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Designing a Composite Test to Evaluate Futsal Players for Preparatory Schools in Al-Anbar Governorate

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ABSTRACT

The research aims to design a composite test to evaluate futsal players of the Al-Anbar Education Directorate for the preparatory stage. The research population included preparatory school futsal players in Al-Anbar Governorate for the academic year 2024-2025, and the sample was purposively selected from some schools in the Ramadi district, consisting of 60 players. The scientific foundations of the test were verified: the validity of the test was established through content validity by conducting personal interviews with experts and specialists in the field of measurement; the reliability of the test was established using the test-retest method after 7 days on the same sample, and the results showed high correlation coefficients; the objectivity of the test was established by preparing a specific questionnaire for the test content and presenting it to experts and specialists to deduce the possibility of using the test, where the test received a high percentage, indicating its objectivity.

Keywords: Futsal, Players, Test, Schools.

1.Introduction:

The game of futsal is considered an exciting and favored game when compared to other team sports due to the thrill, speed, and excitement it carries. Futsal has transformed from a recreational activity into an integrated scientific activity encompassing physical, skill-based, psychological, and tactical aspects; thus, many of those interested in the sport refer to it as a game of multiple talents (Al-Mawla, 2012; Hermans & Engler, 2011), as it requires a high mastery of basic individual skills on the one hand and coordination with team players on the other.

Advancement has encompassed most sporting events and games, and futsal has garnered a significant share of interest and popularity. It has developed in its tactical, physical, skill-based, and psychological aspects based on scientific foundations grounded in the kinematic and physiological analysis of modern futsal (Barbero-Alvarez et al., 2008; Castagna et al., 2009).

The majority of the tests utilized in futsal are singular tests that measure each physical attribute and skill individually, rendering the measurement process for attributes and skills unrealistic and not based on complex real-game situations (Hassanin, 2001; Naser et al., 2017). Therefore, there is an emergent need to design a composite test consisting of certain attributes and skills relied upon by coaches for player selection and tracking their development (Dogramaci et al., 2011).

Research Problem: The tests through which measurement is conducted in the game of futsal are individual tests that measure each attribute separately, such as speed and power, and they

also measure skills like trapping and scoring independently. This prompted the researcher to attempt designing a composite test consisting of certain attributes and skills for futsal, applied to the Al-Anbar Education Directorate team for the preparatory stage.

Research Objective:

- Designing a composite test to evaluate the preparatory stage futsal players from the schools of the Al-Anbar Education Directorate.
- Verifying the scientific foundations: validity, reliability, and objectivity.

Research Hypothesis: The test possesses a high degree of validity, reliability, and objectivity.

Research Domains:

- **Human Domain:** Preparatory school players in Al-Anbar Education Directorate for the academic year 2024-2025.
- **Spatial Domain:** The indoor hall in the city of Ramadi.
- **Temporal Domain:** From April 1, 2024, to May 1, 2024.

Terminology:

- **Composite Test:** A test that combines more than one attribute or skill, or an attribute and a skill, in a single measurement situation.

Theoretical Studies and Similar Studies

Theoretical Studies

Physical Attributes of Futsal: Futsal demands high levels of integrated physical competence (Bompa & Buzzichelli, 2015; Razzouqi, 2019), which are represented in:

- **Speed:** Transitional speed in running, dribbling, and rapid reaction to variables (Milanović et al., 2011).
- **Explosive Power:** The muscular power necessary for jumping, shooting, and continuous defending (Khuraibit, 2016).
- **Endurance, Agility, Flexibility:** These are crucial attributes for repetitive, high-intensity performance (Gabbett, 2015).

Basic Skills in Futsal: Due to the nature of the miniaturized court, the importance of skill performance under pressure is highlighted (Hammad, 2010):

- **Ball Control:** Due to the small size and weight of the ball, controlling it must be mastered (Khayoun, 2010).
- **Shooting:** Utilizing the foot, which must be direct and sudden because the goalkeeper closes the angles quickly due to the small goal size.

- **Accurate Passing, Dribbling in Tight Spaces, Positioning, and Off-the-Ball Control**.

Similar Studies

- Al-Hayani (2021): "Designing a test to measure passing accuracy in futsal".
- Al-Khashab et al. (1990): "Designing and standardizing tests to measure some basic motor skills in football".
- Al-Azzawi (2025): "Designing a test to measure scoring accuracy from different distances for football players".

2. Research Methodology

2.1 Research Approach: The researcher utilized the descriptive and experimental approaches due to their suitability to the nature of the study. The descriptive approach aids in analyzing the phenomenon through statistical indicators, whereas the experimental approach measures variables under controlled conditions (Hassan, 2023; Mahjoub, 2001).

2.2 Research Population and Sample: The research population consisted of preparatory school futsal players in Al-Anbar Governorate for the academic year 2024-2025. The sample was purposively selected from some schools in the Ramadi district, comprising 60 players.

2.3 The Designed Test:

- **Test Name:** Composite Futsal Test.
- **Test Purpose:** To measure certain attributes (explosive power of the lower limbs and speed) and certain skills (trapping and scoring) in futsal.
- **Tools and Equipment Used:** A regulation futsal court, futsal balls (2), measuring tape, a measuring ruler fixed on a stand and a board, a whistle, a futsal goal divided into 3 sections, a marking pen, and a stopwatch.
- **Performance Method:** The test subject stands up straight in front of the board and marks a first sign on it. Upon the whistle blow to start the test, the player jumps vertically upwards to mark a second sign on the board, then moves to execute a horizontal jump forwards from a starting line. Subsequently, the subject sprints quickly to a 1x1 meter square, enters it, receives a ball from the coach, executes the trapping process, dribbles the ball towards an area 10 meters away from the goal, and then shoots at the goal which is divided into 3 sections.
- **Scoring:** Timing begins at the start of the test for the second jump and ends upon the subject's execution of shooting at the goal. The reading between the first mark and the second mark is recorded in centimeters for the vertical jump. The reading for the horizontal jump is recorded from the starting line to the mark reached by the subject in centimeters. The readings for both vertical and horizontal jumps are summed to calculate a single reading for the subject. If the subject traps the ball inside the square, they are awarded 5 points; if close to the

square, 3 points; and if far from the square, only 1 point. In the event of scoring in the goal's corners, they are awarded 5 points, 3 points in the middle, and 1 point if hitting the goalpost. The subject's total score is calculated and divided by the time taken to complete the test.

2.4 Scientific Foundations: Achieving scientific foundations is considered one of the most important characteristics of a good test to ensure the accuracy of results and the possibility of their generalization (Al-Kinani, 2015; Baumgartner et al., 2015).

2.4.1 Test Validity: The researcher utilized the content validity method to ensure the validity of the test by conducting personal interviews with experts and specialists in the field of measurement. After making some modifications, they expressed their approval and confirmed the content validity of the test.

2.4.2 Test Reliability: The researcher employed the test-retest method after an interval of 7 days on the same sample to determine if there was a correlation between the first test and the second test, and the results showed high correlation coefficients.

2.4.3 Test Objectivity: Objectivity was established by preparing a specific questionnaire for the test content, which was presented to experts and specialists to conclude the possibility of using the test. The test obtained a high percentage, which indicates its objectivity.

2.5 The Main Experiment: Once the researcher verified the scientific foundations of the test—validity, reliability, and objectivity—the test was applied to a sample comprising 60 student players, individually for each student.

2.6 Discriminatory Power of the Test: For the discriminatory power to differentiate the test, after data collection and tabulation, the data were arranged sequentially from lowest to highest to identify the test's ability to discriminate between the high-level group and the low-level group. The researcher utilized the (t-test) to compare the two extreme groups (Al-Tikriti & Abd, 1999; Field, 2018).

2.7 Statistical Methods Used (Field, 2018):

- Arithmetic Mean.
- Standard Deviation.
- Pearson Correlation Coefficient.
- (t) Test for Paired Samples.

3. Results:

Table (1) shows the scientific foundations of the test

Test Name	Unit of Measurement	Validity	Reliability	Objectivity
Composite Futsal Test	Score / Sec	92%	83%	88%

Table (2) shows the discriminatory power of the test

Parameters	Unit of Measurement	High-Level Group: Mean	High-Level Group: SD	Low-Level Group: Mean	Low-Level Group: SD	Calculated (t) Value	Significance
Composite Futsal Test	Score / Sec	4.22	0.543	3.221	0.214	9.87	Significant

Table (3) Basic values of the sample

Test	Mean	Standard Deviation	Minimum Value	Maximum Value
Composite Futsal Test	10.324	1.563	7.5	15

4. Discussion

Through the presentation of the results in Table (1), it is evident that the designed composite test has achieved high scientific indicators, as the validity reached (92%), reliability (83%), and objectivity (88%). The researcher attributes this elevation in scientific coefficients to the accuracy of the methodological procedures followed in constructing the test, starting from verifying content validity through experts, up to controlling extraneous variables during application in the indoor hall in the city of Ramadi.

The test's possession of these high coefficients makes it a robust measurement tool capable of providing accurate results that reflect the actual level of the players. This aligns with the assertions of Hassanin (2001) and Baumgartner et al. (2015) that tests constructed according to sound psychometric foundations guarantee the researcher and the coach a high capacity for predicting performance and making precise evaluative decisions.

Regarding the discriminatory power of the test, the results in Table (2) demonstrated the presence of statistically significant differences between the two groups (high and low), where the calculated (t) value reached (9.87). This result confirms the superior ability of the test to sort and classify players based on their integrated competence. The researcher believes that this distinction is attributed to the "composite" nature of the test, which simulates the reality of skill performance under physical pressure, a characteristic lacking in singular tests (Naser et al., 2017). Integrating explosive power and speed with the skills of trapping and scoring places the player in a situation analogous to actual match conditions, which highlights genuine individual differences and allows for accurate talent identification. This is consistent with the orientations of Barbero-Alvarez et al. (2008) and Al-Mawla (2012) regarding the necessity of adopting composite and comprehensive tests to evaluate futsal players.

Looking at the results in Table (3) which summarized the basic values of the sample, we find that the general arithmetic mean (10.324) reflects a good performance level for the players of the Al-Anbar Education schools, with relative homogeneity supported by the standard deviation (1.563). The success of the test in measuring integrated attributes and skills emphasizes the importance of shifting sports measurement from a fragmented approach to a

composite approach that provides a holistic view of the player's physical and skill-based condition simultaneously (Al-Kinani, 2015; Dogramaci et al., 2011).

Consequently, these results support the research hypothesis and affirm that the designed test represents an objective and modern evaluation tool that the Al-Anbar Education Directorate can rely upon for selection programs and periodic evaluations of its preparatory stage players, in alignment with modern scientific standards in sports sciences (Castagna et al., 2009).

Conclusions and Recommendations

Conclusions

- The test demonstrated a high degree of validity, reliability, and objectivity.
- The test was an easy-to-apply tool for the examiners.

Recommendations

- Adopting the test as a tool to evaluate the attributes and skills measured by the test.
- Applying the test continuously to ascertain the technical performance of the players.

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