



## Decision-Making Accuracy And Its Relationship To Cognitive Achievement Of Football Law For Third-Year Students

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### Abstract

Accuracy of decision-making is one of mental capabilities that contributes to overcoming competitors and working to make decision quickly to avoid wasting time during performance. Psychology is an important science that deals with psychological topics, including those related to sports activity in its various fields and levels. It also examines psychological characteristics and traits of personality that form subjective basis of sports activity, with aim of developing this type of activity and trying to find scientific solutions to its various applied problems. This research aims to identifying level of decision-making accuracy, identifying level of knowledge attainment in some football law subjects, identifying relationship between decision-making accuracy and cognitive achievement in some football law subjects for third-stage students. The research population was determined purposively and consisted of 77 in third-year students in Department of Physical Education and Sports Sciences at Al-Kut Private College for academic year 2024-2025. All students were selected to be research sample and the research sample constituted 100% of the research population. The researcher concluded that Students in Department of Physical Education and Sports Sciences have a high rate of quick decision-making, the students have a good level of knowledge attainment in subjects of football law, there is a direct relationship between students' decision-making and their academic achievement. The researcher recommended that conducting other measures of the speed of decision-making among the research sample, conducting a comparison between male and female students regarding their decision-making level.

**Keywords:** Decision-Making Accuracy, Cognitive Achievement, Football Law, University Students.

### Introduction

Psychology is an important science that deals with psychological topics, including those related to sports activity in its various fields and levels. It also examines psychological characteristics and traits of personality that form subjective basis of sports activity, with aim of developing this type of activity and trying to find scientific solutions to its various applied problems.

In order to achieve goals, aspirations, and ambitions of society, attention must be paid to process of preparing students properly. Knowing intelligence, its characteristics, and dimensions in general, and accuracy of decision-making in particular, can contribute to developing their abilities and considering them as valuable members, as they are foundation of society and its leaders. Since university stage is a stage of preparation for life in all intellectual, emotional, and professional aspects, progress and greatness of nation depends

primarily on university youth who are full of vitality and activity so that they become leaders of the future. Therefore, female university students, including students of physical education and sports science colleges, are in dire need of possessing many traits and skills, including accuracy of decision-making, in addition to their intellectual, physical, and skill-based abilities. Integration of students' personalities in terms of knowledge and emotion is necessary so that they are able to face situations and problems that they encounter in life.

Football is one of the basic subjects studied within physical education and sports science curricula approved by Ministry of Higher Education and Scientific Research, as it is the most popular game in the world. This is due to fun, excitement, and thrill it offers to both practitioners and spectators. It should be included among academic subjects in college. Undoubtedly, level of third-year college students should be closer to ideal, as they studied laws of football in third year and it was reviewed with field application in current year.

Accuracy of decision-making is one of mental capabilities that contributes to overcoming competitors and working to make decision quickly to avoid wasting time during performance. This is what whole world is working on investing time and trying not to waste minutes and hours and working continuously according to time in order to keep pace with developed world.

Importance of the research lies in identifying relationship between accuracy of decision-making and cognitive achievement of some football materials, making it an ideal problem and a basis for researchers to conduct experimental research based on the results of the current research.

A competent student needs many factors to be an ideal student, including accuracy in decision-making to be able to identify correct decisions in football to ensure lesson proceeds smoothly and to utilize time in correcting mistakes by subject teacher, which requires a long time and great effort during lesson to be able to convey all refereeing cases to all students perfectly, as refereeing and laws of game are relatively difficult for students because most of them do not practice football before entering university, and as the researcher is an instructor in physical education and sports science, sought to study solutions to this problem through following question: Does accuracy of decision-making relate to level of cognitive achievement in football among students?

Objectives of this research is to identifying level of decision-making accuracy for third-stage students, identifying level of knowledge attainment in some football law subjects for third-stage students, identifying relationship between decision-making accuracy and cognitive achievement in some football law subjects for third-stage students.

### **Research Methodology**

Nature of problem, research objectives, and its hypotheses necessitate the researcher's choice of appropriate methodology. Since descriptive method involves "studying current facts related to nature of a phenomenon, situation, group of people, set of events, or set of circumstances". the researcher adopted this methodology in this study. The research population was determined purposively and consisted of 77 in third- year students in Department of Physical Education and Sports Sciences at Al-Kut Private College for academic year 2024-2025. All students were selected to be research sample and research sample constituted (100%) of the research population.

#### *Research procedures*

Defining the research variables: After reviewing numerous scientific sources and references (theses and dissertations) that addressed sports psychology and football in general, and after identifying problem, the researcher decided to define variables, and the following were

determined: Accuracy in decision-making. Acquiring knowledge of some of rules of game in football.

#### *The scales used*

Decision-making scale: It is a scale composed of three domains: ability to generate appropriate decisions, working to improve performance in making arbitration decisions, and the ability to process alternatives in decision-making. It comprises (40) items: (14) items for the first domain and (13) items for each of the second and third domains. Each item has five answer choices: very appropriate, somewhat appropriate, somewhere in between, somewhat inappropriate, completely inappropriate. Scores are assigned to each answer choice. (5, 4, 3, 2, 1) The scores for the positive items are (1, 2, 3, 4, 5), and for the negative items, they are (5). Therefore, the lowest score a judge can achieve is (40), and the highest score is (200), with a hypothetical mean of (120) . As in Appendix (1)

Knowledge acquisition of some articles on the laws of the game in football: For the purpose of using a test that assesses students' knowledge of the Laws of Football (research sample), the researcher reviewed scientific sources and references related to measurement. The evaluation, in addition to being based on previous studies and research that addressed cognitive achievement in the laws of football , led the researcher to develop a cognitive achievement test previously used with the same specifications for the research sample and designed according to Bloom's Taxonomy of Educational Philosophy. This test is standardized and takes into account the cognitive level and experience of the target research sample. To ensure the suitability of this test, the researcher extracted the scientific coefficients for this test.

The researcher adopted the cognitive achievement test developed in the study by Mohammed Jaber Kadhim Hussein Al-Zubaidi (2014), which consisted of 120 questions covering 17 football-related topics. The test was comprehensive, with each question having four different answers, one of which was correct. The test was printed on sheets distributed to each participant, and the questions were to be answered in pencil. The researcher emphasized to the participants the importance of reading the questions carefully and answering them based on their knowledge of the laws of football in both the pre- and post-tests, for both the experimental and control groups. The scoring key was (1) for correct answers and (0) for incorrect answers, with a total score of 120.

The researcher selected the first nine materials, which consisted of 40 items, as shown in Appendix (1). The researcher set the time for answering the cognitive achievement questionnaire at 20 minutes, based on the exploratory experience.

#### *Pilot study*

The researcher conducted pilot study on Monday. The date is 22/1/2025 and its purpose was to verify the following matters.

- 1- Identifying the time taken to answer the two scales.
- 2- electronic devices, tools , and applications used.
- 3- The extent of understanding and responsiveness of the research sample.

#### *Main experiment*

conducted the main experiment with help of assisting work team in classrooms of College of Physical Education and Sports Sciences, Wasit University by distributing the specified measures on Tuesday, January 29, 2025, by distributing paper questionnaire to all fourth-year students of morning study, which included decision-making measure, and other

questionnaire included knowledge achievement of football law materials, which had 40 items.

*Statistical methods*

The researcher used SPSS statistical package to process the data.

- Arithmetic mean
- Standard deviation
- Pearce's simple correlation coefficient and n .

**Results and Discussion**

*Display and analyze the values of the arithmetic mean, standard deviation, and hypothetical mean for the decision-making scale*

Table 1. It shows mean, hypothetical mean, and standard deviation for decision-making for sample

Sex	Sample No.	Mean	Standard deviation	Hypothetical mean	Significance
Female	33	130.67	24.12	120	Sig.

It is clear to us from what is presented in Table (1) that the value of the arithmetic mean reached (130.67), which is close to the hypothetical mean of (120), which indicates that the sample enjoys a high degree of accuracy in decision-making. The reason for this can be attributed to the fact that university students at this stage have reached a degree of mental and emotional maturity and have become highly aware of themselves and their emotions, controlling and managing them and providing the appropriate response. They also possess a high ability to perceive their emotions with others and to empathize with them, and all of this will help them to make a sound adjustment with themselves and with others.

*Presenting and analyzing values of mean, standard deviation, and hypothetical mean of knowledge attainment in football law subjects*

In order to achieve this goal, we had to find the arithmetic mean and the hypothetical mean for the research sample, as shown in Table (2).

Table 2. Statistical description of cognitive achievement

Sex	Sample No.	Mean	Standard deviation	Median	Highest value	Minimum value
Female	33	31.624	7.40	32	36	22

Table (2) shows us that value of mean is (31.624), which indicates that sample enjoys a good average level in terms of cognitive achievement in law subjects. This indicates the efficiency of the instructor in how to deliver material well, which was reflected in their good achievement. Also, the high mental abilities and mental maturity that appeared to us in decision-making accuracy scale contributed to showing this good level of cognitive achievement in football law subjects.

*Presenting results of correlation coefficient between decision-making level of knowledge regarding laws of football among sample*

In order to achieve this goal, we had to find Spearman's correlation coefficient for the two research variables, as shown in Table (3).

Table 3. It illustrates relationship between decision-making and acquisition of knowledge of football law materials

Correlation coefficient between emotional intelligence and cognitive achievement	Correlation coefficient	Tabular value	Sig. level
Decision-making accuracy VS cognitive achievement	0.655	0.692	0.05

Table (3) shows us that there is a direct correlation between emotional intelligence variable and cognitive achievement, where if level of emotional intelligence among students increases, it contributes to an increase in cognitive achievement.

The researcher believes that as long as students possess ability to make good decisions, they will be able to face situations and tasks that require their successful implementation. Sources indicate that decision-making is strongly related to tasks and performance required of individuals, as it affects the level of individual performance and can predict the level of performance of individuals to a greater degree than mental intelligence.

### Conclusions

In light of results, the researcher reached conclusions students in Department of Physical Education and Sports Sciences have a high rate of quick decision-making. Students of Department of Physical Education and Sports Sciences have a good level of knowledge attainment in subjects of football Law. There is a direct relationship between students' decision-making and their academic achievement.

### Recommendations

Conducting other measures of speed of decision-making among the research sample.  
Conducting a comparison between male and female students regarding their decision-making level.

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### **Appendix (1)**

#### *Decision-making scale*

No.	Paragraphs	Very suitable	Slightly suitable	sometimes	Not Slightly suitable	Not Absolutely suitable
1	I have a perception of the situations that require me to make a decisive decision .					
2	I have the ability to acquire information through my own abilities .					
3	I contribute to achieving the decision in a way that is appropriate to the elements of the game in crucial situations .					
4	I find myself to be convincing to others in the decisions I make .					
5	I rely on cooperation with the assistant referees when making decisions .					
6	I realized the clarity of the decisions because they depended on the plan he followed during the match .					
7	I find within myself that I possess suitable alternatives for decisions related to different situations .					
8	My decision during the course of the game gives me control over the elements of the game .					
9	It is difficult for me to pinpoint exactly the mistakes I made as a result of my decisions .					
10	Time bothers me when making decisions because of the pressures I am under .					
11	It is difficult for me to use modern scientific methods in making crucial decisions .					
12	I don't mind setting objective standards in my mind before entering the match in order to control my decisions in the best way .					
13	The decision I made is based on a different perspective .					
14	Pay attention to the decisions made on the field that have negative repercussions on my refereeing career .					
15	When the assistant referee suggests a particular decision, I discuss it .					
16	I work on using my mental abilities to process the decision before I make it .					
17	Before entering the match, I review a number of decisions, especially when I have a picture of a particular team .					
18	I will probably reconsider my decision when I find convincing advice .					
19	I affirm that the decision is good from among the alternatives presented .					
20	The decisions I make do not take into account the emotional state of the two teams and the public .					
21	It is difficult for me to subject initial decisions to evaluation .					
22	I disregard the alternatives suggested to my decisions based on my arbitration experience .					
23	Avoid pre-planning to achieve outstanding decisions .					
24	Ignore the new regulatory laws .					
25	I am firm in adopting a single decision when the referees discuss it with me after the match has ended .					

26	There are reasons why it is not advisable to consult others when drafting appropriate arbitration decisions .					
27	I get worried about the noise of the audience when I find my decision to be sound .					
28	I continue to benefit from the international experiences of those who preceded me in the arbitration process .					
29	Work on attracting international lecturers in the field of arbitration .					
31	Make a point of reading the positive and negative aspects during the controlled viewing .					
31	We are among those who wish to participate in the referee development courses .					
32	I don't feel embarrassed when I consult experts with extensive experience .					
33	We are interested in the psychological aspects of the referee's personality and its effects on leading the match .					
34	I continue practical training for difficult refereeing situations .					
35	Ignore the objections to correct the decisions I made later .					
36	I blame the losing team for my hasty decisions .					
37	I overlook the refereeing innovations issued by the International Federation .					
38	I'm worried about the timing in the final moments of the match .					
39	My ambition to lead the final match I am assigned to is diminishing .					
40	I react very passively when my motivation decreases .					

*A scale for assessing cognitive achievement of some articles of Laws of Game in football for legal articles 1-10.*

No	Questions	No.	Questions
1	Is it permissible to hold football matches on the following surfaces? A) Artificial and natural surfaces B) Artificial (green) surfaces only C) Natural surfaces only D) All answers are incorrect	21	When a substitution is made and the substituted player refuses to leave the field : a. Play continues without the substitution. b. The substituted player is cautioned. c. The substituted player is sent off. d. All The answers are correct.
2	All court lines are the same width and do not exceed... A. (10) cm. (11) cm. (12) cm. (13) cm	22	Is it permissible for a substituted player to leave any part of the field ? A. No. B. Yes. C. Yes, if the referee believes there is time-wasting. D. All answers are incorrect.
3	Field dimensions in international football matches: A) (100-110)m <sup>2</sup> - (120-130)m <sup>2</sup> - (125-130)m <sup>2</sup> D) (125-135)m	23	A substitute player may enter from anywhere on the field... A. Yes, provided play is stopped. B. Yes, provided the substituted player exits from the same spot. C. No. D. All answers are incorrect.
4	The pitch width for international football matches is as follows:	24	Is it permissible for a goalkeeper to wear clothing in the same color as his team?

	A-(60-75)M-(64-75)M-(70-80)D-(75-80)M		A. Yes. B. No. A. Is that permissible ? B. Yes, provided the fourth official is notified. C. All answers are correct.
5	The penalty spot is located... A. (10) M. (11) M. J. (12) M. D. (13) M	25	Is it permissible for a player not to wear shin guards? A. Provided the team therapist is informed. B. Permissible provided the referee is informed. C. Always permissible. D. No.
6	The height of the angle flag shall not be less than : (1,2)mb, (1,3)mj, (1,4)md, (1,5)m	26	Is it permissible for a player to wear thermal shorts in a different color than his original shorts? A. No. B. Yes. C. All answers are correct. D. Yes, provided they are a similar color.
7	The height of the goal is... A. (2.40)m ...	27	A player refuses to cover his shin guards with socks because he has a cut. A. He is allowed to do so. B. The referee orders a substitution. C. He is not allowed to do so. D. All answers are incorrect.
8	The width of the goal is... A. (7.32) MB. (7.34) MO. (7.36) MD. (7.38) M	28	The substitution procedure is considered complete... a. If play is stopped for that purpose. b. When the substitute player enters and the substituted player leaves. c. When the substituted player leaves. d. ( a + c ) are correct answers
9	The shape of a football field is..... A. Circular B. Square C. Oval D. Rectangle	29	The duties and powers of the government mentioned in Article (5) amount to... A.(16)B.(17)C.(18)D.(20)
10	The radius of the center circle is... a.(9)mb.(9.15)mg.(9.30)d -(9.45)m	30	Duties and powers of the referee: A. Acts as timekeeper and records the events of the match. B. Determines when the match will resume after it has been suspended. C. Enforces the rules of the game. D. All answers are correct.
11	The shape of a football is... round b. Oval c. (A + B) Correct answers d. (A + B) Incorrect answers	31	According to the Laws of the Game, the referee is permitted to caution... A. Only the team manager and substitute players. B. Only players involved in the game. C. Everyone sitting in the team's technical area . D. All answers are incorrect.
12	regulation football is made from... A. Plastic B.	32	The assistant referee's duties include: A. Starting and ending the match. B. Conducting the coin toss between the two

	Rubber C. Fabric D. Leather or any other suitable material		teams. C. Identifying when a player is offside. D. ( A + B ) are correct.
13	The circumference of a regulation football should not exceed: A. (65-67) cm B. (68-70) cm C. (70-72) cm D. (72-74) cm	33	The responsibility for determining when the ball has fully crossed the field lines... A. Fourth official B. Referee C. Assistant referee D. All answers are correct
14	Weight of a standard football... A. (370-400) gm. B. (400-420) gm. C. (410-450) gm. D. (450-470) gm	34	Duties of the assistant referee: A. Treating injured players B. Announcing extra time C. When a player substitution is requested D. ( A + B ) are correct answers
15	After 15 minutes of play, the referee discovered that the ball weighed 430 grams... A) Play is allowed to continue. B) The ball is allowed to be changed. C) Play is allowed to be stopped. D) All answers are incorrect.	35	The assistant referee's duties during a penalty kick: A. The ball must completely cross the goal line. B. The goalkeeper must move forward before the kick. C. Players must enter the penalty area before the kick. D. ( A + B ) are correct.
16	The number of players per team in football matches shall not exceed... A. (11) players. B. (12) players. C. (13) players. D. (14) players.	36	A football match is played between two teams and is divided into two halves. The duration of each half is : A. 40 minutes B. 45 minutes C. 50 minutes D. ( A + C ) are correct answers
17	Football matches cannot start if the number of players is less than... A. (6) players B. (7) players C. (8) players D. (9) players	37	The haltime break in a football match should not exceed : A. (10) minutes B. (15) minutes C. (20) minutes D. At the referee's discretion
18	The maximum number of substitutes in an official match, including the goalkeeper, is : A. (3) players , B. (4) players, C. (5) players, D. (6) players	38	The time added in each half is compensated for : a. Substitutions b. Time-wasting c. Any other reasons d. All answers are correct
19	One of the conditions for making a player substitution is... A. Play is ongoing. B. Play is stopped. C. All answers are correct. D. All answers are incorrect.	39	Before the penalty kick is taken, the first half of the match has ended. A. The half ends and the penalty kick is not taken. B. It is taken after the start of the second half. C. It must be taken and the first half ends. D. All answers are incorrect.
20	Any player may change positions with the goalkeeper provided that: a) the referee is notified and play is ongoing; b) the referee is not notified and play is stopped; c) the referee is notified and play is stopped; d) all answers are incorrect.	40	The estimated stoppage time for each half is... A. The referee B. The assistant referee C. The fourth official D. All of them share in this.