

CONTENT AND CONSTRUCT VALIDITY OF SOCCER TALENT TEST INSTRUMENT IN SSO REAL MADRID UNIVERSITAS NEGERI YOGYAKARTA STUDENTS

Hari Yulianto

Instrument is a tool to measure a measuring object. Good instruments must satisfy the element of validity. The purpose of this study is to find out: 1) content validity of football talent measurement instruments consisting of three variables: play creativity, play skills, and task commitment, and 2) construct validity of task commitment instruments.

The subjects of this study are students of SSO Real Madrid Universitas Negeri Yogyakarta. Football talent measurement instruments consist of: 1) written test to measure task commitment; 2) guidelines for observation of a series of football performances that include passing, receiving, dribbling, and headings to measure the skills of playing football; and 3) observation guidelines on the creativity of playing football. Measurement of instrument validity is based on content validity (Aiken Index) and construct validity (CFA).

Based on the result of the research, it can be concluded as follows: 1) the content validity of the football talent measurement instruments is good with the coefficient of Aiken obtained the lowest value of 0.83 and the highest is 0.94, and 2) the construct validity of task commitment instruments is either obtained ($X^2 = 5.06$), (p -value) = 0.40871, and (RMSEA = 0.020).

Keywords: validity, instrument, football talent

I. INTRODUCTION

The development of Indonesian football can be seen through the competition held PSSI. Measurable achievements of national achievement based on the main division of the Indonesian Football League. There are still shortages and problems that need to be observed at the clubs that competed in the competition in the Football League Indonesia in 2016 ago. The pace of acceleration of Indonesian football achievement in the international level is slower than some other countries such as China, South Korea and Japan who can compete in the World Cup.

Efforts that can be made to catch up the achievement of Indonesian football is by improvements in all areas, including facilities and human resources involved in it. This lag will encourage the need for structuring the national football coaching system. The most basic sports coaching pyramid is breeding and shooting followed by talent scouting from an early age. One of the improvements that can be made with the development of a talent scouting system is especially the development of measurement instruments of talented soccer athletes.

Validity of football talent measurement instrument is very important to be able to capture the talent of football optimally. A test can be said to be good as a

* Sport Sciences Faculty of Universitas Negeri Yogyakarta, Indonesia, *E-mail: hariyulianto@uny.ac.id*

measuring device must meet the main criteria / principles of the preparation of tests in order to obtain a good and correct test equipment, so that the test results describe the true state of the object being measured. The test is said to be good if it can provide precisely related data. A good test if it qualifies for validity, reliability, objectivity, and practicality (Miller, 2002, pp.55-63; Ismaryati, 2006, pp.13-36). Research on the validity of the content and the validity of the constructs of football talent measurement instruments is important as some studies of soccer talent instincts have been done that only distinguish gifted and gifted children based on criteria and indicators that are still simple because it only touches the ability and physical skills. The results of the study include: (1) Allan's research, JP et al (2007) who only studied about anthropometry profile and physical appearance; and (2) Hirose's research, N. et al (2007) identifies the talents of teenage football players from a physical, physiological, and biological perspective. Other things like mental and physical proportions have not been discussed in depth.

Research on the validity of the constructs of football talent measurement tests is important because the development of an understanding of the constructs of football talent measurement is always evolving and has a different understanding of the variables used in composing the instruments. This research is expected to produce an instrument that can optimally capture the talent of football.

II. STUDY REFERENCE

2.1. Football Talent

Football is one of the most popular sports in the world. The number of football enthusiasts is increasing rapidly each year. Many parents are enrolling their children at football clubs to be trained to be excellent footballers. Speaking of professional football is certainly related to achievement. Many factors influence achievement in football (Hirose 2011; Fernandez & Mendez, 2014; Hujigen B.C.H. et al., 2015). These factors include physical factors, physiological, psychological, technical skills and tactics. There are four key stages in the formation of professional footballers namely detection, identification, selection, and talent development (Hirose, 2011, p.1). This shows that talent is very important in achieving football achievement.

Football talent is a capability that someone has in accordance with the needs of the characteristic of soccer sport so that it can be a potential to achieve football achievement. Football talent can be seen as a whole on the concept of three ring conception from Renzulli. The identification of a soccer talent based on above-average ability, task commitment, and creativity will capture the talents of football well. These three variables indirectly represent factors that influence one's success in achieving soccer achievement such as skill factor of tactical and psychological techniques.

A child who has the above average ability of his peers is one indicator that the child has talent. Being able to show good technical skills is an above-average form of ability. Another indicator of creativity that someone has. Problem solving faced as it can do deceitful motion when playing football as a way to get through the opponent is a hallmark of creativity. In addition to above-average capabilities and creativity of other indicators is task commitment. A child who has a strong mentality, confidence, and motivation in football practice is an example of a child who has a good duty commitment. If all three indicators are met then it can be said that the child is talented in the field of football.

Basic Concepts of Testing, Measurement, and Evaluation

Tests, measurements, and evaluations are important elements in the science of sports (Haris B.S, Blom, L.C. & Visek A.J., 2013, p.201). Implementation of tests, measurements and evaluation in the field of sports is very supportive of the development of sports science because the test, measurement and evaluation can prove the incident scientifically. Tests, measurements, and evaluations are essentially different things.

According to Djemari Mardapi (2017, p.94) the test is one form of the instrument consisting of a number of questions used to perform the measurement. This can be interpreted as a matter of class increase test, psychological questionnaire, performance questionnaire are some examples of test forms. Overton (2012, p.3) states that the test is a method to measure the ability of students. From the expert statement on the test it appears that the test is part of the measurement and can be said that the test is only as a tool or instrument. It can be concluded that the test is a measuring instrument or instrument used to obtain data about a person's ability.

Another case with a test that is only a measuring tool, more measurement refers to a process of determining the number of test results that have been done. Djemari Mardapi (2017, p.5) states that measurement is basically an activity of determining numbers for an object systematically. Measurement as the activity of determining the numbers by comparing the test results with certain criteria so that the form of measurement is a number or numerical. Gordon (2012, p.7) argues that measurement is a process of obtaining information in numerical form about one's ability. These two expert opinions indicate that the essence of measurement of numbers determines the state or individual capabilities. Such capabilities can be cognitive, affective, and psychomotor abilities. It can be concluded that the measurement is an activity of determining the number of the state or ability of a person.

Continuation of the measurement is the assessment as a form of high-low description or good-badness of measurement results. To be able to know the estimated ability of a person who is measured using a test, it is necessary to evaluate the results of the assessment of measurement results. Evaluation is a judgment of

the value of the measurement or the implications of measurement results (Griffin & Nix in Djemari Mardapi, 2017, p. 3).

Based on the definition of the tests, measurements and evaluations that have been submitted can be ascertained that these three things are different. When viewed more intelligently again, from the whole sense seen that the tests, measurements and evaluations are interconnected form a stage to produce a basis for improving ability.

Appropriate and good evaluation results require that measurement results should have the smallest possible errors. This error rate is related to the reliability of the measuring instrument. A good measuring instrument gives a steady result when used repeatedly. The measurement error is random and systematic. Random errors are caused by the measured physical and mental states. Systematic error is caused by measuring instruments, measured and measured (Djemari Mardapi, 2017, p.7). Consistency of measurement results obtained from the accuracy of measuring instruments used, so that in the implementation of the measurement test should be tailored to the needs.

Validity of Test

Validity in the test states the degree of accuracy of the measuring instrument of the actual content or meaning measured. Validity is important in finding quality tests. According to Djemari Mardapi (2017, p.32) validity refers to the support of evidence and theory to the interpretation of test scores according to the purpose of the use of the test. The validation process includes the accumulation of evidence as the basis of scientific measurement for the purpose of interpreting scores. Another expert opinion states the validity of the measuring instrument is how far the measuring instrument is able to measure what should be measured (Saefuddin Azwar, 2007, p.45). It can be concluded that the validity of the test is a condition that refers to the ability of a test in shaving and produce interpretation of the score in accordance with the purpose of the test.

Validity can be grouped into four, namely: 1) content validity; 2) construct validity, 3) validity based on internal structure, and 4) validity based on relationship with other variables (Djemari Mardapi, 2017, p.33). Validity is an integrated evaluative policy of the extent to which empirical facts and theoretical reasons support the adequacy and suitability of inferences and actions based on test scores, and are related to the accuracy of measurements.

Some things to note regarding the validity and reliability of tests by Ismaryati (2006, pp. 33-34) are: a) the results of less experienced players' achievements are usually less reliable when compared to high performers; b) special test reliability for the tested group. The same reliability coefficients can be expected to be obtained provided they are used for similar groups and under similar conditions; c) the number of subjects can affect reliability, therefore more trust will be given to the

reliability coefficient of a test calculated from a large number of subjects; and d) low validity coefficient indicates an element of inaccuracy in measurement.

III. RESEARCH METHOD

3.1. Scope and Types of Research

This study uses a quantitative approach. This study was designed to measure the validity of the contents and the validity of constructs of soccer talent measurement instruments.

3.2. Population and Sample Research

The population used in this study were all SSB students of SSO Real Madrid. Sampling technique used in the form of purposive random sampling, with SSB student criteria SSO Real Madrid aged 10-12 years. Therefore, the research sample used in this study is SSB students Real Madrid SSO age 10-12 years, amounting to 16 people.

3.3. Data and Data Collection Techniques

The type of research data is quantitative data obtained from 1) written test in the form of task commitment consisting of 15 items; 2) measurement of the observer on the ability to play football through observations when the subject plays football; 3) the observer's results on the creativity of playing football. Based on the scoring figures of each of these instruments can be confirmed on the norms that can be used to determine the talent of football.

3.4. Data Analysis Technique

The data analysis technique used Aiken analysis to measure the validity of the instrument content, while the validity of instrument construct was measured using confirmatory factor analysis (CFA) as the data analysis technique.

IV. RESEARCH RESULTS AND DISCUSSION

4.1. Content validity

Content validity is intended to measure the extent to which the instrument items used cover the entire contents of the object to be measured. The validity of the instrument contents in this study was conducted by using rational analysis that is whether the grain on the instrument grille describes the indicator of the measured variables of each instrument consisting of: 1) task commitment; 2) the skills of playing football consisting of passing, receiving, dribbling, and heading skills in playing football; 3) the creativity of playing football consisting of fluency, flexibility and originality in playing football.

Task Commitment

The coefficient value of content content of six (6) people rater with four (4) categories of answers is good if the coefficient of validity is obtained at least 0.78. The results of data analysis indicate that all items of task commitment instrument have met the criteria. Overall, the average is 0.89, with the lowest value of 0.83 and the highest value of 0.94.

TABLE 1: INDEKS AIKEN ITEM TASK COMMITMENT ANALYSIS RESULTS

<i>Task Commitment</i>			
<i>Item</i>	<i>Result</i>	<i>Item</i>	<i>Result</i>
1	0.83	9	0.83
2	0.89	10	0.94
3	0.83	11	0.94
4	0.89	12	0.94
5	0.89	13	0.89
6	0.83	14	0.89
7	0.83	15	0.89
8	0.94		
Mean	0,89		

Football Playing Skill

The result of index analysis of aiken skill of playing football shows that the content validity index using Aiken coefficient obtained the average passing ability of 0.94, the average of receiving ability is 0.94, the average dribbling ability is 0.94, and the heading ability is 0.93. The average overall result of soccer playing skills that includes passing, receiving, dribbling and heading of 0.94. Based on the conversion value of Aiken's validity coefficient, all instruments are said to be good because the value of validity coefficient is more than 0.78.

TABLE 2: INDEKS AIKEN ANALYSIS RESULTS OF FOOTBALL PLAYING SKILL
Football Playing Skill

<i>Passing</i>		<i>Receiving</i>		<i>Dribbling</i>		<i>Heading</i>	
<i>Btr</i>	<i>Hasil</i>	<i>Btr</i>	<i>Hasil</i>	<i>Btr</i>	<i>Hasil</i>	<i>Btr</i>	<i>Hasil</i>
1	0.94	1	0.96	1	0.93	1	0.93
2	0.92	2	0.94	2	0.94	2	0.93
3	0.96	3	0.93	3	0.94	3	0.94
4	0.93	4	0.93	4	0.93	4	0.92
Rerata	0.94		0.94		0.94		0.93
Mean	0,94						

Creativity

The result of the content analysis of the content of playing skill using Aiken index coefficient obtained the smoothness in playing football equal to 0,93; average

flexibility of 0.90; and the average originality of 0.93. The average creativity coefficient of playing football as a whole is 0.92. Based on the conversion value of Aiken’s validity coefficient, all instruments are good including the validity coefficient of more than 0.78.

TABLE 3: INDEKS AIKEN ANALYSIS RESULT OF ITEM PLAYING FOOTBALL CREATIVITY

<i>Passing Kelancaran</i>		<i>Receiving Keluwesan</i>		<i>Dribling Originalitas</i>	
<i>Item</i>	<i>Result</i>	<i>Item</i>	<i>Result</i>	<i>Item</i>	<i>Result</i>
1	0.94	1	0.94	1	0.89
2	0.94	2	0.89	2	0.89
3	0.94	3	0.89	3	0.94
4	0.89	4	0.89	4	0.94
5	0.94	5	0.89	5	1
Rerata	0.93		0.90		0.93
Mean	0,92				

The results of the content validation analysis of the overall variables of football talent measurement instrument show that the Aiken index coefficient of football talent measurement instrument obtained including satisfactorily with the coefficient of grain aiken each variable move from the value of 0.83 to 0.94. This indicates that the validity of the content of the items in each of the compilation of the test variables used in this study is satisfactory and reflects the overall content or matter tested in a propositional manner.

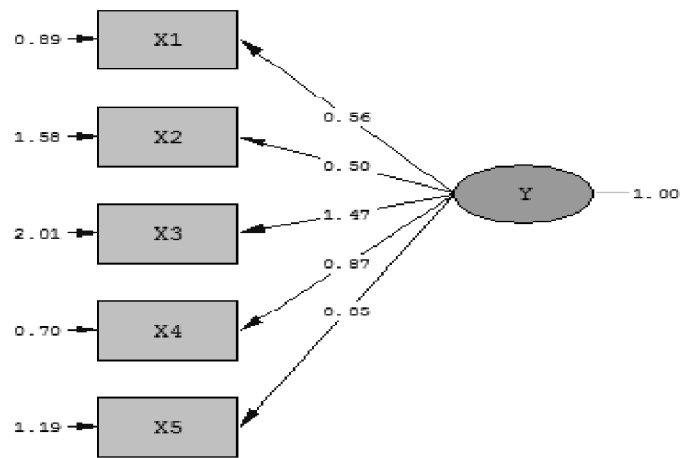
4.2. Construct Validity

In determining the construct validity is done theoretical review process of a concept of task commitment variable in football. The formulation of constructs is based on systems and theories about the concept of task commitment in playing football through a logical analysis process.

The construct validity in this study aims to see whether the instrument grain measures the construct to be measured and to know the suitability between the theoretical concepts and the empirical data. The instrument items measured in this study several suggestions are:

1. In quantitative research it is suggested to researchers that the instruments that measure manifest variables are used valid instruments, one of them through the validity of the content.
2. If the instrument used is an instrument that measures latent variables, then the instrument validity is recommended based on the validity of the construct.
3. Suggested further research to be more careful in doing data analysis, because many things that can be delivered using confirmatory factor

analysis. are written test items of the task commitment variable consisting of five observer variables: X1 = curiosity, X2 = persistence, X3 = mental endurance, X4 = selfconfidence, and X5 = achievement boost, and one latent variable Y = task commitment. For this purpose used two criteria, namely the value of calculation results (p-value) and RMSEA.



■ Chi-Square=5.06, df=5, P-value=0.40871, RMSEA=0.020 ■

x1=0,56 x2=0,80 x3= 1,47 x4=0,87 x5=0 ,85

Picture 1: Confirmatory Factor Analysis Result of Task Commitment Variable

The acceptance criteria for the model are $p\text{-value} > \alpha$ and $RMSEA < 0.08$ (Mueller, 1996, p.163). Figure 1 shows the result of confirmatory factor analysis with p-value significance value of 0.40871 (with a significance level of 0.05). The value of $p > \alpha$, $RMSEA = 0,020 < 0,08$. It can be concluded that the model offered is fit in accordance with empirical data.

V. CONCLUSIONS AND RECOMENDATIONS

5.1. Conclusion

1. The validity of the contents of football talent measurement instruments is quite good with Aiken coefficient obtained the lowest value 0.83 and the highest 0.94.
2. The construct validity of the task tool device is good, obtained (X2 = 5.06), (p-value = 0.40871, and (RMSEA = 0.020)

5.2. Recommendations

Based on the conclusions obtained then there are several suggestions are:

1. In quantitative research it is suggested to researchers that the instruments that measure manifest variables are used valid instruments, one of them through the validity of the content
2. If the instrument used is an instrument that measures latent variables, then the instrument validity is recommended based on the validity of the construct.
3. Suggested further research to be more careful in doing data analysis, because many things that can be delivered using confirmatory factor analysis.

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