutiutami@upy.ac.id>
to Sekretariat

Thu, May 25, 2023,
10:20 PM

Dear Mr. Dariusz Jasinski

I thank you for accepting my article for print Fizjoterapia Polska edition 3/2025 (June 2025).

The preparation fee for printing is 1500 PLN. I agree with the bank transfer method.

I will be happy if you tell me the address of the account that I have to pay.

Thank you

Kind regards
Danarstuti Utami

[Quoted text hidden]

Secretary of Fizjoterapia Polska <sekretariat@fizjoterapiapolska.pl>
To: Danarstuti Utami <danarstutiutami@upy.ac.id>

Thu, May 8, 2025 at 6:26 PM

What currency will you pay - USD, EUR or PLN? We have three different accounts.

Kind regards,

Dariusz Jasiński

W dniu 8.05.2025 o 03:21, Danarstuti Utami pisze:
[Quoted text hidden]

Danarstuti Utami <danarstutiutami@upy.ac.id>
To: Secretary of Fizjoterapia Polska <sekretariat@fizjoterapiapolska.pl>

Thu, May 8, 2025 at 6:33 PM

Dear Mr. Dariusz Jasinski

As I said before I will pay in PLN currency. Thank you.

Kind regards,
Danarstuti Utami
[Quoted text hidden]

Secretary of Fizjoterapia Polska <sekretariat@fizjoterapiapolska.pl>
To: Danarstuti Utami <danarstutiutami@upy.ac.id>

Thu, May 8, 2025 at 6:38 PM

Dear Author

I am sending the bank account details (1500 PLN):

Name: **DJ Studio Dariusz Jasinski**

Street: **Łaska 3/5 pok. 108**

Zip code: **95-200**

City/Country: **Pabianice, Poland**

SWIFT: **BREXPLPMBK**

Bank account number (IBAN/BIC) in PLN: **PL 55 1140 2004 0000 3902 7706 7792**

Bank address: **mBank S.A. FORMERLY BRE BANK S.A. (RETAIL BANKING) ŁÓDŹ, Skrytka pocztowa 2108, 90-959 Łódź 2**

SORT CODE – **11402004**

The content should include: Prepress – System ID 1589.

Kind regards,

Dariusz Jasiński

<https://mail.google.com/mail/u/0/?ik=495d2960fc&view=pt&search=all&permthid=thread-a:r1523507370546409142&simpl=msg-a:r151854991660...> 5/6

8/20/26, 1:32 PM

Universitas PGRI Yogyakarta Mail - Journal Submission

W dniu 8.05.2025 o 13:33, Danarstuti Utami pisze:
[Quoted text hidden]

Danarstuti Utami <danarstutiutami@upy.ac.id>
To: Secretary of Fizjoterapia Polska <sekretariat@fizjoterapiapolska.pl>

Thu, May 15, 2025 at 1:28 PM

Dear Mr Dariusz Jasinski

Please find the attached document is our publication fee.
Please let me know for next update.
Thank you!

Kind Regards,
Danarstuti Utami

 **Polska Journal Fee-BRI.pdf**
884K