

## MULTIMODAL COMMUNICATION IN PHYSICAL EDUCATION CLASSES

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**Abstract.** This study examines the special aspects of communication in physical education and its managerial implications in teacher-student interaction. Understanding different types of communication improves the quality and effectiveness of teaching physical education. Multimodal communication involves using various methods and codes to engage students effectively in physical education and sports activities. These methods include speech, intonation, facial expressions, eye contact, gestures, proxemics, body movements, and posture. These communication means are used in varying proportions during different lesson moments for organising, demonstrating, motivating, coaching, and providing feedback. The teacher's mastery of a rich repertoire of communication means can facilitate the achievement of physical education objectives for all students. This is even more necessary as young people become increasingly sedentary and less involved in physical activities.

*Keywords:* soft skills; motivation; team spirit; physical activity

### Introduction

The latest World Health Organisation<sup>1</sup> reports show a decline in young people's interest in physical activities, which has long-term consequences for physical and mental health. WHO recommends a regular Physical Activity (PA) of 60 minutes daily for adolescents. At the same time, the organisation found that 81% of adolescent girls were less active than boys, with 85% of them failing to meet the recommended level of PA. In Europe, 62 per cent of the population never or seldom engage in PA or play sports<sup>2</sup>.

To enhance these conditions, teachers and specialists in physical education and sports need good professional training and methods to capture students' attention and maintain interest in their discipline. In addition to solid theoretical and practical training (hard skills), soft skills are essential for promoting effective interaction with students and establishing a good working atmosphere in physical education classes. Soft skills are subjective qualities, one of the first mentioned

is effective communication (Nopiyanto et al. 2023) besides building collaboration in teamwork, problem-solving, ethics, leadership (Charoensap-Kelly et al. 2016), emotional intelligence, and creativity. All those qualities are personal attributes, intangible and therefore difficult to quantify; yet the effect of a skilful teacher upon the students might be the difference between a compulsory lesson and taking part with joy in physical education lessons.

This study examines the special aspects of communication in physical education and its managerial implications in teacher-student interaction.

### **Pedagogical communication**

Communication is the main means of achieving educational goals at all forms and levels of assisted education. Didactic communication appears as a particular form, necessary in teaching specific contents of academic subjects. It could be defined as a relationship between two interlocutors, with well-defined roles, the teacher and the student, through which knowledge transfer is achieved (Iacob 1999). Didactic communication is considered one of the key competencies in the educational process of physical education and sports domain (Boeva 2023).

The act of addressing someone, in a certain context and with a certain purpose, gives the social aspect of human communication. Education is based on teacher-student interaction, therefore interpersonal communication defines this process. This kind of communication is the relationship established between people when they come into contact, and through information exchange, they publicly express their personal experiences.

Interpersonal communication can pursue four objectives:

- influencing other people is one of the declared goals of education;
- exchange of information;
- expressing feelings or emotions;
- strengthening the validity of the communication channel used.

According to the criterion of the code in which the message is transmitted, the communication can be:

– Verbal, when using the word and its phonetic, lexical and morpho-syntactic aspects as a tool. Verbal communication can take two forms: oral and written, and in education it is still the main way of transmitting information and knowledge.

Almost all the information in physical education lessons is orally transmitted. This type of communication allows direct contact in both formal and informal relationships, whether planned or accidental. Oral communication has the advantage of immediate impact and reaction so that questions can be asked, and possible problems can be clarified. Besides, the effects of the message on the receiver can be observed, and students feel the attention and importance given to them. Unlike the written message, the verbal one cannot be resumed later; as a Latin proverb states: *Verba volant, scripta manet*, meaning (spoken) words fly away, but the written letter remains (Robertson 1991);

– Paraverbal communication refers to the characteristics of the voice, the peculiarities of pronunciation, the intensity of the utterance, the accent, the intonation, the pause, etc. Paraverbal communication cannot be dissociated from verbal communication, but it brings specific information, independent of the verbal message, regarding the geographical and cultural environment to which the speaker belongs; what the speaker considers to be important and underlined, his/ her affective involvement or the energy with which teacher communicates. Although it is not a verbal message, para-verbal communication is still received through the auditory canal, and the speech areas in the brain's left hemisphere are responsible for their decoding. The same content could have different meanings or effects depending on the voice and accents (para-verbal) variations;

– Non-verbal communication is achieved by decoding information related to posture, movement, gesture, mimicry, the way the space is structured and, in general, everything that a person communicates outside of words. Non-verbal communication can exist independently as a form of expression in sports alongside dance, ballet, pantomime or the sign language of the deaf. The intentional gesture becomes the information support, attributing a new dimension to the movement at the muscular level. What artists and athletes manage to convey is a combined action of cognitive, sensory and motor processes. The identical and synchronised movements of the dancers or the efficient, harmonious and creative suitability of the sports gesture at the right time in a competition, have, in addition to the quantitative dimension of the effort, a cultural dimension: the aesthetic emotion.

Non-verbal communication is most important in establishing a mutual relationship which takes place reciprocally and without words, the presence of gesture and mimicry facilitate understanding and verbal expression. Together with the paraverbal, it constitutes the preferred channel of affective-attitudinal communication. Studies on communication state that emotional states and attitudes are expressed in different proportions: 55% non-verbal, 38% para-verbal and only 7% verbal (Mehrabian 1971). Men and women have similar nonverbal communication, but gender influences social interactions. Women tend to show emotions through facial expressions more accurately and frequently than men, who are thought to hide their feelings (Sullivan 2004).

The speed with which para- and non-verbal signals are decoded is four and a half times higher than understanding verbal messages. In the first few seconds or even microseconds of social interaction, individuals can perceive various social and personal attributes, such as personality and affective states, from nonverbal cues (Ali, Nasreen, Wajdi 2019). Those traits may be interpreted quickly and processed outside the conscious awareness with little or no cognitive control (Lakin 2006). It has been scientifically proven that verbal information determines only 25% of the final effect (Ruckle 1999) compared to the non-verbal elements (facial expression, gaze, gestures, position towards the interlocutor) and paralanguage elements (tone,

voice volume, accents) which have greater effect on the receiver. Verbal and visual stimuli are processed in different brain hemispheres, with different decoding speeds, which creates interconnectivity and interdependence between brain areas (Chen et al. 2002).

*Proxemics and gestures.* The efficiency of transmitting and receiving information can be facilitated or inhibited, depending on the attitude of the communication partners, it can be positive, negative, or neutral. The teacher, who addresses the students, will simultaneously convey his opinion about the difference in status between oneself and the class or group, along with the verbal message. Attitude can be understood by deciphered body language and from the proxemic dimension of communication. In general, the one who gladly initiates communication and is interested in the effect on the interlocutor will sit as close as possible, and maintain visual contact with the person to whom was addressing and possibly touching during the interaction. When a student was pointed at with an index finger to answer a question, there was a sudden negative change: the student distanced themselves from the teacher. However, when the question was asked with an open-hand, palm-up gesture, the students moved closer and turned toward the teacher (Farsani, Rodrigues Mendes 2023).

Motor activities require a specific way of using and perceiving space, not just in a permissive way but also according to specific rules for each sport. These rules are communicated non-verbally through referee signals and the clear borderlines of sports spaces using markings and colours. Parlebas (1986) considered the space in sports to be the place for the organisation of comotricity directed towards solidarity and, or antagonism. In antagonistic situations, specific to sports, there are misleading movements (tricks) or counter-communication intended to disorganise the opponent's actions.

### **Motivation**

The increased time that children and youngsters spend in sedentary activities (gaming or social media) is at the expense of the time spent in physical activities and outdoors. While gaming time is increasing and PA among children decreases, studies found a reciprocal relationship between time spent in gaming and moderate to vigorous PA and athletic self-esteem (Hygen et al. 2022). This situation is not in favour of our discipline, therefore the ability of the teacher to motivate the group of students becomes essential for covering the distance from simple presence to involvement and from obligation to satisfaction.

The teacher, through the attributes of his role: supervision, evaluation, grading system, and granting of positive or negative feedback, intervenes as an extrinsic motivating factor. If the activity proposed to the students is perceived as interesting and stimulating students will follow the course motivated by the feeling of achievement, and fulfilment, demonstrating competence in completing the lesson

tasks (Nae 2016). Active participation, emotional engagement, and deriving satisfaction from physical education activities are driven by intrinsic motivation. Intrinsic motivation is associated with desire and enjoyment in participating, whereas extrinsic motivation is linked to feelings of obligation and necessity to be part of a mandatory class.

To be successful in motivating students is to discover what needs each one has and to direct their effort so that they feel supported and encouraged to strive towards a goal they consider valuable. In this sense, demonstrate a genuine interest in the students' activities and difficulties, listen to them, and treat them as true partners. The teacher's responsibility is to initiate the building of this trustful partnership. Girls, for example, are more interested in body image and weight management while boys reported athleticism and competition as exercise incentives (Vu et al. 2006).

*Team spirit* is a form of intrinsic motivation that enables individuals to invest more energy than they would be willing to do as individuals. Students can allocate much effort as a team member in competition with another team, instead of training solely for personal benefit in PE classes. Team spirit is maintained by mutual help among teammates in competition with other teams and the joy of the game. PE teachers can sustain this enjoyment by cultivating enthusiasm and a positive atmosphere, as physical education also serves as a form of recreation and compensation for intense and prolonged intellectual efforts.

In a team sport, students develop soft (or life) skills like time management, leadership, teamwork, goal setting, emotional and social skills (Duz & Aslan 2020), fair play and compliance with the game rules, impacting their long-term social and professional life.

### **Organising**

The teacher, by personal example, determines how the relations between him and the group of students will proceed, they will react according to how the teacher chooses to behave. Most young people in their teenage years are looking for a role model and respond positively when they meet it. There is an opinion that the members of a group tend to copy, even unconsciously, the attitude and behaviour of the leader. A possible explanation would be that 80 b90% of information is received visually (Hyerle 2008), and when words are in discrepancy with actions, our interlocutors will believe what they see. The principle is simple: you must behave as you want those you lead to conduct themselves.

Physical education is a discipline best defined by action, so the verbal message should be concise, clear, affirmative, and in a positive key (Pop 2014). Using examples, metaphors, or analogies can help create a clearer picture for the students, shorten explanations, and save time. The volume of information will be greater for beginners for whom it is important to give the time and guidance they need to progress.

In PE classes more effective than explanation is the demonstrations. A proper demonstration shows students what movement sequence is required and how it could be done. Most teachers' demonstrations involve techniques to help students become skilful performers within the specific context where those techniques are needed. Therefore, the PE teacher should demonstrate skills within their relevant context whenever possible (Mitchel & Walton-Fisette 2021). Inviting students to demonstrate a motoric sequence is often preferable because the rest of the class sees one of their peers, rather than an adult model, performing a task.

*Delegation* is a form of student involvement in leading the instructional process. The area of freedom that the teacher gives to the student is limited and can take the form of demonstration, leading parts of warming up, refereeing or making up teams. Such a measure aims to:

- organise knowledge and the ability to apply it;
- assuming some responsibilities because their decisions may have effects on their teammates and not least
- the development of leadership qualities.

When choosing a student to take on a leadership role within the team or group, two criteria are considered:

1. The student's demonstrated ability to complete the task and their proven experience;
2. The student's strong motivation and enthusiasm for the task. Experience takes precedence, and when paired with enthusiasm, it's even better.

When a student is asked to demonstrate a motor procedure or empower him to lead his colleagues in lesson sequences, we recognise the qualities that recommend him for this role. A new role within the team or a lesson sequence is an opportunity to enrich students' activity in physical education and sports classes. It stimulates some of them to control their movements more attentively or to be creative and find original solutions to solve tasks. Delegation gives students the authority, opportunity and motivation to take initiative, solve problems and assert themselves as leaders.

## **Conclusions**

Understanding different types of communication improves the quality and effectiveness of teaching physical education lessons. Multimodal communication involves using various methods to engage students effectively in physical education classes. These methods include speech, intonation, facial expressions, eye contact, gestures, proxemics, body movements, and posture. These communication means are used in varying proportions during different lesson moments for organising, demonstrating, motivating, coaching, and providing feedback.

The communication style chosen by the PE teacher will determine the climate of the classes. An open working climate inspires trust and pleasure of practising;

along with encouragement of students to contribute to its maintenance. An inflexible, permanent authoritarian behaviour or a suspicious and critical attitude will determine a gloomy climate and a defensive attitude on the part of the students. A positive affective condition facilitates the information retained, while in a stressful context (fear, excessive effort, unpleasantness) inhibition and forgetting are facilitated. The students through their positive, neutral or negative attitude, favour or inhibit communication, increase or cancel the effects of the teaching approach. Therefore, the teacher's mastery of a rich repertoire of communication means can facilitate the achievement of physical education objectives for all students.

## NOTES

1. WHO. Physical Activity. 26 June 2024. Available at <https://www.who.int/news-room/fact-sheets/detail/physical-activity> retrieved 23.08.2024 [Retrieved 29 August 2024]
2. EUROPEAN COMMISSION. Special Eurobarometer SP525: Sport and physical activity. 2022 Available online at: <https://europa.eu/eurobarometer/surveys/detail/2668> [Retrieved 27 August 2024]

## REFERENCES

- ALI, A.; NASREEN, S.; WAJDI, M.A., 2019. An Observational Study of Verbal and Nonverbal Communication in Female and Male University Students. *Pakistan Journal of Gender Studies*. vol. 19, pp. 1 – 18 [retrieved 20 July 2024] DOI:10.46422/pjgs.v19i0.72.
- BOEVA, S., 2023. Regarding the Key Competences in the Educational Process of Physical Education and Sports. *Pedagogika-Pedagogy*, vol. 95, no. 4s, pp. 69 – 79, [retrived 19 September 2024]. Available from: DOI: 10.53656/ped2023-4s.07. ISSN 1314-8540.
- CHAROENSAP-KELLY, P.; BROUSSARD, L.; LINDSL, M.; TROY, M., 2016. Evaluation of a soft skills training program. *Business and Professional Communication Quarterly*, vol. 79, no. 2, pp. 154 – 179 [retrived 18 August 2024]. Available from: <https://doi.org/10.1177/2329490615602090>.
- CHEN, Q; BEATY RE.; CUI, Z.; SUN, J.; HE, H.; ZHUANG, K.; REN, Z.; LIU, G.; QIU, J., 2019. Brain hemispheric involvement in visuospatial and verbal divergent thinking. *Neuroimage*, no. 15 [retrieved 18 August 2024]. Available from: <https://doi:10.1016/j.neuroimage>.
- DUZ, S. & ASLAN, T.V., 2020. The Effect of Sport on Life Skills in High School Students. *Journal of Education and Training*, no. 6, pp. 161– 168. [retrieved 10 August 2024]. Available from: <https://doi.org/10.20448/journal.522.2020.62.161.168>.



- FARSANI, D.; RODRIGUES MENDES, J., 2023. Multimodal classroom discourse: gestures and proxemics in teacher-student interaction. *Educar em Revista, Curitiba*, vol. 39 [retrieved 11 August 2024]. Available from: <https://doi.org/10.1590/1984-0411.75958>.
- HYERLE, D., 2008. *Thinking Maps: A Visual Language for Learning, chapter 4 in Knowledge Cartography*. London: Springer. ISSN 1610-3947, E-ISSN 2197-8441.
- HYGEN, B. W.; BELSKY, J.; STENSENG, F.; STEINSBEKK, S.; Wichstrøm, L.; SKALICKA, V., 2022. Longitudinal relations between gaming, physical activity, and athletic self-esteem. *Computers in Human Behavior*, vol. 132 [retrieved 12 August 2024]. Available from: <https://doi.org/10.1016/j.chb.2022.107252>.
- IACOB, L., 1999. *Comunicarea didactica. In Psihologie scolara* [in Romanian] Iasi: Polirom. ISBN 973-683-048-9.
- LAKIN, J.L., 2006. Automatic cognitive processes and nonverbal communication. In: MANUSOV & PATTERSON (Eds). *The Sage Handbook of Nonverbal Communication*, pp. 59 – 77. Sage Publications.
- NOPIYANTO, Y. E.; PUJianto, D.; MAISARAH, I.; COTTON, W., 2023. The effect of an 8-week service-learning program on traditional sports games courses on the soft skills of pre-service physical education teachers. *Journal of Physical Education & Sport*, vol. 23, no. 12. [retrieved 30 August 2024]. Available from: DOI:10.7752/jpes.2023.12400.
- MEHRABIAN, A., 1971. *Silent messages*. Belmont; California: Wadsworth. ISBN 13 978-0534000592.
- MITCHEL, S.; WALTON-FISETTE, G.L., 2021. *The Essentials of Teaching Physical Education: Curriculum, Instruction, and Assessment*. Human Kinetics Pub Inc. ISBN 9781492598923.
- NAE, C., 2016. Competitive Sport and Motivation. *Marathon*, vol. 8, no. 1, p. 96.
- PARLEBAS, P., 1986. *Eléments de sociologie du sport*. Paris: Presses universitaires de France. ISBN-13978-2130392996.
- POP, C. L., 2014. Improving Interpersonal Communication for a Higher Quality of Physical Activities. *Procedia-Social and Behavioral Sciences*, no. 116, pp. 4983 – 4987 [retrieved 9 September 2024]. Available from: <https://doi.org/10.1016/j.sbspro.2014.01.1059>.
- ROBERTSON, J.G., 1991. *Words for a Modern Age: A Cross Reference of Combining Latin and Greek Elements*, Senior Scribe Publications. Wiesbaden, Germany. ISBN – 0-9630919-1-3.
- RUCKLE, H., 2000. *Body Language for Managers*. Bucharest: Tehnica. ISBN 973-31-1347-6.



- SULLIVAN, P., 2004. Communication differences between male and female team sport athletes. *Communication Reports*, vol. 17, no 2, pp. 121 – 128. [retrieved 18 August 2024] Available from: <https://doi.org/10.1080/08934210409389381>.
- VU, M. B; MURRIE D.; GONZALEZ V.; JOBE, J. B., 2006. Listening to girls and boys talk about girls' physical activity behaviors. *Health Educ Behav*, vol. 33, no. 1, pp. 81 – 96 [retrieved 27 August 2024]. Available from: [doi:10.1177/1090198105282443](https://doi.org/10.1177/1090198105282443).

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