

Validation on Talent Selection Criteria for High School Football Central Defenders Based on A Multidimensional Evaluation System

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Abstract. This study further validates the previously established selection indicator system for high school soccer central defenders. For each evaluation indicator, a corresponding test was designed; for example, the Illinois Agility Test was used for the testing agility. An online research method was employed to reference authoritative scoring standards, such as those in Physical Education and the Study of Sport. The percentage conversion method was used to convert raw scores into a percentage scale. The expert scoring method involved inviting professional coaches to evaluate players during seven-a-side matches. Three high school central defenders were selected: Student Wang achieved a final score of 72.2102 points, Student Xue obtained 75.2710 points, and Student Zhao scored 78.5893 points. The players with the higher final scores, Student Zhao and Student Xue, were starters on their team in reality; the player with the lower final score, Student Wang, was a substitute on his team. This finding confirms the validity and reliability of the model.

Keywords: Football central defender; Talent selection; Web Searching Method; Percentage Conversion Method; Expert Scoring Method.

1. Introduction

Soccer, as a competitive sport, is decisively influenced by the individual capabilities of the players composing the team. Therefore, the preliminary task of player selection by the coaching staff is especially critical. An objective and equitable player selection system, grounded in empirical evidence, can effectively assist teams in identifying relatively strong players among a large pool while minimizing subjective bias. However, such an ideal player selection system is uncommon in today's football landscape, particularly as our daily environment lacks the professional rigor required for formal selection. Therefore, this study aims to develop a comprehensive, objective, and equitable selection system for high school soccer central defenders. In the previous article [1], a structured evaluation indicator system for central defenders was successfully established and given weight. In the current study, corresponding tests were designed for each indicator. Then, through methods such as Web Searching Method, the Percentage Conversion Method, and Expert Scoring, appropriate score conversion standards were formulated for each indicator. Subsequently, three enrolled high school students were selected to complete the designed tests and were scored, ultimately confirming the validity of this model.

2. Development of Selection Evaluation Criteria for Central Defenders in High School Soccer Teams

This section is based on the continuation of the previous work [1], employed the Delphi method and Analytic Hierarchy Process to develop a comprehensive evaluation indicator system for central defenders in high school soccer teams, assigning respective weights to each indicator according to experts' assessments of their importance. The present study further examines the practical applicability of this indicator system. The author will reference the established evaluation indicator system and apply it to assess the performance of soccer central defenders practically, ultimately assigning scores to the tested players to confirm the feasibility of the model.

2.1. Selection of Methods for Evaluation Indicator Assessment

In practical testing, different indicators require distinct testing methods, and each test employs specific scoring approaches. Through online literature review and expert consultation, this study designed dedicated testing methods for each indicator. The 32 indicators' corresponding testing methods were classified into four main categories, each with a specific scoring method. Detailed classification is presented in Figure 1.

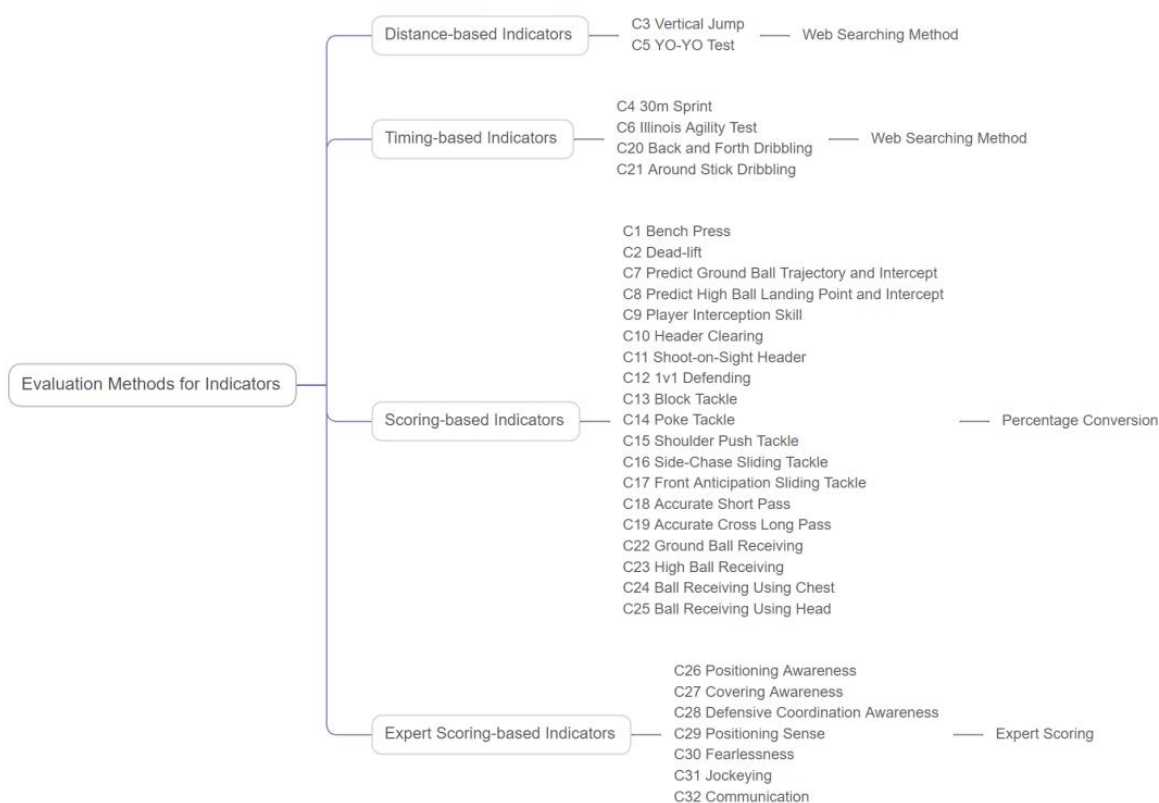


Figure 1. Mind Map of Scoring Methods.

2.2. Distance-based Indicators

This study will employ the Web Searching Method as the scoring method for distance-based indicators. By conducting online research, scoring conversion standards from authoritative and credible institutions are collected, referenced, and cited.

2.2.1 Vertical Jump

The testing method is as follows: players perform a standing jump with fully extended legs, measuring the distance between their feet and the ground [2-4]. This test is a practical measure of an athlete's lower-body explosive power, a key component of reactive strength [5].

This study will reference the scoring standards from Topend Sports, an evidence-based sports science information hub established over thirty years ago. Topend Sports classifies $x > 70$ cm as 'excellent,' $61 \text{ cm} < x \leq 70 \text{ cm}$ as 'very good,' $x < 21 \text{ cm}$ as 'very poor,' [6], and so forth.

To convert the scores into a percentage system, this study assigns corresponding intervals, such as $x > 70 \text{ cm}$ as 100 points, $61 \text{ cm} < x \leq 70 \text{ cm}$ as 90–99 points, and $x < 21 \text{ cm}$ as 0–40 points, and so forth.

2.2.2 YOYO Test

Testing Method: At the start of the audio, the player runs from cone B to cone C (must reach before the subsequent audio begins) and returns to cone B before the next audio prompt. Once the athlete returns to cone B, a 10-second rest interval follows, during which the athlete must jog between cone B and cone A and return to point B before the next start, as detailed in Figure 2.

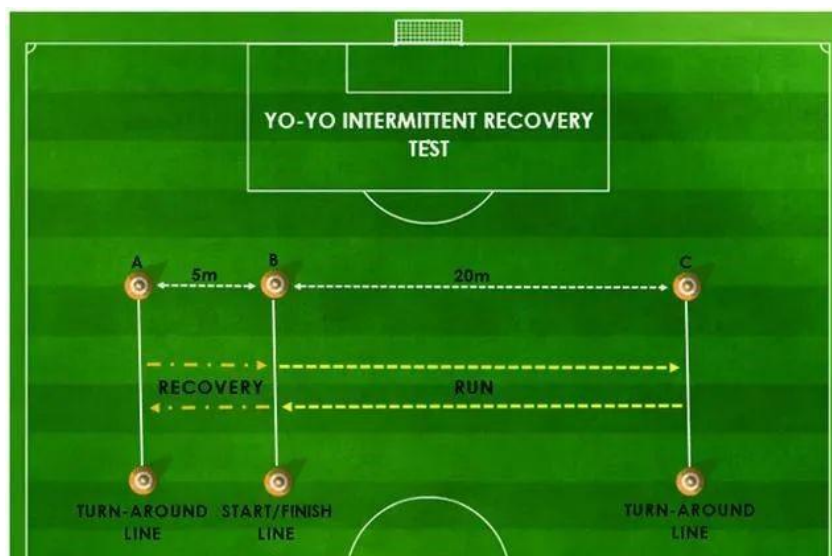


Figure 2. YOYO Test Field Layout.

This study referenced the scoring criteria from *The Yo-Yo Intermittent Tests: A Systematic Review and Structured Compendium of Test Results* [7], a website focused on various tutorials and scoring standards related to the YOYO test.

The YOYO test records scores in three ways: total distance, achieved level, or VO₂max (maximal oxygen uptake). This study adopts the relatively clear and easily calculable total distance as the scoring method [7]; classifies $x > 1120$ m as “elite,” $880 \text{ m} < x \leq 1120$ m as “excellent,” and $x < 240$ m as “poor,” among other categories.

To convert scores into a percentage scale, this study adopts the corresponding intervals; for example, $x > 1120$ m is assigned 100 points, $880 \text{ m} < x \leq 1120$ m corresponds to 90–99 points, $x < 240$ m corresponds to 0–60 points, and so forth.

2.3. Timing-based Indicators

As with distance-based indicators, timing-based indicators will also reference score conversion standards from authoritative online institutions.

2.3.1 30-meter sprint

Testing method: Players will sprint at maximum speed along a thirty-meter track.

This study referenced the standards from *Physical Education and the Study of Sport* [8], a blog primarily focused on a track and field approach, whose articles have been cited by several authoritative platforms, including ESPN [8]. Classifies $x < 4$ s as 'excellent,' $4 \text{ s} \leq x < 4.3$ s as 'above average,' and $x > 4.6$ s as 'poor,' and so forth.

To convert this into a percentage scale, this study adopts the corresponding intervals; for instance, $x < 4$ s corresponds to 100 points, $4 \text{ s} \leq x < 4.3$ s corresponds to 90–99 points, $x < 4.6$ s corresponds to 0–70 points, and so forth.

2.3.2 Illinois Agility Test

Testing method: Players will sprint around the cones following the route illustrated in Figure 3 as quickly as possible.

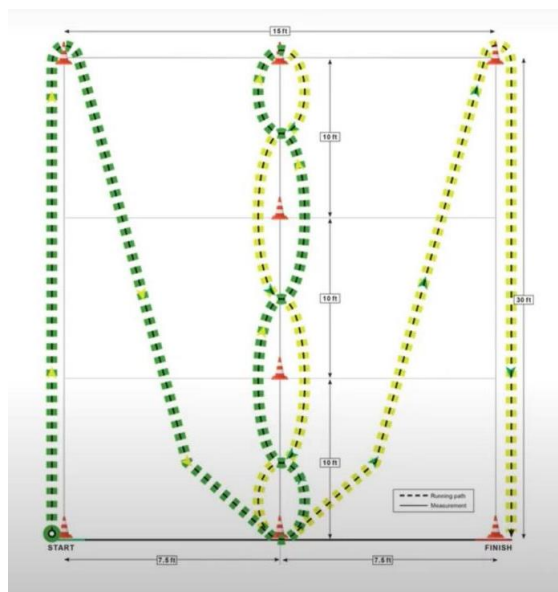


Figure 3. Schematic layout of the Illinois Agility Test field.

This study referenced the standards established in Physical Education and the Study of Sport [9]. Classified $x < 15.2$ s as “excellent,” $15.2 \text{ s} \leq x < 16.1$ s as “above average,” $x > 19.3$ s as “poor,” and so forth [9].

To convert these results to a percentage scale, this study defined corresponding intervals; for instance, $x < 15.2$ s is assigned 100 points, $15.2 \text{ s} \leq x < 16.1$ s is assigned 90–99 points, $x > 19.3$ s is assigned 0–70 points, and so forth.

2.3.3 Back and Forth Dribbling

Testing method: The player starts dribbling quickly from the starting line, maneuvers around a cone positioned 10 meters from the starting line, and then dribbles back.

This study referred to the scoring criteria outlined in the 'Student Soccer Skill Grading Standard.' The 'Student Soccer Skill Grading Standard' assigns 10 points for $x \leq 7.2$ s, 9 points for $7.3 \text{ s} \leq x \leq 8$ s, 1 point for $14.4 \text{ s} \leq x \leq 15.1$ s, and so forth.

To convert these scores into a percentage scale, this study uses the corresponding intervals; for example, a time of $x \leq 7.2$ s is assigned 10 points, equivalent to 100 points on the scale; $7.3 \text{ s} \leq x \leq 8$ s corresponds to 9 points, or 90 points; $14.4 \text{ s} \leq x \leq 15.1$ s corresponds to 1 point, or 10 points; and so forth.

2.3.4 Around Stick Dribbling

Testing method: The player begins dribbling quickly from the starting line, navigating around eight cones spaced two meters apart, covering a total distance of 16 meters, as illustrated in Figure 4.



Figure 4. Layout view of the Around Stick Dribbling course.

This study referred to the scoring criteria outlined in the 'Student Soccer Skill Grading Standard.' According to the 'Student Soccer Skill Level Assessment Standard,' a time of $x \leq 9.3$ s is assigned 10 points, $9.4 \text{ s} \leq x \leq 10$ s is assigned 9 points, $17 \text{ s} \leq x \leq 18$ s is assigned 1 point, and so forth.

To convert these scores into a percentage scale, this study adopts corresponding intervals; for instance, $x < 9.3$ s is assigned 10 points, converted to 100 points; $9.4 \text{ s} \leq x \leq 10$ s is assigned 9 points, converted to 90 points; $17 \text{ s} \leq x \leq 18$ s is assigned 1 point, converted to 10 points; and so forth.

2.4. Scoring-based Indicators

For scoring-based indicators, this study establishes scoring criteria for each indicator by employing a percentage conversion method. Each player is scored according to the rules governing the scoring-based test indicators. Using the formula below, test results are converted into percentage scores and rounded to the nearest whole number, yielding the final score for each item: $\text{Score} = (\text{Actual score} / \text{Full score}) \times 100$ [10].

2.4.1 Bench Press

Testing method: Following standardized protocols for assessing maximum strength [6], the athlete will lie supine on a flat bench, lower the barbell to the chest (making contact), then push upward until the arms are fully extended. Record the maximum single repetition weight.

Scores are assigned as follows: 10 points for $x \geq 1.5 \times \text{weight}$; 8 points for $1.2 \times \text{weight} < x < 1.49 \times \text{weight}$; 4 points for $x < 0.9 \times \text{weight}$; and so on.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.2 Dead Lift

Testing method: In line with established strength assessment guidelines [6], the athlete will lift the barbell from the floor to a standing position with hips and knees fully extended. Record the maximum single repetition weight.

Scores are assigned as follows: 10 points for $x \geq 2 \times \text{weight}$; 8 points for $1.6 \times \text{weight} < x < 1.99 \times \text{weight}$; 4 points for $x < 1.2 \times \text{weight}$; and so on.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.3 Predict Ground Ball Trajectory and Intercept

Testing method: Roll the ball quickly towards the goal; the player positioned in front of the goal must intercept the ball before it crosses the goal line. Conduct 10 trials and record the number of successful interceptions.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.4 Predict High Ball Landing Point and Intercept

Testing method: Throw a high ball by hand towards the goal; the player positioned in front of the goal must intercept the ball before it crosses the goal line. Conduct 10 trials and record the number of successful interceptions.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.5 Player Interception Skill

Testing method: 1v1 dueling training, assessing the player's successful interceptions in 10 defensive scenarios (using physical strength to block the attacker without being dribbled past).

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.6 Header Clearing

Testing method: Deliver a high aerial ball into the penalty area; the athlete must clear the ball by heading it towards a safe zone (typically a distant area oriented towards the sides). Conduct 10 trials and record the number of successful clearances.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.7 Shoot-on-Sight Header

Testing method: Crossing the ball into the penalty area, the athlete performs a header shot. Conduct 10 trials and record the number of successful target hits.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.8 1v1 Defending

Testing method: 1v1 dueling training; record the number of times the player successfully stops the attack in 10 defensive attempts.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.9 Block Tackle

Testing method: Assess the number of times the player successfully blocks the opponent's shot in 10 1v1 dueling attempts.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.10 Poke Tackle

Testing method: Record the number of times the player successfully pokes the ball to disrupt the opponent's attack in 10 defensive attempts.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.11 Shoulder Push Tackle

Testing method: During 10 1v1 duels, use the shoulder to perform a legal charge to disrupt the opponent's ball control, recording the number of successful ball recoveries.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.12 Side-Chase Sliding Tackle

Testing method: The attacking player dribbles forward while the athlete pursues from the side; across 10 opportunities, execute a standard sliding tackle to dispossess the opponent by either pushing the ball out of bounds or gaining possession, ensuring ball contact without committing a foul.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.13 Front Anticipation Sliding Tackle

Testing method: The attacking player advances with the ball, and the defending player anticipates and executes a frontal sliding tackle to intercept the ball. Successfully deflecting the ball out of bounds or regaining possession without committing a foul (making contact with the ball only) is considered valid.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.14 Accurate Short Pass

Testing method: As shown in Figure 5, place the ball on the outermost ring, and the player passes the ball into the circle. The test is conducted five times, and the total score of the five attempts constitutes the result for this item.

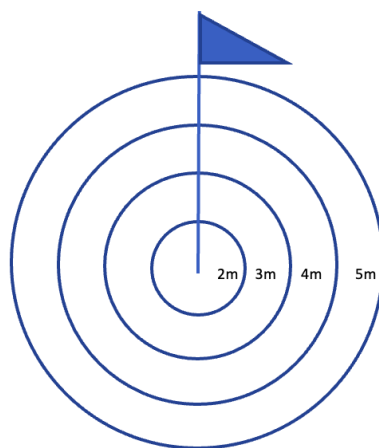


Figure 5. Layout of the Accurate Short Pass Field.

Scoring criteria: The maximum score for this item is 20 points. If the ball lands within the 2-meter radius circle, 4 points are awarded; within the 3-meter radius circle, 3 points; within the 4-meter radius circle, 2 points; within the 5-meter radius circle, 1 point; no points are awarded if the ball lands outside these circles.

The final score is converted and calculated using the formula, for example, $(18/20) \times 100 = 90$ points.

2.4.15 Accurate Cross Long Pass

Testing method: As shown in Figure 6, the player being tested stands inside the penalty area and makes a long pass into the effective area of the center circle. The test is conducted five times, and the sum of the five results constitutes the score for this item.

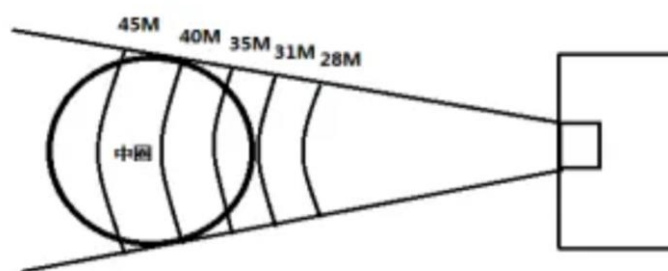


Figure 6. Accurate Cross Long Pass Field Layout.

Scoring criteria: The first landing point within the 28-meter sector scores 2 points; within the 31-meter sector, 3 points; within the 35-meter sector, 4 points; within the 40-meter sector, 5 points; and within the 45-meter sector, 6 points.

The final score is converted and calculated using the formula, for example, $(27/30) \times 100 = 90$ points.

2.4.16 Ground Ball Receiving

Testing method: Upon receiving a short pass, the player immediately executes a one-touch return pass, then sprints forward and controls the ball before the second pass towards the baseline goes out of bounds.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.17 High Ball Receiving

Testing method: The player receives a long pass, controls the ball with the foot, stops it, and maintains stable possession; tested 10 times.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.18 Ball Receiving Using Chest

Testing method: The player receives a long pass, controls the ball with the chest, stops it, and maintains stable possession; tested 10 times.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.4.19 Ball Receiving Using Head

Testing method: The player receives a long pass, controls the ball with the head, stops it, and maintains stable possession; tested 10 times.

The final score is computed using the formula, for example, $(10/10) \times 100 = 100$ points.

2.5. Match-based Indicators

For match-based indicators, this study evaluates players through expert evaluation scoring, with specific scoring criteria and explanations detailed below.

2.5.1 Positioning Awareness

A score of 90-100 indicates almost no positional loss and perfect anticipation of opponents' passes and movement routes. A score of 0-59 indicates frequent positional loss leading to being breached and an inability to determine when to press or retreat.

2.5.2 Covering Awareness

Scores ranging from 90 to 100 indicate anticipation of the positions where teammates are likely to be breached and maintaining the defensive formation after repositioning; scores between 0 and 59 indicate minimal repositioning or incorrect repositioning choices.

2.5.3 Defensive Coordination Awareness

Scores ranging from 90 to 100 indicate the ability to organize offside traps and to direct fullbacks to compress defensively when facing wide attacks. Scores between 0 and 59 indicate an inability to coordinate with teammates and frequent exploitation of defensive gaps by opponents.

2.5.4 Positioning Sense

Scores ranging from 90 to 100 indicate consistently intercepting critical passing lanes or blocking shots. Scores between 0 and 59 indicate focusing on the ball rather than the opponent and positional conflicts with the goalkeeper.

2.5.5 Fearlessness

Scores ranging from 90 to 100 indicate readiness to physically block powerful shots and fearlessness in aerial ball contests. Scores of 0-59 indicate the player abandons pressing and allows the opponent to complete the attack due to fear of committing a foul.

2.5.6 Jockeying

Scores of 90-100 indicate the player adopts a sideways blocking stance to cut off both inside and outside channels, effectively guiding the opponent into an encirclement. Scores of 0-59 indicate the player is easily dribbled past, resulting in a one-on-one situation and premature pressing.

2.5.7 Communication

Scores of 90-100 indicate the player clearly issues vocal commands to orchestrate an offside trap, timely instructs fullbacks to contract their positioning, and communicates effectively with the goalkeeper to avoid errors. Scores of 0-59 indicate no vocal commands are issued during the match, resulting in teammates losing position due to inadequate communication.

3. An Empirical Study of Selection Criteria for Central Defenders in High School Soccer Teams

3.1. Identification of Evaluation and Selection Candidates

This study included three test subjects from 'Guangfucheng,' an emerging team participating in the Foshan La Liga 11-a-side men's amateur soccer league. All three players are high school students, consistent with the target population of high school teams in this study.

3.2. Selection of evaluation scoring experts

As this study employs expert evaluation scoring to assess match-based indicators, the performances of 'Guangfucheng' in three matches of the Foshan La Liga group stage were selected. Additionally, the head coach of 'Guangfucheng' was invited to score the three selected central defenders according to the aforementioned scoring criteria.

3.3. Evaluation Object Score Summary Conversion Table

Table 1. Summary and Conversion of Player Evaluation Scores.

Indicators / Scores	Wang		Xue		Zhao	
	Raw score	Conversion (/100)	Raw score	Conversion (/100)	Raw score	Conversion (/100)
C1 Vertical jump	68cm	97	70cm	99	68cm	97
C2 YOYO Test	480m	70	480m	70	480m	70
C3 30m Sprint	4.32s	88	4.78s	70	4.61s	70
C4 Illinois Agility Test	17.31s	84	17.41s	83	16.7s	87
C5 Back and Forth Dribbling	6.32s	100	6.08s	100	5.38s	100
C6 Around Stick Dribbling	11.78s	68	9.6+(1)s	77	8.32s	100
C7 Bench Press	55kg->0.917*weight	60	60kg->0.822*weight	40	60kg->0.923*weight	60
C8 Dead Lift	70kg->1*weight	40	120kg->1.644*weight	80	90kg->1.385*weight	60
C9 Predict Ground Ball Trajectory and Intercept	6/10	60	7/10	70	8/10	80
C10 Predict High Ball Landing Point and Intercept	5/10	50	9/10	90	9/10	90
C11 Player Interception Skill	0/10	0	2/10	20	8/10	80
C12 Header Clearing	5/10	50	9/10	90	9/10	90
C13 Shoot-on-Sight Header	4/10	40	2/10	20	4/10	40
C14 1v1 Defending	2/10	20	6/10	60	8/10	80
C15 Block Tackle	2/10	20	4/10	40	2/10	20
C16 Poke Tackle	2/10	20	4/10	40	4/10	40
C17 Shoulder Push Tackle	0/10	0	2/10	20	8/10	80
C18 Side-Chase Sliding Tackle	8/10	80	10/10	100	8/10	80
C19 Front Anticipation Sliding Tackle	8/10	80	10/10	100	8/10	80
C20 Accurate Short Pass	17/20	85	16/20	80	17/20	85
C21 Accurate Cross Long Pass	28/30	93	22/30	73	29/30	97
C22 Ground Ball Receiving	8/10	80	9/10	90	8/10	80
C23 High Ball Receiving	6/10	60	8/10	80	6/10	60
C24 Ball Receiving Using Chest	8/10	80	8/10	80	8/10	80
C25 Ball Receiving Using Head	8/10	80	8/10	80	8/10	80
C26 Positioning Awareness	(79+77+81)/3=	79	(79+80+82)/3=	80	(80+75+70)/3=	75
C27 Covering Awareness	(81+81+81)/3=	81	(85+85+86)/3=	85	(77+81+77)/3=	78
C28 Defensive Coordination Awareness	(85+79+81)/3=	82	(80+81+88)/3=	83	(80+81+81)/3=	81
C29 Positioning Sense	(78+75+84)/3=	79	(79+82+88)/3=	83	(88+69+55)/3=	71
C30 Fearlessness	(85+85+88)/3=	86	(82+90+90)/3=	87	(92+90+92)/3=	91
C31 Jockeying	(81+79+81)/3=	80	(77+81+90)/3=	83	(82+79+79)/3=	80
C32 Communication	(75+75+75)/3=	75	(75+75+75)/3=	75	(80+75+75)/3=	77

3.4. Test Results of Selection Candidates

To calculate the player's total score, each player indicator is converted to a percentage scale score, multiplied by the weight assigned to that indicator, and then summed to obtain the player's total score, as detailed in Table 1.

Taking Student Wang as an example: $(97 \times 0.0472) + (70 \times 0.1058) + (88 \times 0.0355) + (84 \times 0.0904) + (100 \times 0.0264) + (68 \times 0.0245) + (60 \times 0.0635) + (40 \times 0.0286) + (60 \times 0.0293) + (50 \times 0.0162) + (0 \times 0.0304) + (50 \times 0.0188) + (40 \times 0.006) + (20 \times 0.0086) + (20 \times 0.0049) + (20 \times 0.0043) + (0 \times 0.0088) + (80 \times 0.0032) + (80 \times 0.0017) + (85 \times 0.0319) + (93 \times 0.0107) + (80 \times 0.0108) + (60 \times 0.0081) + (80 \times 0.0032) + (80 \times 0.0022) + (79 \times 0.0654) + (81 \times 0.0413) + (82 \times 0.0424) + (79 \times 0.0368) + (86 \times 0.0442) + (80 \times 0.0858) + (75 \times 0.0627) = 72.2102$

Student Wang's final score is 72.2102 points.

The other two players were calculated using the same method.

Student Xue's final score is 75.2710 points.

Student Zhao's final score is 78.5893 points.

Based on the scores, the ability values were ranked, with Student Zhao achieving the highest final score. Therefore, in the high school team selection, according to this selection scoring system, Student

Zhao has a comparatively higher likelihood of joining the school team than Student Wang and Student Xue, and is also more likely to outperform the other two students to become a main force of the team.

For several indicators with large weighting, the scores of the three students do not exhibit a significant difference. For example, the C5 YO-YO Test accounts for 10.58%, and the three students have identical scores on this indicator; The C6 Illinois Agility Test accounts for 9.04%, with the three students scoring 84, 83, and 87, respectively, on this indicator. The maximum score difference is only 4 points, which, after weighting, results in a maximum difference of only 0.3; and the C31 Jockeying accounts for 8.58%, with the three students scoring 80, 83, and 80, respectively, on this indicator. The maximum score difference is only 3 points. Therefore, their total scores are not significantly differentiated by any single indicator with a large weighting. Rather, the final score differences among the three students are primarily contributed by differences in indicators with smaller weightings. For example, the C9 Player Interception Skill weighted 3.04%. Student Zhao's score is 80 points, which after weighting becomes 2.432, whereas Student Wang's score for this indicator is 0 points. Either after weighting, this results in a 2.432-point difference in the total score, far exceeding 0.3 points. Analysis reveals that players ranked higher have test results across multiple categories that exceed those of lower-ranked players, indicating balanced and prominent comprehensive abilities; meanwhile, lower-ranked players, despite possessing certain technical foundations, have relatively low scores in several test items, demonstrating the need to enhance specific technical skills and improve overall capability. Among the three students currently on the Guangfucheng team, Student Zhao and Student Xue are starting players, while Student Wang is a substitute. The comparison indicates that the starting players possess higher ability values than the substitute player. According to the coach's observations, the comprehensive abilities and performances of starting central defenders are indeed superior to those of substitute central defenders, thereby confirming a positive correlation between players' selection evaluation scores and their actual capabilities.

4. conclusion

This study focuses on establishing a fair, just, and objective selection system for central defenders in high school teams, aiming to minimize unnecessary subjective factors. This study conducted multiple tests on three high school students: Student Wang achieved a final score of 72.2102, Student Xue scored 75.2710, and Student Zhao scored 78.5893. Based on score rankings, Student Zhao is most likely to be selected for the school team, Student Xue is the second most likely, while Student Wang is unlikely to be selected, assuming the team selects only two central defenders. This conclusion confirms the model's validity and feasibility.

The sample size of this study is relatively small; increasing it appropriately could enhance the model's validity. Furthermore, once the sample size is adequate, it is necessary to perform normality tests and other assessments to ensure the model can proceed to further evaluation.

In the future, the author may focus on other positions on the soccer field, developing indicator systems with assigned weights for forwards and midfielders, and conducting empirical validation.

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