

**The analysis of the non-verbal communication of a physical education teachers for Secondary School during the preparatory stage (warm-up) of the P.E session.**

تحليل التواصل غير اللفظي لأساتذة التربية البدنية والرياضية للتعليم الثانوي في المرحلة التحضيرية من الحصة

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**Abstract:**

The study aimed at analyzing the non- verbal behaviors of secondary school teachers of P.E physical education and sport during the preparatory session. The two researchers have used the descriptive analytical method, through regular observation of the teaching behavior between the teacher and the student .The sample of the study was 8 teachers who were selected in an intentional way, by using the observation grid as a tool of study.

The study concluded that the teacher's non- verbal behaviors, differ according to their experiences, while the type of sports activity being taught to students has no effect on the form of the non-verbal behaviors of the teachers.

**Keywords:** Non-verbal communication ; physical education and sport teacher (P.E); the secondary school; preparatory stage (warm up).

## **Introduction:**

Undoubtedly, education is a noble and sacred profession, carrying a divine message. It is considered noble because it demands continuous work, special skills, and a strong character that arises from the teacher's deep sense of responsibility towards their students and the goals of society. The teacher serves as a good role model for their students, not only in terms of character development and academic achievements but also in their attitudes, values, habits, and behavior. All these aspects reflect in the teacher's actions and conduct, which quickly influence their students, as the teacher becomes the exemplar and model to be emulated.

Various studies in the field of teaching indicate that 85% of success is attributed to communication skills, while 15% is attributed to task accomplishment skills (Taouinet , Ali, 2009, P 09). Furthermore, some educational literature suggests that more than 80% of messages directed towards students during classroom interactions are non-verbal messages (Zeitoun, Kamel, Abdelhamid, 2003, P 411) .These statistics emphasize the crucial role of effective communication in the teaching and learning process .Therefore, the success of a teacher in their profession goes beyond possessing knowledge, the ability to utilize information, skills, and various teaching methods. It extends to include their communication skills with students, whether verbal or non-verbal. It has a significant impact on the development of students' personalities, shaping various behaviors that they acquire later on, such as discipline, orderliness, work ethic, self-confidence, respect for others, and increased motivation for learning. The interactions that take place in the classroom cannot be limited to verbal communication alone. They also encompass non-verbal communication, including gestures, body movements, facial expressions, and signals, all aimed at delivering a clear and effective message to the students or vice versa .

## **The Problem:**

It has become evident that the process of education is one of the most complex and challenging tasks. Numerous developments have emerged from a vast amount of research, which has revolutionized teaching methods and approaches. This has transformed the role of teachers from being knowledge providers to becoming guides and facilitators of students' behaviors through specific learning strategies. For a teacher to be effective in this new context, they must be conscious of the various teaching strategies. The strategies employed by the teacher in the classroom encompass three main approaches: the classroom interaction strategy, the discovery and experiential strategy, and the presentation strategy (Qatami Youssef, Qatami Nayefah, 2001, P19)

The classroom interaction strategy encompasses multiple aspects, including the method of asking questions and receiving answers, the use of dialogue and discussions, and the deductive or final phase (Qatami Youssef, Qatami Nayefah, 2001, P20)

Due to the significance of this strategy in the education process, studies emphasize the teacher's mastery of verbal and non-verbal communication and interaction skills. A careful examination of the secondary education curriculum reveals the importance of physical education and sports as a subject cherished by students, driven by their passion for it. The

uniqueness of this subject lies in its focus on cognitive, psychomotor, and affective aspects of the students' learning experience. The subject is taught in three stages: the preparatory stage, the main stage, and the final stage, each with its specific procedural objectives that the teacher prepares. The preparatory stage in physical education and sports class is considered as the most crucial stage, since the success or failure of achieving the specific lesson objective depends on it. A good preparation and attention to this stage undoubtedly lead to the smooth progression of the rest of the lesson. The preparatory stage is commonly known as the warm-up, the physical and psychological conditioning phase for students, preparing them for greater efforts during the main stage of the lesson.

Based on the researcher's experience in the field of teaching physical education and sports at the secondary level, and their involvement with inspectors as an observer for numerous teachers of physical education in their confirmation exams, they noticed a lack of attention given to this stage. Some teachers tend to allocate only a few minutes to the preparatory stage, limiting it to merely introducing the lesson objectives. They may appoint a student to oversee the warm-up exercises without focusing on the language used to address the students, whether it is verbal or non-verbal communication.

To ensure an effective preparatory stage, teachers should allocate sufficient time and effort to its planning and execution. Engaging students in the warm-up exercises and setting clear instructions using appropriate verbal and non-verbal communication is essential to create a good learning atmosphere and maximize the benefits of the physical education and sports class. The teacher's wear, the coherence of their clothing, the liveliness in presenting objectives, the teacher's mood, standing posture, and every movement and gesture they make are all elements that may impact students' motivation and enthusiasm for engaging passionately and wholeheartedly in the lesson. "Non-verbal cues from the teacher often carry more power than words in capturing students' attention and increasing their motivation to Learn" (Qatami Youssef, Qatami Nayefah, 2000, P241)

From this, the following question was raised: What are the non-verbal behaviors exhibited by physical education teachers in secondary education during the preparatory phase of physical education lessons.

This question encompasses two sub-questions:

- 1/ Does the factor of experience have an impact on the form of non-verbal behaviors displayed by teachers during the preparatory phase of the lesson?
- 2/ Does the type of sports activity taught to students have a direct impact on non-verbal behaviors of the teacher?"

**The Hypotheses:** Physical education teachers rely more on positive non-verbal behaviors during the preparatory phase of physical education lessons.

**The Objectives:** The aim of this research is to identify the most prevalent non-verbal behaviors displayed by physical education teachers during the preparatory phase of physical education session.

### 1. Key terms used in the research :

Due to the specificity and importance of the topic, then the presence of some terms that require precise definitions, the researcher has relied on the following conceptual definitions:

**1.1 Communication:** Defined by “Al-Tubaji” as “the process or method through which knowledge is transferred from one person to another, leading to understanding between these individuals or more. This process has elements, components, a direction in which it operates, a goal it seeks to achieve, and a domain in which it operates and influences. This subject makes it subject to observation, research, experimentation, and scientific study in general.” (Al-Tubaji, Hussein , 1980, P 25)

**1.2 Non-verbal communication:** is defined by “Mohammed Hassan Saad” as “all messages or meanings that are transmitted and exchanged without using words.” Meanwhile, “Fiver and Donlob” (1993) indicate that non-verbal communication is associated with a set of body languages, which fall under the following languages: (Saad, Mohamed Hassan, 2000, p 266)

- Haptic Language (language of hands).
- Optic Language (language of eyes).
- Proxemic Language (spatial proximity language).
- Labic Language (language of lips).
- Pedic Language (language of legs/feet).
- Chromatic Language (language of colors).

According to “Farhati Al-Arabi” non-verbal communication can be classified into two types:

**1.2.1 Positive Non-verbal Communication:** It includes all the gestures, movements, signals, and emotions emitted by the teacher, mostly marked with positivity. These enhance the positive verbal message and facilitate learning for the students during pedagogical communication inside the classroom. (Farhati, AL-arabi Belkacem, 2010, p 194)

**1.2.2 Negative Non-verbal Communication:** It encompasses all the gestures, movements, signals, and emotions emitted by the teacher, mostly marked with negativity. These hinder learning for the students during pedagogical communication inside the classroom. (Farhati, AL-arabi Belkacem, 2010, p 195)

**1.2.3 The researchers define non-verbal communication:** as “the set of gestures, movements, and postures that are spontaneously or deliberately expressed by the physical education teacher, reflecting their impressions and emotions during the session.”

**1.3 Physical Education Teacher:** “Amin Anwar Al-Khouli” defines the physical education teacher as “the key figure in the learning process, responsible for choosing suitable activities for students in physical education sessions, through which educational and pedagogical goals can be achieved”. (Al-Khouli, Amin Anwar, 1996 , P 11)

- 1.3.1 The researchers define the physical education teacher** as “a competent person capable of managing the class in a physical education lesson after undergoing training in the field of physical education”.
- 1.4 Physical Education session:** It is one of the academic subjects, like other sciences such as natural sciences, chemistry, and language. However, it differs from these subjects as it provides a lot of knowledge and information that covers health, psychological, and social aspects, in addition to the knowledge that covers the intellectual aspects of human body formation, using physical activities such as exercises and various games conducted under the educational supervision of teachers who are prepared for this purpose. (Mazrou, Al-saeed, 2016, p 16)
- 1.5 Secondary Education:** It is defined as the education that follows the intermediate level and precedes the University level, lasting for three years. Successful completion of this stage leads to obtaining the baccalaureate certificate at the end of the school path. (Bouamer, Ahmed Zinedine, 2008, p 25)
- 1.6 Preparatory Stage (warm up):** The researchers define it as “a part of the educational lesson whose function is to connect the content of the previous lesson with the current one and to mentally, physically, and intellectually prepare the students through engagement and interaction, thereby stimulating the students' motivation to perform better in the main stage of the lesson”

## **2. The previous studies**

**2.1 The first study:** A doctoral thesis by “Barrierr-Boizumault Magali” (2013) from Claude Bernard Lyon 1 University in France titled “Non-Verbal Communication of Physical Education Teachers” The research aimed to investigate the alignment and misalignment between verbal communication, represented by expressions and words, and non-verbal communication, represented by movements and gestures, of teachers during physical education classes. Additionally, it intended to understand the awareness and perception of both teachers and students regarding various non-verbal behaviors occurring during the class and their impact on students' motivation. The researcher utilized a descriptive methodology, and three research instruments were employed:

- a) A questionnaire directed at teachers and another for students to assess the use of non-verbal communication during the session.
- b) A specific interview with teachers to explore their awareness of their non-verbal behaviors.
- c) A non-verbal communication observation grid, prepared by the researcher, was used to assess the alignment between verbal and non-verbal communication during the session.

The researcher found that teachers rarely perceive their non-verbal behaviors, which they exhibit during their teaching, as the study suggests. Furthermore, the study revealed that the positive non-verbal behaviors are linked to the emotional aspect of the teacher-student relationship, given the unique nature of physical education as a subject.

Additionally, the study indicated that variations in non-verbal behaviors among teachers are influenced either by the type of activity being conducted, or by the differences in teachers' characteristics, such as experience and gender, or by the differences in students' characteristics.

As a recommendation, the study emphasized the importance of continuous training for teachers to enhance their non-verbal behaviors during teaching and to develop their understanding of various non-verbal cues

**2.2 The second study:** Conducted by “Patrick Vincent and Nicolas Schulé” (2016) in Lausanne, France, titled “Non-verbal Communication of Physical Education Teachers during the Warm-up Phase in Secondary School,” aimed to observe the impact of various non-verbal communications of physical education teachers on student engagement during the warm-up phase in secondary education. Additionally, the study sought to identify positive movements and gestures that enhance students' motivation in physical activities.

The researchers utilized a descriptive approach to match the study's nature and selected a purposive sample of two teachers. They recorded six sessions for each teacher and employed two tools: The non-verbal communication observation network of “Boizumault Magali” (2013), and a teacher interview tool.

The findings revealed that the type of non-verbal communication (positive or negative) from the teacher significantly affects students' engagement during the warm-up phase. The positive participation of students during the warm-up was particularly influenced by the teacher's personality within the selected sample. However, the study concluded that non-verbal behaviors during the warm-up phase did not differ based on the type of activity being performed.

### 2.3 Commentary on Previous Studies:

The two studies that the researchers relied on are of great importance in this study. The first study provided us with the tool that the researchers used to analyze non-verbal communication, which is among the few tools that study and analyze non-verbal behaviors in physical education and sports classes. This is particularly significant due to the unique nature of this subject and its differences from other academic subjects. On the other hand, the second study presented us with the results of applying the same tool during the preparatory stage

### 3. Tool of the research

The non-verbal communication observation and analysis tool consists of 21 non-verbal behavioral categories distributed across 7 axes in two tables.

#### 3.1 The components of the non-verbal observation grid

- a) The first table describes the behavior in terms of form, time, as well as the speech and commands associated with it, the parties involved in the non-verbal behavior.
- b) The second table analyzes the behavior's location in the lesson, exercise, and the type of behavior, as detailed below:

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(warm up), which will assist us later in the process of analyzing and discussing the results alongside the findings from the first study

**Table (01): Identification of Non-Verbal Behavior Based on the Parties Involved and its Location in the Session**

<b>Teacher:</b> _____		<b>School</b> _____	
<b>Class:</b> _____		<b>Timing:</b> _____	
Start Time :.....	End Time :.....	Duration :.....	
time in minutes		1 m	2 m
Initiator			
Student's Gender			
<b>Talk and commands</b>			
The categories	Content of the Categories		
Category 1	Other Non-Verbal Communication/Others		
Category 2	Organizing the Class with Body Movements or Gestures		
Category 3	Organizing the Class by Touch (Moving a Student, Pushing...)		
Category 4	Repetitive/Specific Gestures		
Category 5	Movement with Pointing      Symbolic Movement		
Category 6	Simple Gestures      Symbolic Non-Verbal Communication without Verbal Language = Signals		
Category 7	Gestures Synchronized with Verbal Language/Rhythmic Gestures Synchronized with Verbal Language and Movement		

Source : (Barrierr-Boizumault Magali, 2013, p. 362)

The table above represents the first section of the “Boizumault Magali tool. The observer records the personal information of the teacher and the class at the beginning of the observation of non-verbal behaviors. At the end of the observation period, the observer returns to the first section to record the end time of the observation.



**Table No. (02): Analysis of Positive and Negative Non-Verbal Behaviors**

Non-verbal Communication grid		
	The categories	The content of Categories
<b>Talk and commands</b>	Category 08	Teacher's Calmness and Silence
	Category 09	Exchanging jokes and funny conversation with students
	Category 10	Non-academic attention (Attention to one group over another)
<b>Reaction and Response to Good Performance</b>	Category 11	Non-verbal Congratulations or Positive Facial Expressions
	Category 12	Expressing congratulations non-verbally through gestures or facial expressions.
	Category 13	Non-verbal Congratulations through touching
<b>Reaction or Response to Weak Performance / Errors</b>	Category 14	Non-verbal Encouragement through Facial Expressions and supportive looks.
	Category 15	Non-verbal Criticism through Negative Facial Expressions and sharp looks.
	Category 16	Non-verbal Criticism through Hand Gestures or Thumbs Down
	Category 17	Physical Touch for Improving Body Posture or Correcting Incorrect Movement
<b>Reaction or Responses to Deviant or Negative Behaviors</b>	Category 18	Organization or Warning through Body Movement (raising the index finger up wards
	Category 19	Asserting Authority through Body Movement: Demonstrating authority through body movements.
	Category 20	Maintaining Control through Negative and Sharp Facial Expressions
	Category 21	Maintaining Authority through Touch (pushing, moving someone)

Source : ( Barrierr-Boizumault Magali, 2013, p. 362)

Table Number (02) represents non-verbal interactions during physical education classes according to the "Barrierr-Boizumault Magali" tool. The observer records non-verbal behaviors that are unrelated to the class objectives in Categories (08), (09), and (10), which belong to the categories of conversation and commands. Meanwhile, positive and negative non-verbal behaviors are recorded separately in their respective categories using this table for the corresponding behavior. Categories ranked from number (11) to number (21).

### 3.2 General rules for using the non-verbal communication observation grid:



1. The non-verbal behaviors are observed by placing a mark (/) in the box corresponding to the category to which the behavior belongs.
2. Observations are recorded on the observation grid every five seconds. If the observer notices more than one behavior occurring within the same period, each behavior is recorded according to its location in the network.
3. Due to the privacy of physical education material and the need for the teacher to move around the classroom, some corners might not be captured by the recording devices. In such cases, the observer records this as "quietness" and "silence" on the teacher's part, every 5 seconds.
4. If the teacher interacts with the students while they are in a chain group this behavior is recorded under category number (10), which indicates non-academic attention, meaning focusing on one group over others.
5. If the observer detects a behavior from the teacher but cannot determine its nature, it is recorded under the first category "Other Non-Verbal Communication".
6. When the observer notices the teacher being quiet and still in the middle of the sports hall while observing the movements of the students, this behavior is recorded in two categories: category number (08), "Teacher's Quietness and Silence" and category number (19), "Control and Use of Authority through Body Language".
7. All behaviors in which the teacher is engaged in something other than interacting with the students are recorded in category number (10), "Non-Academic Attention".
8. When the teacher raises their voice at a student for making a mistake, the observer records this behavior in category number (07), "Simultaneous Gestures with Verbal Language," and records any other non-verbal behavior from the teacher in the respective category it belongs to.

#### **4. Research Methodology and Field Procedures:**

**4.1 The Methodology:** The researcher used the descriptive analytical method as it suited the nature of the study. This involved regular observation of the teaching behavior between the teacher and the students using recording devices. "This methodology is considered one of the most commonly used in psychological, educational, and social research. It examines phenomena as they appear in their current state, whether these phenomena are related to group behavior, institutions, individuals, or interpersonal relationships. The researcher relied on research tools such as interviews, observation networks, questionnaires, and standardized tests". (Farhati, AL-arabi Belkacem, 2012, p 127)

**4.2 Research Community and Sample:** To achieve the study's objectives, the researcher purposefully selected a sample from secondary schools in the city of Batna. The researcher ensured that the sample members had varying years of experience while excluding the gender variable due to the sensitivity of female physical education teachers to the recording process. These educational institutions were chosen for the substantial facilities and support provided by their administration and physical education teachers. The sample of teachers with identification numbers (01, 02, 03, 04) indicates teachers with less than 10 years of experience, while the sample of teachers with identification numbers (05, 06, 07, 08)

represents teachers with more than 10 years of experience. The table below illustrates the size of the community and the number of participants in the research sample based on the selected secondary schools:

**Table (03) presents the secondary schools, the number of teacher participants, their years of experience, and the number of student participants**

No.	Secondary School	Number of Teacher Participants	Years of Experience	Teaching Subject	Number of Student Participants
01	19 March 1962 Secondary School	1 out of 3 teachers	6 years	Long Jump	32
02	Adl Secondary School	1 teacher	7 years	Speed	34
03	Al-Ikhwa Abbas Secondary School	1 out of 2 teachers	8 years	Basketball	28
04	Al-Sadiq ibn Yahya Secondary School	1 out of 4 teachers	9 years	Handball	32
05	Abbas Laghrour Secondary School	1 out of 4 teachers	11 years	Basketball	36
06	Martyr Benflis Al-Taher Secondary School	1 out of 3 teachers	14 years	Volleyball	38
07	Martyr Mustafa bin Boulaid Secondary School	1 out of 4 teachers	18 years	Speed	40
08	Al-Ikhwa Lembarakia Secondary School	1 out of 2 teachers	20 years	Long Jump	32

Source: (the researchers 2023)

Table (03): Shows the secondary schools, the number of teacher participants (sample size: 23 teachers), their years of experience, and the subject they teach. It also indicates the number of student participants (sample size: 4860 students).

**4.3 Time and Location Boundaries:** This study was conducted between the months of January and March 2023 and included secondary schools in the city of Batna.

**4.4 Survey Study:** The researcher conducted a survey study with a small sample of 02 physical education teachers in secondary education. The main objective of the study was to ensure the positioning of recording devices and to practice using Barrierr-Boizumault Magali's non-verbal communication tool by the researcher. The study achieved its objectives.

## 5. Psychometric properties of the instrument:

**5.1 Inter-Rater Reliability:** Farhati Al-Arabi indicated that this type of reliability is assessed by presenting the initial form of the prepared instrument to a sample of experts in psychological and educational measurement, not less than five, accompanied by an instruction

sheet. They are then asked to rate it in terms of its measurement adequacy and the clarity of its items. (Farhati , AL-arabi Belkacem , 2012 , p 327)

According to Magali, the designer of the instrument, and to ensure the reliability of the tool in terms of its validity, the following steps were taken. ( Barrierr-Boizumault Magali, 2013, p. 184)

The analysis of the non-verbal communication observation grid was conducted based on its categories using a collection of images representing non-verbal behaviors. These images were gathered by the researcher through the results of her master's study.

These images and videos were presented through direct interviews with teachers, with each interview lasting an hour and a half. The purpose was to seek their opinions on these behaviors, interpret them, and determine their alignment with specific categories.

The instrument was presented to a group of specialists and experts in verbal and non-verbal interactions (body language) to gather their opinions. They reviewed the content of each category separately, and they confirmed the validity and accuracy of the network and its corresponding categories.

To ensure the validity of the instrument, the researchers presented it to a group of experts, including:

- Three university professors. Two educational inspectors for Physical Education in the Directorate of Education for the Batna province
- Two high school Physical Education teachers who were not part of the study's sample.

These experts confirmed the adequacy of the language used in the tool and acknowledged that the grid's categories included a significant number of non-verbal behaviors commonly encountered in Physical Education sessions. Consequently, the grid demonstrated the ability to measure non-verbal behaviors that occur during Physical Education session, making it applicable in the Algerian schools.

## **5.2 the stability of the tool**

According to "Magali," the designer of the tool, and for assessing the reliability of the non-verbal communication grid observation, the following steps weretaken (Barrierr-Boizumault Magali, 2013, p184) .

Relying on the observer's reliability (test-retest method), the researcher analyzed video clips and observed the non-verbal behaviors of the teachers in the grid. After one month, the researcher re-analyzed the same previous video clips and observations. The results, according to "Magali," demonstrated a very high internal stability in the monitoring outcomes, confirming the validity and consistency of the tool

To ensure the stability of the tool by the researchers:

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To calculate the stability, we relied on the test-retest method, which involves retesting. Since the researcher who designed the tool calculated and confirmed its stability, and the researchers also assessed the tool's inter-rater reliability, there is no doubt that the tool is stable through inferential analysis. However, it is still worthwhile to calculate the stability of the tool by applying it to the Algerian schools.

The same sample at a time interval between the two tests (Jacob, Ahmed Al-nour, 2007, P176) we analyzed (01) video and recorded the nonverbal behaviors observed on the grid. After a month (a sufficient period for forgetting the initial observation results), we analyzed and recorded the same video, and the following results were obtained.

**Table No. (04): Observed Behaviors in the First and Second Tests When Studying the Stability of the Tool**

	Talk and commands	Reaction and Response to Good Performance	Reaction or Response to Weak Performance / Errors	Reaction or Responses to Deviant or Negative Behaviors
TEST 1	122	2	7	120
TEST 2	134	6	2	135

Source: (The researchers 2023)

The stability coefficient is calculated using the following equation: (Al-Qoumi, Mohammad Mofeed, 2014, p. 259)

$$\text{Stability Coefficient} = \frac{2 \cdot c}{1 + c}$$

Where "C" represents the Pearson correlation coefficient, which is calculated using the following equation: (Al-Qoumi, Mohammad Mofeed, 2014, p. 259)

$$C = \frac{N \cdot \sum(X \cdot Y) - (\sum X \cdot \sum Y)}{\sqrt{[N \cdot \sum X^2 - (\sum X)^2] \cdot [N \cdot \sum Y^2 - (\sum Y)^2]}}$$

Where: N; Number of behavioral categories ; X: Test 1 ; Y: Test 2.

After performing the calculations, we obtained a stability coefficient of 0.96, indicating a very high level of stability.

## 6. Presenting the Study Results and Analysis:

**6.1 First, transcription of data for teachers with less than 10 years of experience:** After transcribing the recorded sessions, the following results were obtained:

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**Table number (05): Results of Non-Verbal Behaviors for a Sample of Teachers with Less than 10 Years of Experience**

The teachers		The teacher N 01		The teacher N 02		The teacher N 03		The teacher N 04		the total	the average for each category
Categories	the frequency	F	%	F	%	F	%	f	%		
	The Categories										
Talk and commands	Category 01	00	00	01	0.43	03	1.22	04	1.74	08	0.84
	Category 02	02	0.84	00	00	01	0.4	02	0.87	05	0.53
	Category 03	00	00	01	0.43	02	0.8	00	00	03	0.30
	Category 04	05	2.1	02	0.86	08	3.25	23	10	38	4.05
	Category 05	06	2.52	09	3.93	05	2.03	07	3.04	27	2.88
	Category 06	02	0.84	04	1.74	02	0.8	06	2.60	14	1.49
	Category 07	26	10.92	20	8.73	24	9.76	15	6.52	85	8.98
	Category 08	18	7.56	30	13.1	26	10.57	35	15.21	109	11.61
	Category 09	00	00	00	00	00	00	00	00	00	00
Category 10	69	29.00	58	25.32	63	25.61	40	17.39	230	24.33	
the total		128	53.78	125	54.48	134	54.47	132	57.4	519	55.05
Reaction and Response to Good Performance	Category 11	00	00	00	00	00	00	01	0.43	01	0.11
	Category 12	00	00	01	0.43	00	00	00	00	01	0.11
	Category 13	00	00	00	00	02	0.81	01	0.43	03	0.31
the total		00	00	01	0.43	02	0.81	02	0.86	05	0.53
Reaction or Response to Weak Performance / Errors	Category 14	01	0.42	00	00	02	0.8	01	0.43	04	0.41
	Category 15	03	1.26	02	0.86	00	00	01	0.43	06	0.64
	Category 16	01	0.42	04	1.74	01	0.4	03	1.30	09	0.96
	Category 17	00	00	01	0.43	03	2.13	00	00	04	0.64
the total		05	2.1	07	3.05	06	2.44	05	2.17	23	2.65
Reaction or Responses to Deviant or Negative Behaviors	Category 18	23	9.66	25	10.91	28	19.92	19	8.26	95	12.18
	Category 19	82	34.45	70	30.57	74	52.64	69	30	295	36.91
	Category 20	00	00	00	00	01	0.4	02	0.87	03	0.32
	Category 21	00	00	01	0.43	01	0.4	01	0.43	03	0.32
the total		105	44.12	96	41.92	104	42.27	91	39.57	396	49.73
the overall total		238	100%	229	100%	246	100%	230	100%	943	
The standard ratios of behaviors for each teacher to the total observed behaviors		25.25%		24.28%		26.08%		24.39%		100%	

Source: (The researchers 2023)

From the table number (05), it becomes evident to us that the standard ratios of behaviors for each teacher in relation to the total observed behaviors of the research sample are relatively close. However, it is noticed that the predominant non-verbal behaviors among the teachers are behaviors falling under categories of speech and commands, with an average

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standard ratio of 55.05%. The researcher explains this high ratio by stating that the preparatory stage of physical education lessons is the most utilized stage by teachers for providing explanations, setting lesson objectives, interacting with students, and giving responses.

Furthermore, it is also observed that behaviors falling under category number (07): simultaneous gestures with verbal language, category number (08): teacher's calmness and silence, and category number (10): non-academic attention, are the categories with the highest increase. The researcher explains this by the fact that physical education and sports classes take place in a wide area that requires teachers to use a sharp and elevated verbal language along with body movements and gestures to ensure that all students can hear and understand. Additionally, it is a subject where verbal language is often used simultaneously with non-verbal language to deliver accurate information.

The researcher attributes the higher average standard ratios for categories (08) and (10) to the factor of lack of experience. This is evidenced by the teacher's silence and calmness, which had an average standard ratio of 11.61%, while the category of non-academic attention was significantly higher with an average standard ratio of 24.33% of the total observed behaviors. The researcher also links this to the factor of lack of experience

As we also observe, there is a significant decrease in the average standard ratios for the categories related to reacting to good performance, which are categories (11), (12), and (13), with an average standard ratio of 0.53%. Similarly, there is a decrease in the categories related to reacting to poor performance, which are categories (14), (15), and (16), with an average standard ratio of 2.65%. The researcher attributes these low ratios to the factor of experience, as well as the teachers' tendency to fall into monotony and routine due to the large number of enrolled students, the pressure of classes, and the intensive teaching program. Additionally, the teachers' focus on the main stage of the lesson may contribute to these low ratios.

Furthermore, we also notice that the average standard ratios for categories related to reacting to negative behaviors are relatively high with an average of 49.73%. The researcher attributes this increase to the teachers' attempts to assert themselves and discourage any bad behavior by students.

Additionally the nature of adolescent secondary school students requires constant monitoring and intervention in response to any undesirable behavior they exhibit. The playful nature predominant in physical education classes also necessitates teachers to protect students by discouraging any negative behavior.

On the other hand, we observe that the teacher's specialization does not have an impact on the non-verbal behaviors exhibited by the teachers, as indicated by the close convergence in the ratio of non-verbal behaviors observed. This demonstrates that the non-verbal behaviors are not influenced by the teacher's subject specialization.

## 6.2 Secondly: Data transcription of teachers with more than 10 years of experience

**The analysis of the non-verbal communication of a physical education teachers for Secondary School during the preparatory stage (warm-up) of the P.E session**

**Table number (06): Results of Non-Verbal Behaviors for a Sample of Teachers with More than 10 Years of Experience.**

The teachers Categories		The teacher N 05		The teacher N 06		The teacher N 07		The teacher N 08		the total	the average for each category
	the frequency The Categories	F	%	F	%	F	%	F	%		
Talk and commands	Category 01	04	1.39	01	0.4	00	00	02	0.95	07	0.68
	Category 02	03	1.04	03	1.2	02	0.77	04	1.9	12	1.22
	Category 03	03	1.04	02	0.8	03	1.15	03	1.42	11	1.1
	Category 04	40	13.98	13	5.2	15	5.8	12	5.71	80	7.67
	Category 05	12	4.19	28	11.2	31	12	24	11.43	95	9.7
	Category 06	05	1.74	07	2.8	08	3.08	03	1.43	23	2.26
	Category 07	47	16.43	45	18	43	16.6	32	15.25	167	16.57
	Category 08	43	15.03	25	10	30	11.58	23	10.95	121	11.89
	Category 09	00	00	02	0.8	04	1.54	03	1.42	09	0.94
	Category 10	05	1.74	09	3.6	08	3.1	11	5.25	33	3.42
the total		162	56.64	135	54	144	55.6	117	55.72	558	55.49
Reaction and Response to Good Performance	Category 11	06	2.10	08	3.2	06	2.31	09	4.28	29	2.97
	Category 12	09	3.14	17	6.8	14	5.5	12	5.71	52	5.28
	Category 13	00	00	01	0.4	03	1.15	04	1.9	08	0.86
the total		15	5.24	26	10.4	23	8.88	25	11.9	89	9.1
Reaction or Response to Weak Performance / Errors	Category 14	11	3.85	07	2.8	09	3.47	12	5.71	39	3.96
	Category 15	04	1.4	03	1.2	04	1.54	05	2.38	16	1.63
	Category 16	04	1.4	00	00	01	0.38	03	1.42	08	0.8
	Category 17	00	00	03	1.2	02	0.77	01	0.48	06	0.61
the total		19	6.65	13	5.2	16	6.18	21	10	69	07
Reaction or Responses to Deviant or Negative Behaviors	Category 18	29	10.14	08	3.2	11	4.24	09	4.29	57	5.47
	Category 19	56	19.58	51	20.4	48	18.53	30	14.3	185	18.2
	Category 20	04	1.4	15	6	14	5.4	08	3.82	41	4.15
	Category 21	01	0.34	02	0.8	03	1.15	00	00	06	0.57
the total		90	31.47	76	30.4	76	29.34	47	22.38	289	28.39
the overall total		286	100	250	100	253	100	210	100	1005	
The standard ratios of behaviors for each teacher to the total observed behaviors		28.49%		24.87%		25.77%		20.9%		100%	

Source:( The researchers , 2023 )

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It is evident from Table number (06) that there is some variation in the standard ratios of behaviors for each teacher in relation to the total observed behaviors. It is also clear that the factor of experience has a significant impact on the teachers' behaviors.

Additionally, the predominant non-verbal behaviors among the teachers are those falling under the categories of speech and commands, with an average standard ratio of 55.49%. This is similar to the average standard ratios for teachers with less than 10 years of experience.

Furthermore, it is observed that behaviors falling under category number (07): simultaneous gestures with verbal language, and category number (08): teacher's calmness and silence, show the highest increase. The researcher explains this by stating that experienced teachers attach great importance to their voice tones, gestures, and body movements to effectively convey their message. On the other hand, the category number (10): non-academic attention, has a significantly low average standard ratio of 3.42%. The researcher attributes this decrease to experienced teachers being more in control of the students and better at utilizing the space and positioning themselves within the sports hall.

As we also observe, there is an increase in the average standard ratios for categories related to reacting to good performance, namely categories (11), (12), and (13), with an average standard ratio of 9.1%. Similarly, there is an increase in the categories related to reacting to poor performance, which are categories (14), (15), and (16), with an average standard ratio of 7%. The researcher attributes this increase to the fact that experienced and older teachers often approach their students by taking on a parental role. They tend to be more inclined to support and guide the students through advice and guidance rather than resorting to punishment and reprimands.

Additionally, we also observe that the average standard ratios for categories related to reacting to negative behaviors are relatively low, with an average of 28.39%. The researcher attributes this decrease to the fact that older and highly experienced teachers are more respected and appreciated by the students. The age difference between students and teachers plays a significant role in controlling students' negative behaviors, which is evident in category number (19), where the teachers' behavior is described as conservative and authoritative through their body language. The average standard ratio for this category is 18.2%, which is relatively high, indicating the teachers' ability to maintain their authority through their strong presence during the lesson, as well as their remarkable capability to manage the educational group effectively.

As we also observe for this sample, there is no impact of the teacher's specialization on the non-verbal behaviors that were observed. This is evident from the close convergence in the standard ratios of behaviors for each teacher in relation to the total observed behaviors. Any slight variation recorded can be attributed to other factors such as the teacher's mood and the demographic composition of the pedagogical group.

The results we have obtained are in agreement with the findings of “Barrierr-Boizumault Magali” study, which attributes the predominantly positive behaviors exhibited by teachers to the factors of experience and the emotional aspect that governs the teacher-student

relationship. However, the results of our study diverge in terms of non-verbal behaviors and their association with different activities. Our study found no impact of the practiced activity on the nature of non-verbal behaviors exhibited by teachers during the preparatory stage.

On the other hand, our results align with the findings of the study conducted by "Patrick Vincent" and "Nicholas Schouli" which highlight the significant impact of positive non-verbal behaviors on learners' commitment to positive engagement during the preparatory stage. Additionally, our study agrees with their results that the personality of the teachers plays a major role in increasing learners' motivation for good performance during the preparatory stage.

Furthermore, our study also agrees with the findings of "Patrick Vincent" and "Nicholas Schouli" that the teacher's specialization in physical education does not influence the form of non-verbal behaviors exhibited by teachers. Instead, the personality of the teachers, shaped through experience and expertise, plays a crucial role in promoting positive non-verbal behaviors in the teachers' performance.

**7. Conclusions and Recommendations:** After presenting and discussing the results, the following conclusions were reached:

- a) Regarding the first partial question: Does the variable of experience have an impact on the form of non-verbal behaviors exhibited by teachers during the preparatory stage of the lesson?

After presenting and analyzing the results from Table number (05) and Table number (06), the findings demonstrated the influence of the experience factor on the non-verbal behaviors exhibited by teachers. The results also showed an increase in the percentage of positive non-verbal behaviors for the sample with more than 10 years of experience compared to the sample of teachers with less than 10 years of experience.

- b) Regarding the second partial question: Does the type of sports activity taught to students have a direct impact on non-verbal behaviors of the teacher?

After presenting and analyzing the results from Table number (05) and Table number (06), the findings indicated that there is no significant effect of the type of sports activity taught to students on the form of non-verbal behavior. This applies to both the sample of teachers with less than 10 years of experience and the sample of teachers with more than 10 years of experience.

As the study, revealed, other results can be outlined as follows:

- c) The study revealed the complexity and intricacy of the non-verbal behaviors exhibited by teachers, making them sometimes challenging to observe and interpret.
- d) Less experienced teachers tend to exhibit the following non-verbal behaviors during the preparatory stage(warm up): - Simultaneous gestures with verbal

language, such as raising their voice while addressing a student- Non-academic attention, like showing favoritism towards certain students or being preoccupied with their phone, neglecting students.- Non-verbal criticism, expressed through negative facial expressions and sharp glances, such as yelling at a student with raised eyebrows.- Organization or warning through body movements, like raising a finger or swiftly raising a hand to signal or alert.- Maintaining authority and using body language to establish control, such as standing in the center of the sports hall and closely monitoring the students' movements during running activities.

- e) Experienced teachers tend to exhibit the following non-verbal behaviors during the preparatory stage: - Specific and repetitive gestures that are characteristic of each teacher, such as frequently placing hands behind the body.- Symbolic movements like nodding the head to approve a student's request to leave or continue the effort during running without stopping. - Simultaneous gestures with verbal language, such as raising their voice while addressing a student or raising their voice while signaling the students to continue running. - Calmness and silence, where the teacher observes the students while they perform light running exercises around the hall. - Non-verbal congratulatory expressions through gestures or signals, like raising the thumb upwards to indicate satisfaction or applauding when a movement is performed correctly. -Non-verbal criticism through negative facial expressions and sharp glances, such as raising the eyebrows and shaking the head from side to side. - organization or warning is achieved through body movements, such as raising the index finger upwards or signaling to maintain distance between students by extending the arms away from the body. Teachers also maintain authority by closely monitoring the students as they perform running exercises around the sports hall. They assert their control through negative and sharp facial expressions, such as direct eye contact with students while furrowing their eyebrows.
  - f) The study revealed that inexperienced teachers lack familiarity with positive non-verbal behaviors and gestures and their importance in the teaching process. On the other hand, most of the behaviors exhibited by teachers seem to be unconscious or unintentional, and some of these behaviors are influenced by habits and the teacher's personality, as mentioned in the procedural definition of non-verbal communication that we presented.
- ✓ Therefore, it is essential to work on preparing and training educational inspectors and administrators in the field of non-verbal interactions and body language .
  - ✓ Evaluating the performance of physical education teachers should not be limited to assessing their pedagogical and professional performance but should also include evaluating their behavioral and emotional performance. This evaluation can be facilitated through observation grids during teaching, which provide more accurate data on teachers' functional performance, serving as effective feedback to enhance their performance.
  - ✓ Regular meetings, seminars, and training courses should be organized, facilitated by experts in body language, for the benefit of physical education teachers. Since

physical education is among the subjects that extensively employ gestures, movements, and body signals, it is crucial that teachers use them based on scientific, knowledge-driven, and intentional foundations .

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