

The Relationship Between Communication Skills and Cognitive Perception Among Students of The College of Physical Education and Sport Sciences From the Teachers' Perspective

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ABSTRACT

The present study aimed at identifying the level of communication skills and the level of cognitive perception among the students of the College of Physical Education and Sport Sciences at Misan University, and revealing the nature of the correlational relationship between their communication skills and cognitive cognition. The research was carried out with the descriptive approach and the relational method, in accordance with the nature of the research and its objectives. The research sample consisted of college students who were enrolled in the academic year and were selected by random method. To achieve the objectives of the research, the researcher used the Communication Skills Scale (verbal, non-verbal, and listening), and the Listening Scale Cognitive cognition (attention and cognitive concentration, mental processing, recall and tactical thinking), and after confirming the scientific conditions of the two scales of truthfulness and consistency, the data were statistically treated using the statistical package (SPSS 25). The results were: Overall, students have (high) level of communication skills with the first place of the "non-verbal communication" axis. Students have a high level of cognitive cognition, with the "Attention and Cognitive Focus" axis leading the other axes, filtering distractions, and responding to direct observation methods and immediate feedback from the teaching staff. There is a positive and statistically significant relationship between communication skills and cognitive cognition. Effective communication (verbal, non-verbal and listening) is the main input for encoding motor and tactical information and storing it in long-term memory. The results led the researcher to recommend that teachers and trainers should focus on promoting and developing non-verbal communication codes and unified tactical signals during educational and training units. Including exercises to increase capacity for attention control and cognitive selection among distractions of the field.

Keywords: Communication Skills; Non-verbal Communication; Cognitive Cognition; Attention and Concentration.

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ABSTRAK

Studi ini bertujuan mengidentifikasi tingkat keterampilan komunikasi dan tingkat persepsi kognitif di antara mahasiswa College of Physical Education and Sport Sciences di Universitas Misan, serta mengungkap sifat hubungan korelasi antara keterampilan komunikasi mereka dan kognisi kognitif. Penelitian dilakukan dengan pendekatan deskriptif dan metode relasional, sesuai dengan sifat penelitian dan tujuannya. Sampel penelitian terdiri dari mahasiswa yang terdaftar di tahun akademik dan dipilih secara acak. Untuk mencapai tujuan penelitian, peneliti menggunakan Skala Keterampilan Komunikasi (verbal, non-verbal, dan mendengarkan), serta Skala Mendengarkan Kognisi Kognitif (perhatian dan konsentrasi kognitif, pemrosesan mental, ingatan dan pemikiran taktis), dan setelah mengonfirmasi kondisi ilmiah dari dua skala kebenaran dan konsistensi, data tersebut diperlakukan secara statistik menggunakan paket statistik (SPSS 25). Hasilnya adalah: Secara keseluruhan, mahasiswa memiliki tingkat keterampilan komunikasi (tinggi) dengan posisi pertama pada sumbu "komunikasi non-verbal". Siswa memiliki tingkat kognisi kognitif yang tinggi, dengan sumbu "Attention and Cognitive Focus" memimpin sumbu lain, menyaring gangguan, dan merespons metode observasi langsung serta umpan balik langsung dari staf pengajar. Terdapat hubungan positif dan signifikan secara statistik antara keterampilan komunikasi dan kognisi kognitif. Komunikasi yang efektif (verbal, non-verbal, dan mendengarkan) adalah input utama untuk mengkodekan informasi motorik dan taktis serta menyimpannya dalam memori jangka panjang. Hasilnya membuat peneliti merekomendasikan agar guru dan pelatih fokus pada promosi dan pengembangan kode komunikasi non-verbal serta sinyal taktis terpadu selama unit pendidikan dan pelatihan. Termasuk latihan untuk meningkatkan kapasitas kontrol perhatian dan seleksi kognitif di antara gangguan di bidang ini.

Kata Kunci: Keterampilan Komunikasi; Komunikasi Non-Verbal; Kognisi Kognitif; Perhatian dan Konsentrasi.

INTRODUCTION

In the modern era, radical shifts have been witnessed in the educational system towards the focus on building the integrated personality of the learner (Shi, Wang & Lipowski, 2024) to enable the student to keep pace with the requirements of the professional and academic environment (Farrow, Baker & MacMahon, 2023). One of the main pillars that are designed to facilitate the transfer of ideas, the exchange of experiences, and fruitful interaction between the elements of the educational process (teaching and learning) is human communication skills (Adriani & Irwandy, 2024). In the domain of Physical Education and Sports Sciences, the importance of communication skills is multiplied, since this discipline involves a dynamic interaction that combines theoretical aspects with those of the field and practical applications (Molina-García et al., 2024). The main driver for managing sports activities, communicating motor directions and controlling team performance in halls and stadiums is effective communication, whether verbal or non-verbal (Akpetou & Furley, 2023).

In contrast, "cognitive cognition" is a higher mental process that receives, interprets and regulates environmental stimuli, which is reflected in the way the student

understands situations and stores experiences and summons them to support and make appropriate decisions (Zou et al., 2025). A student with mature cognitive awareness is in a better position to consciously understand and apply the skills and to deal with the obstacles they face in the teaching and training environment (Yang, Tian & Madni, 2025). From this stand, the communication skills and cognitive perception are closely intertwined, since the modern educational visions point to the fact that a successful communication helps to broaden an individual's cognitive perception and the weight of his ability to think and reflect, and good cognitive perception helps to the choice of the most appropriate communication methods for the sports and educational situation. Therefore, this study was developed to provide insight into the nature of the degree of relationship between communication skills and cognitive perception among college students from the point of view of their professors; in a way that contributes to the provision of evidence that helps develop and maintain academic programs in a way that serves the aspirations of the educational and sports process.

Research Problem

Notwithstanding the growing fascination with the physical and skill dimensions of students in physical education and sports sciences, contemporary field and academic standards necessitate a comprehensive preparation that harmonises motor proficiency, cognitive capabilities, and social competencies (Siedentop & Van der Mars, 2022). Communication abilities are a crucial element in a student's ability to express their thoughts, comprehend instructional guidance, and engage effectively in both recreational and academic settings (Nikolic, 2025). Cognitive cognition serves as the primary catalyst for information processing and the comprehension of intricate tactical and educational scenarios (Toka & Akil, 2025). Field observations and educational surveys conducted at the College of Physical Education and Sport Sciences at Misan University reveal a discrepancy among students regarding the expression of their cognitive abilities and the execution of motor skills, which may partially stem from deficiencies or inconsistencies in their verbal and non-verbal communication skills. Given that the College members possess the greatest capacity to assess this phenomenon due to their firsthand interactions with students during theoretical lectures and practical exercises, the research issue has emerged in an effort to address the inquiry. The subsequent Chairman enquires: "How do communication abilities relate to cognitive perception among students in the College of Physical Education and Sport Sciences at Misan University, as perceived by educators?"

The following sub-questions are derived from this main question:

1. What is the level of communication skills of the students of the College of Physical Education and Sport Sciences at Misan University from the point of view of the teachers?
2. What is the level of cognitive perception among the students of the college from the point of view of the College?
3. Is there a statistically significant relationship between students' communication skills and cognitive cognition from the teachers' point of view?
4. Does the degree of teachers' evaluation of students' communication skills and cognitive perception differ according to the two variables (scientific title and teaching experience)?

Research Objectives

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The current research seeks to achieve the following objectives:

1. Identifying the level of communication skills among students of the College of Physical Education and Sport Sciences at Misan University from the perspective of teachers.
2. Identify the level of cognitive perception among the college students from the point of view of the teachers.
3. Uncovering the nature of the relational relationship between communication skills and cognitive perception among college students from the perspective of teachers.
4. Identifying the differences in the responses of the research sample members (teachers) about the study variables according to the two variables (scientific title and teaching experience).

Research hypotheses

In light of the research problem and its objectives, the following hypotheses have been formulated:

1. The first hypothesis (relational): There is a statistically significant correlation at the level of significance ($\alpha \leq 0.05$) between communication skills and cognitive cognition among students of the College of Physical Education and Sport Sciences at Misan University from the teachers' point of view.
2. Hypothesis 2 (Differences): There are no statistically significant differences at the level of significance ($\alpha \leq 0.05$) in the evaluation of students' communication skills and cognitive cognition attributed to the variable of the scientific title of the teachers.
3. Hypothesis Third (Differences): There are no statistically significant differences at the level of significance ($\alpha \leq 0.05$) in the evaluation of students' communication skills and cognitive perception attributed to the variable of years of teaching experience.

Research Areas

Human Area: A members at the College of Physical Education and Sport Sciences- Misan University, who have been promoted scientifically and continue in academic service for the academic year (2025/2026).

Spatial Area: Classrooms, stadiums, sports facilities and academic offices of the College of Physical Education and Sport Sciences at Misan University.

Time Area: For the period from (the date of the start of the field transaction/application of the questionnaire) until (the date of completion of data collection and unloading), during the semester of the academic year (2025/2026).

METHODS

Research Methodology

The researcher used the descriptive method with the survey method and relational relationships, to suit the nature of the problem and the objectives of the research, where the descriptive method relies on studying the phenomenon as it is in reality, describing it accurately, and expressing it quantitatively and qualitatively to reveal the nature of the relationship between (communication skills) and (cognitive perception).

Research population and sample

Research Community: The current research community consists of all College members at the College of Physical Education and Sport Sciences - Misan University for the academic year (2025/2026). The reason for choosing this academic year is because

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of their experience and communication for a period of 3 continuous teaching years in the college, where the sample number reached (80) professors. Where (10) professors were selected in a random way.

Second: Research Tools and Scientific Foundations

Research tools are defined as the means and devices by which the researcher arrives at the responses of the research sample and achieves its goals and aspirations. In order to achieve the objectives of the current research and to reveal the correlation between communication skills and cognitive perception among the students of the College of Physical Education and Sport Sciences at Misan University from the point of view of the College members, the researcher has prepared and built the two basic research tools according to the following scientific methodological steps:

Data Collection Tools

In his study, the researcher relied on the following tools:

Sources, references, and academic publications: Access to theoretical frameworks and previous studies in the fields of cognitive cognition, communication skills, and physical education.

Main Research Questionnaires (Prepared by the Researcher):

1. Communication Skills Scale: It consists of (20) items distributed over four main axes (verbal communication, non-verbal communication, listening and listening, interactive and social communication).
2. Cognitive Cognition Scale: It consists of (20) items distributed over four main axes (Attention and Cognitive Focus, Comprehension and Comprehension, Recall and Information Processing, Problem Solving and Decision Making).

The two scales are designed according to the graded Likert 5-point scale: (very high score = 5, high score = 4, medium score = 3, low score = 2, very low score = 1).

Scientific Foundations of Research Tools

To ensure the quality of the instruments and their honest and accurate measurement, the researcher subjected the two research tools to the following scientific procedures and procedures:

First: Validity of Measures

Honesty refers to the ability of the tool to measure what it was designed for, and the researcher has adopted two types of honesty:

1. Face Validity: The scales were presented in their initial form to a group of experts and specialists in the fields (physical education and sports sciences, tests and measurement, and educational psychology) to express their opinions and observations on the validity of the paragraphs, the soundness of their linguistic formulation, and their suitability for the specific themes. In light of their opinions, some paragraphs were amended and drafted that had a percentage of agreement (80% or more) among the arbitrators.
2. Construct Validity: The internal consistency of the scales was calculated after applying them to the survey sample consisting of (numerically determined) teaching, by extracting:
 - a. The Pearson Correlation Coefficient is between the score of each paragraph and the overall score of the axis to which it belongs.
 - b. The Pearson correlation coefficient between the score of each axis and the overall score of the scale.

The results showed that all correlation coefficients were statistically significant at the level of significance ($\alpha \leq 0.05$) which confirms the validity of the construction of the scales and the coherence of their paragraphs. As in Table 1.

Table 1. Shows the internal consistency (construction truthfulness) of the two search criteria.

Scale	Axis	Number of paragraphs	R	Sig
Communication skills	First: Verbal Communication	5	0.68-0.84	0.01
	Second: Non-verbal Communication	5	0.62-0.79	0.01
	Third: Listening and Listening	5	0.71-0.88	0.01
	Fourth: Interactive and Social Communication	5	0.65-0.81	0.01
Cognitive Perception	First: Attention and Cognitive Focus	5	0.69-0.85	0.01
	Second: Tactical Understanding and Understanding	5	0.73-0.87	0.01
	Third: Recall and Information Processing	5	0.64-0.82	0.01
	Fourth: Problem Solving and Decesion Making	5	0.70-0.86	0.01

Second: Reliability

Consistency means that the tool gives almost the same results if it is applied more than once in similar conditions. The following two methods have been used:

1. Test-Retest Method:

The scales were applied to a survey sample with a time difference of (14) days between the first and second applications, and the Pearson correlation coefficient was calculated between the products of the two applications, where the values of the stability coefficients reached high and statistically significant.

2. Cronbach's Alpha Factor:

The internal consistency of all paragraphs of the two scales was calculated using the (Cronbach's alpha) equation, and the results showed that the communication skills scale and the cognitive cognition scale had high stability coefficients (exceeding 0.85), which are high and reassuring stability ratios that indicate the validity of the scales for final application. As in Table 2.

Table 2. Shows the stability coefficients of the axes and the total score of the two scales.

Scale	Themes	Number of paragraphs	Test-Retest	Cronbach's alpha
Communication Skills Scale	First Theme: Verbal Communication	5	0.84	0.86
	The second axis: non-verbal communication	5	0.81	0.83
	The Third Theme: Listening and Listening	5	0.86	0.88
	Fourth Theme: Interactive Communication Overall score	5	0.83	0.85

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Cognitive Cognition Scale	Overall Score	20	0.88	0.91
	First Theme: Attention and Concentration	5	0.85	0.87
	The second axis: Understanding and comprehension	5	0.87	0.89
	The Third Theme: Recall and Processing	5	0.82	0.84
	Fourth Theme: Problem Solving and Decesion Making	5	0.84	0.86
	Overall Score	20	0.89	

All of the above consistency coefficient values are statistically significant and exceed the academically acceptable threshold value (0.70), indicating that the two research tools are very honest, consistent, and stable over time, and are suitable for final field application. Third: Correction and Digital Key for Metrics

Lowest possible overall score for the scale: $20 \times 1 = 20$ Score.

Highest possible overall score for the scale: $20 \times 5 = 100$ Score.

Specify the class length to translate the arithmetic averages:

Table 3. Shows interpretation of response performance levels

Arithmetic Average	Verbal Assessment	Level
1.00 to 1.80	To a very small degree	Very low
1.81 to 2.60	To a lesser degree	Low
2.61 to 3.40	Medium	Medium
3.41 to 4.20	To a large extent	High
4.21 to 5.00	To a very large extent	Very high

RESEARCH RESULTS

Presentation and analysis of the results of the Communication Skills Scale paragraphs

The first theme: Verbal communication

Table 4. Shows mathematical averages, standard deviations and percentages of the paragraphs of the verbal communication axis

No	Paragraph	M	SD	Percentage	Level	Rank
1	The student uses mathematical and precise terminology during the explanation and kinesthetic analysis.	3.84	0.52	76.8%	High	2
2	The student expresses his scientific ideas and opinions in a clear and direct linguistic style.	3.78	0.58	75.6%	High	3
3	The student must adhere to an appropriate tone of voice that is appropriate for the size of the classroom or sports field.	3.92	0.46	78.4%	High	1
4	The student coordinates his or her ideas in a logical sequence during the presentation and academic presentation.	3.71	0.61	74.2%	High	5

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5	The student accepts scientific and educational criticism in a sportsmanlike spirit without verbal emotion.	3.75	0.55	75.0%	High	4
-	The general average of the first axis	3.80	0.42	76.0%	High	-

Analysis of the paragraphs of the first axis:

The results of the statistical analysis of the paragraphs of the first axis, represented by (verbal communication), show a positive disparity in the response levels of the research sample, as these results were reflected through a logical gradation of the paragraphs of the axis according to their importance, the values of their arithmetic media, and their standard deviations: paragraph (3) which stipulates (the student shall adhere to an appropriate tone of voice suitable for the size of the classroom or sports field) topped the first rank among the paragraphs of the axis with the highest arithmetic mean of (3.92) and a standard deviation of (0.46). This result clearly indicates that Students have a high and conscious ability to adapt frequencies and tones of sound and adjust their intensity according to the requirements of the teaching or field environment, whether in closed theoretical classrooms or in stadiums and open gyms that require higher sound energy to bypass distractions and ambient noise. This academic value demonstrates the sober foundation of the students' specialized linguistic output, and their outstanding ability to recall the mathematical dictionary and the precise biomechanical and training terms and employ them effectively during dialogues, discussions, and kinetic analysis circles within the lecture.

This result reflects the extreme directness and clarity in the intellectual and academic presentation, which proves that students avoid ambiguity or ineffective redundancy while communicating scientific concepts and opinions to teachers and their peers. Paragraph (5), which states that "the student accepts scientific and educational criticism in a sportsmanlike spirit without verbal emotion", came in fourth place, achieving an arithmetic mean of (3.75) and a standard deviation of (0.55). This high value confirms that students enjoy a glimpse of emotional maturity and high psychological control, which is reflected in their ability to absorb the observations and educational corrections issued by the teaching staff in a logical manner characterized by sportsmanship, away from convulsions or sharp verbal reactions. Finally, paragraph (4), which states that the student coordinates his thoughts in a logical sequence during the academic presentation and presentation, came in the fifth and last place within this axis with an arithmetic mean of (3.71) and a standard deviation of (0.61). Although this paragraph is at the bottom of the ranking, its digital value still falls within the approved range of the (high) level, which leads to the need to pay more attention to the development of logical construction skills and thought sequence during the preparation and implementation of presentations and seminars, to reach the level of overall balance with the rest of the verbal skills.

Second Theme: Non-Verbal Communication

Table 5. Shows arithmetic averages, standard deviations and percentages of non-verbal communication axis paragraphs

No	Paragraph	M	SD	Percentage	Level	Rank
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6	The student uses body and hand signals effectively to illustrate the field performance of the skill.	4.08	0.41	81.6%	Very High	1
7	The student's facial expressions reflect their interest in the lesson and their desire for academic communication.	3.86	0.50	77.2%	High	4
8	The student maintains direct visual coordination (Eye Contact) with his/her professor and peers.	3.89	0.48	77.8%	High	3
9	The student responds flexibly to the tactical cues and movements issued by the instructor/professor.	4.02	0.44	80.4%	Very High	2
10	The student employs his body shape and posture to enforce discipline and drive on the field.	3.73	0.57	74.6%	High	5
-	The general average of the second axis	3.91	0.38	78.2%	High	-

Analysis of the paragraphs of the second axis:

The results of the statistical analysis of the paragraphs of the second axis, which is represented by (non-verbal communication), show a gradation that reflects a high awareness among the members of the research sample of the importance and impact of body language and motor and visual expression in the field of physical education and sports sciences, as academic and field interaction requires the employment of non-verbal skills with high efficiency to clarify performance and comprehend directions, and the general average of the second axis reached an arithmetic average of (3.91) with a standard deviation of (0.38) and a percentage of (78.2%), which places it within the (high) level. The details of the results are clear This axis is according to the differential order of its paragraphs as follows: Paragraph (6), which states (the student uses body and hand signals effectively to illustrate the field performance of the skill), topped the first rank with the highest arithmetic average of (4.08), a standard deviation of (0.41) and a percentage of (81.6%), to record an evaluation level of (very high). This result confirms the basic and direct reliance of mathematical science students on body expressions and hand signals as a great compensatory and supportive tool, which contributes to explaining the technical nuances of complex motor skills and reducing verbal effort within the training and field correction environment.

In second place, paragraph (9), which states that the student responds flexibly to the tactical signals and movements issued by the coach/professor), came in second place, paragraph (9), which stipulates that the student responds flexibly to the tactical signals and movements issued by the coach/professor with an arithmetic mean of (4.02), a standard deviation of (0.44), and a percentage of (80.4%), and a level of (very high) as well. This academic value shows the speed of intuition and mental readiness that students have in reading and decoding tactical gestures and signals issued by teachers or coaches on the field lines, and employing them immediately in favor of joint tactical and skill performance. Paragraph (8), which states that the student maintains direct eye contact with his professor and colleagues, came in third place with an arithmetic mean of (3.89), a standard deviation of (0.48), a percentage of (77.8%) and a level of (high). This result reflects the students' self-confidence and emotional balance during the

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educational situation, where direct and continuous eye contact represents evidence of full attention, and a sincere desire to maintain the circle of communication and convey a sense of interest and mental control.

Paragraph (7), which states (the student's facial expressions reflect his interest in the lesson and his desire for academic communication)—came in fourth place, achieving an arithmetic average of (3.86), a standard deviation of (0.50), a percentage of (77.2%), and a level of (high). Finally, paragraph (10), which states that the student uses his body form and posture to enforce discipline and leadership on the field—came in the fifth and last place within this axis with an arithmetic mean of (3.73), a standard deviation of (0.57), and a percentage of (74.6%), and despite its ranking at the bottom of the ranking, it remained within the range Approved for (High) Level. This result reveals a continuous need among students to enhance and develop the posture and the physical presence of leadership within the stadium or hall, and train them to demonstrate a strong and confident sports personality that qualifies them to practice management, coaching and refereeing roles with high efficiency in the future.

Third Theme: Listening & Listening Skills

Table 6. Shows Mathematical Averages, Standard Deviations and Percentages of the Listening Axis Paragraphs

No	Paragraph	M	SD	Percentage	Level	Rank
11	The student uses body and hand signals effectively to illustrate the field performance of the skill.	3.88	0.47	77.6%	High	1
12	The student's facial expressions reflect their interest in the lesson and their desire for academic communication.	3.71	0.54	74.2%	High	4
13	The student maintains direct visual coordination (Eye Contact) with his/her professor and peers.	3.66	0.59	73.2%	High	5
14	The student responds flexibly to the tactical cues and movements issued by the instructor/professor.	3.74	0.51	74.8%	High	3
15	The student employs his body shape and posture to enforce discipline and drive on the field.	3.82	0.49	76.4%	High	2
-	The general average of the third axis	3.76	0.41	75.2%	High	-

Analysis of the paragraphs of the third axis:

The results of the statistical analysis of the paragraphs of the third axis, which is represented in (Listening & Listening Skills), show a high level of response among the members of the research sample, as this axis reflects the pillar of receiving the educational and tactical material and understanding the field directions accurately before starting the performance. The general average of the third axis reached an arithmetic average of (3.76), with a standard deviation of (0.41) and a percentage of (75.2%), which places it within the (high) level. The details of the numerical analysis of the paragraphs of this axis are clear according to Paragraph (11), which states that the student listens attentively to the tactical directions and plans provided by the teacher,

topped the first rank among the axis paragraphs with an arithmetic average of (3.88), a standard deviation of (0.47), and a percentage of (77.6%), to record an evaluation level of (high). This result is attributed to the field awareness among mathematical science students of the importance of focusing their attention while explaining tactical plans and instructions, as any distraction in concentration while listening is directly reflected on the quality of application and group coordination on the field.

In second place, paragraph (15), which included (the student absorbs the feedback provided to him and works to correct his mistakes) came in second place, with an arithmetic mean of (3.82), a standard deviation of (0.49), a percentage of (76.4%), and a level of (high). This value reveals the students' high ability to process feedback from the teacher or trainer and convert it into immediate corrective responses, which speeds up the process of motor path modification and reduces skill errors during practical application. Paragraph (14), which states that "the student follows and executes complex motor instructions accurately without the need to repeat them" came in third place with an arithmetic mean of (3.74), a standard deviation of (0.51), a percentage of (74.8%), and a level of (high). The result shows that the sample has motor comprehension and physical memory that help them to comprehend the complex instructions and apply them in the field with the least amount of verbal repetition by the teacher.

While paragraph (12), which states that the student avoids interruption while explaining the theoretical material or the educational steps of the skill, came in fourth place, achieving an arithmetic average of (3.71), a standard deviation of (0.54), a percentage of (74.2%), and a level of (high). This value confirms the students' commitment to the rules of academic discipline and behavioral respect in the hall or stadium, by allowing the teacher to complete the theoretical presentation or skill demonstration without distracting with side interruptions. Finally, paragraph (13), which states that "the student demonstrates his understanding of the instructions by asking focused and useful clarifying questions" came in the fifth and last place within this axis with an arithmetic mean of (3.66), a standard deviation of (0.59), and a percentage of (73.2%), and it also falls within the (high) level. This result reveals a point that requires modernization and development in the teaching environment, as the sample members tend to be content with listening and actual application without expanding on the question of qualitative clarification, which calls for encouraging critical thinking and urging students to inquire about specialized inquiries to deepen the theoretical understanding parallel to physical performance.

Fourth Theme: Interactive Communication

Table 7. Shows Arithmetic Averages, Standard Deviations and Percentages of the Interactive Communication Axis Paragraphs

No	Paragraph	M	SD	Percentage	Level	Rank
16	The student communicates actively with his team members to reach a common tactical goal.	3.85	0.49	77.0%	High	1
17	The student takes into account the diversity and individual differences in his communication styles with his classmates.	3.61	0.62	72.2%	High	5

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18	The student has the ability to manage academic and field dialogues and discussions calmly.	3.68	0.53	73.6%	High	4
19	Effective communication in the student contributes to reducing stress and resolving disagreements within the team.	3.72	0.56	74.4%	High	3
20	The student demonstrates a spirit of leadership and positive encouragement to his classmates and coaches.	3.79	0.50	75.8%	High	2
-	The general average of the fourth axis	3.73	0.43	74.6%	High	-

Analysis of the paragraphs of the fourth axis:

The results of the statistical analysis of the paragraphs of the fourth axis (Interactive and Social Communication) show a high level of positive interaction and field cohesion among the members of the research sample, as this axis reflects the students' ability to translate verbal and non-verbal communication skills and listen to interactive and social behavior that contributes to building successful academic and sports relationships within the team and the classroom. The general average of the fourth axis is an arithmetic average of (3.73) with a standard deviation of (0.43) and a percentage of (74.6%), which places it within the (high) level. The details of the numerical and analytical data of the paragraphs of this axis are shown in sequence according to their descending statistical order as follows: Paragraph (16), which states (the student communicates effectively with his team members to reach a common tactical goal) topped the first rank with the highest arithmetic average of (3.85), a standard deviation of (0.49) and a percentage of (77.0%), to record an evaluation level of (high).

This outstanding result is attributed to the collective awareness of the field among sports science students of the need to maintain channels of communication and interactive tactical coordination during the implementation of motor plans and duties, as continuous immediate communication is a key pillar to achieve motor harmony and reach common sports goals on the field. This value highlights the students' possession of field leadership characteristics and self-motivation and social motivation, where mutual moral support and encouragement contribute to raising the self-efficacy of peers and enhancing motivation towards academic and physical achievement. Paragraph (19), which states that "effective communication among the student contributes to reducing tension and resolving differences within the team", came in third place with an arithmetic mean of (3.72), a standard deviation of (0.56), a percentage of (74.4%), and a level of (high).

This result confirms the functional role of communication skills as a psychological and social containment tool that contributes to resolving emergency field conflicts and alleviating the emotional tensions common in competitions and stressful sports situations. Paragraph (18), which states that the student has the ability to manage academic and field dialogues and discussions calmly, came in fourth place, achieving an arithmetic mean of (3.68), a standard deviation of (0.53), a percentage of (73.6%), and a level of (high). Finally, paragraph (17), which states that the student takes into account the diversity and individual differences in his methods of communication with his colleagues, came in the fifth and last place within this axis with an average of (3.61), a standard deviation of (0.62), and a percentage of (72.2%), and it is also located in the

(high) level. This result reveals the need for students to enhance awareness of the individual differences and diverse personality styles of their peers, and to adapt communication styles to suit these psychological and physical differences to reach the highest levels of interaction and social cohesion.

Second: Presentation and analysis of the results of the paragraphs of the Cognitive Perception Scale

The first axis: Cognitive Attention & Focus

Table 8. Shows Mathematical Averages, Standard Deviations and Percentages of Attention and Concentration Axis Paragraphs

No	Paragraph	M	SD	Percentage	Level	Rank
1	The student shows high mental focus during the educational or training situation.	3.94	0.44	78.8%	High	1
2	The student avoids external distractions while implementing complex mathematical skills.	3.76	0.55	75.2%	High	5
3	The student connects theoretical orientation with their skill performance on the field at intuitive speed.	3.89	0.47	77.8%	High	2
4	The student observes the fine details of correct motor performance during the demonstration.	3.83	0.50	76.6%	High	4
5	The student continues to maintain his mental attention until the end of the lecture or training.	3.87	0.48	77.4%	High	3
-	The general average of the first axis	3.86	0.39	77.2%	High	-

Analysis of the paragraphs of the first axis:

The results of the statistical analysis of the paragraphs of the first axis, which is represented in (Cognitive Attention & Focus), show a high level of mental readiness and cognitive comprehension among the members of the research sample, as this axis constitutes the main pillar of the educational and training process in physical education and sports sciences, due to the direct correlation of mental abilities with the accuracy of information processing and the speed of motor decision-making. The general average of the first axis reached an arithmetic mean of (3.86) with a standard deviation of (0.39) and a percentage Percentage reached (77.2%), which puts it within the (high) level. The numerical and analytical details of the paragraphs of this axis are shown in order sequentially according to their relative importance and descending statistical order as follows: Paragraph (1), which states (the student shows high mental concentration during the educational or training situation) topped the first rank among the paragraphs of the axis with the highest arithmetic average of (3.94), a standard deviation of (0.44) and a percentage of (78.8%), to record an evaluation level of (high).

This result is attributed to the high ability of mathematical science students to direct their mental energies towards the academic and direct training situation, and to focus attention on the stimuli associated with the educational situation, which reflects a psychological and neurological readiness that contributes to enhancing the efficiency of motor learning and reducing the error rate. This academic value highlights the

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quickness of intuition and the ability to process knowledge immediately, where students are able to transform concepts and oral theoretical texts into complex kinetic plans and applied models on the field without a significant time gap. Paragraph (5), which states that the student shall maintain his mental attention until the end of the lecture or training, came in third place with an average of (3.87), a standard deviation of (0.48), a percentage of (77.4%), and a level of (high). This result reveals that the sample possesses the feature of "sustained attention", which is a psychomotor skill that reflects the ability of the central nervous system to resist the mental and physical stress caused by the duration of training modules or theoretical lectures. Paragraph (4) which states that the student observes the exact details of the correct motor performance during the demonstration came in fourth place, achieving an arithmetic mean of (3.83), a standard deviation (0.50), a percentage of (76.6%), and a level of (high).

This value indicates that students possess the skill of careful observation and scrutiny of the geometric and temporal details of the motor path during the model demonstration, which facilitates the process of visual modeling and mental visualization of the skill before proceeding to apply it. Finally, paragraph (2) which states that the student avoids external distractions while implementing complex mathematical skills came in the fifth and last place within this axis with an arithmetic mean of (3.76), a standard deviation of (0.55), and a percentage of (75.2%), and it falls within the (high) level. Also. This result reveals that some of the sample members are susceptible to external distractions (noise, crowd, adjacent stadiums) when performing complex motor skills that require intense concentration, suggesting the need to develop concentration exercises under conditions of pressure and environmental distractions similar to those of formal competitions.

The second axis: Tactical and skill comprehension and comprehension (Comprehension & Understanding)

Table 9. Shows Mathematical Averages, Standard Deviations and Percentages of the Items of the Understanding and Comprehension Axis

No	Paragraph	M	SD	Percentage	Level	Rank
6	The student is aware of the scientific and biomechanical reasons behind the success or failure of the motor skill.	3.69	0.58	73.8%	High	5
7	The student understands the duties of his planning and tactical positions during team play.	3.91	0.45	78.2%	High	1
8	The student interprets the changing sports situations within the field based on his scientific understanding.	3.77	0.52	75.4%	High	4
9	The student understands the importance of physical and psychological preparation in raising the level of athletic performance.	3.85	0.48	77.0%	High	2
10	The student distinguishes between correct technical performance and common mistakes during field application.	3.81	0.50	76.2%	High	3
-	The general average of the second axis	3.81	0.40	76.2%	High	-

Analysis of the paragraphs of the second axis:

The results of the statistical analysis of the paragraphs of the second axis, represented by (Comprehension & Understanding) show a high level of cognitive and applied perception among the members of the research sample, as this axis constitutes the bridge between mental comprehension and field application in the faculties of physical education and sports sciences, where sports games and competitions require the transformation of planning concepts into conscious motor decisions and responses. The general average of the second axis reached an arithmetic mean of (3.81) and a deviation Benchmark (0.40) and a percentage of (76.2%), which places it within the (high) level. The numerical and analytical details of the paragraphs of this axis are shown in order sequentially according to their relative importance and descending statistical order as follows: Paragraph (7), which stipulates that (the student understands the duties of his planning and tactical positions during team play) topped the first rank among the paragraphs of the axis with the highest mean of (3.91), a standard deviation of (0.45) and a percentage of (78.2%), to record an evaluation level of (high).

This result is attributed to the deep understanding and field awareness of sports science students of the specific planning requirements and tactical maneuvers for each position within the stadium, which reflects a high ability to coordinate and commit to defensive and offensive duties within the framework of team play. In second place, paragraph (9), which included (the student is aware of the importance of physical and psychological preparation in raising the level of athletic performance), came in second place, with an arithmetic mean of (3.85), a standard deviation of (0.48), a percentage of (77.0%), and a level of (high). This academic value reflects the integrative awareness of the sample members of the close overlap between physical and psychological aspects and their direct impact on skill stability and facing the pressures of competition, which reflects positively on their commitment to comprehensive training programs. Paragraph (10), which states that "the student distinguishes between correct technical performance and common mistakes during field application" came in third place with an arithmetic mean of (3.81), a standard deviation of (0.50), a percentage of (76.2%), and a level of (high).

This result reveals that students possess the skill of "comparative skill analysis", which is a deconstruction ability that allows the learner to mentally compare between ideal models of performance and wrong motor paths, which facilitates the process of self-correction and avoids fixing errors during training. Finally, paragraph (6), which states that the student is aware of the scientific and biomechanical reasons behind the success or failure of the motor skill, came in the fifth and last place within this axis with an arithmetic mean of (3.69), a standard deviation of (0.58), and a percentage of (73.8%), and it is also located in the (high) level. This result reveals a point that requires attention and development in the academic aspect, as students tend to have a general applied and planning understanding with a relative decrease in linking it to biomechanical laws and the physical analysis of motion, which calls for linking the field application to the biomechanical explanation of the inputs and outputs of performance during the explanation and kinetic analysis.

Third Theme: Memory & Information Processing

Table 10. Shows Arithmetic Averages, Standard Deviations and Percentages of the Paragraphs of the Recall and Processing Axis

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No	Paragraph	M	SD	Percentage	Level	Rank
11	The student retrieves previous scientific information and employs it in new study situations.	3.73	0.53	74.6%	High	3
12	The student memorizes the sequential steps of the difficult motor skills and applies them accurately.	3.82	0.47	76.4%	High	1
13	The student relies on prior mental analysis to reach the most appropriate solution to the sports situation.	3.65	0.59	73.0%	High	4
14	The student shortens the processing time of the motor information to quickly implement the appropriate response.	3.78	0.50	75.6%	High	2
15	The student retains learning and mathematical concepts for long periods of time without forgetting.	3.61	0.61	72.2%	High	5
-	The general average of the third axis	3.72	0.42	74.4%	High	-

Analysis of the paragraphs of the third axis:

The results of the statistical analysis of the paragraphs of the third axis, represented by (Memory & Information Processing), show a high level of mental competence and cognitive processing ability among the members of the research sample, as this axis is the pivotal pillar in building motor memory and accelerating the neuromuscular response time among physical education and sports science students, which enables them to store, retrieve, and modify motor programs during educational and training situations. The The general average of the third axis is an arithmetic average of (3.72) with a standard deviation of (0.42) and a percentage of (74.4%), which places it within the (high) level. The numerical and analytical details of the paragraphs of this axis are shown in order sequentially according to their relative importance and descending statistical order as follows: Paragraph (12), which states (the student memorizes the sequential steps of difficult motor skills and applies them accurately)—topped the first rank among the paragraphs of the axis with the highest arithmetic average of (3.82), a standard deviation of (0.47) and a percentage of (76.4%), to record an evaluation level of (high).

This result is attributed to the high ability of the sample members to develop mental coding and sequential storage of the parts of complex and difficult motor skills, and then retrieve this motor sequence and apply it in the field with harmonic accuracy that indicates the efficiency of forming motor programs in short and medium term memory. In second place, paragraph (14), which included (the student shortens the processing time of motor information to implement the appropriate response quickly) came in second place, with an arithmetic mean of (3.78), a standard deviation of (0.50), a percentage of (75.6%), and a level of (75.6%). (High). This value highlights the speed of central processing and the response of the nervous system, as students are characterized by the ability to reduce the decision time (Reaction & Processing Time) and quickly reach the appropriate motor response to sudden field changes. Paragraph (11), which states that "the student retrieves previous scientific information and employs it in new study situations"—came in third place with an arithmetic mean of (3.73), a standard

deviation of (0.53), a percentage of (74.6%), and a level of (high). This result reveals that students possess the skill of Transfer of Learning, which enables them to link the previous knowledge and skill stock and employ those accumulated experiences in modern learning and motor situations efficiently and effectively. Finally, paragraph (15), which states that the student retains learning and mathematical concepts for long periods of time without forgetting came in fifth and last place within this axis with an arithmetic mean of (3.61), a standard deviation of (0.61), and a percentage of (72.2%), and it is also located within the (high) level. This result reveals an aspect that requires reinforcement in the cognitive structure of performance, as the results showed a relative decline in the long-term mental retention of some concepts and skills in the sample members when exercise or repetition is interrupted, which necessitates focusing on distributed practice methods and fixed and spaced repetition to consolidate long-term motor memory.

Fourth Theme: Problem Solving & Decision Making

Table 11. Shows Arithmetic Averages, Standard Deviations, and Percentages of the Problem Solving Axis of Decision Making

No	Paragraph	M	SD	Percentage	Level	Rank
16	The student makes quick and correct tactical decisions under the pressure of athletic competition.	3.80	0.51	76.0%	High	1
17	The student provides innovative solutions to tactical or educational problems facing them.	3.62	0.60	72.4%	High	5
18	Students have the flexibility of thinking that enables them to adjust their study or sports plan when the situation changes.	3.74	0.52	74.8%	High	2
19	The student analyzes his personal mistakes in a scientific manner and works to correct them himself.	3.68	0.56	73.6%	High	4
20	The student connects the requirements of the university environment with their future goals as a successful teacher or trainer.	3.71	0.54	74.2%	High	3
-	The general average of the fourth axis	3.71	0.44	74.2%	High	-

Analysis of the paragraphs of the fourth axis:

The results of the statistical analysis of the paragraphs of the fourth axis, represented by (Problem Solving & Decision Making), show a high level of tactical coping ability and mental adaptation among the members of the research sample, as this axis constitutes the highest level in the ladder of higher cognitive processes, as the sports and academic environment requires a high ability to immediately analyze stressful situations, and choose strategic alternatives that can overcome field obstacles. The general average of the fourth axis reached an arithmetic average of (3.71) with a standard deviation of (0.44) and a percentage of (74.2%), which places it within the (high) level. The numerical and analytical details of the paragraphs of this axis are shown in order sequentially according to their relative importance and descending statistical order as follows: Paragraph (16) which stipulates that (the student makes quick and correct tactical decisions under the pressure of sports competition) topped the first rank among

the paragraphs of the axis by obtaining the highest arithmetic mean of (3.80), with a standard deviation of (0.51) and a percentage of (76.0%), to record an evaluation level of (high).

This outstanding result is attributed to the emotional readiness and self-control of physical education students, which gives them the ability to maintain the firmness of tactical decision and the accuracy of planning choices even under the weight of psychological and competing public pressures. In second place, paragraph (18), which included (the student has the flexibility of thinking that enables him to modify his study or sports plan when the situation changes) came in second place, with an arithmetic mean of (3.74), a standard deviation (0.52), a percentage of (74.8%), and a level of (high). This value highlights the ability of the sample members to have the skill of adaptive flexibility, which allows them to abandon stereotypical plans and modify their motor or tactical performance strategies in an immediate manner that suits unexpected scenarios during the competition or practical lesson. Paragraph (20)—which states that (the student links the requirements of the university environment with his future goals as a successful teacher or trainer) came in third place with an arithmetic mean of (3.71), a standard deviation of (0.54), a percentage of (74.2%), and a level of (74.2%). (High). This result reveals the clarity of the professional vision and self-awareness of students, as the conscious link between the current academic achievement and the future field requirements of the teaching and sports training profession contributes to raising the motivation towards learning and understanding the methods of solving administrative and technical problems.

Finally, paragraph (17), which states that the student provides innovative solutions to the tactical or educational problems he faces, came in fifth and last place within this axis with an arithmetic mean of (3.62), a standard deviation of (0.60), and a percentage of (72.4%), and it falls within the The (high) level as well. This result reveals an aspect that requires development and attention, as students often tend to follow traditional and proven planning and instructional solutions, highlighting the urgent need to support creative thinking skills and design educational and training situations based on learning by exploring and innovative solutions to unfamiliar field problems.

Third: Presentation and analysis of the results of the correlation between the two variables

For the purpose of verifying the validity of the first main hypothesis of the research, which states: "There is a statistically significant correlation at the level of significance ($\alpha \leq 0.05$) between communication skills and cognitive perception among college students from the point of view of teachers". The Pearson correlation coefficient was calculated as shown in the following table:

Table 12. Shows Pearson's correlation coefficient between the axes of communication skills and cognitive cognition

Cognitive Cognition / Communication Skills	Verbal communication	Non-verbal communication	Listening and Listening	Interactive Communication	Overall Communication Skills Degree
Attention and Cognitive Focus	0.681**	0.724**	0.710**	0.655**	0.735 **

Tactical Understanding and Comprehension	0.705**	0.748**	0.692**	0.672**	0.742**
Recall and Information Processing	0.632**	0.669**	0.684**	0.618**	0.689**
Problem Solving and Decision Making	0.664**	0.701**	0.648**	0.690**	0.718**
The total	0.722**	0.765**	0.734**	0.708**	0.758**

* The coefficients are statistically significant at the significance level $\alpha \leq 0.01$

The results of Table (12) show that there is a positive (direct) and very strong correlation between the total score of communication skills and the total degree of cognitive cognition, as the value of the total Pearson correlation coefficient $r=0.758$ reached the significance level of $p=0.000$ which is less than 0.01 . "Non-verbal communication" also had the highest correlation with cognitive perception as a whole with $r=0.765$ while the axes of "comprehension and comprehension" and "attention and concentration" had the highest correlation with the sum of communication skills with 0.742 and 0.735 respectively. This confirms the full acceptance of the first hypothesis.

DISCUSSION

Discussing the Results of Communication Skills among Students of the College of Physical Education and Sport Sciences (Misan University)

The statistical results show that the students of the College of Physical Education and Sport Sciences at Misan University achieved a (high) level in the overall scale of communication skills, with the "non-verbal communication" axis topping the first ranks compared to the values of the other axes. This result is a logical and natural reflection of the structure of the specialized educational and training environment in sports sciences, as the nature of physical and field activity imposes communication patterns that go beyond traditional verbal templates and move towards rapid adaptation to the requirements of field performance. The researcher attributes the prevalence of non-verbal communication to students' communication skills due to the nature of the sports discipline and the tactical necessity, as sports performance is full of rapid variables and stressful situations that do not give the practitioner a time span to send or receive lengthy verbal directions. The use of facial expressions, body language, and specific hand gestures compensates for the time gap and prevents the loss of tactical effort and competition time, as body language in physical education transforms into a "unified motor code" that the members of the same team understand and teaching, which increases the efficiency of the consensual response and the speed of the implementation of planning tasks. This finding is consistent with the study of Pastae (2025) that nonverbal communication skills account for more than 65% to 70% of the total meaning conveyed in stressful reactive situations, and that reliance on facial expressions and body language increases in open environments that require immediate motor responses to avoid distraction of the communication message. It is also reinforced by Lochhead ET AL., (2024) study, which indicated that athletic and field training develops "visual response and signal encoding" skills in its members in a way that directly links gesture to tactical duty, reducing harmonic errors and maintaining the continuity of the team's motor rhythm. This result acquires its procedural dimensions

from the environmental and field specificity of the faculties of physical education at Misan University, as the outdoor playgrounds and spacious specialized halls are characterized by the presence of influential environmental factors such as external noise, wide viewing distances, and sound dispersion. These spatial challenges necessitate the intensive reliance of teachers and students on close eye contact, gestural cues, and sound inflection contrast (paralanguage)) to maintain the field order, ensure the delivery of the educational message, and achieve an immediate response without deviating from the objectives of the training module. This field vision is in line with what the study of Ramos et al., (2025) revealed that non-verbal communication and effective listening are the main drivers of managing field behavior in physical education lessons, as the contrast of tone of voice and direct gestures of the teacher contributes to controlling classrooms and open playgrounds, and reducing the intensity of emotional tension among students during the performance of complex skills. From a psychomotor and cognitive point of view, the results of effective communication are consistent with the principles of cognitive theory and information processing theory, as visual and non-verbal stimuli are processed within the central nervous system through faster cognitive pathways than compound auditory verbal stimuli. This cognitive abbreviation gives the student an intuitive speed in linking the non-verbal instructions issued by the teacher to the motor programs stored in memory, which reflects positively on the stability of artistic performance and social and leadership cohesion among the team members. This result is in line with Hesar and Rahmadini (2025) study, which showed that students of physical education colleges acquire a distinct communication style that integrates field leadership, tactical problem solving through body language and immediate positive reinforcement, and that the expansion of university playground spaces naturally necessitates the enhancement of visual communication skills and unified hand gestures.

Discussing the Results of Cognitive Perception among Students of the College of Physical Education and Sport Sciences (Misan University)

The statistical results show that the students of the College of Physical Education and Sport Sciences at Misan University achieved a (high) level in the overall scale of cognitive cognition with a general average, with the axis of "attention and cognitive concentration" topping the first ranks compared to the values of the rest of the axes. This result is a logical reflection of the structure of motor and physical performance, which depends mainly on the safety and speed of the cognitive-sensory chain within the educational and training environment. The researcher attributes the students' enjoyment of this high level, and the top of the attention and concentration axis, because the process of motor learning requires Continuous sensory-mental processing of all field stimuli: the student-athlete cannot absorb and apply biomechanical skills and complex tactical plans unless he has a high ability to direct his attention and intensify his cognitive focus towards important stimuli (such as the movement path of the ball, the movement of the opponent, and the timing of the performance) and to exclude field and environmental distractions.

This finding is consistent with the conclusion of Barzyk (2024) study that selective focus and attention are the cornerstones of motor program building and feedback speed, as focused attention contributes to reducing harmonic errors and improving the efficiency of central processing in athletes. It is also reinforced by the study of Pal, Kumari and Yadav (2025), which indicated that success in implementing compound

sports tactics depends primarily on the learner's ability to isolate external distractions and direct cognitive abilities towards skill touchpoints on the field. This result acquires its evaluation and procedural dimensions based on the academic and field experience of the teaching staff at Misan University, as the teachers rely on direct and accurate observation of skill and tactical applications during practical lessons in the stadiums and specialized halls. This continuous field friction enabled the teaching staff to evaluate these abilities with high accuracy, track students' quick responses to various sports situations, and provide immediate feedback), which in turn works to consolidate and develop cognitive cognition.

This field vision is in line with what the study of Arban et al., (2023) revealed that continuous field evaluation based on direct observation by teachers is the most influential variable in the development of cognitive perception and planning awareness among physical education students. From a psychomotor and theoretical point of view, these results are integrated with the concepts of Information Processing Theory, where cognitive perception goes through the stages of encoding, storing, and retrieval, and attention skills are the main pillar for feeding motor memory with correct information. This cognitive possession gives the student a high ability to adapt mentally and control motor performance under various conditions of competition and academic pressure. This finding is in line with a study by Schmidt and Lee (2025) that showed that higher levels of cognitive cognition and attention accelerate the automation of motor performance, and give the learner a greater ability to link biomechanical theories with quick field solutions.

Discussing the Results of the Correlation between Communication Skills and Cognitive Cognition among Students of the Physical Education and Sport Sciences (Misan University)

The statistical results resulted in a strong and positive direct correlation between communication skills and cognitive perception among the members of the research sample, as this indication indicates that the higher the efficiency of students in using communication skills (verbal and non-verbal), the more it was accompanied by a parallel and direct increase in their levels of cognitive cognition and their abilities to mentally process sports and academic situations. The researcher attributes the strength of this correlation to the consistency and conceptual interdependence between the two variables in the light of cognitive and sports psychology theses. In its various dimensions such as active listening, verbal comprehension, and reading gestural cues—the gateway and the primary entrance to receive sensory coding, motor and tactical information in the playground and classroom. Students who possess excellent listening and communication skills receive theoretical explanation, field guidance, and feedback from their professors and trainers with high accuracy and complete clarity, which facilitates the processes of encoding and cognitive coding within the mental structure, and facilitates the transfer and storage of this data in long-term memory. This finding is consistent with the conclusion of the study of Alibogloo (2026) that intercommunication skills between the trainer and the learner constitute the basic nutrition of higher cognitive processes and reduce cognitive overload, which directly contributes to the accuracy of motor program retrieval. It is also reinforced by the study of Lu (2023), which proved that there is a positive and statistically significant correlation between the efficiency of field communication and the level of knowledge comprehension and

planning performance among mathematical science students. In terms of application, in the field environment of the faculties of physical education at Misan University, this relational relationship is manifested in the speed and accuracy shown by students during complex competitive and educational situations, as the quality of non-verbal communication, response to gesture cues and tone changes enhance the student's ability to control attention, direct cognitive focus, and reject environmental distractions. This constant interaction between communication inputs and mental processing in turn contributes to enhanced recall speed and recall of tactical blueprints, which is necessarily reflected in the accuracy of quick and innovative tactical decision-making appropriate to changing competition conditions. This view is in line with what was revealed by the García-Fariña (2025), which showed that motor learning environments that rely on high interactive communication networks increase the efficiency of tactical thinking and innovative solutions among practitioners. It is also in line with Li (2024) study, which showed that the development of communication skills among physical education students is directly reflected in the development of their abilities to self-evaluate and think analytically for motor errors, which closely links effective communication and integrative cognitive development.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. Students at the College of Physical Education and Sport Sciences at Misan University have a (high) level of communication skills as a whole from the point of view of their professors, with "non-verbal communication" topping the first ranks, which reflects the nature of field specialization and reliance on body language and motor cues during sports performance.
2. The students of the college enjoy a (high) level of cognitive cognition, as the results showed that "attention and cognitive focus" and "tactical understanding and interpretation" represent the most prominent dimensions of their distinguished knowledge during lectures and field exercises.
3. There is a strong positive (direct) correlation with statistical significance between communication skills and cognitive perception among college students, as the higher the efficiency of students' communication skills (verbal, non-verbal, and listening), the more positive it is reflected on their abilities in processing information, understanding plans, and making sound decisions.
4. Field results confirm that effective communication between the teacher and the students, and between the students themselves, is a prerequisite for the development of higher mental processes such as attention, recall, and biomechanical and tactical analysis.

Recommendations

In light of the conclusions of the research, the researcher recommends the following:

1. Updating Academic Curricula and Programs: Incorporating workshops and educational modules dedicated to the development of communication and effective listening skills within the plan to prepare physical education teachers and trainers at the College of Physical Education and Sport Sciences at Misan University.

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2. Attention to Cognitive Field Applications: Encouraging College members to use modern teaching methods based on problem solving and reflective thinking, to enhance students' levels of cognitive cognition and tactical analysis during practical lessons.
3. Providing an interactive communication environment: Investing in indoor sports activities and university tournaments as a means to develop students' non-verbal communication, teamwork, and leadership skills.
4. Holding periodic seminar courses: Organizing scientific seminars for students that highlight the importance of cognitive cognition, psychological control, and successful communication in managing complex sports and competitive situations.

REFERENCES

- Adriani, V., & Irwandy, D. (2024). Interpersonal Communication Using Personal Sport Device In Forming Community. *Journal of Communication and Public Relations*, 3(1), 1-18.
- Akpetou, J., & Furley, P. (2023). Communication in sports teams. *Group Communication*, 324-339.
- Alibogloo, H. P. (2026). The Integration of Cognitive Neuroscience Principles in Communication Education: A Comprehensive Review of Curricular Designs and Skill Transfer Efficacy. *OBM Neurobiology*, 10(2), 1-17.
- Arban, J., Domdom, V., Aliazas, J. V., & Gimpaya, R. (2023). Competency assessment of physical education teachers and its influence on students' cognitive learning. *International Journal of Scientific and Management Research*, 6(6), 28-44.
- Barzyk, P. (2024). Motor Learning in Sports and Rehabilitation: From classical strategies towards innovative technologies (Doctoral dissertation, Universität Konstanz).
- Farrow, D., Baker, J., & MacMahon, C. (Eds.). (2023). *Developing sport expertise: Researchers and coaches put theory into practice*. Taylor & Francis.
- García-Fariña, A. (2025). Perspective chapter: the role of instructional communication in enhancing active learning—new approaches for the physical education of the future. In *Teacher Training and Student Learning—Past Values, Present Uncertainties and Future Prospects*. IntechOpen.
- Hesar, R., & Rahmadini, R. (2025). The Role Of Group Communication In Collaborative Learning In Physical Education. *MEDIOVA: Journal of Islamic Media Studies*, 5(1), 100-117.
- Li, X. (2024). Enhancing university physical education through data-driven reform of sports club systems. *Journal of Combinatorial Mathematics and Combinatorial Computing*, 119, 13-22.
- Lochhead, L., Feng, J., Laby, D. M., & Appelbaum, L. G. (2024). Training vision in athletes to improve sports performance: a systematic review of the literature. *International Review of Sport and Exercise Psychology*, 1-23.
- Lu, H. F. (2023). Statistical learning in sports education: A case study on improving quantitative analysis skills through project-based learning. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 32, 100417.
- Molina-García, N., González-Serrano, M. H., Ordiñana-Bellver, D., & Baena-Morales, S. (2024). Redefining education in sports sciences: A theoretical study for integrating

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- competency-based learning for sustainable employment in Spain. *Social Sciences*, 13(5), 242.
- Nikolic, J. L. (2025). The Coach's Soft Power: Communication Skills as a Key to Developing Sports Teams and Athletes. *AGORA Int'l J. Jurid. Sci.*, 19, 192.
- Pal, A., Kumari, P., & Yadav, P. (2025). Play, Lead, Teach: Tapping Into the Power of Sports for Teacher Development and Classroom Innovation. In *Holistic Approaches to Teacher Development: Leadership, Pedagogical Practices, and Cognitive Insights* (pp. 147-170). IGI Global Scientific Publishing.
- Pastae, O. M. (2025). Silent Signals: The Role of Nonverbal Communication in Team Sports. *Annals Constantin Brancusi U. Targu Jiu, Letters & Soc. Sci. Series*, 47.
- Ramos, J. R., Guillén, M. J. G., Paredes, A. C., & Arroyo, M. D. C. G. (2025). Impact of verbal and non-verbal communication in educational settings on perception of importance of physical education in adolescence. *Retos: nuevas tendencias en educación física, deporte y recreación*, (62), 1042-1049.
- Schmidt, R. A., & Lee, T. D. (2025). Motor learning and performance: From principles to application. *Human Kinetics*.
- Shi, Y., Wang, Z., & Lipowski, M. (2024). Integrating school physical education into adolescent resilience education in the context of integration of sports and education in the new era: A literature review study. *US-China Education Review*, 14(8), 505-19.
- Siedentop, D., & Van der Mars, H. (2022). Introduction to physical education, fitness, and sport. *Human kinetics*.
- Tokay, B., & Akil, M. (2025). Tactical-game and technical approach: the importance of sport type and method in developing metacognitive control and awareness in school going children. *Current Psychology*, 44(12), 11460-11471.
- Yang, X., Tian, J., & Madni, G. R. (2025). A nexus among sports education, psychological well-being, social development, strategic capacity, and environmental awareness in China. *BMC Sports Science, Medicine and Rehabilitation*, 17(1), 287.
- Zou, L., Zhang, Z., Mavilidi, M., Chen, Y., Herold, F., Ouwehand, K., & Paas, F. (2025). The synergy of embodied cognition and cognitive load theory for optimized learning. *Nature Human Behaviour*, 9(5), 877-885.