The Development Of Badminton Skills Test Instruments
for Athletes in Age Groups of Children, Cub, Teenager and Youth

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Article Info

Abstract

The study aims to produced development of Badminton Skills Test Instrumens for athletes in age groups of children, cub, teenager and youth. This study is a type of Research and Development (R & D). In this study, the steps which should be done are: (1) preliminary study, (2) planning (analysis), (3) initial draft design, (4) draft validation, (5) small-scale product test and revision, (6) big-scale product test and revision, (7) result. The product produced in this study are badminton skill test instrumens, there are: (1) short-serve, (2) long-serve, (3) forehand lob, (4) forehand smash, (5) forehand drop shot, and (6) footwork for athletes in age children, beginners, teenagers and cadets which can be equipped with the test norms. The result of validations from the expert of academic, trainers and practitioners (player) of badminton as a whole stated that 'very good' with average score 3,66. Conclusion in this study is that based on the result of the data and expert's judgments, the development of badminton skill test instrumen product for children, beginners, teenagers and cadets are worthy of being used as a standard badminton test instrumens. The suggestion from the researcher is that the result of this development can be used as one of alternative test for the basic skills assessment technique of local badminton athletes.

INTRODUCTION

According to Singer (2010) Skill is the degree of success in achieving goals effectively and efficiently. Skill also defined as the procedural ability of how to display a particular motion task ranging from the simplest to the most complex (Anderson, 1995). Skills in both definitions implicitly refer to a particular task or action and become an indicator of a level of proficiency in relation to the attainment of objectives (Subarjah, 2010). From those opinions, it can be concluded that skill is a procedural ability of a person in completing a task motion, which ranging from the simplest level to the most complex.

In sport, the skill itself is divided into two types: general skills and special skill. Subarjah (2010) added that badminton playing skills is the ability of a badminton player to display his effective and efficient motion skills in badminton games that can be observed through his performance in demonstrating badminton playing skills including; dimensions of position placement and leg movement, as well as skills to hit the shuttlecock. Technical skills in playing badminton are the most abilities of all athletes, as well as trainers who must full fill the needs of their athletes, in order to achieve high achievement in badminton (Sari & Widodo, 2017). From some of the above opinions can be concluded that the skills in badminton sport is very important to be mastered by badminton players, these skills include ball hitting skills as well as stepping skills or footwork.

Badminton is one of the sports in Indonesia. This sport has undergone quite rapid development both domestically and abroad. The sport attracts a wide range of interests, varying degrees of skill, from both men and women and from children to adult. According to Aksan (2012) badminton is a racquet sport that is played by two people for singles, or two pairs for doubles who take the opposite position in the field which is divided by two and limited by the net. Badminton is a sport that is played by using racket, net, and shuttlecock with various beating techniques ranging from relatively slow until very

quickly accompanied by deception (Sutono IR, 2008). Badminton sport has a fast sport character so players must have good physical, technical, tactical, and mental qualities in order to win the game (Nugroho, 2015). In the game badminton legs serve as a support body to move in any direction quickly, so it can position the body in such a way that can make effective blow movement (Kristiantono, 2016). In line with Kristiantono & Arisbowo (2008) said that, punch technique is a technique that must be skilled in this sport because with a good punch technique a player becomes easy to implement strategies and tactics that have been planned. The combination of techniques and supporting things in badminton has a big effect on the quality of the game. If the player can do it well then the victory will be achieved perfectly. However, if not, we will lose.

There are many kinds of skill tests in sports, as many as the sport itself. Skill tests within the sport are also differentiated by age, achievement, gender and so on, even at the same age level in the same sport are sometimes different if made by different experts in addition to the skill test also differentiated into skills tests general and special skills tests (Haryono, 2008). Mackenzie 2014, also added that the results of the evaluation test can be used to: predict future performance, show weaknesses, measure improvements, and enable trainers to assess the success of training programs. It is also reinforced by a research conducted by José L. Arias & Francisco (2012). The results of this study found a conclusion that the best instrument to apply in attack and defense in sports is the performance instrument tests.

While the results of practice or learning badminton skills can be seen through two ways: by competence match and perform badminton skills test (Purnama, 2010). Based on the above statement, it can be concluded that skill tests are divided into two types: general skills tests and special skill tests that include basic techniques in sports, especially badminton, in addition to skill tests should consider the level of participants' age so that the test more accurate. While the skill test is one way to determine the basic technical skills of a sport in this case badminton.

While badminton skills test which is often used in badminton club is a skill test originated from Frank M. Verducci (1941). From the results of practice in the field, found some weaknesses from the test that has been described above. The weaknesses are: (1) There is no age, achievement and gender information, so the norms on the test cannot be used as a reference to be applied to athletes of a certain age group. (2) Found some athletes do a wrong technique when performing skill test that is when the position hit the ball (shuttlecock). So between athletes who hit the ball using the correct technique and athletes who hit the ball with incorrect techniques have the same chance to get the same score because the test does not assess the process/technique when hitting the ball. (3) Placement of scores are less suitable for the purpose. (4) Between athletes who are returning to the center point and athletes who are not returning to the center point, have the same opportunity to get a high score. So it will harm the athletes who always return to the center point or athletes who perform the correct technique. (5) The intended target on the smash hit test is too difficult if applied to a beginner athlete. So only the professional athletes or those with high skill levels can get a good score.

Based on the background of the problems described above, the researcher can identify the problems that exist in this research, as follows: How is the development of badminton skill instruments suitable for athletes of age group of children, cub, teenager and youth?

METHODS

This research is a development research using a procedural development model, because it is descriptive, that is a procedure that describes the steps that must be followed in producing the product.

In this development study, the steps which should be done are: (1) Preliminary study (literature study and field study), (2) Planning (analysis), (3) Draft initial design, (4) draft validation (5) Small group product test and revision, (6) Large group trial and revision, (7) Final result.

This study involves three expert of badminton: first, Drs Hermawan Pamot R, M.Pd (badminton academic), second expert is Drs. Cornelis Arnold (badminton trainers), third Tahron M.Pd (practitioner or badminton player). The study was conducted on 10 badminton clubs in Semarang City and Wonosobo District. The samples were badminton athletes with age category of children, cub, teenager and youth. Determination of sample is by purposive sampling technique.

RESULTS AND DISCUSSION

The data from experts judgment (badminton academician, badminton coach, and badminton player) are guidelines for declaring whether the product of test instruments produced can be used for small group product test and large group trial. The assessment data is summarized in the table as follows:

Table 1. The Results of Experts Judgment

Experts	Average score
Badminton expert 1 (academician)	3,66
Badminton expert 2 (coach)	3,66
Badminton expert 3 (player)	3,66

The average results table of ratings from the experts of academic, trainer and practitioner (player) of badminton as a whole stated that 'very good' with average score 3,66. So, it can be concluded that the product development of badminton skill test instrument for children age group, cub, teenager and youth can be used for small group product test and large group trial after revision.

In addition to providing an assessment, experts also provide suggestions that can be used as an improvement to researcher about the developed badminton test instruments. Having obtained data from experts, researchers undertake a revision of test instruments such as advice from experts and then conducted data retrieval through small group product test.

Small group product test conducted at C-Plusco Badminton Club and Bintang Perkasa Badminton Club Semarang with head coach

Mr. Cornelis Arnold and Mr. Tahron. Small group product test conducted on March 14, 2018 to March 16, 2018 at the Badminton Sports Club, Graha Padma, Semarang City and Badminton Paradise Indraprasta, Semarang City. Small group product test aims to identifying the strengths, weaknesses, shortcomings, or faults in the development of a skill test instrument under development.

The samples were badminton athletes with age category of children, cub, teenager and youth which represents various athlete characteristics that include athletes with low, medium, and high ability. Also male and female to be more varied. Respondent determination is done through consultation with badminton coach.

While large group trials were applied to athletes in four groups of age children, cub, teenager and youth who joined in 10 badminton clubs in Semarang City and Wonosobo District, they are: (1) Matahari Terbit Badminton Club, (2) Bintang Perkasa Badminton Club, (3) Garuda Junior Badminton Club, (4) Gatra Pino Semarang, (5) Cplusco Badminton Club Semarang, (6) Bina Satria Tangkas Wonosobo, (7) Tunas Perkasa Badminton Club, (8) Indoraya Badminton Club, (9) Baker Badminton Club, (10) ABS Badminton Club Wonosobo.

The product produced in this study are badminton skill test instruments, there are: (1) short-serve, (2) long-serve, (3) forehand lob, (4) forehand smash, (5) forehand drop shot, and (6) footwork for athletes in age children, beginners, teenagers and cadets which can be equipped with the test norms.

The results of Validity and Reliability statistics skill test instruments is:

    a. Short-serve skill test instrument.
       Validity "0,702", Reliability "0,901"
    b. Long-serve skill test instrument.
       Validity "0,631", Reliability "0,880"
    c. Forehand lob skill test instrument.
       Validity "0,692", Reliability "0,880"
    d. Forehand smash skill test instrument.
       Validity "0,688", Reliability "0,870"
    e. Forehand drop shot test instrument.
       Validity "0,700", Reliability "0,870"
    f. Footwork skill test instrument.
       Validity "0,624", Reliability "0,750"

Based on the result of the data and then validity and reliability calculation, the development of badminton skill test instrument product for children, beginners, teenagers and cadets are worthy of being used as a badminton skill's test instruments, so it can be used to apply on large group trials.

The norm of badminton skills test instruments for athletes in age groups of children, cub, teenager, and youth is:

Table 2. Short-serve Test Norm

	Teenager	Youth
Excellent	≥ 36	≥ 41
Above average	32 – 35	36 – 40
Average	28 – 31	31 – 35
Below average	≤ 27	≤ 30

Table 3. Long-serve Test Norm

	Children	Cub	Teenager	Youth
Excellent	≥ 41	≥ 46	≥ 48	≥ 49
Above average	35 – 40	37 – 45	41 – 47	44 – 48
Average	29 – 34	28 – 36	35 – 40	39 – 43
Below average	≤ 28	≤ 27	≤ 34	≤ 38

Table 4. Forehand Lob Test Norm

	Children	Cub	Teenager	Youth
Excellent	≥ 46	≥ 46	≥ 50	≥ 50
Above average	40 – 45	40 – 45	42 – 49	42 – 49
Average	33 – 39	33 – 39	34 – 41	34 – 41
Below average	≤ 32	≤ 32	≤ 33	≤ 33

Table 5. Forehand Smash Test Norm

	Children	Cub	Teenager	Youth
Excellent	≥ 37	≥ 40	≥ 40	≥ 47
Above average	32 – 36	34 – 39	35 – 39	41 – 46
Average	27 – 31	29 – 33	30 – 34	36 – 40
Below average	≤ 26	≤ 28	≤ 29	≤ 35

Table 6. Forehand Drop Shot Test Norm

	Children	Cub	Teenager	Youth
Excellent	≥ 33	≥ 34	≥ 36	≥ 38
Above average	29 – 32	33 – 39	31 – 35	33 – 37
Average	24 – 28	24 – 28	26 – 30	28 – 32
Below average	≤ 23	≤ 23	≤ 25	≤ 27

Table 7. Footwork Test Norm

	Children	Cub	Teenager	Youth
Excellent	≥ 25	≥ 25	≥ 25	≥ 28
Above average	23 – 24	23 – 24	23 – 24	25 – 27
Average	21 – 22	21 - 22	22 – 22	22 – 24
Below average	≤ 20	≤ 20	≤ 21	≤ 21

CONCLUSION

Based on the result of the data and expert's judgments, the development of badminton skill test instrument product for children, cub, teenagers and youth are worthy of being used as a standard badminton test instruments. The suggestion from the researcher is that the result of this development can be used as one of alternative test for the basic skills assessment technique of local badminton athletes.

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